3-7-08 Letting, Item 067

| F.A.P RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 1 |
| FED. ROAD DIST. NO. | ILLINOIS | CONTRACT NO. 60D54 | | |

# STATE OF ILLINOIS
# DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS

# PROPOSED
# HIGHWAY PLANS

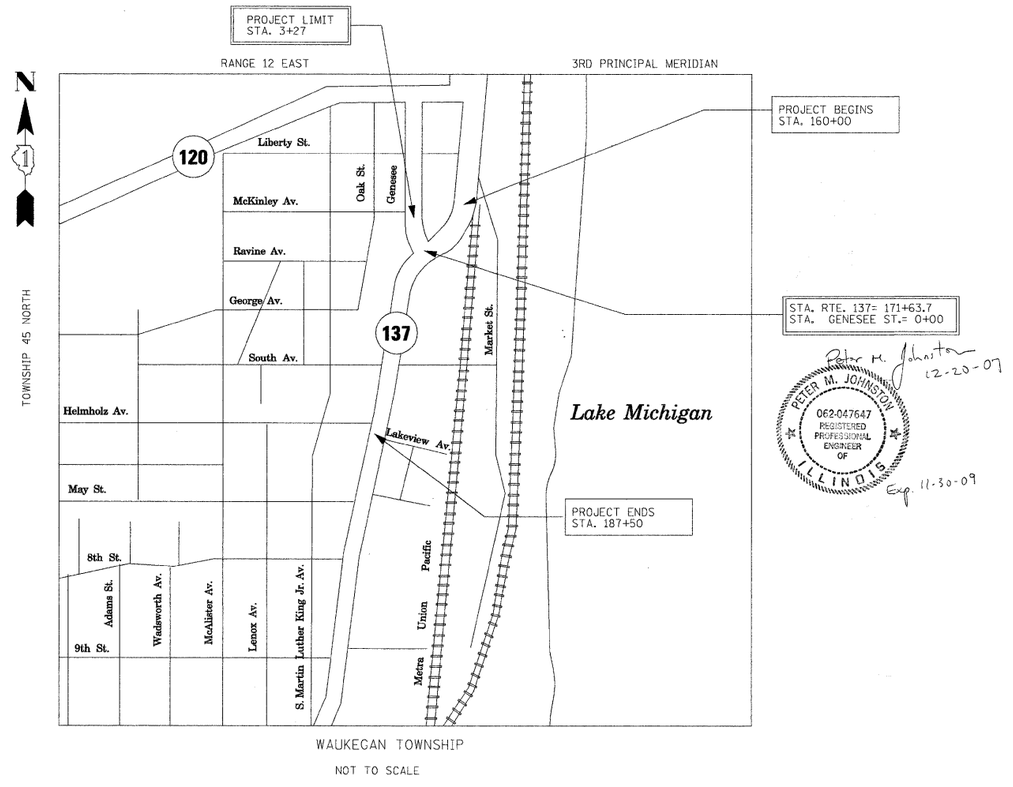
## FAP ROUTE 352 (IL 137)
## SECTION D–RD–5
## NORTH OF GENESEE STREET TO SOUTH AVENUE
## RESURFACING (SKIDPROOFING) & TRAFFIC SIGNAL MODERNIZATION
## PROJECT: ACHSIP-0352(008)
## LAKE COUNTY
## C–91–042–08

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**TRAFFIC DATA**

EXISTING ADT
15,200 TO 18,400 (2005)
SPEED LIMIT 30 MPH GENESEE STREET
SPEED LIMIT 55 MPH AMSTUTZ EXPY

**PROJECT LOCATED IN THE CITY OF WAUKEGAN**




GROSS AND NET LENGTH OF IMPROVEMENT: 2,750 FT (0.521 MILES)

D–91–042–08


**LOCATION OF SECTION INDICATED THUS: –**

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631
(773) 399-0112

Peter M. Johnston 12-20-07

PETER M. JOHNSTON
062-047647
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
Exp. 11-30-09

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

SUBMITTED Dec. 24 20 07
Dave Olk
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 1, 20 08
Eric E. Harm
ACTING ENGINEER OF DESIGN AND ENVIRONMENT

February 1, 20 08
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

100′ 200′ 300′ — 1″= 100′
0 10′ 20′ 30′ — 1″= 10′
0 50′ 100′ — 1″= 50′
0 50′ 100′ — 1″= 40′
0 50′ 100′ — 1″= 30′
0 50′ 100′ — 1″= 20′

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

**J.U.L.I.E.**
**JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION**
**1–800–892–0123**
**OR 811**

**PROJECT ENGINEER PETER JOHNSTON, P.E. (773) 399–0112**
**PROJECT MANAGER KEN ENG, P.E. (847) 705–4247**

**CONTRACT NO. 60D54**

**DISTRICT ONE PLAN PREPARATION ENGINEER: KEN ENG (847) 705–4247**

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

## INDEX OF SHEETS



## STATE STANDARDS

| STD. NO. | DESCRIPTION |
|---|---|
| 000001-05 | STANDARD SYMBOLS, ABBREVATIONS AND PATTERNS |
| 442201-03 | CLASS C AND D PATCHES |
| 701601-05 | URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN |
| 701606-05 | URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN |
| 701701-05 | URBAN LANE CLOSURE, MULTILANE INTERSECTION |
| 701901 | TRAFFIC CONTROL DEVICES |
| 780001-01 | TYPICAL PAVEMENT MARKINGS |
| 781001-02 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS |
| 805001 | ELECTRICAL SERVICE INSTALLATION DETAILS |
| 814001-01 | HANDHOLES |
| 814006-01 | DOUBLE HANDHOLES |
| 857001 | STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES |
| 862001 | UNINTERRUPTABLE POWER SUPPLY (UPS) |
| 873001-01 | TRAFFIC SIGNAL GROUNDING & BONDING |
| 877001-03 | STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55' |
| 878001-06 | CONCRETE FOUNDATION DETAILS |
| 880006 | TRAFFIC SIGNAL MOUNTING DETAILS |
| 886001 | DETECTOR LOOP INSTALLATIONS |
| 886006 | TYPICAL LAYOUT FOR DETECTION LOOPS |

## GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
2. 10 FOOT (3 METER ) TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB & GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
3. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
5. WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILTY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
6. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1½ INCHES (40 MM ) WHERE THE SPEED LIMIT IS 45 MPH (80 KM/H) OR LESS AND 1 INCH (25 MM ) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H ). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 MM ) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
7. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
8. FOR PAVEMENT MARKING, REFER TO DISTRICT ONE TYPICAL MARKINGS FOR DETAILS NOT SHOWN.
9. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS.
10. THE CONTRACTOR SHALL SAW CUT PAVEMENT PRIOR TO REMOVING PAVEMENT FOR PATCHING. THE COST FOR SAW CUTTING WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF CLASS D PATCHES OF TYPE SPECIFIED.
11. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 72 HOURS BEFORE WORK BEGINS.
12. THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON AT (847) 438-2300 TWO WEEKS BEFORE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

### HOT MIX ASPHALT MIXTURE REQUIREMENTS

| DESCRIPTION | AC TYPE | AIR VOIDS | MIX TYPE | THICKNESS |
|---|---|---|---|---|
| POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", IL 9.5mm, N90 | SBS/SBR PG 70-22 | 4% @ 90 GYR. | SAME | 1¾" |
| POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75mm, N50 | SBS/SBR PG 76-28/-22 | 4% @ 50 GYR. | SAME | ¾" |
| CLASS D PATCHES, TYPE I, II, III, IV, 8" | PG 64-22• | 4% @ 70 GYR. | HMA BINDER IL 19.0mm | 8" |
| HOT-MIX ASPHALT REPLACEMENT OVER PATCHES | PG 64-22• | 4% @ 70 GYR. | HMA BINDER IL 19.0mm | 3" |

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 Lbs/SqYd/In

• WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER SHALL BE PG 58-22

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

| | | | |
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| | | DRAWN - EAD | REVISED - |
| | PLOT SCALE = 10.0000 ' / IN. | CHECKED - RS | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 8/27/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STATE STANDARDS, GENERAL NOTES AND BITUMINOUS MIXTURE REQUIREMENTS**

SCALE: | SHEET NO. 2 OF SHEETS | STA. | TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 2 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

# SUMMARY OF QUANTITIES

| PAY ITEM NIMBER | PAY ITEM DESCRIPTION | UNIT | TOTAL QUANTITY | ROADWAY I000-2A (URBAN 90% FED. 10% STATE) | SIGNALS GENESEE ST Y031-IF (90% FED 6.6% STATE 3.3% WAUKEGAN) | SIGNALS SOUTH AVE Y031-IF (90% FED. 5% STATE 5% WAUKEGAN) | PREEMPTION Y031-3D (100% WAUKEGAN) |
|---|---|---|---|---|---|---|---|
| 40600200 | BITUMINOUS MATERIALS (PRIME COAT) | TON | 14 | 14 | | | |
| 40600300 | AGGREGATE (PRIME COAT) | TON | 67 | 67 | | | |
| 40600400 | MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS | TON | 9 | 9 | | | |
| X4067107 | POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 | TON | 700 | 700 | | | |
| 40600895 | CONSTRUCTING TEST STRIP | EACH | 2 | 2 | | | |
| 40600982 | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | SQ YD | 145 | 145 | | | |
| 40600990 | TEMPORARY RAMP | SQ YD | 145 | 145 | | | |
| 40601005 | HOT-MIX ASPHALT REPLACEMENT OVER PATCHES | TON | 286 | 286 | | | |
| 40603595 | POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 | TON | 1,634 | 1,634 | | | |
| 42400200 | PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH | SQ FT | 400 | | | 400 | |
| 44000159 | HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2" | SQ YD | 18,042 | 18,042 | | | |
| 44000600 | SIDEWALK REMOVAL | SQ FT | 408 | | | 408 | |
| 44001700 | COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | FOOT | 325 | 325 | | | |
| 44002212 | HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3" | SQ YD | 1,702 | 1,702 | | | |
| 44201737 | CLASS D PATCHES, TYPE I, 8 INCH | SQ YD | 27 | 27 | | | |
| 44201741 | CLASS D PATCHES, TYPE II, 8 INCH | SQ YD | 811 | 811 | | | |
| 44201745 | CLASS D PATCHES, TYPE III, 8 INCH | SQ YD | 264 | 264 | | | |
| 44201747 | CLASS D PATCHES, TYPE IV, 8 INCH | SQ YD | 391 | 391 | | | |
| 48301000 | PROTECTIVE COAT | SQ YD | 72 | 72 | | | |
| 60300105 | FRAMES AND GRATES TO BE ADJUSTED | EACH | 2 | 2 | | | |
| 60300310 | FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) | EACH | 44 | 44 | | | |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 4 | 4 | | | |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 | | | |
| 70102625 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701606 | L SUM | 1 | 1 | | | |
| 70102630 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701601 | L SUM | 1 | 1 | | | |
| 70102635 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701701 | L SUM | 1 | 1 | | | |
| 70103815 | TRAFFIC CONTROL SURVEILLANCE | CAL DA | 60 | 60 | | | |
| 70300100 | SHORT-TERM PAVEMENT MARKING | FOOT | 8,058 | 8,058 | | | |
| 70300210 | TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS | SQ FT | 82 | 82 | | | |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | 17,565 | 17,565 | | | |
| 70300240 | TEMPORARY PAVEMENT MARKING - LINE 6" | FOOT | 1,528 | 1,528 | | | |
| 70300260 | TEMPORARY PAVEMENT MARKING - LINE 12" | FOOT | 116 | 116 | | | |
| 70300280 | TEMPORARY PAVEMENT MARKING - LINE 24" | FOOT | 376 | 376 | | | |
| * 72000100 | SIGN PANEL - TYPE 1 | SQ FT | 14 | | | 14 | |
| * 72000200 | SIGN PANEL - TYPE 2 | SQ FT | 45 | | 15 | 30 | |
| * 78000100 | THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS | SQ FT | 41 | 41 | | | |
| * 78000200 | THERMOPLASTIC PAVEMENT MARKING - LINE 4" | FOOT | 8,782 | 8,782 | | | |
| * 78000400 | THERMOPLASTIC PAVEMENT MARKING - LINE 6" | FOOT | 764 | 764 | | | |
| * 78000600 | THERMOPLASTIC PAVEMENT MARKING - LINE 12" | FOOT | 58 | 58 | | | |
| * 78000650 | THERMOPLASTIC PAVEMENT MARKING - LINE 24" | FOOT | 188 | 188 | | | |
| 78003120 | PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5" | FOOT | 555 | 555 | | | |
| * 78100100 | RAISED REFLECTIVE PAVEMENT MARKER | EACH | 299 | 299 | | | |
| 78300200 | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | EACH | 277 | 277 | | | |
| 81000600 | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | 466 | | 22 | 444 | |
| 81000700 | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 12 | | | 12 | |
| 81001000 | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL | FOOT | 38 | | | 38 | |
| * 81018400 | CONDUIT PUSHED, 1 1/2" DIA., GALVANIZED STEEL | FOOT | 28 | | | 28 | |
| 81018500 | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | 175 | | 39 | 136 | |
| 81018700 | CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL | FOOT | 79 | | | 79 | |
| 81018900 | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL | FOOT | 83 | | | 83 | |
| 81019000 | CONDUIT PUSHED, 5" DIA., GALVANIZED STEEL | FOOT | 43 | | | 43 | |

| PAY ITEM NIMBER | PAY ITEM DESCRIPTION | UNIT | TOTAL QUANTITY | ROADWAY I000-2A (URBAN 90% FED. 10% STATE) | SIGNALS GENESEE ST Y031-IF (90% FED. 6.6% STATE 3.3% WAUKEGAN) | SIGNALS SOUTH AVE Y031-IF (90% FED. 5% STATE 5% WAUKEGAN) | PREEMPTION Y031-3D (100% WAUKEGAN) |
|---|---|---|---|---|---|---|---|
| 81400100 | HANDHOLE | EACH | 7 | | | 7 | |
| 81400200 | HEAVY-DUTY HANDHOLE | EACH | 2 | | 1 | 1 | |
| 81400300 | DOUBLE HANDHOLE | EACH | 1 | | | 1 | |
| 81900200 | TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 522 | | 22 | 500 | |
| 85000200 | MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 | | 1 | | |
| 85700205 | FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 2 | | 1 | 1 | |
| 87301215 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | 1,004 | | | 1,004 | |
| 87301225 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | 1,076 | | | 1,076 | |
| 87301245 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C | FOOT | 1,950 | | 171 | 1,779 | |
| 87301255 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C | FOOT | 439 | | 439 | | |
| 87301305 | ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1PAIR | FOOT | 1,293 | | 90 | 1,203 | |
| 87301805 | ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C | FOOT | 140 | | 114 | 26 | |
| X8730027 | ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C | FOOT | 361 | | | 361 | |
| 87502480 | TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT. | EACH | 4 | | | 4 | |
| 87502500 | TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT. | EACH | 1 | | 1 | | |
| 87700140 | STEEL MAST ARM ASSEMBLY AND POLE, 20 FT. | EACH | 2 | | | 2 | |
| 87700160 | STEEL MAST ARM ASSEMBLY AND POLE, 24 FT. | EACH | 2 | | | 2 | |
| 87800100 | CONCRETE FOUNDATION, TYPE A | FOOT | 8 | | | 8 | |
| 87800150 | CONCRETE FOUNDATION, TYPE C | FOOT | 4 | | | 4 | |
| * 87800400 | CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER | FOOT | 60 | | | 60 | |
| 87900200 | DRILL EXISTING HANDHOLE | EACH | 1 | | 1 | | |
| 88200210 | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM | EACH | 14 | | 6 | 8 | |
| 88500100 | INDUCTIVE LOOP DETECTOR | EACH | 6 | | 1 | 5 | |
| 88600100 | DETECTOR LOOP, TYPE I | FOOT | 493 | | 96 | 397 | |
| 88800100 | PEDESTRIAN PUSH-BUTTON | EACH | 10 | | 3 | 7 | |
| 89000100 | TEMPORARY TRAFFIC SIGNAL INSTALLATION (PHASING UNITS) | EACH | 1 | | | 1 | |
| 89501410 | RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, | EACH | 1 | | | | 1 |
| 89502300 | REMOVE ELECTRIC CABLE FROM CONDUIT | FOOT | 439 | | 439 | | |
| 89502375 | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 2 | | 1 | 1 | |
| 89502380 | REMOVE EXISTING HANDHOLE | EACH | 3 | | | 3 | |
| 89502385 | REMOVE EXISTING CONCRETE FOUNDATION | EACH | 6 | | | 6 | |
| 88030020 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED | EACH | 11 | | 3 | 8 | |
| 88030050 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 6 | | 1 | 5 | |
| 88030100 | SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED | EACH | 2 | | 2 | | |
| 88030110 | SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED | EACH | 3 | | 3 | | |
| 88030210 | SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 1 | | 1 | | |
| 88030240 | SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED | EACH | 1 | | 1 | | |
| 88102710 | PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED | EACH | 8 | | 2 | 6 | |
| 88102740 | PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED | EACH | 2 | | 1 | 1 | |
| X8050010 | SERVICE INSTALLATION-GROUND MOUNTED | EACH | 1 | | 1 | | |
| X8050015 | SERVICE INSTALLATION-POLE MOUNTED | EACH | 1 | | | 1 | |
| X8620020 | UNINTERRUPTABLE POWER SUPPLY | EACH | 2 | | 1 | 1 | |
| X0322256 | TEMPORARY INFORMATION SIGNING | SQ FT | 85 | 85 | | | |

* SPECIALTY ITEMS

GRAEF ANHALT SCHLOEMER and Associates Inc.
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631
(312) 399-0112

| | | | |
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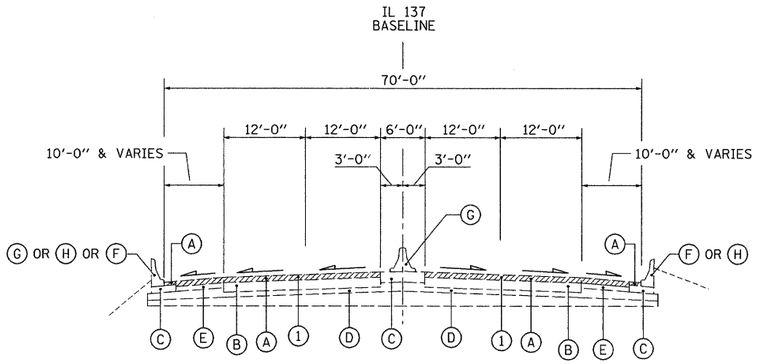
| | | DRAWN - EAD | REVISED - |
| | PLOT SCALE = 10.0000 ' / IN. | CHECKED - RS | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 8/27/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

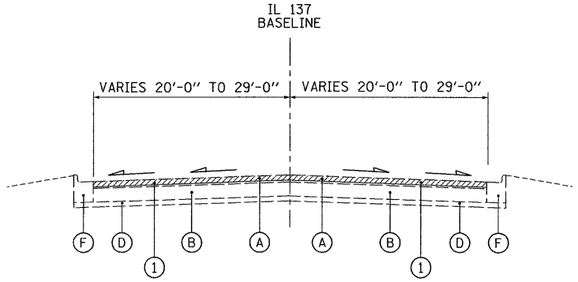
SCALE: | SHEET NO. 3 OF SHEETS | STA. | TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RS-5 | LAKE | 30 | 3 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |



