1.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENT LOCATED IN THE

CITY OF DES PLAINES

PROPOSED
HIGHWAY PLANS
F.A.P. 375 (TOUHY AVE.)

AT US 12/45 (MANNHEIM RD.)

SECTION: 3035-Z-Y-1-RS-1

RESURFACING (MAINTENANCE)
COOK COUNTY

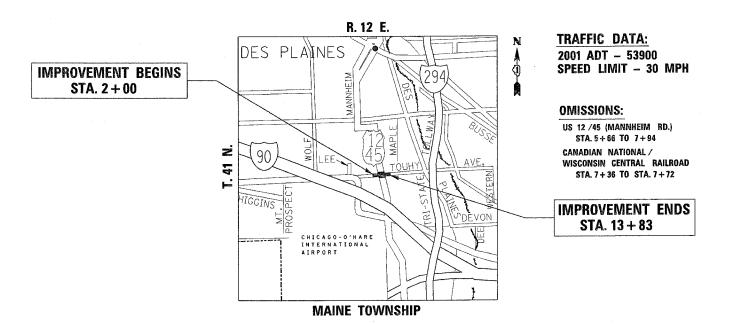
C-91-180-05

o'

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

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

CONTRACT NO. 62941



GROSS LENGTH OF IMPROVEMENT - 1183 FEET - .22 MILES

NET LENGTH OF IMPROVEMENT - 955 FEET - .18 MILES

| F.A.P. | SECTION | COUNTY | TOTAL SHEET | NO. | 375 | 3035-Z-Y-1-RS-1 | COOK | 23 | 1 |

D-91-180-05



STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SUBMITTED

Jone O'Keel H

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

JULY 1, 20 05

Mile Nau H

ENGINEER OF DESIGN AND ENVIRONMENT

JULY 1, 20 05

NUMBER OF DESIGN AND ENVIRONMENT

DIRECTOR OF HIGHWAYS CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

| F.A.P. RTE. | SECTION | | COUNT | Y | TOTAL | SHEE NO. |
|----------------|--------------|---------|-------|-----|---------|-------------|
| 375 | 3035-Z-Y-1- | RS-1 | C00 | K | 23 | 2 |
| STA. | | TO | STA. | | | • |
| FED. RO | AD DIST. NO. | ILLINOI | FED. | AID | PROJECT | |

CONTRACT NO. 62941

INDEX OF SHEETS

DESCRIPTION

SHEET

NO.

- COVER SHEET
- INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES
- SUMMARY OF QUANTITIES
- 4-6 TYPICAL SECTIONS
- ROADWAY AND PAVEMENT MARKING PLANS
- DETAILS FOR FRAMES AND LIDS ADJUSTMENTS WITH MILLING
- PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT
- CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
- 11 BUTT JOINT AND BITUMINOUS TAPER DETAILS
- TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
- TYPICAL APPLICATIONS FOR RAISED REFLECTIVE PAVEMENT MARKERS
- DISTRICT ONE TYPICAL PAVEMENT MARKINGS
- TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
- 16 TEMPORARY PAVEMENT MARKING--LETTERS AND SYMBOLS FOR TRAFFIC STAGING
- 17-20 DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
- DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING
- 22 DETECTOR LOOP LOCATION DETAIL
- 23 TEMPORARY INFORMATION SIGNING

STATE STANDARDS

886006 TYPICAL LAYOUT FOR DETECTION LOOPS

000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS 442201-01 CLASS C AND D PATCHES 604001-02 FRAME AND LIDS, TYPE 1 606001-02 CONCRETE CURB AND COMBINATION CONRETE CURB AND GUTTER 701601-04 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W, WITH MOUNTABLE MEDIAN 701606-04 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN 701701-04 URBAN LANE CLOSURE, MULTILANE INTERSECTION 702001-05 TRAFFIC CONTROL DEVICES 780001-01 TYPICAL PAVEMENT MARKINGS 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS 886001 DETECTOR LOOP INSTALLATIONS

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), (312)-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES, (48 HOUR NOTIFICATION IS REQUIRED).