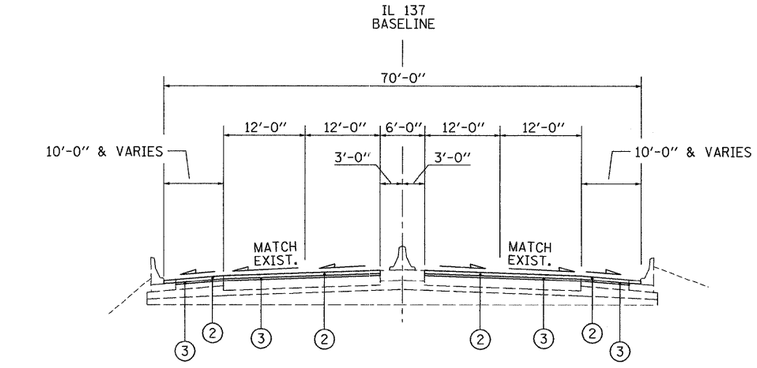

IL 137 EXISTING TYPICAL SECTION

STA. 160+00± TO STA. 176+50±



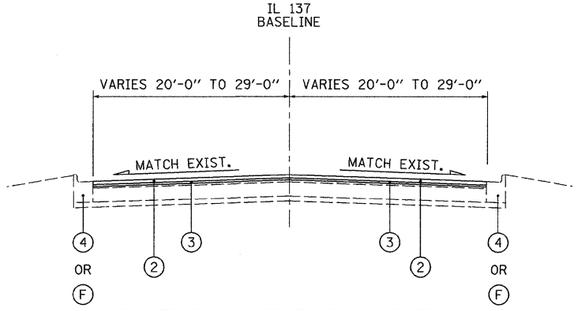

IL 137 EXISTING TYPICAL SECTION

STA. 176+50± TO STA. 187+50




IL 137 PROPOSED TYPICAL SECTION

STA. 160+00± TO STA. 176+50±




IL 137 PROPOSED TYPICAL SECTION

STA. 176+50± TO STA. 187+50

EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- (B) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- (C) PORTLAND CEMENT CONCRETE BASE COURSE
- (D) SUB-BASE GRANULAR MATERIAL
- (E) HOT-MIX ASPHALT SHOULDERS
- (F) COMBINATION CONCRETE CURB AND GUTTER
- (G) BARRIER CURB
- (H) RETAINING WALL

PROPOSED IMPROVEMENTS:

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 2½"
- (2) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", IL 9.5mm, N90, (1¾")
- (3) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75mm, N50, (3/4")
- (4) COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)

| | | | |
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| | | DRAWN - EAD | REVISED - |
| | PLOT SCALE = 10.0000 ' / IN. | CHECKED - RS | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - 11/07/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RS-5 | LAKE | 30 | 4 |
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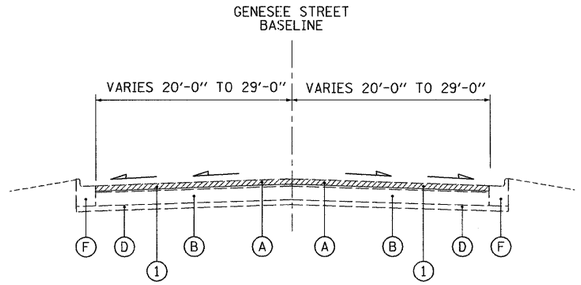
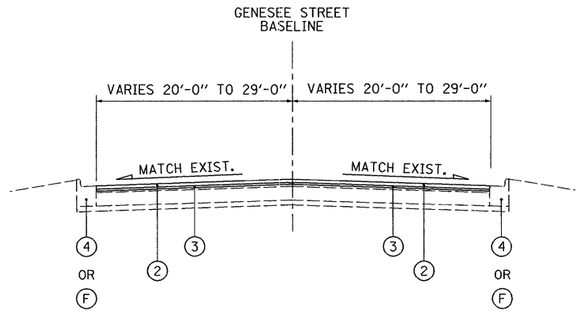
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




GENESEE STREET EXISTING TYPICAL SECTION

STA. 0+00± TO STA. 3+27




GENESEE STREET EXISTING TYPICAL SECTION

STA. 0+00± TO STA. 3+27

EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- (B) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- (C) PORTLAND CEMENT CONCRETE BASE COURSE
- (D) SUB-BASE GRANULAR MATERIAL
- (E) HOT-MIX ASPHALT SHOULDERS
- (F) COMBINATION CONCRETE CURB AND GUTTER
- (G) BARRIER CURB
- (H) RETAINING WALL

PROPOSED IMPROVEMENTS:

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 2½"
- (2) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", IL 9.5mm, N90, (1¾")
- (3) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75mm, N50, (3/4")
- (4) COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)

| | | | |
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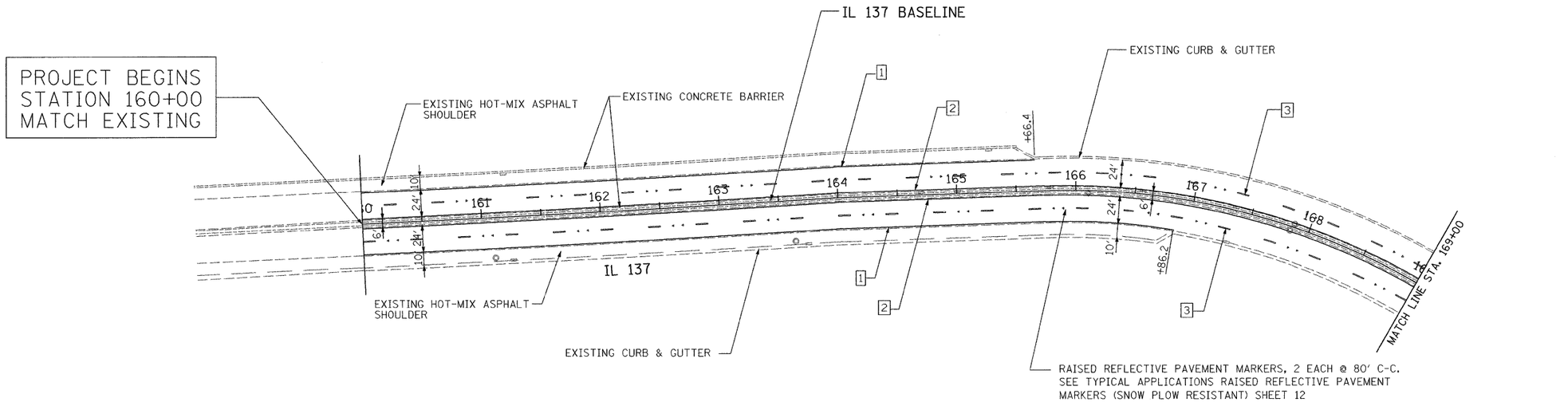
| FILE NAME = | USER NAME = _USER_ | DESIGNED - | REVISED - |
| $FILEL$ | | DRAWN - EAD | REVISED - |
| | PLOT SCALE = 10.0000 ' / IN. | CHECKED - RS | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - 11/07/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RS-5 | LAKE | | 5 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




## LEGEND

[1] THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID EDGE LINE)

[2] THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW SOLID EDGE LINE)

[3] PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5" (WHITE LANE LINE - 10' DASH, 30' SKIP)

[4] THERMOPLASTIC PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW SOLID LINE)

[5] THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE SOLID LINE)

[6] THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW DIAGONAL LINE)

[7] THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE STOP LINES)

[8] THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (TYP.)

[9] THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE LANE LINE - 10' DASH, 30' SKIP)

| | | | |
|---|---|---|---|
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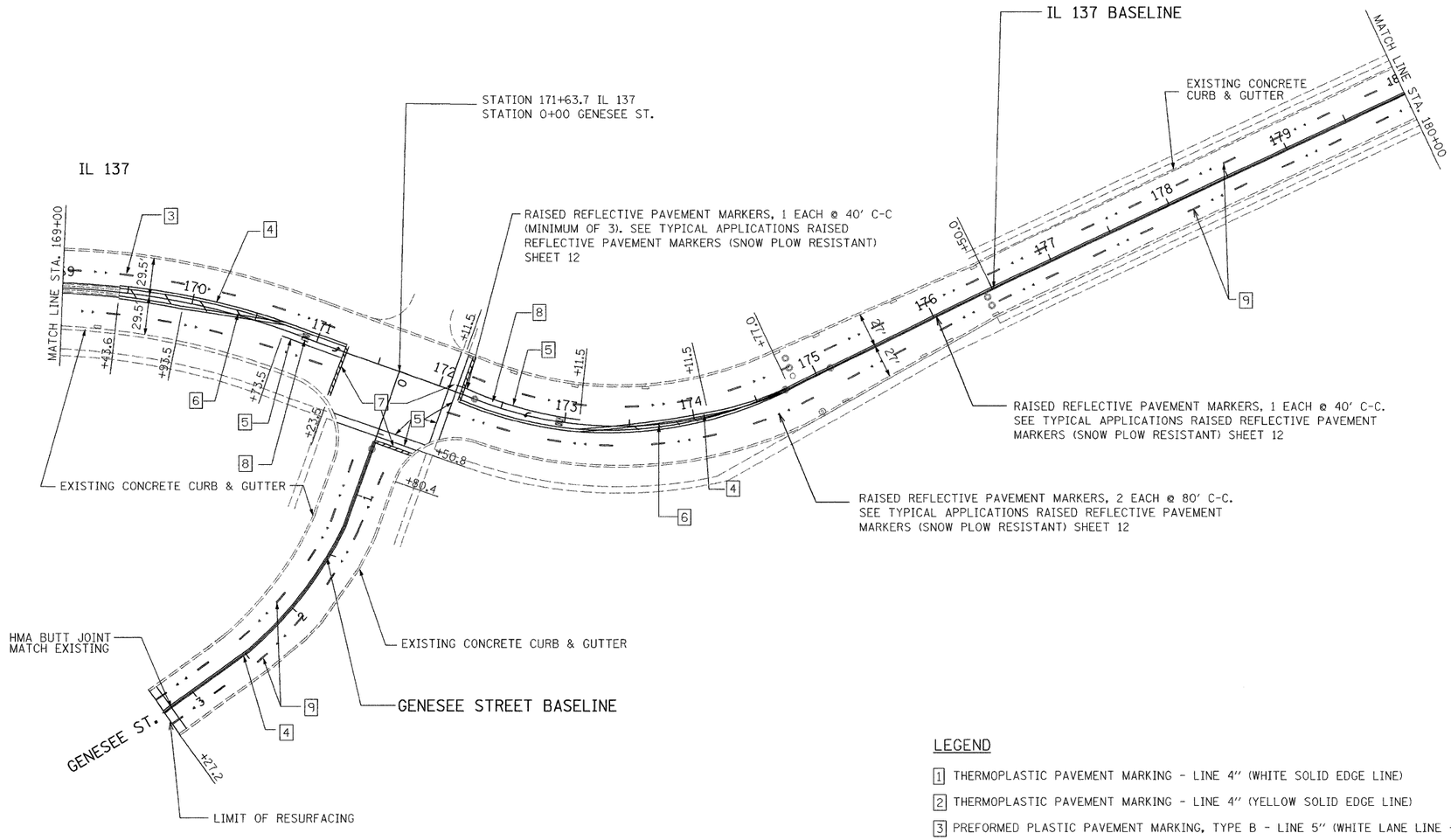
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 50.0000 ' / IN. | CHECKED - | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**ROADWAY AND PAVEMENT MARKING PLANS**

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 6 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




## LEGEND

1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID EDGE LINE)

2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW SOLID EDGE LINE)

3 PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5" (WHITE LANE LINE - 10' DASH, 30' SKIP)

4 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW SOLID LINE)

5 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE SOLID LINE)

6 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW DIAGONAL LINE)

7 THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE STOP LINES)

8 THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (TYP.)

9 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE LANE LINE - 10' DASH, 30' SKIP)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
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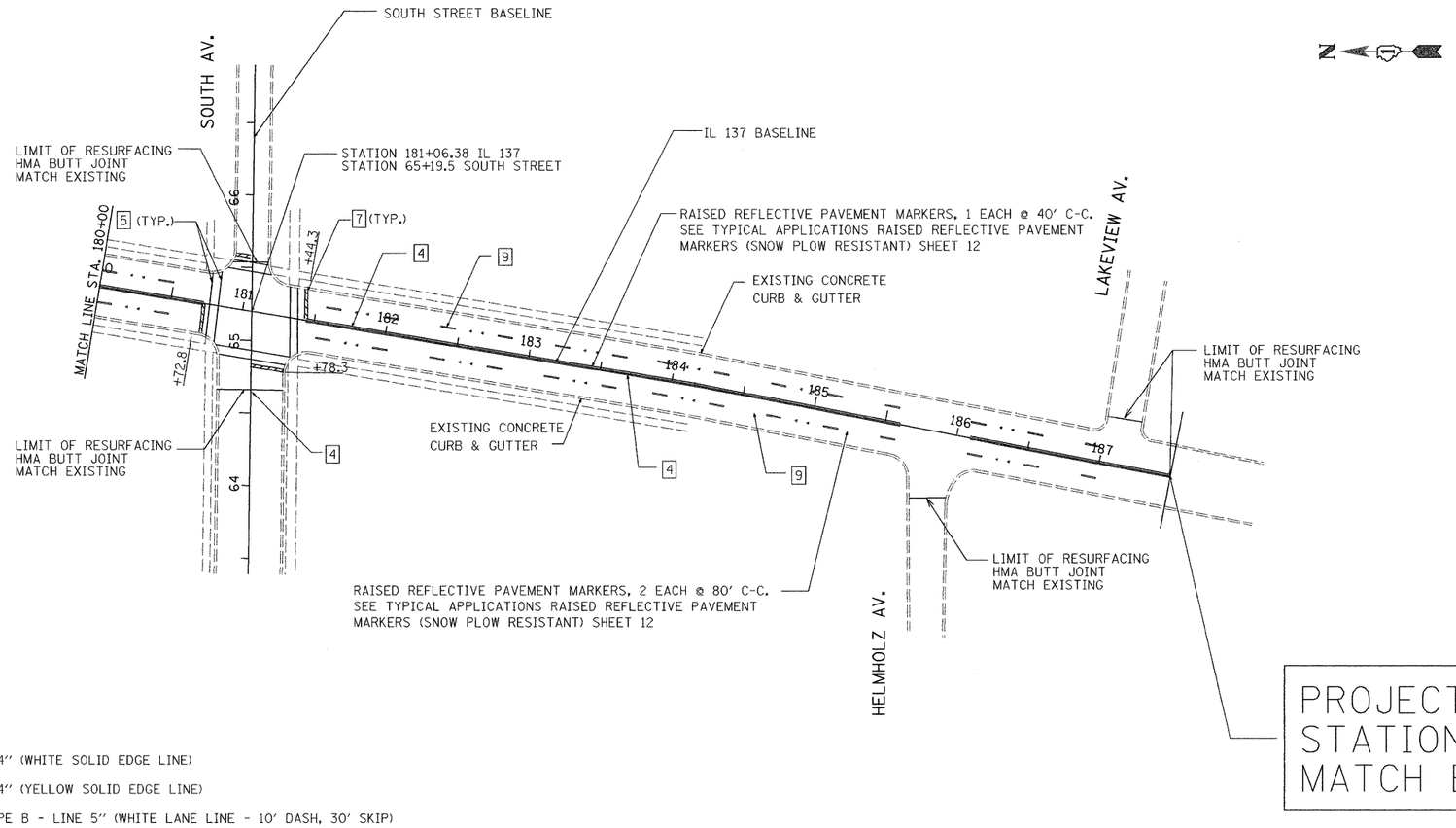
| | | DRAWN - | REVISED - | | | 352 | D-RS-5 | LAKE | | 7 |
| | PLOT SCALE = 50.0000 ' / IN. | CHECKED - | REVISED - | | | | | CONTRACT NO. 60D54 | | |
| | PLOT DATE = 12/28/2007 | DATE - | REVISED - | | SCALE: SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




## LEGEND

1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID EDGE LINE)

2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW SOLID EDGE LINE)

3 PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5" (WHITE LANE LINE - 10' DASH, 30' SKIP)

4 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW SOLID LINE)

5 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE SOLID LINE)

6 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW DIAGONAL LINE)

7 THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE STOP LINES)

8 THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (TYP.)

9 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE LANE LINE - 10' DASH, 30' SKIP)

| | | | |
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| | PLOT SCALE = 50.0000 ' / IN. | CHECKED - | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**ROADWAY AND PAVEMENT MARKING PLANS**

SCALE: | SHEET NO. 8 OF SHEETS | STA. | TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 8 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

## TRAFFIC SIGNAL LEGEND

| | PROPOSED | EXISTING |
|---|---|---|
| CONTROLLER | | |
| RAILROAD CONTROL CABINET | R | R |
| SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNTED | P | P |
| SIGNAL HEAD | | |
| SIGNAL HEAD WITH BACKPLATE | | |
| SIGNAL HEAD, PEDESTRIAN | | |
| SIGNAL POST | | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | |
| MAST ARM ASSEMBLY AND POLE, ALUMINIUM | | |
| COMMON TRENCH | CT | |
| UNIT DUCT | UD | |
| HANDHOLE | | |
| HEAVY DUTY HANDHOLE | H | H |
| DOUBLE HANDHOLE | | |
| G.S.CONDUIT IN TRENCH OR PUSHED | | |
| CAST IRON JUNCTION BOX | | "E" |
| SIGNAL HEAD OPTICALLY PROGRAMMED | "P" | "P" |
| CONDUIT SPLICE | | |
| WOOD POLE | | "E" |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | | "E" |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | | |
| RAILROAD CONTROL CABINET | R | R "E" |
| ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" | | "E" |
| ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" | | "E" |
| TELEPHONE CONNECTION | T | T |
| PEDESTRIAN PUSHBUTTON DETECTOR | | |
| DETECTOR LOOP, TYPE I | | |
| PREFORMED DETECTOR LOOP | | |
| VIDEO DETECTOR | V | V |
| CLOSED CIRCUIT TV | C | C |
| EMERGENCY VEHICLE SYSTEM DETECTOR | | |
| CONFIRMATION BEACON | | |
| UNINTERRUPTABLE POWER SUPPLY | B | |

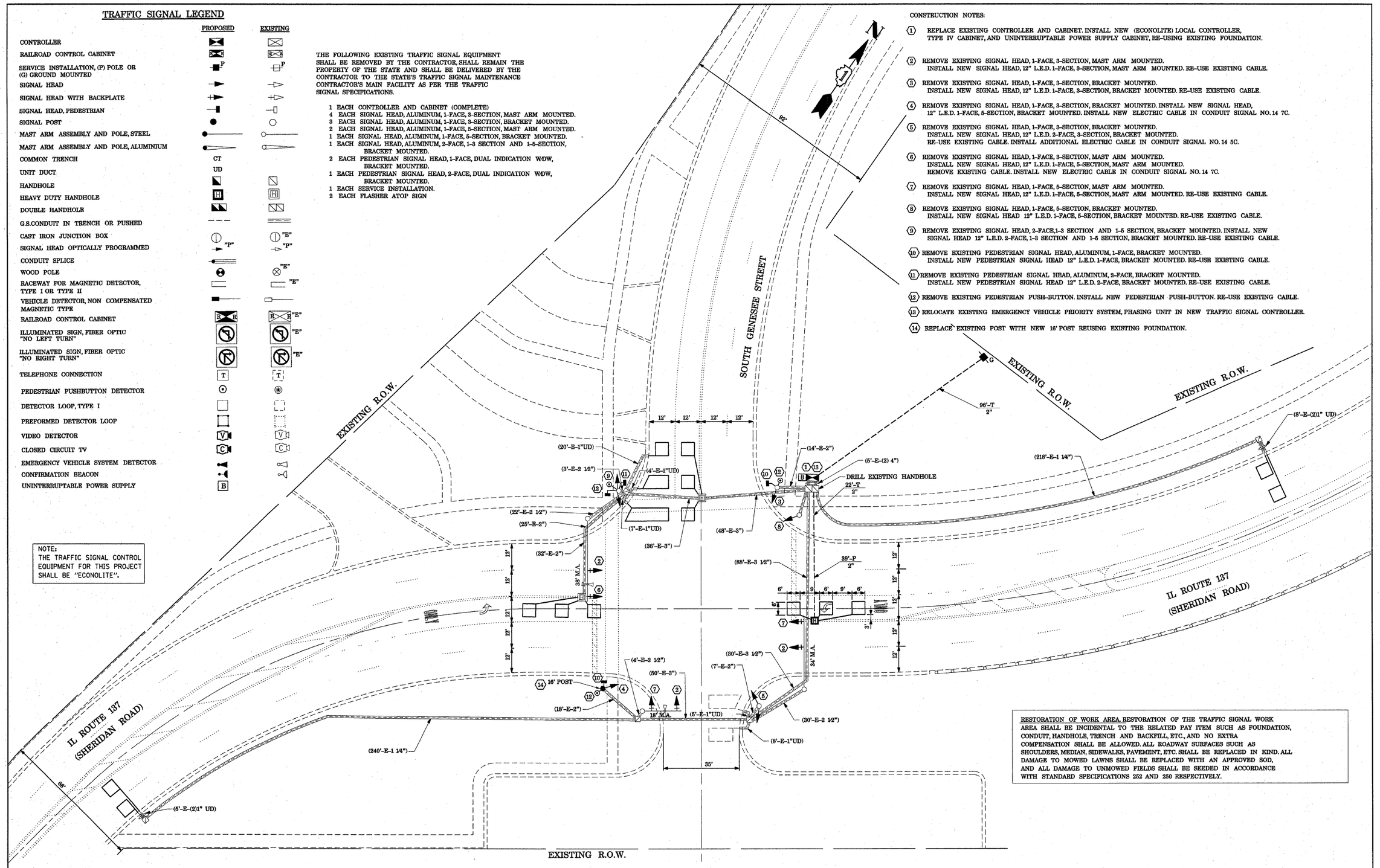
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET (COMPLETE)
4 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 3-SECTION, MAST ARM MOUNTED.
3 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 3-SECTION, BRACKET MOUNTED.
2 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 5-SECTION, MAST ARM MOUNTED.
1 EACH SIGNAL HEAD, ALUMINUM, 1-FACE, 5-SECTION, BRACKET MOUNTED.
1 EACH SIGNAL HEAD, ALUMINUM, 2-FACE, 1-3 SECTION AND 1-5-SECTION, BRACKET MOUNTED.
2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE, DUAL INDICATION WDW, BRACKET MOUNTED.
1 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE, DUAL INDICATION WDW, BRACKET MOUNTED.
1 EACH SERVICE INSTALLATION.
2 EACH FLASHER ATOP SIGN

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

CONSTRUCTION NOTES:

1. REPLACE EXISTING CONTROLLER AND CABINET. INSTALL NEW (ECONOLITE) LOCAL CONTROLLER, TYPE IV CABINET, AND UNINTERRUPTABLE POWER SUPPLY CABINET, RE-USING EXISTING FOUNDATION.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 1-FACE, 3-SECTION, MAST ARM MOUNTED. RE-USE EXISTING CABLE.
3. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 1-FACE, 3-SECTION, BRACKET MOUNTED. RE-USE EXISTING CABLE.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 1-FACE, 5-SECTION, BRACKET MOUNTED. INSTALL NEW ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 7C.
5. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 2-FACE, 3-SECTION, BRACKET MOUNTED. RE-USE EXISTING CABLE. INSTALL ADDITIONAL ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 5C.
6. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 1-FACE, 5-SECTION, MAST ARM MOUNTED. REMOVE EXISTING CABLE. INSTALL NEW ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 7C.
7. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED. INSTALL NEW SIGNAL HEAD, 12" L.E.D. 1-FACE, 5-SECTION, MAST ARM MOUNTED. RE-USE EXISTING CABLE.
8. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD 12" L.E.D. 1-FACE, 5-SECTION, BRACKET MOUNTED. RE-USE EXISTING CABLE.
9. REMOVE EXISTING SIGNAL HEAD, 2-FACE,1-3 SECTION AND 1-5 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD 12" L.E.D. 2-FACE, 1-3 SECTION AND 1-5 SECTION, BRACKET MOUNTED. RE-USE EXISTING CABLE.
10. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, ALUMINUM, 1-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD 12" L.E.D. 1-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLE.
11. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, ALUMINUM, 2-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD 12" L.E.D. 2-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLE.
12. REMOVE EXISTING PEDESTRIAN PUSH-BUTTON. INSTALL NEW PEDESTRIAN PUSH-BUTTON. RE-USE EXISTING CABLE.
13. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT IN NEW TRAFFIC SIGNAL CONTROLLER.
14. REPLACE EXISTING POST WITH NEW 16' POST REUSING EXISTING FOUNDATION.




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

| | | | |
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| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - 12/28/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

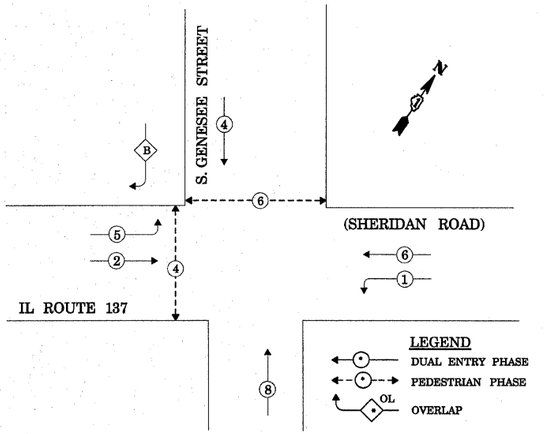
TRAFFIC SIGNAL MODIFICATION PLAN
IL ROUTE 137 (SHERIDAN ROAD) AT S. GENESEE STREET

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

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 9 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

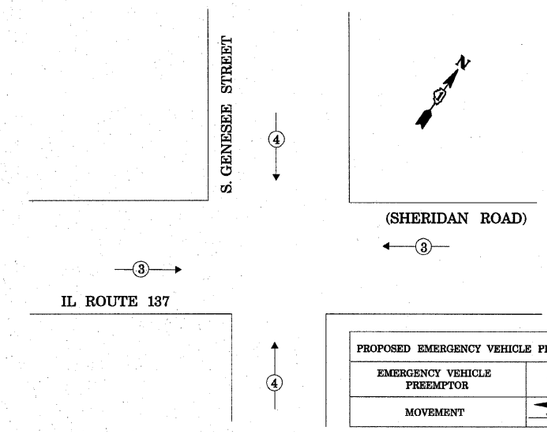
12:22:59 12/28/2007

## CONTROLLER SEQUENCE

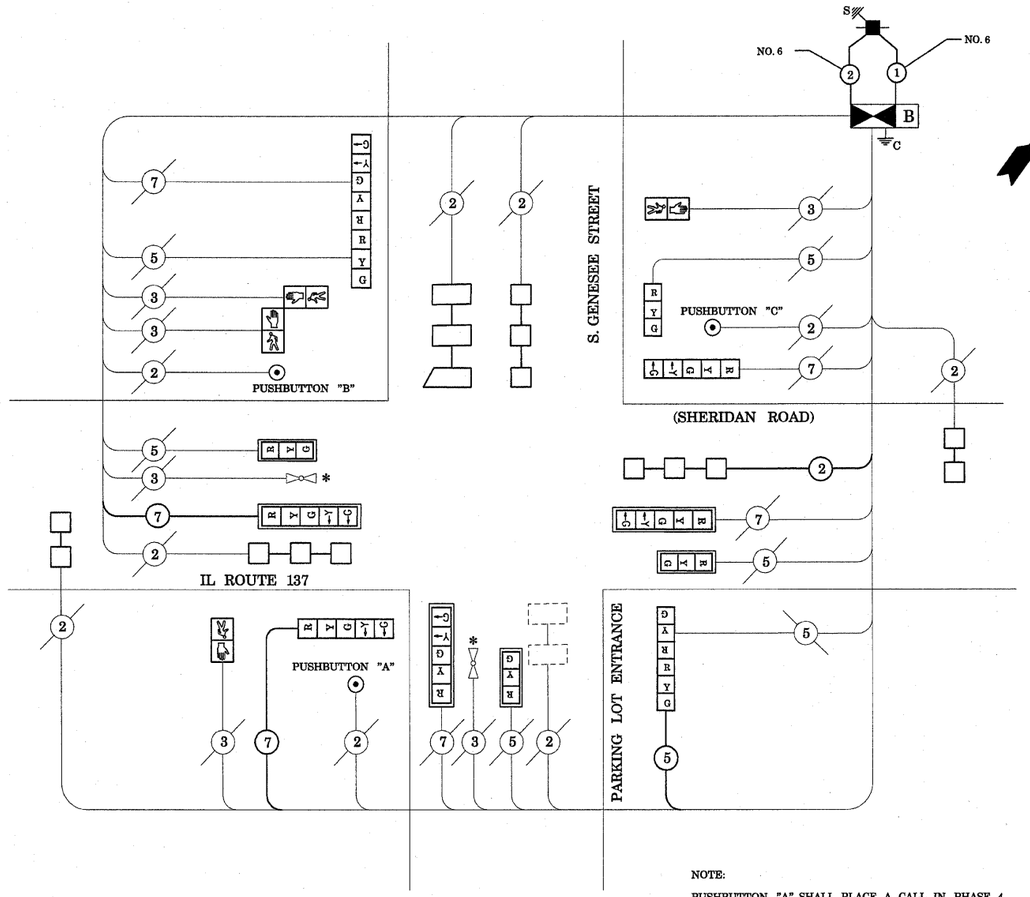



## PHASE DESIGNATION DIAGRAM

## EMERGENCY VEHICLE PREEMPTION SEQUENCE




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




CABLE PLAN

NOTE:

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASE 4
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASE 6

## CABLE PLAN LEGEND

| PROPOSED | EXISTING | |
|---|---|---|
| G | G | 8" (200mm) TRAFFIC SIGNAL SECTION |
| R | R | 12" (300mm) TRAFFIC SIGNAL SECTION |
| W | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12"(300mm) PEDESTRIAN SIGNAL SECTION |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATON |
| T | T | TELEPHONE CONNECTION |
| | | MAGNETIC DETECTOR |
| | | PUSHBUTTON DECTECTOR |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| (2) | (2) | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| R Y G Y G "P" | R Y G Y G "P" | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD |
| | "E" | RAILROAD CONTROL CABINET |
| | "E" | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| | "E" | ILLUMINATE SIGN, FIBER OPTIC "NO RIGHT TURN" |
| HC | HC | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| P | P | GROUND ROD AT POST OR MAST ARM POLE |
| S | S | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (1) | (1) | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| (24) | (24) | FIBER OPTIC CABLE IN CONDUIT NO.62.5125 2-MM12F & SM12F |
| | | MICROWAVE VEHICLE SENSOR |
| V | V | VIDEO DETECTOR |
| C | C | CLOSED CIRCUIT TV |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| B | B | UNINTERRUPTABLE POWER SUPPLY |

## SCHEDULE OF QUANTITIES

| QUANTITIES | UNIT | ITEM |
|---|---|---|
| 15 | SQFT | SIGN PANEL-TYPE II |
| 22 | FOOT | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL |
| 39 | FOOT | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL |
| 1 | EACH | HEAVY-DUTY HANDHOLE |
| 22 | FOOT | TRENCH AND BACKFILL FOR ELECTRICAL WORK |
| 1 | EACH | MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION |
| 1 | EACH | FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL |
| 171 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C |
| 439 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C |
| 90 | FOOT | ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR |
| 114 | FOOT | ELECTRIC CABLE IN CONDUIT, SERVICE NO.6 2C |
| 1 | EACH | DRILL EXISTING HANDHOLE |
| 6 | EACH | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM |
| 1 | EACH | INDUCTIVE LOOP DETECTOR |
| 1 | EACH | TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT |
| 510 | FOOT | DETECTOR LOOP, TYPE I |
| 3 | EACH | PEDESTRIAN PUSH-BUTTON |
| 1 | EACH | * RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT |
| 439 | FOOT | REMOVE ELECTRIC CABLE FROM CONDUIT |
| 1 | EACH | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT |
| 3 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MASTARM MOUNTED |
| 1 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED |
| 2 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED |
| 3 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED |
| 1 | EACH | SIGNAL HEAD, L.E.D., 2-FACE, 3-SECTION, BRACKET MOUNTED |
| 1 | EACH | SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED |
| 2 | EACH | PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED |
| 1 | EACH | PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED |
| 1 | EACH | SERVICE INSTALLATION, GROUND MOUNT |
| 1 | EACH | UNINTERRUPTABLE POWER SUPPLY (UPS) |

* 100% COST TO THE VILLAGE OF WAUKEGAN

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

| TYPE | NO. LAMPS | X WATTAGE INCAND. | WATTAGE LED | X % OPERATION | TOTAL WATTAGE |
|---|---|---|---|---|---|
| SIGNAL (RED) | 13 | 135 | 17 | 0.50 | 110.50 |
| (YELLOW) | 13 | 135 | 25 | 0.25 | 81.25 |
| (GREEN) | 13 | 135 | 15 | 0.25 | 48.75 |
| ARROW | 12 | 135 | 12 | 0.10 | 14.40 |
| PED. SIGNAL | 4 | 90 | 25 | 1.00 | 100.00 |
| CONTROLLER | 1 | 100 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | | 84 | | 0.05 | - |
| | | | | | |
| | | | | | |
| FLASHER | | | | 0.05 | - |
| ENERGY COSTS TO: CITY OF WAUKEGAN | | | | TOTAL= | 454.90 |

ENERGY SUPPLY CONTACT: MR. TARNCY BUCHANAN
PHONE: (630)816-5365
COMPANY: PATRICK ENGINEERING

| | | | |
|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070022\i168forestbydgn | USER NAME = kanthaphixaybc | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - 12/28/2007 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

CABLE PLAN, SCHEDULE OF QUANTITIES,
PHASE DESIGNATION DIAGRAM
IL ROUTE 137 (SHERIDAN ROAD) AT S. GENESEE STREET
SCALE: NTS | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 1D |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

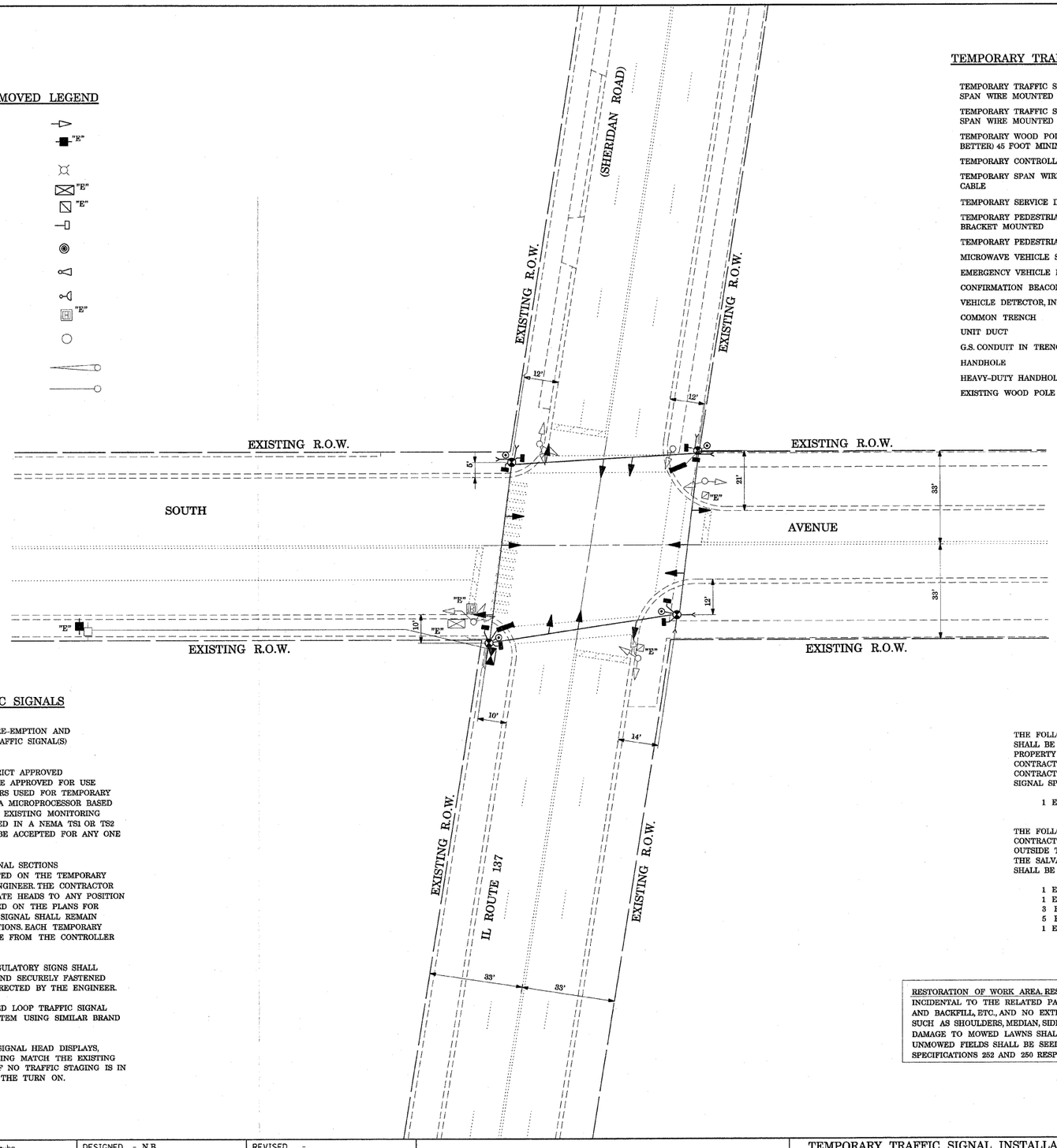
12:23:07 12/28/2007

## EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED "E"
- EXISTING STREET LIGHT, FOUNDATION AND LUMINAIRE TO REMAIN
- EXISTING CONTROLLER TO BE REMOVED "E"
- EXISTING HANDHOLE TO BE REMOVED "E"
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH BUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED "E"
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

## TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- TEMPORARY PEDESTRIAN PUSHBUTTON DETECTOR
- MICROWAVE VEHICLE SENSOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- COMMON TRENCH — CT
- UNIT DUCT — UD
- G.S. CONDUIT IN TRENCH OR PUSHED
- HANDHOLE
- HEAVY-DUTY HANDHOLE
- EXISTING WOOD POLE




NOTE:

ALL EXISTING CONDUIT AND DETECTOR LOOPS ARE TO BE ABANDONED.

## 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 RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR 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 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK 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.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL 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.

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

1 EACH CONTROLLER AND CABINET (COMPLETE)

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

1 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
1 EACH SIGNAL HEAD, 2-FACE, 3-SECTION
3 EACH SIGNAL HEAD, 3-FACE, 3-SECTION
5 EACH TRAFFIC SIGNAL POST
1 EACH SERVICE INSTALLATION

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

| | | | |
|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070222\i168forestwy.dgn | USER NAME = kanthaphixaybo | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 1/4/2008 | REVISED - |

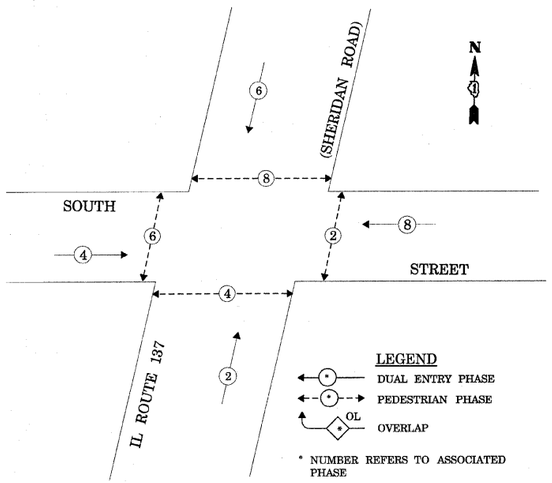
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE
EXISTING TRAFFIC SIGNAL EQUIPMENT
IL ROUTE 137 (SHERIDAN ROAD) AT SOUTH AVENUE

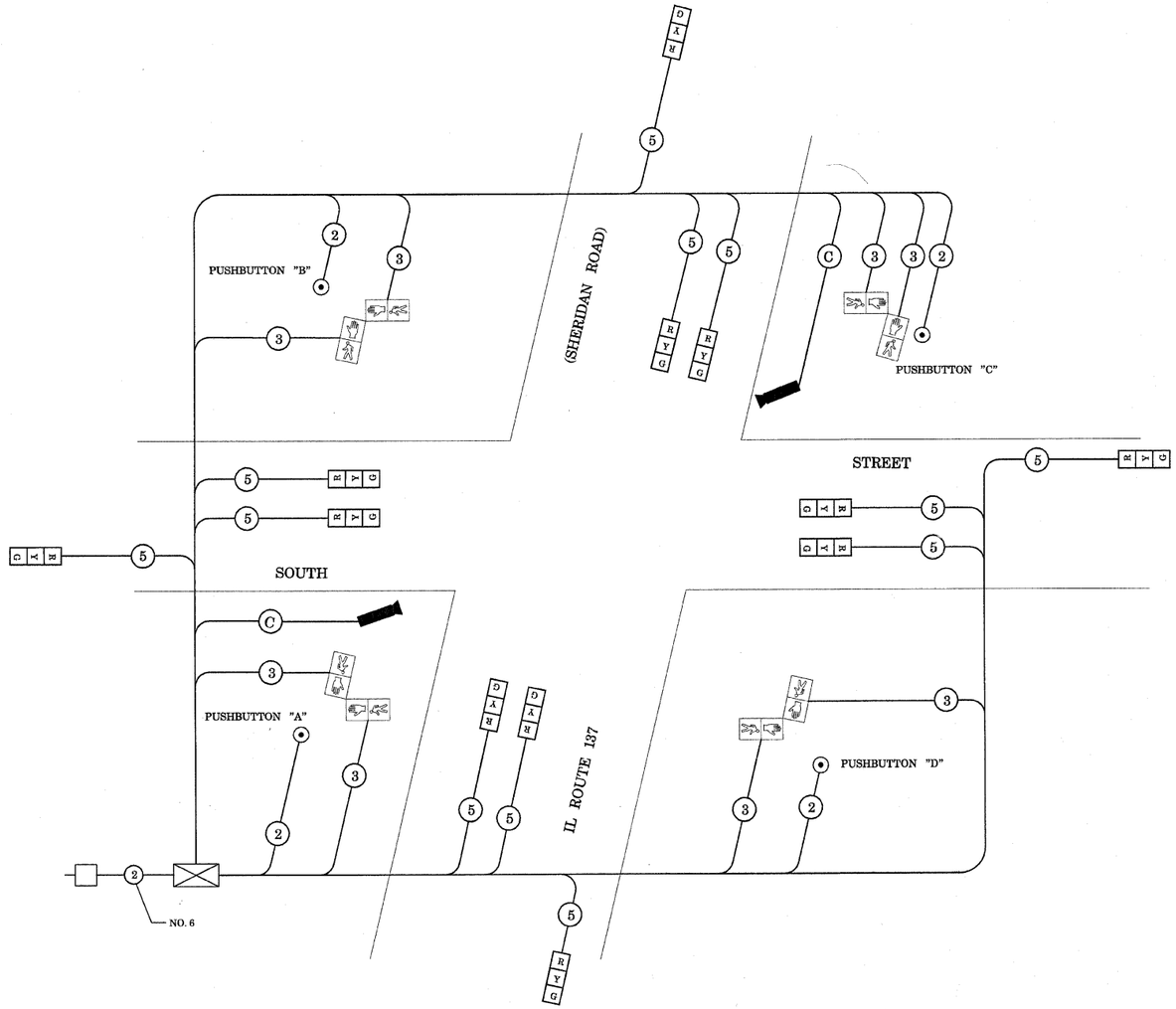
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 11 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

## CONTROLLER SEQUENCE




## TEMPORARY PHASE DESIGNATION DIAGRAM




## TEMPORARY CABLE PLAN




### TEMPORARY CABLE DIAGRAM LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION, 12" (300 mm)
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- 5 — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBERED 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PEDESTRIAN PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- 12" (300 mm) PEDESTRIAN SIGNAL SECTION
- MICROWAVE VEHICLE SENSOR

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

| TYPE | NO. LAMPS | WATTAGE INCAND. | WATTAGE LED | % OPERATION | TOTAL WATTAGE |
|---|---|---|---|---|---|
| SIGNAL (RED) | 12 | 135 | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | 135 | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | 135 | 15 | 0.25 | 45.00 |
| ARROW | | 135 | 12 | 0.10 | |
| PED. SIGNAL | 8 | 90 | 25 | 1.00 | 200.00 |
| CONTROLLER | 1 | 100 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | | 84 | | 0.05 | – |
| | | | | | |
| | | | | | |
| FLASHER | | | | 0.05 | – |
| ENERGY COSTS TO: CITY OF WAUKEGAN | | | | TOTAL= | 522.00 |

ENERGY SUPPLY CONTACT: MR. TARNCY BUCHANAN
PHONE: (630)816-5365
COMPANY: PATRICK ENGINEERING

## SCHEDULE OF QUANTITIES

| QUANTITIES | UNIT | ITEM |
|---|---|---|
| 1 | EACH | TEMPORARY TRAFFIC SIGNAL INSTALLATION |
| 1 | EACH | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT |
| 3 | EACH | REMOVE EXISTING HANDHOLE |
| 6 | EACH | REMOVE EXISTING CONCRETE FOUNDATION |

NOTE:

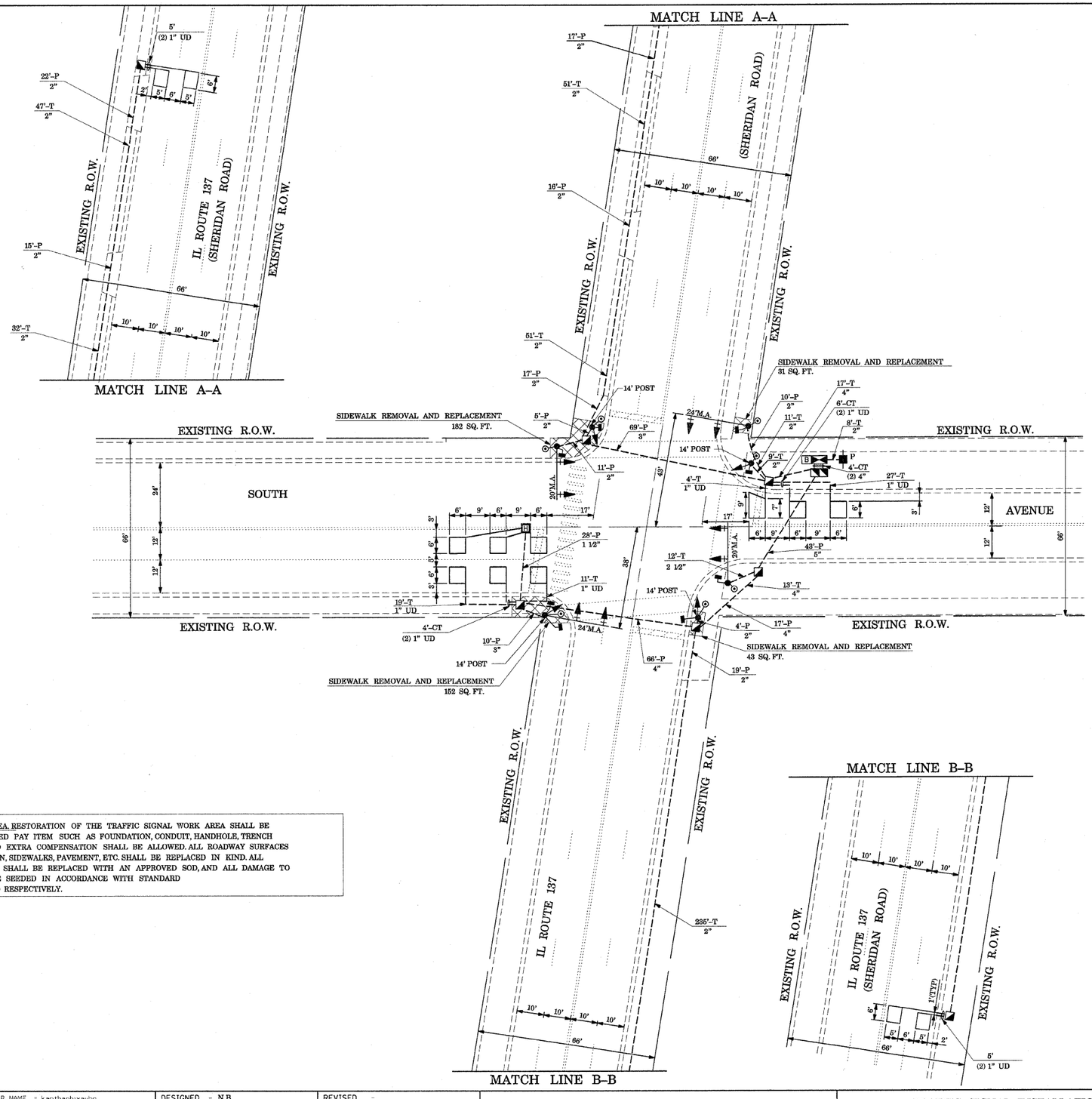
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 4 AND 6
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 6 AND 8
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 2 AND 8
PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 4

| | | | |
|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070022\i168forestway.dgn | USER NAME = kanthaphixaybc | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 1/4/2008 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

TEMPORARY CABLE PLAN, AND TEMPORARY PHASE DESIGNATION DIAGRAM
IL ROUTE 137 (SHERIDAN ROAD) AT SOUTH STREET
SCALE: NTS | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 12 |
| | | CONTRACT NO. 60054 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




N

1

## TRAFFIC SIGNAL LEGEND

| | PROPOSED | EXISTING |
|---|---|---|
| CONTROLLER | | |
| RAILROAD CONTROL CABINET | | |
| SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNTED | P | P |
| SIGNAL HEAD | | |
| SIGNAL HEAD WITH BACKPLATE | | |
| SIGNAL HEAD, PEDESTRIAN | | |
| SIGNAL POST | | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | |
| MAST ARM ASSEMBLY AND POLE, ALUMINIUM | | |
| COMMON TRENCH | CT | |
| UNIT DUCT | UD | |
| HANDHOLE | | |
| HEAVY DUTY HANDHOLE | H | H |
| DOUBLE HANDHOLE | | |
| G.S.CONDUIT IN TRENCH OR PUSHED | | |
| CAST IRON JUNCTION BOX | "P" | "E" |
| SIGNAL HEAD OPTICALLY PROGRAMMED | | |
| CONDUIT SPLICE | "P" | "P" |
| WOOD POLE | | "E" |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | | "E" |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | | |
| RAILROAD CONTROL CABINET | R R | R R "E" |
| ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" | | "E" |
| ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" | | "E" |
| TELEPHONE CONNECTION | T | T |
| PEDESTRIAN PUSHBUTTON DETECTOR | | |
| DETECTOR LOOP, TYPE I | | |
| PREFORMED DETECTOR LOOP | | |
| VIDEO DETECTOR | V | V |
| CLOSED CIRCUIT TV | C | C |
| EMERGENCY VEHICLE SYSTEM DETECTOR | | |
| CONFIRMATION BEACON | | |
| UNINTERRUPTABLE POWER SUPPLY | B | |

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

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

| | | | |
|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070022\i168@forest+bydgn | USER NAME = kanthaphixaybo | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 1/4/2008 | REVISED - |

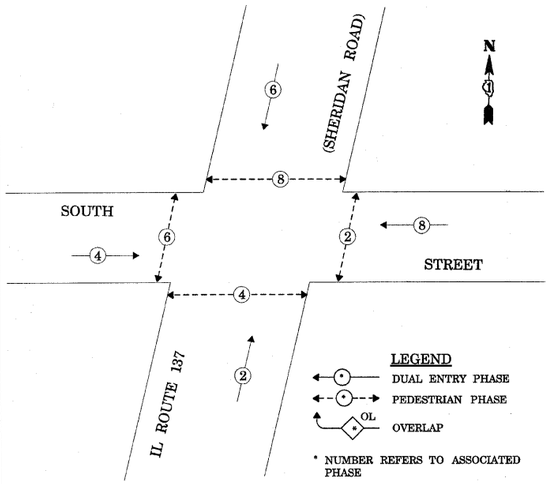
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

TRAFFIC SIGNAL INSTALLATION PLAN
IL ROUTE 137 (SHERIDAN ROAD) AT SOUTH STREET

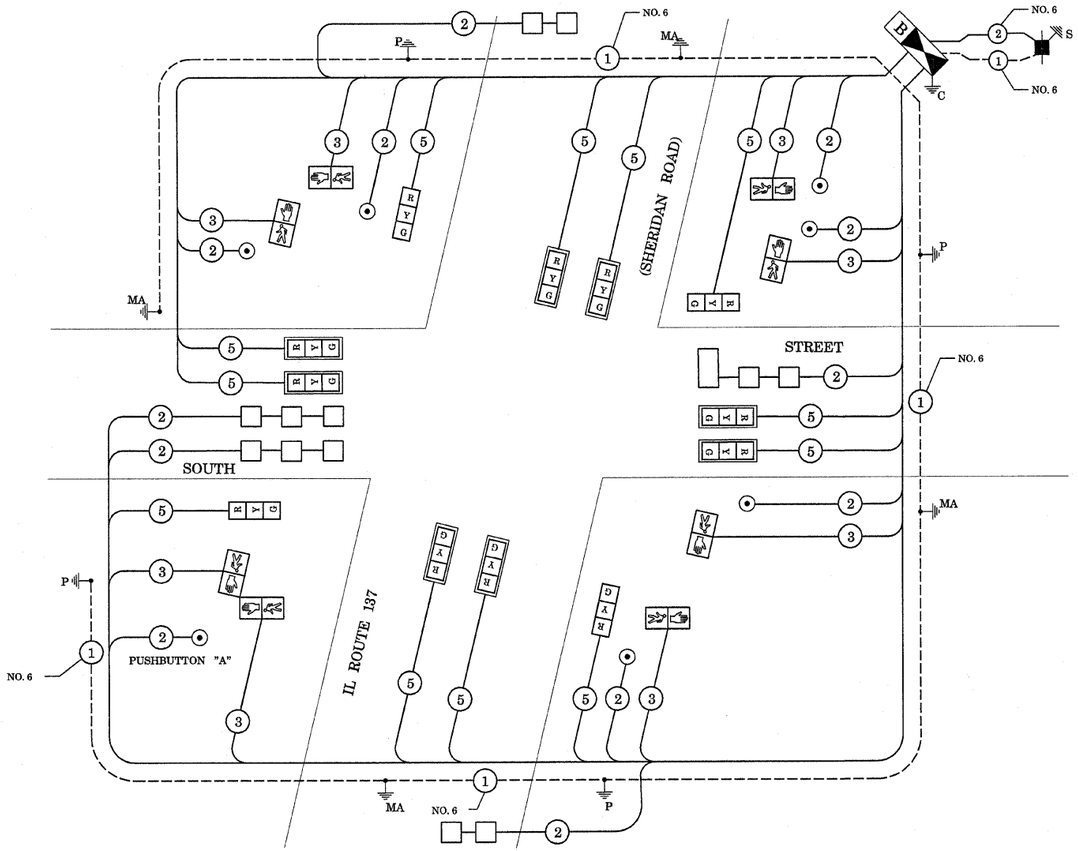
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 13 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

## CONTROLLER SEQUENCE




PHASE DESIGNATION DIAGRAM




CABLE PLAN

NOTE:

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 4 AND 6

## CABLE PLAN LEGEND

| PROPOSED | EXISTING | |
|---|---|---|
| G | G | 8" (200mm) TRAFFIC SIGNAL SECTION |
| R | R | 12" (300mm) TRAFFIC SIGNAL SECTION |
| W | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12"(300mm) PEDESTRIAN SIGNAL SECTION |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATON |
| T | T | TELEPHONE CONNECTION |
| | | MAGNETIC DETECTOR |
| | | PUSHBUTTON DECTECTOR |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| 2 | 2 | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| R Y G Y G "P" | R Y G G G "P" | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD |
| | "E" | RAILROAD CONTROL CABINET |
| | "E" | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| | "E" | ILLUMINATE SIGN, FIBER OPTIC "NO RIGHT TURN" |
| HC | HC | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| P | P | GROUND ROD AT POST OR MAST ARM POLE |
| S | S | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| 1 | 1 | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| 24 | 24 | FIBER OPTIC CABLE IN CONDUIT NO.62.5125 2-MM12F & SM12F |
| | | MICROWAVE VEHICLE SENSOR |
| V | V | VIDEO DETECTOR |
| C | C | CLOSED CIRCUIT TV |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| B | | UNINTERRUPTABLE POWER SUPPLY |

## SCHEDULE OF QUANTITIES

| QUANTITIES | UNIT | ITEM |
|---|---|---|
| 400 | SQ FT | PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH |
| 408 | SQ FT | SIDEWALK REMOVAL |
| 13.5 | SQFT | SIGN PANEL-TYPE I |
| 30 | SQFT | SIGN PANEL-TYPE II |
| 444 | FOOT | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL |
| 12 | FOOT | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL |
| 38 | FOOT | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL |
| 28 | FOOT | CONDUIT PUSHED, 1"" DIA., GALVANIZED STEEL |
| 136 | FOOT | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL |
| 79 | FOOT | CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL |
| 83 | FOOT | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL |
| 43 | FOOT | CONDUIT PUSHED, 5" DIA., GALVANIZED STEEL |
| 7 | EACH | HANDHOLE |
| 1 | EACH | HEAVY-DUTY HANDHOLE |
| 1 | EACH | DOUBLE HANDHOLE |
| 500 | FOOT | TRENCH AND BACKFILL FOR ELECTRICAL WORK |
| 1 | EACH | FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL |
| 1004 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C |
| 1076 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C |
| 1783 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C |
| 1203 | FOOT | ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR |
| 26 | FOOT | ELECTRIC CABLE IN CONDUIT, SERVICE NO.6 2C |
| 361 | FOOT | ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C |
| 4 | EACH | TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT. |
| 2 | EACH | STEEL MAST ARM ASSEMBLY AND POLE, 20 FT. |
| 2 | EACH | STEEL MAST ARM ASSEMBLY AND POLE, 24 FT. |
| 8 | FOOT | CONCRETE FOUNDATION, TYPE A |
| 4 | FOOT | CONCRETE FOUNDATION, TYPE C |
| 60 | FOOT | CONCRETE FOUNDATION, TYPE E 30" DIAMETER |
| 8 | EACH | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM |
| 5 | EACH | INDUCTIVE LOOP DETECTOR |
| 397 | FOOT | DETECTOR LOOP, TYPE I |
| 7 | EACH | PEDESTRIAN PUSH-BUTTON |
| 1 | EACH | TEMPORARY TRAFFIC SIGNAL INSTALLATION |
| 1 | EACH | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT |
| 3 | EACH | REMOVE EXISTING HANDHOLE |
| 6 | EACH | REMOVE EXISTING CONCRETE FOUNDATION |
| 8 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MASTARM MOUNTED |
| 5 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED |
| 6 | EACH | PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED |
| 1 | EACH | PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED |
| 1 | EACH | SERVICE INSTALLATION, POLE MOUNT |
| 1 | EACH | UNINTERRUPTABLE POWER SUPPLY (UPS) |

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

| TYPE | NO. LAMPS | X WATTAGE INCAND. | X WATTAGE LED | X % OPERATION | TOTAL WATTAGE |
|---|---|---|---|---|---|
| SIGNAL (RED) | 12 | 135 | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | 135 | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | 135 | 15 | 0.25 | 45.00 |
| ARROW | | 135 | 12 | 0.10 | – |
| PED. SIGNAL | 8 | 90 | 25 | 1.00 | 200.00 |
| CONTROLLER | 1 | 100 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | | 84 | | 0.05 | – |
| | | | | | – |
| | | | | | |
| | | | | | |
| FLASHER | | | | 0.05 | |
| ENERGY COSTS TO: CITY OF WAUKEGAN | | | | TOTAL= | 522.00 |

ENERGY SUPPLY CONTACT: MR. TARNCY BUCHANAN
PHONE: (630)816-5365
COMPANY: PATRICK ENGINEERING

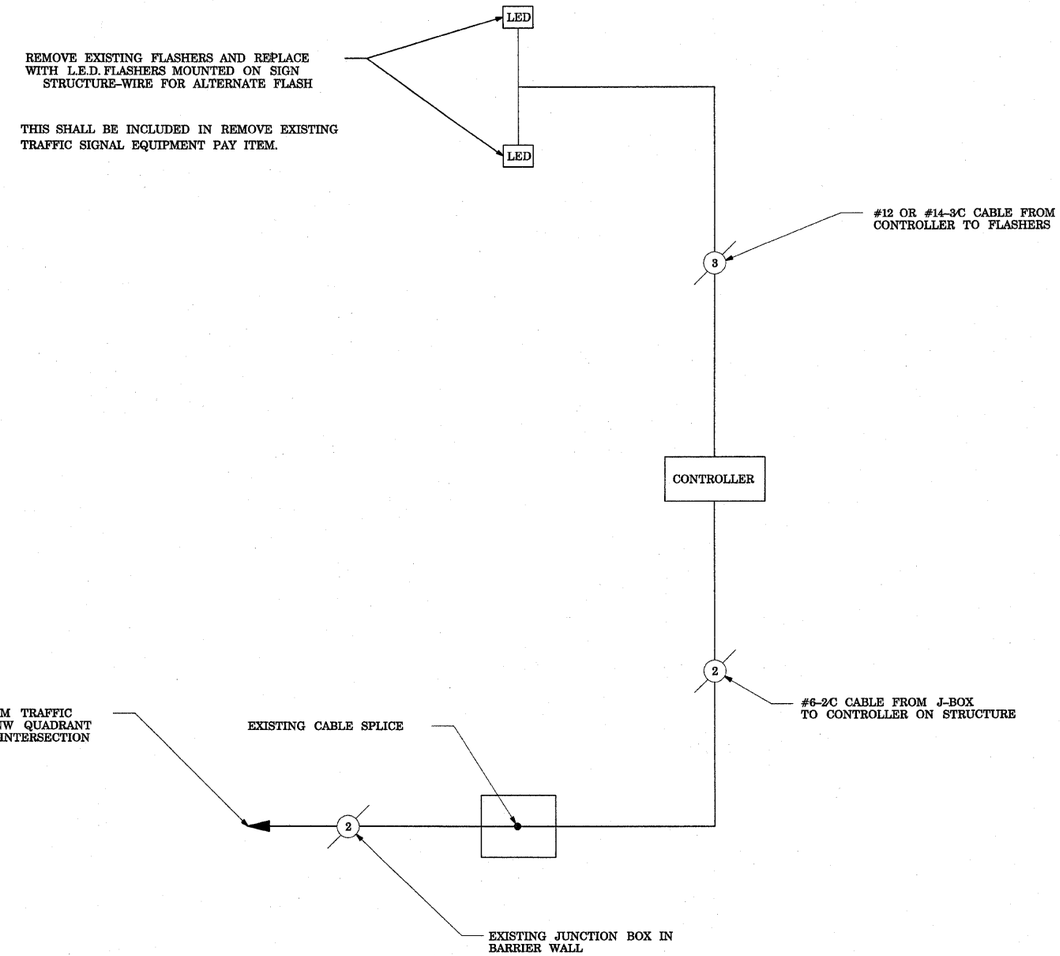
| | | | |
|---|---|---|---|
| FILE NAME = o:\projects\traffic\t070022\i168forestway.dgn | USER NAME = kanthaphixaybo | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 12/28/2007 | DATE - 12/28/2007 | REVISED - |

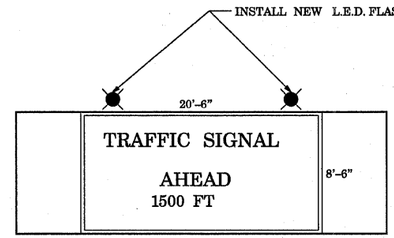
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

CABLE PLAN, SCHEDULE OF QUANTITIES, PHASE DESIGNATION DIAGRAM
IL ROUTE 137 (SHERIDAN ROAD) AT SOUTH STREET

SCALE: NTS | SHEET NO. OF SHEETS | STA. | TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 14 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




NOTE:

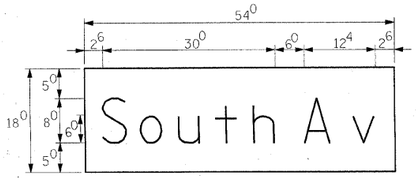
OVERHEAD SIGN PANEL IS LOCATED ON IL-137 APROXIMATELY 1500FT NORTH FROM INTERSECTION OF BUCKLEY ROADWEST DOWNEY ROAD AND IL-137LAKE FRONT HIGHWAY

## CABLE PLAN FOR FLASHERS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070022\i168forestwy.dgn | USER NAME = kanthaphixaybo | DESIGNED - N.B. | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CABLE PLAN FOR FLASHERS | | | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | DRAWN - N.B. | REVISED - | | | | | | | 352 | D-RD-5 | LAKE | 30 | 15 |
| | PLOT SCALE = 20.0000 ' / IN. | CHECKED - D.B. | REVISED - | | | | | | | | | | CONTRACT NO. 60D54 | |
| | PLOT DATE = 12/28/2007 | DATE - 12/28/2007 | REVISED - | | SCALE: NTS | SHEET NO. OF SHEETS | STA. | TO STA. | | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

12:23:18 12/28/2007

## PANEL SIGN DESIGN TYPE 1




____ Sq. M. each

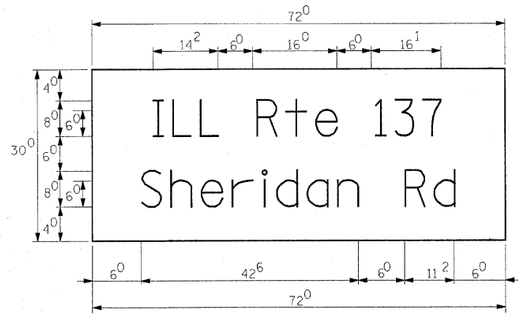
6.75 Sq. Ft. each

2 Required

Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

## PANEL SIGN DESIGN TYPE 2



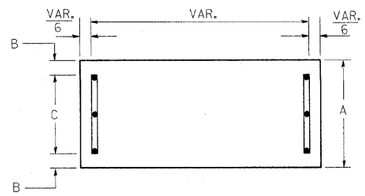

____ Sq. M. each

15.0 Sq. Ft. each

3 Required

Design Series D

## SUPPORTING CHANNELS




| A | B | C |
|---|---|---|
| 18" | 2" | 14" |

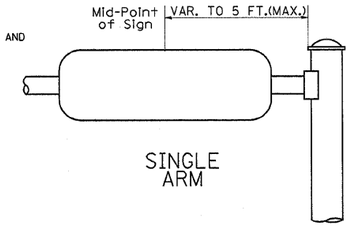
## GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
4. ALL BORDERS SHALL BE ¾" WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * A.K.T. CORPORATION, SCHAUMBURG, IL
   - * TUCKER COMPANY, INC., WAUWATOSA, WI
   - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - * WESTERN TRAFFIC CONTROL INC., CICERO, IL

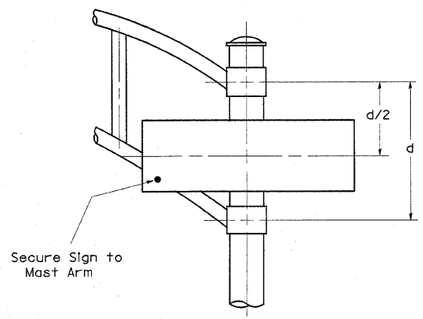
PARTS LISTING:

| | |
|---|---|
| SIGN CHANNEL | PART #HPN053 (MED. CHANNEL) |
| SIGN SCREWS | ¼" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER |
| BRACKETS | PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING |

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

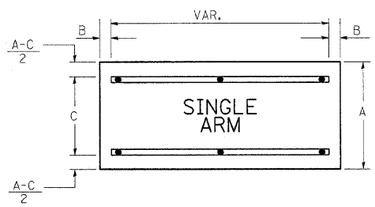



SINGLE ARM




DUAL ARM

## SUPPORTING CHANNELS




| A | B | C |
|---|---|---|
| 18" | 2" | 12" |
| 30" | 2" | 22" |

## SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, $2\frac{3}{8}$ DENOTES $2\frac{3''}{8}$

| FIRST LETTER \ SECOND LETTER | a c d e g o q | b h i k l m n p r u | f w | j | s t | v y | x | z |
|---|---|---|---|---|---|---|---|---|
| SERIES | C D | C D | C D | C D | C D | C D | C D | C D |
| A W X | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $1^1$ $1^4$ | $0^6$ $1^0$ | $1^1$ $1^2$ | $1^2$ $1^4$ |
| B | $1^4$ $1^5$ | $2^0$ $2^1$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^6$ $1^7$ |
| C E G | $1^4$ $1^5$ | $2^0$ $2^1$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ |
| D O Q R | $1^4$ $1^5$ | $2^0$ $2^1$ | $1^4$ $1^5$ | $0^6$ $1^0$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ |
| F | $0^5$ $0^6$ | $1^4$ $1^5$ | $0^6$ $1^0$ | $0^5$ $0^6$ | $0^6$ $1^0$ | $0^6$ $1^0$ | $0^6$ $1^0$ | $1^1$ $1^2$ |
| H I M N | $2^0$ $2^1$ | $2^2$ $2^4$ | $2^0$ $2^1$ | $1^4$ $1^5$ | $1^6$ $1^7$ | $1^6$ $1^7$ | $2^0$ $2^1$ | $2^0$ $2^1$ |
| J U | $2^0$ $2^1$ | $2^0$ $2^1$ | $1^6$ $1^7$ | $1^4$ $1^5$ | $1^6$ $1^7$ | $1^6$ $1^7$ | $1^6$ $1^7$ | $2^0$ $2^1$ |
| K L | $1^1$ $1^2$ | $1^6$ $1^7$ | $1^1$ $1^2$ | $0^5$ $0^6$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ |
| P | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^2$ $1^4$ | $0^5$ $0^6$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| S | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| T | $1^1$ $1^2$ | $1^6$ $1^7$ | $0^6$ $1^0$ | $0^6$ $1^0$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ |
| V | $0^6$ $1^0$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $0^6$ $1^0$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| Y | $0^5$ $0^6$ | $1^4$ $1^5$ | $0^6$ $1^0$ | $0^5$ $0^6$ | $0^5$ $0^7$ | $0^5$ $0^6$ | $0^6$ $1^0$ | $1^1$ $1^2$ |
| Z | $1^6$ $1^7$ | $2^2$ $2^4$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^6$ $1^7$ | $1^6$ $1^7$ | $2^0$ $2^1$ |

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

| FIRST LETTER \ SECOND LETTER | a c d e g o q | b h i k l m n p r u | f w | j | s t | v y | x | z |
|---|---|---|---|---|---|---|---|---|
| SERIES | C D | C D | C D | C D | C D | C D | C D | C D |
| a d h g l j l m n q u | $1^6$ $1^7$ | $2^2$ $2^4$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^6$ $1^7$ | $1^6$ $1^7$ |
| b f k o p s | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^1$ $1^2$ | $0^5$ $0^6$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| c e | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| r | $0^6$ $1^0$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $0^3$ $0^3$ | $0^5$ $0^6$ | $0^5$ $0^6$ | $0^6$ $1^0$ | $0^6$ $1^0$ |
| t z | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $0^6$ $1^0$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ | $1^2$ $1^4$ |
| v y | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $0^5$ $0^6$ | $0^6$ $1^0$ | $0^6$ $1^0$ | $1^1$ $1^2$ | $1^1$ $1^2$ |
| w | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $0^5$ $0^6$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ |
| x | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^1$ $1^2$ | $0^5$ $0^6$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^2$ $1^4$ |

Number To Number

Spacing Chart 8 Inch Series "C & D"

| FIRST NUMBER \ SECOND NUMBER | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| SERIES | C D | C D | C D | C D | C D | C D | C D | C D | C D | C D |
| 0 9 | $1^6$ $1^7$ | $1^6$ $1^7$ | $1^4$ $1^5$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^6$ $1^7$ |
| 1 | $2^0$ $2^1$ | $2^0$ $2^1$ | $2^0$ $2^1$ | $1^6$ $1^7$ | $1^4$ $1^5$ | $2^0$ $2^1$ | $2^0$ $2^1$ | $1^4$ $1^5$ | $2^0$ $2^1$ | $2^0$ $2^1$ |
| 2 3 4 | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^6$ $1^7$ | $1^4$ $1^5$ |
| 5 | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^4$ $1^5$ |
| 6 | $1^6$ $1^7$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^2$ $1^5$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^4$ $1^5$ |
| 7 | $1^2$ $1^4$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^2$ $1^5$ | $0^5$ $0^6$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^1$ $1^2$ | $1^4$ $1^5$ | $1^2$ $1^4$ |
| 8 | $1^6$ $1^7$ | $1^6$ $1^7$ | $1^4$ $1^5$ | $1^2$ $1^5$ | $1^2$ $1^4$ | $1^4$ $1^5$ | $1^6$ $1^7$ | $1^2$ $1^4$ | $1^6$ $1^7$ | $1^4$ $1^5$ |

UPPER AND LOWER CASE LETTER WIDTHS

| LETTERS | 6 INCH UPPER CASE LETTERS SERIES C | D | 8 INCH UPPER CASE LETTERS SERIES C | D | LETTERS | 6 INCH LOWER CASE LETTERS SERIES C | D |
|---|---|---|---|---|---|---|---|
| A | $3^6$ | $5^0$ | $5^0$ | $6^5$ | a | $3^5$ | $4^2$ |
| B | $3^2$ | $4^0$ | $4^3$ | $5^3$ | b | $3^5$ | $4^2$ |
| C | $3^2$ | $4^0$ | $4^3$ | $5^3$ | c | $3^5$ | $4^1$ |
| D | $3^2$ | $4^0$ | $4^3$ | $5^3$ | d | $3^5$ | $4^2$ |
| E | $3^0$ | $3^5$ | $4^0$ | $4^7$ | e | $3^5$ | $4^2$ |
| F | $3^0$ | $3^5$ | $4^0$ | $4^7$ | f | $2^3$ | $2^6$ |
| G | $3^2$ | $4^0$ | $4^3$ | $5^3$ | g | $3^5$ | $4^2$ |
| H | $3^2$ | $4^0$ | $4^3$ | $5^3$ | h | $3^5$ | $4^2$ |
| I | $0^7$ | $0^7$ | $1^1$ | $1^2$ | i | $1^1$ | $1^1$ |
| J | $3^0$ | $3^6$ | $4^0$ | $5^0$ | j | $2^0$ | $2^2$ |
| K | $3^2$ | $4^1$ | $4^3$ | $5^4$ | k | $3^5$ | $4^2$ |
| L | $3^0$ | $3^5$ | $4^0$ | $4^7$ | l | $1^1$ | $1^1$ |
| M | $3^7$ | $4^5$ | $5^1$ | $6^1$ | m | $6^0$ | $7^0$ |
| N | $3^2$ | $4^0$ | $4^3$ | $5^3$ | n | $3^5$ | $4^2$ |
| O | $3^4$ | $4^2$ | $4^5$ | $5^5$ | o | $3^6$ | $4^3$ |
| P | $3^2$ | $4^0$ | $4^3$ | $5^3$ | p | $3^5$ | $4^2$ |
| Q | $3^4$ | $4^2$ | $4^5$ | $5^5$ | q | $3^5$ | $4^2$ |
| R | $3^2$ | $4^0$ | $4^3$ | $5^3$ | r | $2^6$ | $3^2$ |
| S | $3^2$ | $4^0$ | $4^3$ | $5^3$ | s | $3^6$ | $4^2$ |
| T | $3^0$ | $3^5$ | $4^0$ | $4^7$ | t | $2^7$ | $3^2$ |
| U | $3^2$ | $4^0$ | $4^3$ | $5^3$ | u | $3^5$ | $4^2$ |
| V | $3^5$ | $4^4$ | $4^7$ | $6^0$ | v | $4^2$ | $4^7$ |
| W | $4^4$ | $5^2$ | $6^0$ | $7^0$ | w | $5^5$ | $6^4$ |
| X | $3^4$ | $4^0$ | $4^5$ | $5^3$ | x | $4^4$ | $5^1$ |
| Y | $3^6$ | $5^0$ | $5^0$ | $6^6$ | y | $4^6$ | $5^3$ |
| Z | $3^2$ | $4^0$ | $4^3$ | $5^3$ | z | $3^6$ | $4^3$ |

| NUMBER | 6 INCH SERIES C | D | 8 INCH SERIES C | D |
|---|---|---|---|---|
| 1 | $1^2$ | $1^4$ | $1^5$ | $2^0$ |
| 2 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 3 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 4 | $3^5$ | $4^3$ | $4^7$ | $5^7$ |
| 5 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 6 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 7 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 8 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 9 | $3^2$ | $4^0$ | $4^3$ | $5^3$ |
| 0 | $3^4$ | $4^2$ | $4^5$ | $5^5$ |

| | | | |
|---|---|---|---|
| FILE NAME = c:\projects\traffic\t070022\i168forestwyddgn | USER NAME = kanthaphixaybo | DESIGNED - N.B. | REVISED - |
| | | DRAWN - N.B. | REVISED - |
| | PLOT SCALE = 50.0000 ' / IN. | CHECKED - D.B. | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - 1/4/2008 | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NTS | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 16 |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | CONTRACT NO. 60D54 | |

## LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

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.

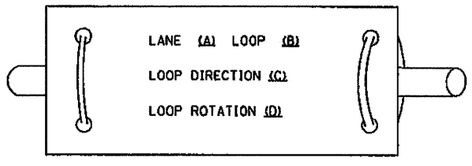
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

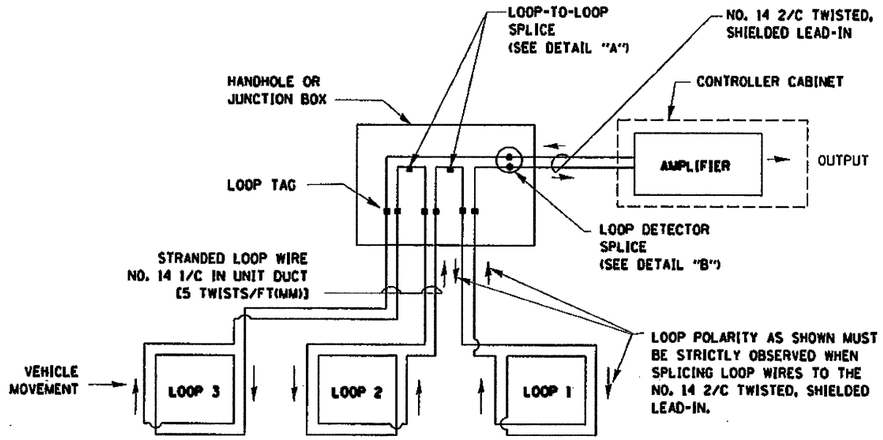



A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

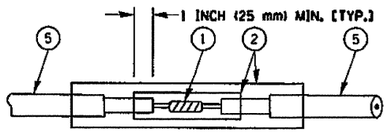
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

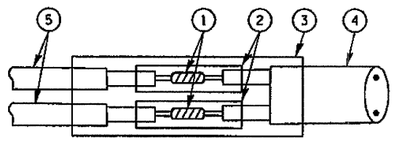



### DETECTOR LOOP WIRING SCHEMATIC

- 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.




DETAIL "A"
LOOP-TO-LOOP SPLICE




DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

### LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(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.

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| | PLOT DATE = 10/19/2007 | DATE - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

| F.A.P RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 17 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

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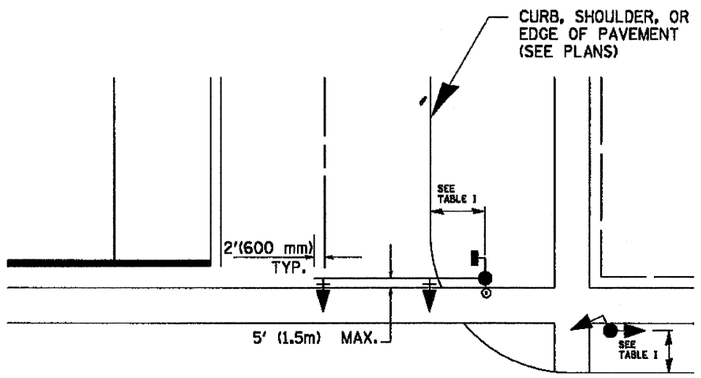
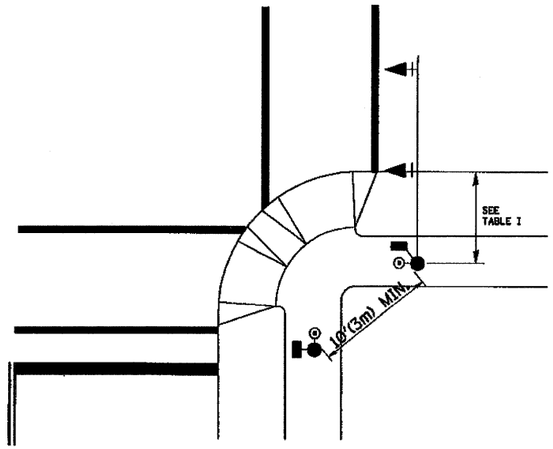
## TRAFFIC SIGNAL MAST ARM AND POST

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




## PEDESTRIAN SIGNAL PUSHBUTTON




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

## NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

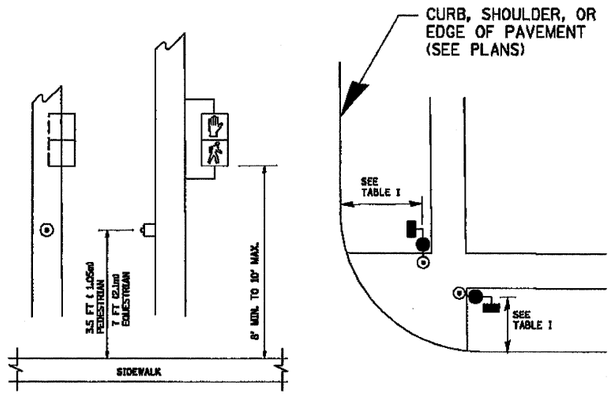
2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

## PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION




## TABLE I

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

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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NTS | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
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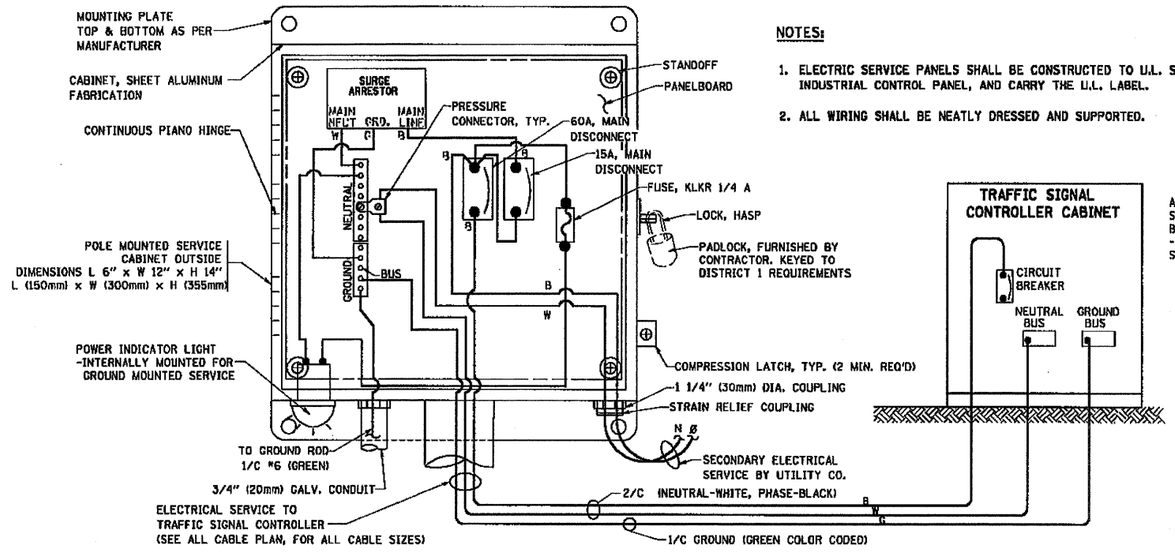
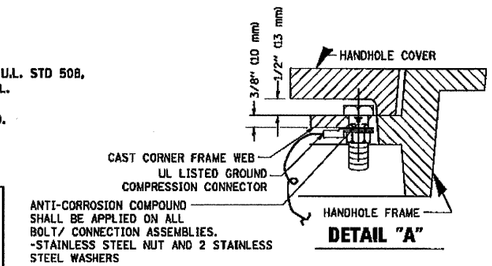
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |



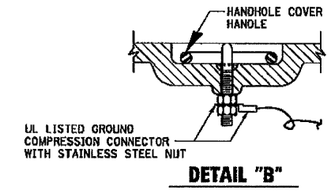

## ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

NOTES:

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




**DETAIL "A"**




**DETAIL "B"**

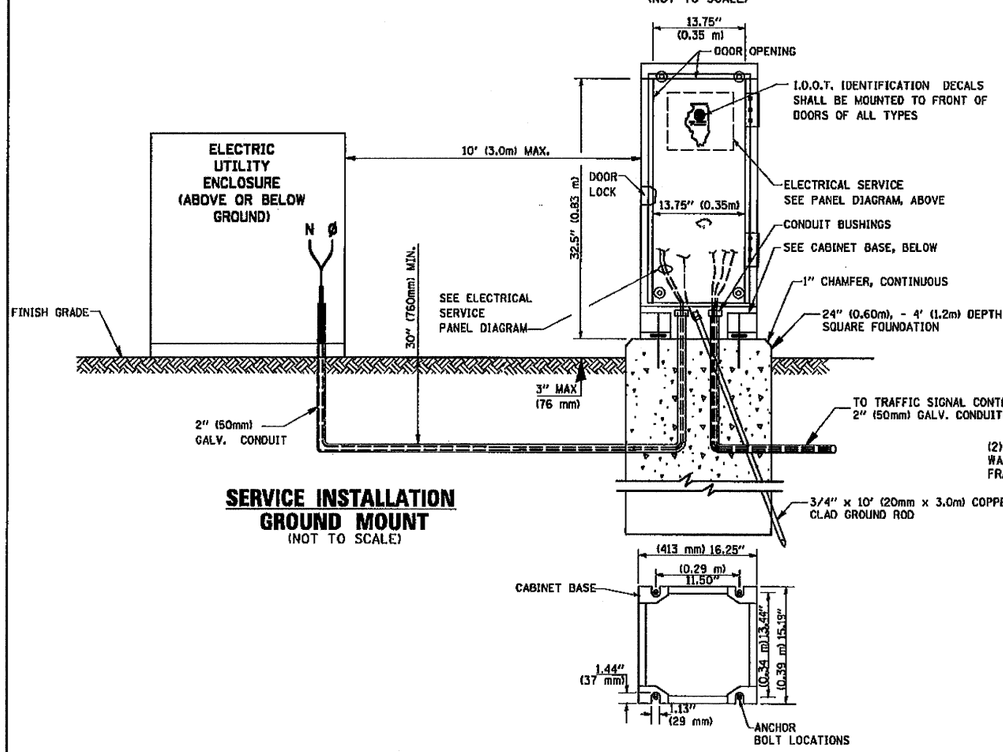
NOTES:

GROUNDING SYSTEM

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

## SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



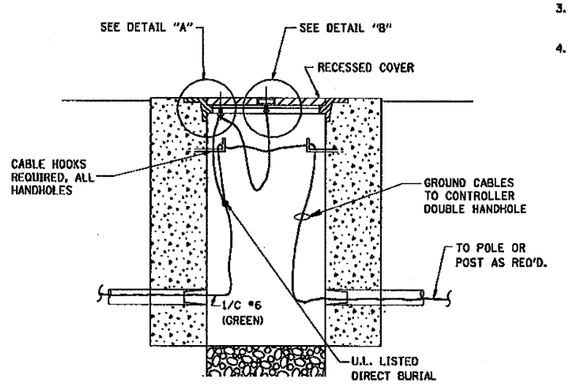

**SERVICE INSTALLATION GROUND MOUNT**

(NOT TO SCALE)




**CABINET – BASE BOLT PATTERN**

(NOT TO SCALE)

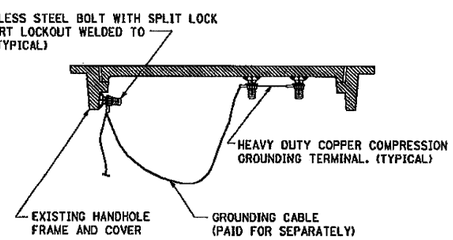



**HANDHOLE COVER & FRAME – GROUNDING DETAIL**

(NOT TO SCALE)

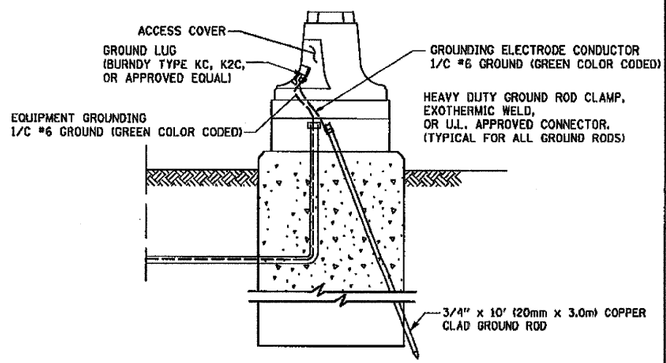

NOTES:

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




**EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL**

(NOT TO SCALE)




**MAST ARM POLE / POST–GROUNDING DETAIL**

(NOT TO SCALE)

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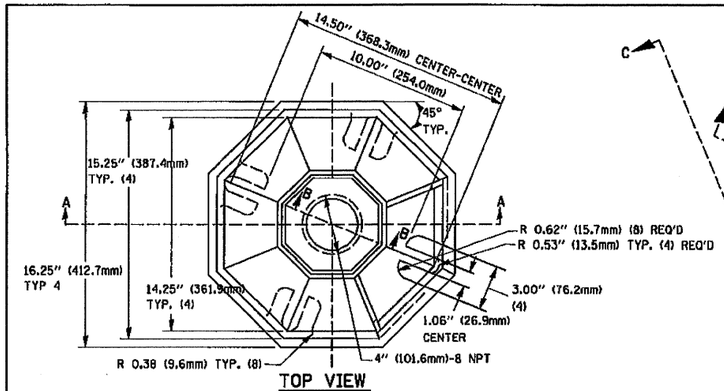
| | PLOT DATE = 10/12/2007 | DATE - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

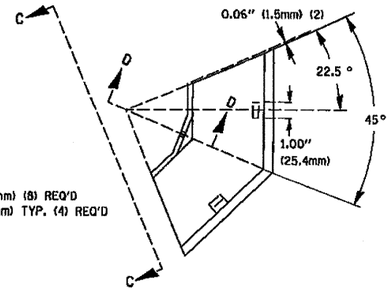
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

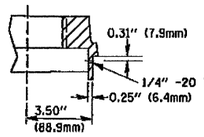
SCALE: NTS | SHEET NO. OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | 0-RD-5 | LAKE | 30 | 19 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

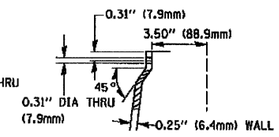



TOP VIEW




SECTION B-B

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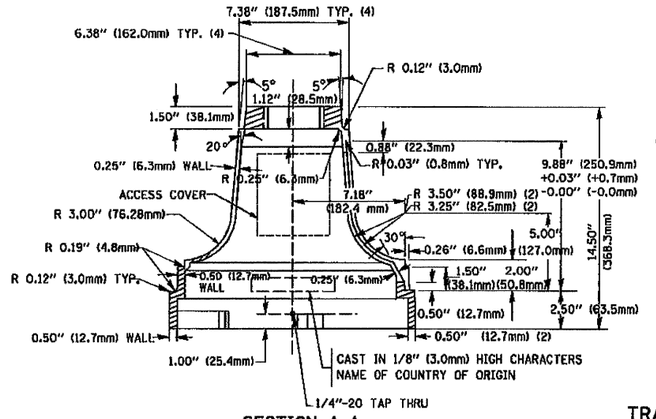
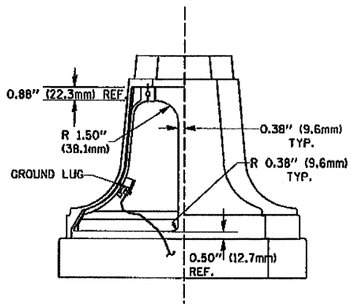
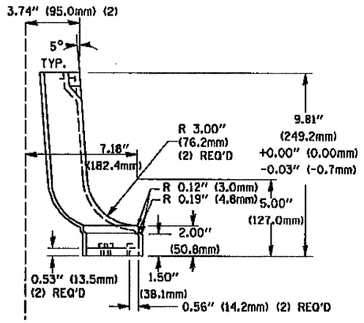


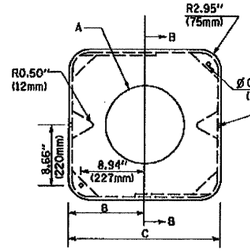

SECTION A-A

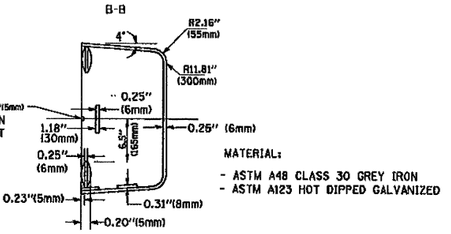



VIEW C-C




TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

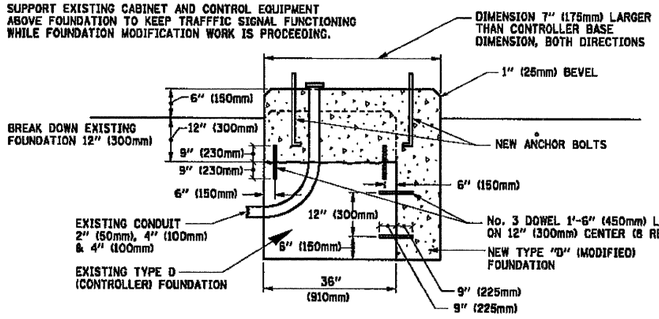



| TYPE | A | B | C | HEIGHT | WEIGHT |
|---|---|---|---|---|---|
| I | Ø 10.125"(257mm) | 9.5"(241mm) | 19"(483mm) | 12" (300mm) | 24kg |
| II | Ø 11.125"(283mm) | 10.75"(273mm) | 21.5"(546mm) | 12" (300mm) | 26kg |

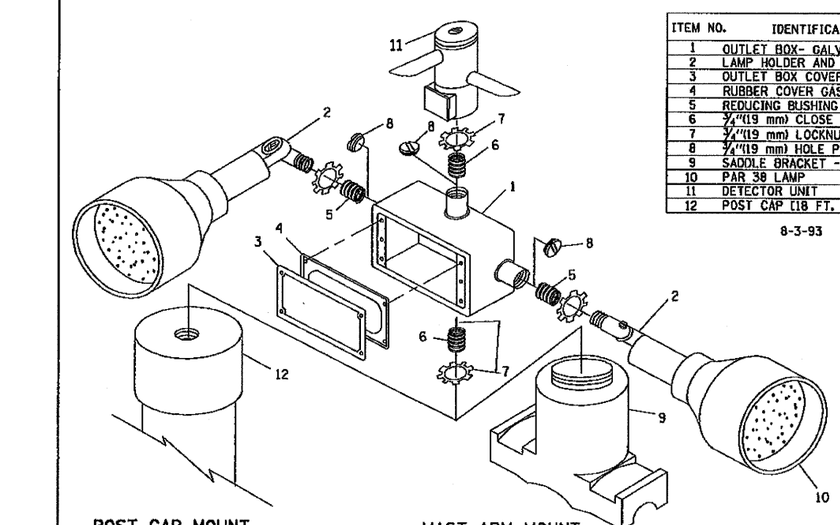
SHROUD DETAIL

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




MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)




POST CAP MOUNT

MAST ARM MOUNT

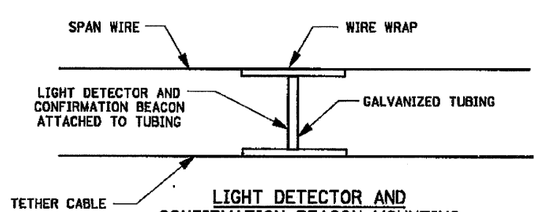
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

| ITEM NO. | IDENTIFICATION |
|---|---|
| 1 | OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M) |
| 2 | LAMP HOLDER AND COVER |
| 3 | OUTLET BOX COVER |
| 4 | RUBBER COVER GASKET |
| 5 | REDUCING BUSHING |
| 6 | ¾"(19 mm) CLOSE NIPPLE |
| 7 | ¾"(19 mm) LOCKNUT |
| 8 | ¾"(19 mm) HOLE PLUG |
| 9 | SADDLE BRACKET - GALV. |
| 10 | PAR 38 LAMP |
| 11 | DETECTOR UNIT |
| 12 | POST CAP (18 FT. (5.4 m) POST MIN.) |

8-3-93

NOTES:

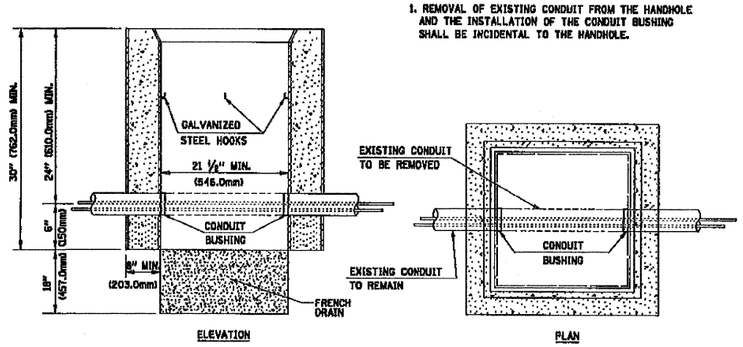
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾"(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.




LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.




DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

| | | | |
|---|---|---|---|
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**STATE OF ILLINOIS**
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| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 20 |
| | | CONTRACT NO. 60D54 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

CONTRACT NO. 60D54

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| STA. | TO STA. | | | |
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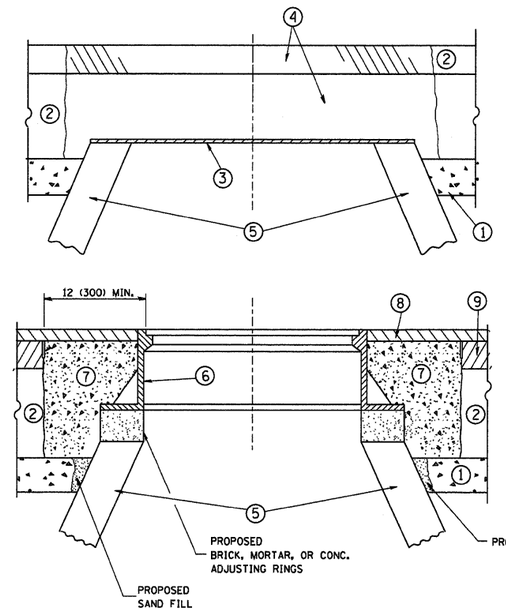



## CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

## LEGEND

1. SUB-BASE GRANULAR MATERIAL
2. EXISTING PAVEMENT
3. 36 (900) DIAMETER METAL PLATE
4. PROPOSED CRUSHED STONE AND HMA SURFACE MIX
5. EXISTING STRUCTURE
6. FRAME AND LID (SEE NOTES)
7. CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
8. PROPOSED HMA SURFACE COURSE
9. PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

# DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

| REVISIONS | |
|---|---|
| NAME | DATE |
| R. SHAH | 10/25/94 |
| R. SHAH | 01/30/95 |
| R. SHAH | 03/10/95 |
| A. ABBAS | 03/21/97 |
| R. WIEDEMAN | 05/14/04 |
| R. BORO | 01/01/07 |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: VERT. NONE HORIZ.

DRAWN BY

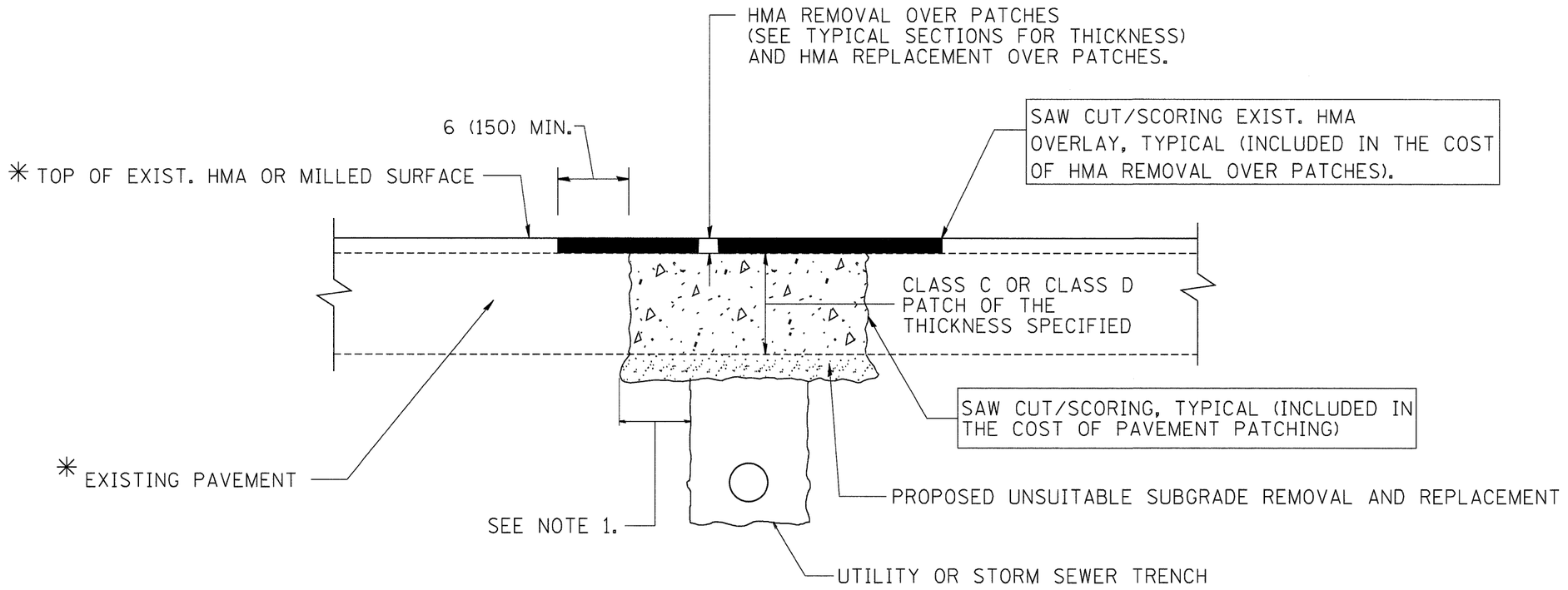
CHECKED BY

BD600-03 (BD-8)

PLOT DATE = 3/5/2007
FILE NAME = K:\dista\sch\bd803.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60D54

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 22 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT | | |




* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

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.

| REVISIONS NAME | DATE |
|---|---|
| R. SHAH | 10/25/94 |
| R. SHAH | 01/14/95 |
| R. SHAH | 03/23/95 |
| R. SHAH | 04/24/95 |
| A. HOUSEH | 03/15/96 |
| A. ABBAS | 03/21/97 |
| A. ABBAS | 01/20/98 |
| ART ABBAS | 04/27/98 |
| R. BORO | 01/01/07 |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

SCALE: VERT. NONE HORIZ.

DRAWN BY

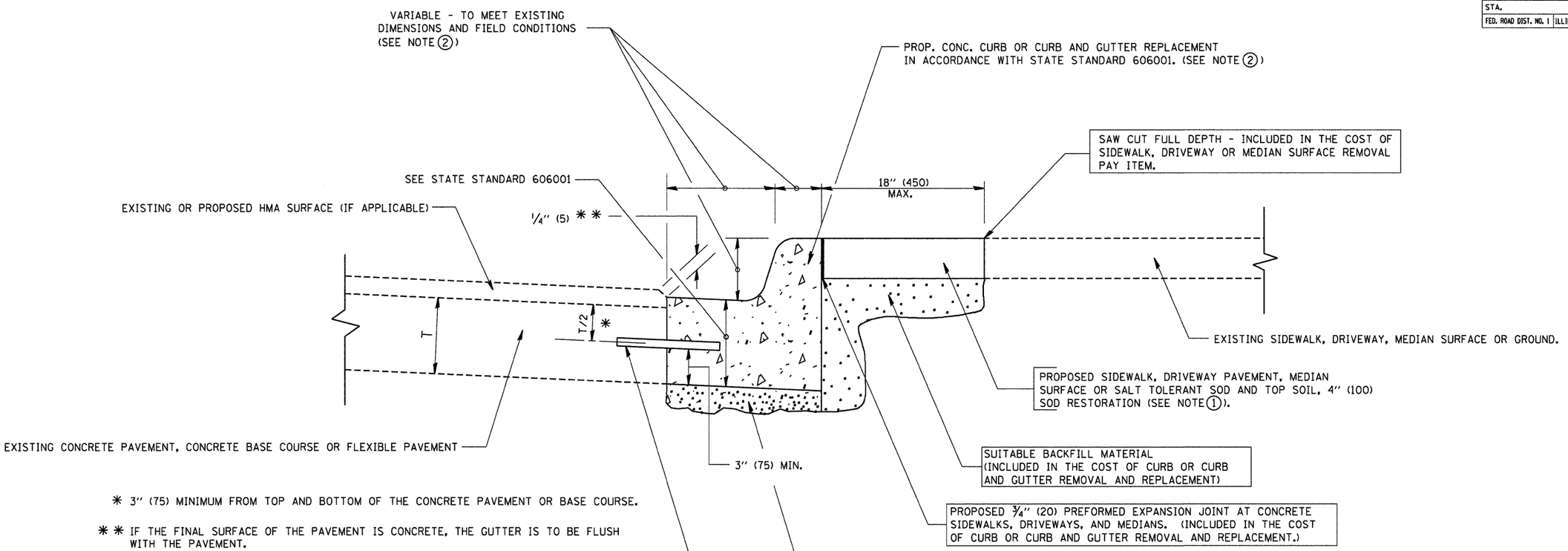
CHECKED BY

BD400-04 (BD-22)

PLOT DATE = 3/5/2007
FILE NAME = K:\district\bd22.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = bauerdl

CONTRACT NO. 60D54

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 23 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT | | |




* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

* * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: (1) SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

(2) CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

(3) FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

(4) LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

(5) THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

(6) THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

(7) THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

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

| REVISIONS NAME | DATE |
|---|---|
| A. HOUSEH | 03/11/94 |
| R. SHAH | 02/24/95 |
| R. SHAH | 03/02/95 |
| R. SHAH | 08/19/96 |
| R. SHAH | 09/12/96 |
| R. SHAH | 09/19/96 |
| R. SHAH | 10/03/96 |
| A. ABBAS | 03/21/97 |
| M. GOMEZ | 01/22/01 |
| R. BORO | 01/01/07 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

SCALE: VERT. NONE HORIZ.

DRAWN BY

CHECKED BY

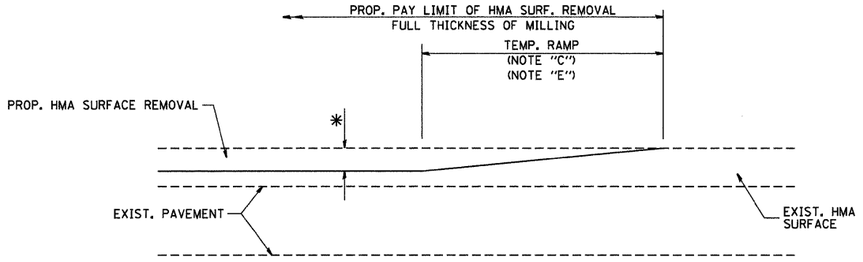
BD600-06 (BD-24)

PLOT DATE = 3/15/2007
FILE NAME = K:\dists\sch\bd24.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = bauerdl

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

CONTRACT NO. 60D54

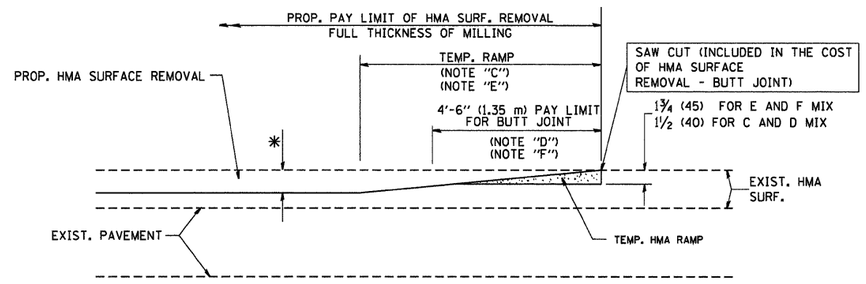
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 24 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT | | |




MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

## OPTION 1

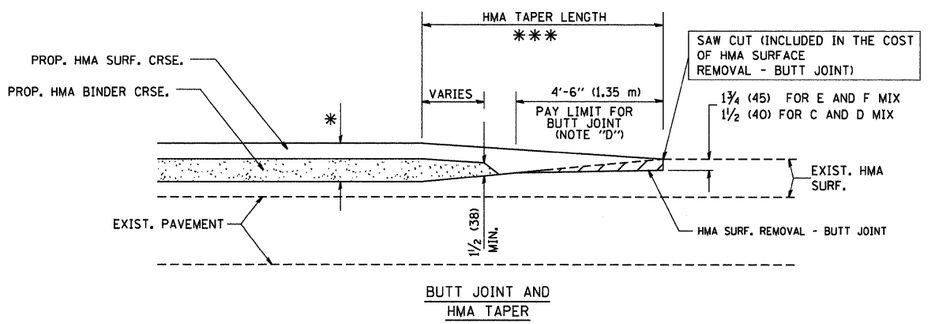



HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

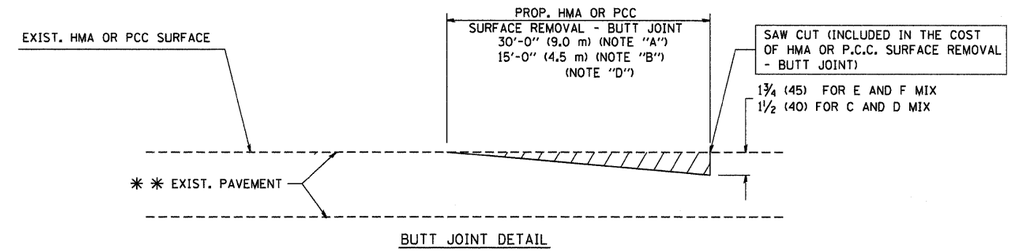
## OPTION 2

## TYPICAL TEMPORARY RAMP

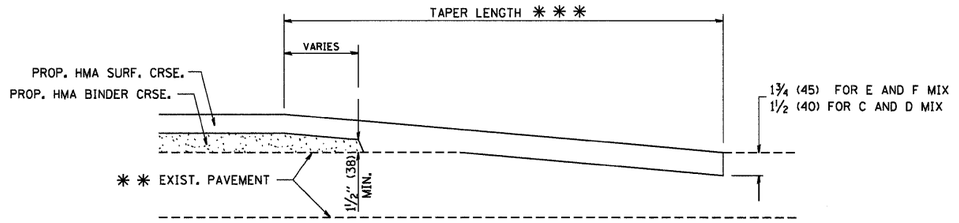



BUTT JOINT AND HMA TAPER

## TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING




BUTT JOINT DETAIL




HMA TAPER DETAIL

## TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

### NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

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

### BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

| REVISIONS | |
|---|---|
| NAME | DATE |
| M. DE YONG | 6-13-90 |
| M. DE YONG | 7-3-90 |
| M. DE YONG | 3-27-92 |
| R. SHAH | 09/09/94 |
| R. SHAH | 10/25/94 |
| A. ABBAS | 03/21/97 |
| M. GOMEZ | 04/06/01 |
| R. BORO | 01/01/07 |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. HORIZ. NONE

DRAWN BY

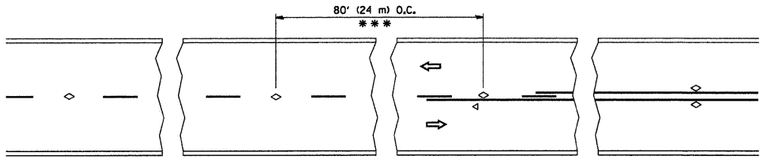
CHECKED BY

BD400-05 (VI=BD32)

PLOT DATE = 3/9/2007
FILE NAME = K:\stnstd\std32.dgn
PLOT SCALE = 50.8889 ' / IN.
USER NAME = bauerdl

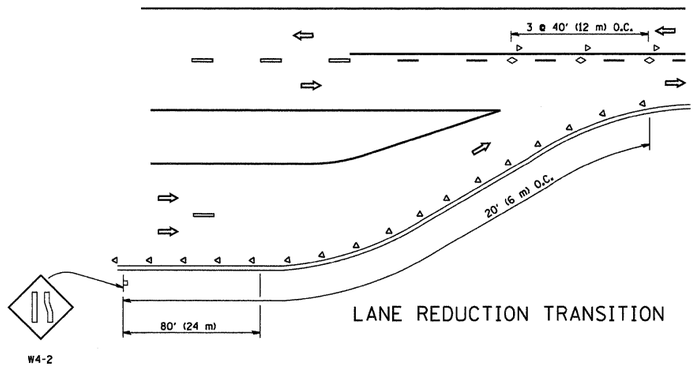
CONTRACT NO. 60D54

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 29 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

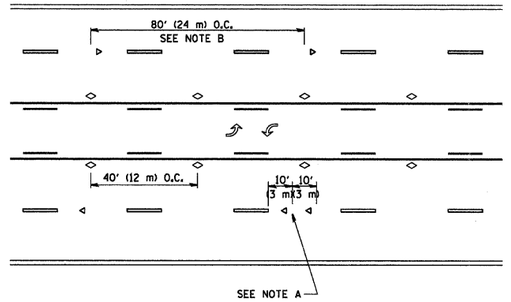



*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

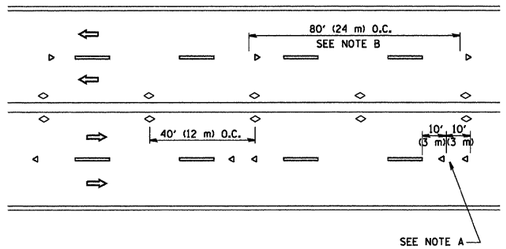
TWO-LANE/TWO-WAY



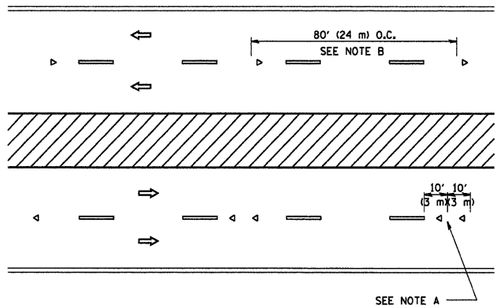

LANE REDUCTION TRANSITION




TWO-WAY LEFT TURN




MULTI-LANE/UNDIVIDED




MULTI-LANE/DIVIDED

## GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

## LANE MARKER NOTES

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

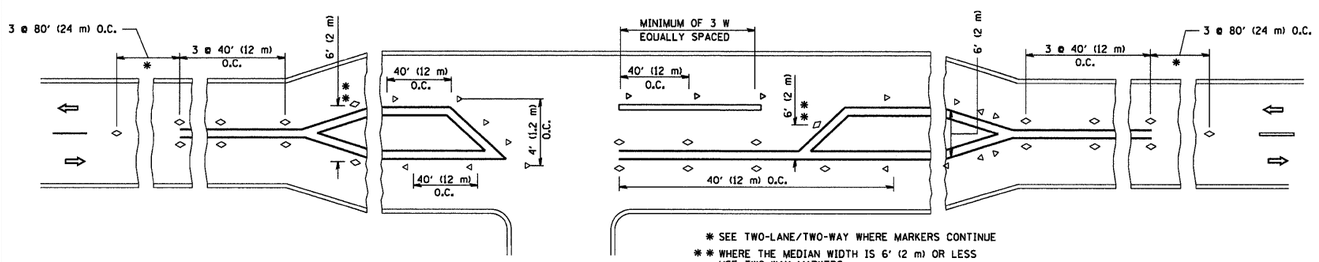
A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

## SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

## DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.




LEFT TURN

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

| REVISIONS NAME | DATE |
|---|---|
| T. RAMMACHER | 09-19-94 |
| T. RAMMACHER | 03-12-99 |
| T. RAMMACHER | 01-06-00 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT
MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-11

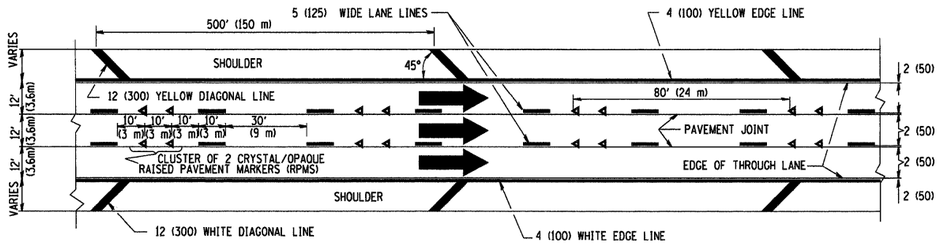
PLOT DATE = 3/6/2007
FILE NAME = K:\dataroh\tc11.dgn
PLOT SCALE = 50.000 '/ IN.
USER NAME = baumdl

CONTRACT NO. 60B54

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 26 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH

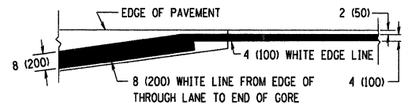
THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH



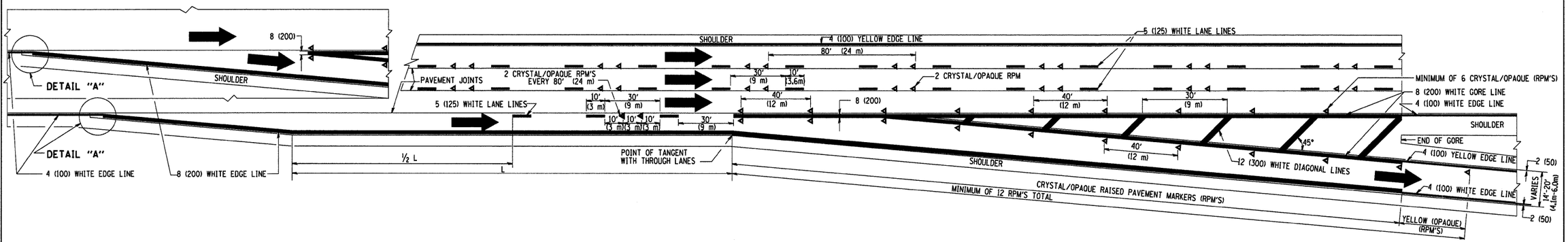

## TYPICAL EDGE LINES & LANE LINES

NOTES:

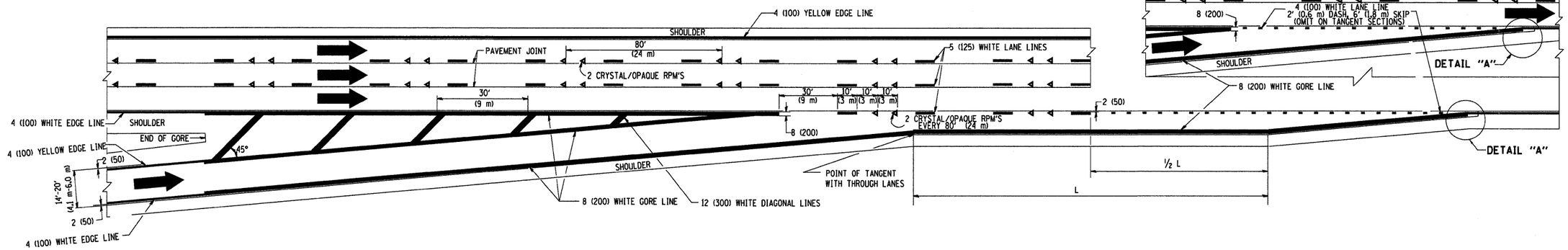
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT
3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC




DETAIL "A"




## TYPICAL EXIT RAMP PAVEMENT MARKINGS




## TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

| REVISIONS | |
|---|---|
| NAME | DATE |
| DWS | 1/90 |
| DWS | 5/91 |
| AH | 3/96 |
| DWS | 7/96 |
| JAF | 2/06 |
| SPB | 1/07 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS

SCALE: NONE

DRAWN BY C.A.D.D.

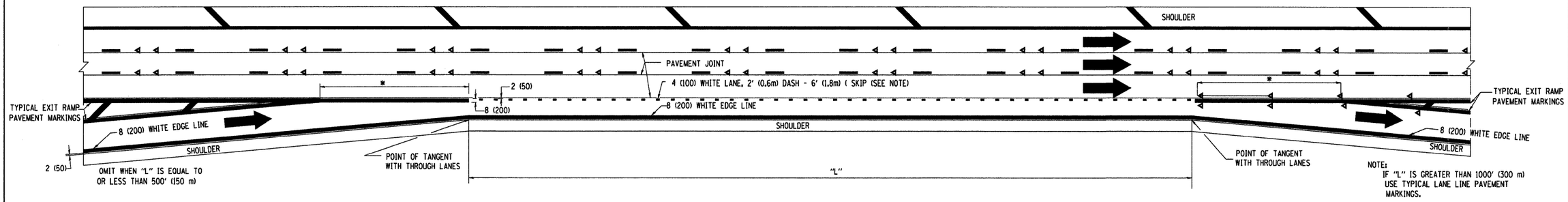
CHECKED BY

TC12 SHEET 1 OF 2

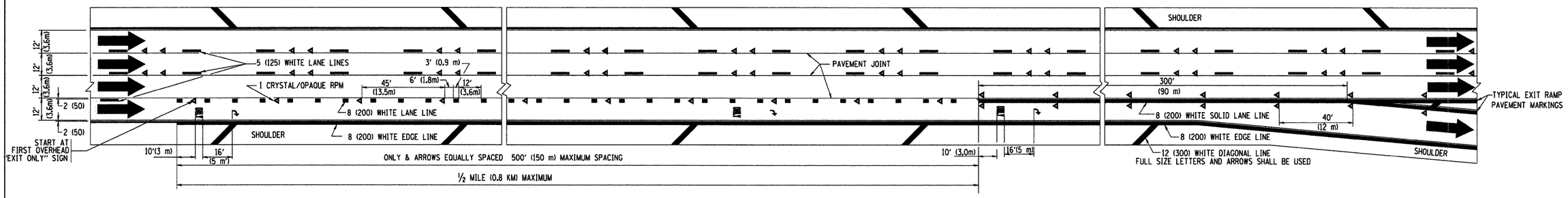
PLOT DATE = 3/6/2007
FILE NAME = K:\district\tc12.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = bauerdl

CONTRACT NO. 60D54

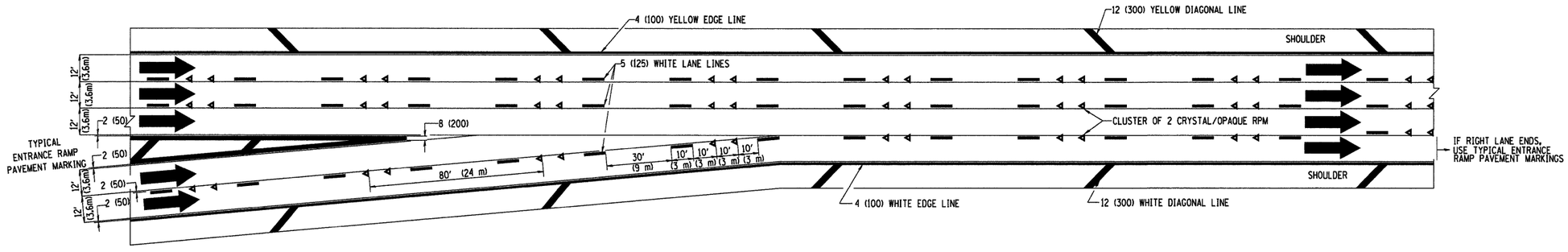
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 27 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




## TYPICAL ENTRANCE/EXIT RAMP COMBINATION PAVEMENT MARKINGS




## TYPICAL EXIT ONLY LANE PAVEMENT MARKINGS




## TYPICAL TWO LANE ENTRANCE RAMP PAVEMENT MARKINGS

| REVISIONS | |
|---|---|
| NAME | DATE |
| DWS | 1/90 |
| DWS | 5/91 |
| SPB | 1/07 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS

SCALE: NONE

DRAWN BY C.A.D.D.

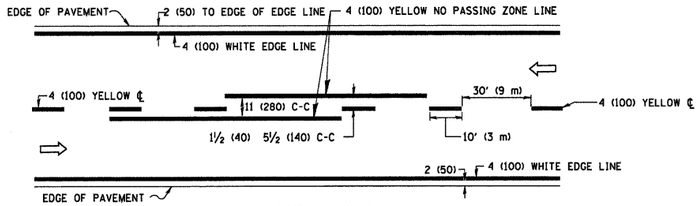
CHECKED BY

TC12 SHEET 2 OF 2

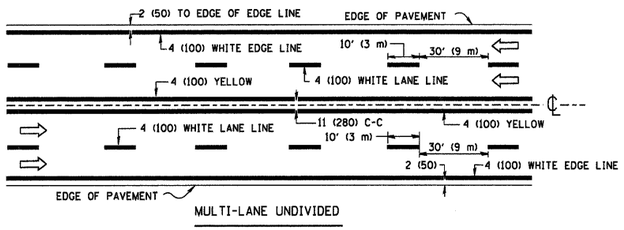
PLOT DATE = 3/6/2007
FILE NAME = K:\Data\tc\tc12.dgn
PLOT SCALE = 88.888 '/ IN.
USER NAME = bauer-dl

CONTRACT NO. 60D54

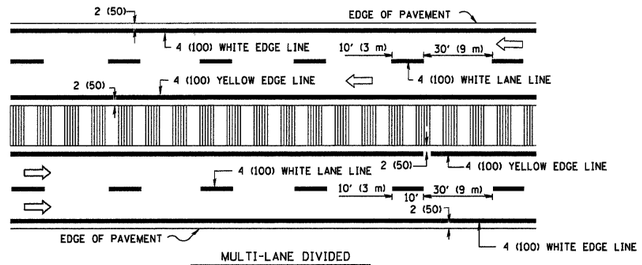
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 392 | D-RD-5 | LAKE | 30 | 28 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




2-LANE ROADWAY



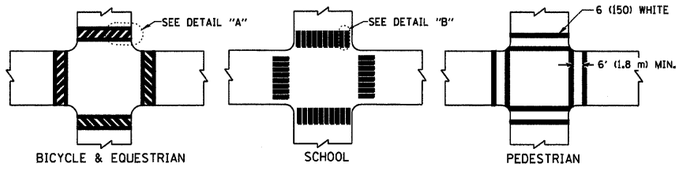

MULTI-LANE UNDIVIDED

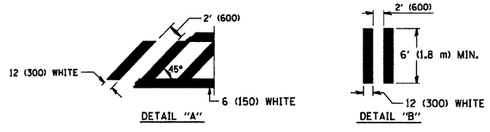



MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

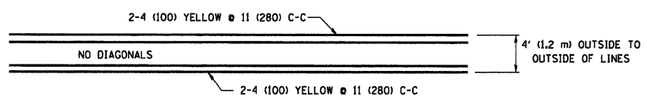
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

## TYPICAL LANE AND EDGE LINE MARKING

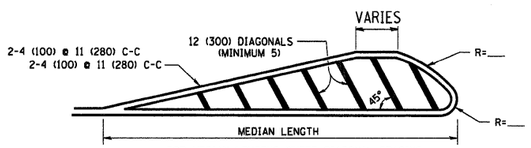



## TYPICAL CROSSWALK MARKING



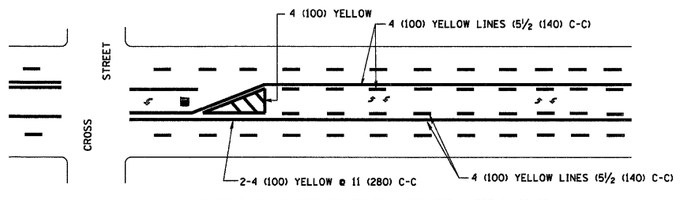

4' (1.2 m) WIDE MEDIANS ONLY



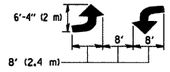

FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (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

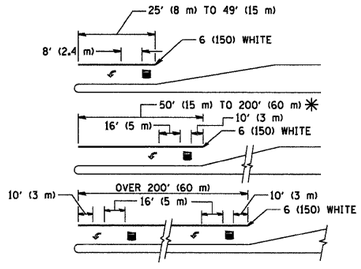



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.




MEDIAN WITH TWO-WAY LEFT TURN LANE

## TYPICAL PAINTED MEDIAN MARKING

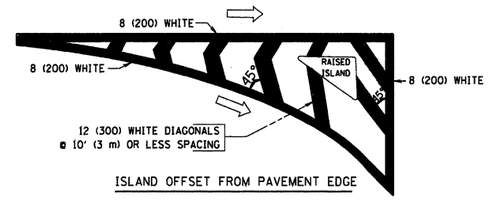



FULL SIZE LETTERS 8' (2,4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

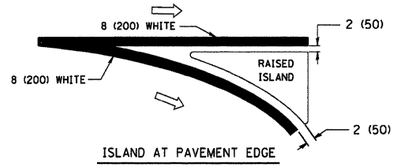
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

## TYPICAL TURN LANE MARKING




ISLAND OFFSET FROM PAVEMENT EDGE




ISLAND AT PAVEMENT EDGE

## 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 PAVEMENT | 2 ⊘ 4 (100) | SOLID | YELLOW | 11 (280) C-C |
| NO PASSING ZONE LINES:<br>FOR ONE DIRECTION<br>FOR BOTH DIRECTIONS | 4 (100)<br>2 ⊘ 4 (100) | SOLID<br>SOLID | YELLOW<br>YELLOW | 5½ (140) C-C FROM SKIP-DASH CENTERLINE<br>11 (280) C-C<br>OMIT 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<br>(EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) | SAME AS LINE BEING EXTENDED | SKIP-DASH | SAME AS LINE BEING EXTENDED | 2' (600) LINE WITH 6' (1.8 m) SPACE |
| EDGE LINES | 4 (100) | SOLID | YELLOW-LEFT<br>WHITE-RIGHT | OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB |
| TURN LANE MARKINGS | 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2,4m)) | SOLID | WHITE | SEE TYPICAL TURN LANE MARKING DETAIL |
| TWO WAY LEFT TURN MARKING | 2 ⊘ 4 (100)<br>EACH DIRECTION<br><br>8' (2,4m) LEFT ARROW | SKIP-DASH AND SOLID<br><br>IN PAIRS | YELLOW<br><br>WHITE | 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE<br><br>SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL |
| CROSSWALK LINES (PEDESTRIAN)<br>A. DIAGONALS (BIKE & EQUESTRIAN)<br>B. LONGITUDINAL BARS (SCHOOL) | 2 ⊘ 6 (150)<br>12 (300) ⊘ 45°<br>12 (300) ⊘ 90° | SOLID<br>SOLID<br>SOLID | WHITE<br>WHITE<br>WHITE | NOT LESS THAN 6' (1.8 m) APART<br>2' (600) APART<br>2' (600) APART<br>SEE TYPICAL CROSSWALK MARKING DETAILS. |
| STOP LINES | 24 (600) | SOLID | WHITE | PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS | 2 ⊘ 4 (100) WITH 12 (300) DIAGONALS ⊘ 45°<br><br>NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS | SOLID | YELLOW:<br>TWO WAY TRAFFIC<br><br>WHITE:<br>ONE WAY TRAFFIC | 11 (280) C-C FOR THE DOUBLE LINE<br><br>SEE TYPICAL PAINTED MEDIAN MARKING. |
| GORE MARKING AND CHANNELIZING LINES | 8 (200) WITH 12 (300) DIAGONALS ⊘ 45° | SOLID | WHITE | DIAGONALS:<br>15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h))<br>20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))<br>30' (9 m) C-C (OVER 45MPH (70 km/h)) |
| RAILROAD CROSSING | 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" | SOLID | WHITE | SEE STATE STANDARD 780001<br>AREA OF:<br>"R"=3.6 SQ. FT. (0.33 m²) EACH<br>"X"=54.0 SQ. FT. (5.0 m²) |
| SHOULDER DIAGONALS | 12 (300) ⊘ 45° | SOLID | WHITE - RIGHT<br><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 (OVER 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.

| REVISIONS | |
|---|---|
| NAME | DATE |
| EVERS | 03-19-90 |
| T. RAMMACHER | 10-27-94 |
| ALEX HOUSEH | 10-09-96 |
| ALEX HOUSEH | 10-17-96 |
| T. RAMMACHER | 01-06-00 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

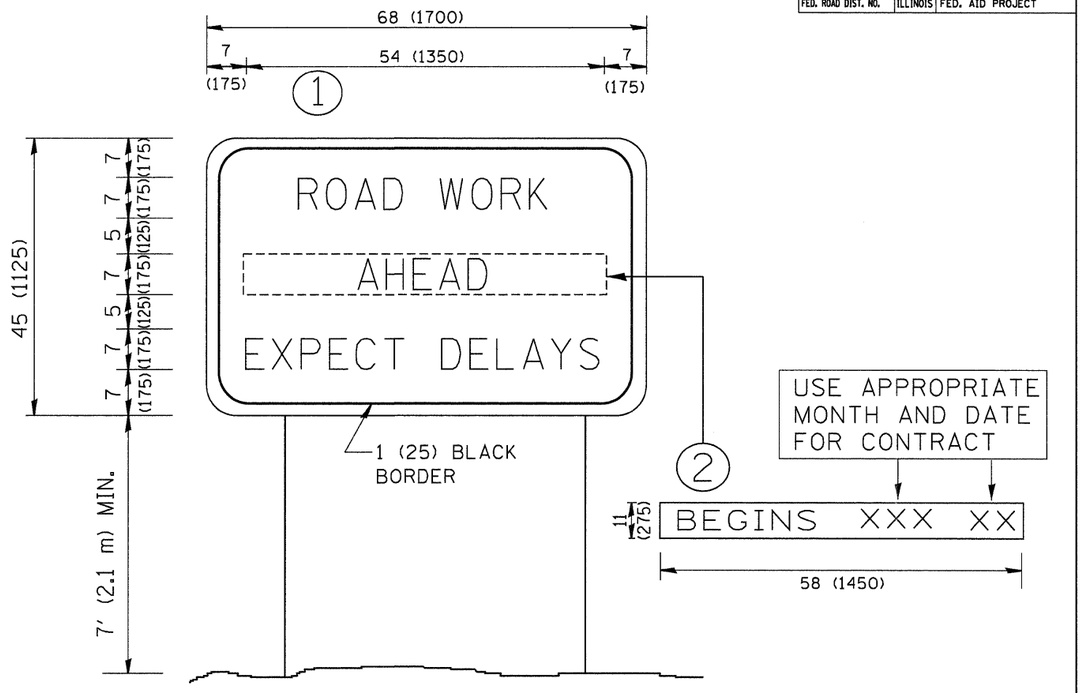
CHECKED BY

TC-13

PLOT DATE = 3/6/2007
FILE NAME = K:\dists\d1\tc13.dgn
PLOT SCALE = 50.000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60D34

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 29 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |




## NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

| REVISIONS | |
|---|---|
| NAME | DATE |
| R. MIRS | 9-15-97 |
| R. MIRS | 12-11-97 |
| T. RAMMACHER | 2-2-99 |
| C. JUCIUS | 1-31-07 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE

DRAWN BY DESIGN

CHECKED BY

TC22

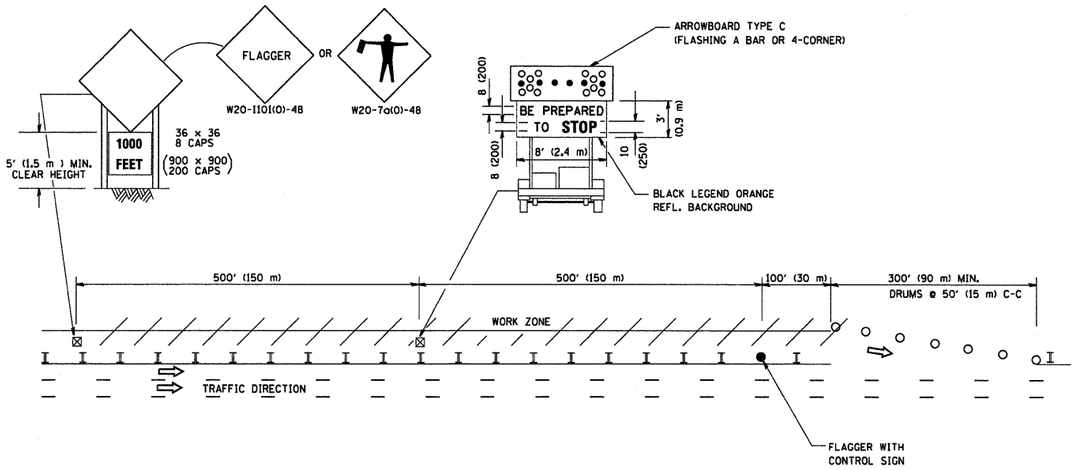
PLOT DATE = 3/8/2007
FILE NAME = K:\district\tc22.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = bbaardi

CONTRACT NO. 60D34

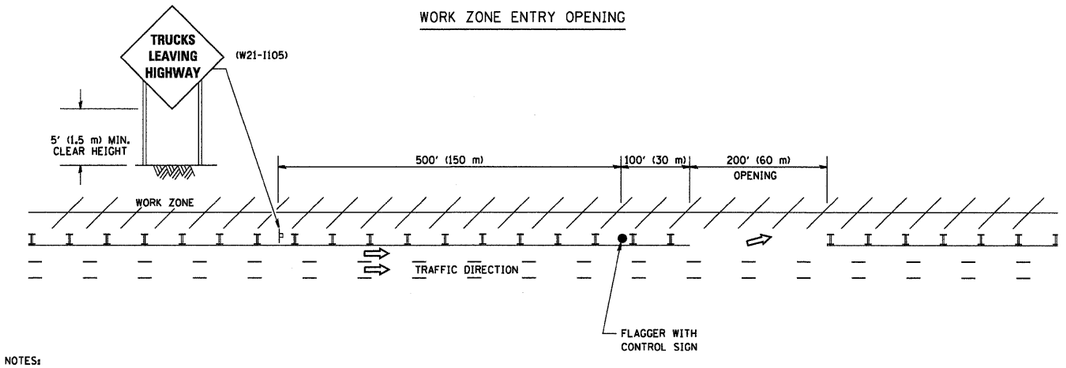
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 352 | D-RD-5 | LAKE | 30 | 30 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

# SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

## WORK ZONE EXIT OPENING




## WORK ZONE ENTRY OPENING




NOTES:

1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
2. Work Zone Exit Openings should be a minimum of one half mile apart.
3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

| REVISIONS | |
|---|---|
| NAME | DATE |
| DWS | 8/98 |
| JAF | 4/03 |
| JAF | 2/06 |
| SPB | 1/07 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-18

PLOT DATE = 3/7/2007
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PLOT SCALE = 96.000 ' / IN.
USER NAME = bauerdl