3 METER (10 FEET) TRANSITION SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSON FROM THE DEPARTMENT.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 40 MM (1 1/2 INCHES WHERE THE SPEED LIMIT IS 80 KM/H (45 MPH) OR LESS AND 25 MM (1 INCH) WHERE THE SPEED LIMIT IS GREATER THAN 80 KM/H (45 MPH)). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 75 MM (3 INCHES) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 13 (V+H). MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED

AT LEAST (2) WEEKS PRIOR TO FINAL PAVEMENT MARKING PLACEMENT PLEASE CONTACT WALTER CZARNY, AREA TRAFFIC FIELD ENGINEER AT (773) 685-8386.

> ILLINOIS DEPARTMENT OF TRANSPORTATION INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES F.A.P. 375 (TOUHY AVE.) AT U.S. 12/45 (MANNHEIM RD.) SCALE: VERT. HORIZ. DRAWN BY CHECKED BY

DATE NAME SCALE NAME

| F.A.P. RTE. | SECTION | COUNT | Y | TOTAL SHEETS | SHEET NO. | |
|----------------|------------------|-------|-------|-----------------|--------------|------|
| 375 | 3035-Z-Y-1-RS-1 | COOR | (| 23 | 3 | |
| FED. | ROAD DIST. NO. 1 | ILL | INOIS | HIGHWAY PRO | | JECT |

CONTRACT NO. 62941

| | SUMMARY OF QUANTITIES | | | | CONSTRUC | TION TYPE CO | DE | <u> </u> | SUMMARY OF QUANTITIES | | | | CONSTRUCTION | 1 TYPE CODE | |
|----------|--|--------|---------------------|-------------------------|----------|--------------|----|-----------------------|---|--------------|---------------------|-------------------------|--------------|-------------|--|
| CODE NO | ITEM | UNIT | TOTAL QUANTITIES | <i>URBAN</i> 1000-2A | | | | CODE NO | ITEM | UNIT | TOTAL QUANTITIES | <i>URBAN</i> 1000-2A | | | |
| 40600200 | BITUMINOUS MATERIALS (PRIME COAT) | TON | . 3 | 3 | | | | 70301000 | WORK ZONE PAVEMENT MARKING REMOVAL | SQ FT | 1797 | 1797 | | | |
| 40600300 | AGGREGATE (PRIME COAT) | TON | 13 | 13 | | | | X 78000100 | THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS | SQ FT | 391 | 391 | | | |
| 40600400 | MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS | TON | . 1 | 1 | | | - | 78000200 | THERMOPLASTIC PAVEMENT MARKING | FOOT | 2547 | 2547 | | | |
| 40600895 | CONSTRUCTING TEST STRIP | EACH | 1 | 1 | | | | M | - LINE 4" | FOOT | 362 | 362 | | | |
| 40600980 | BITUMINOUS SURFACE REMOVAL - BUTT JOINT | SQ YD | 159 | 159 | | | | ₹ 78000400 | THERMOPLASTIC PAVEMENT MARKING - LINE 6" | 1001 | 362 | 362 | | | |
| 40600990 | TEMPORARY RAMP | SQ YD | 159 | 159 | | | | X 78000650 | THERMOPLASTIC PAVEMENT MARKING - LINE 24" | FOOT | 131 | 131 | | | |
| 40601000 | BITUMINOUS REPLACEMENT OVER PATCHES | TON | 66 | 66 | | | | 78100100 | | EACH | 58 | 58 | | | |
| 42001300 | PROTECTIVE COAT | SQ YD | 62 | 62 | | | | 78300200 | RAISED REFLECTIVE PAVEMENT MARKER | EACH | 53 | 53 | | | |
| 44000008 | BITUMINOUS SURFACE REMOVAL 2 1/2" | SQ YD | 6285 | 6285 | | | | | REMOVAL | | | | | | |
| 44000124 | BITUMINOUS REMOVAL OVER PATCHES 6" | SQ YD | 195 | 195 | | | | ¥ 88600600 | DETECTOR LOOP REPLACEMENT | FOOT | 186 | 186 | | | |
| 44001700 | COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | FOOT | 200 | 200 | | | | X0322256 | CPOLYMERIZED | SQ FT TON | 51. 4 616 | 51. 4 616 | | | |
| 44201765 | CLASS D PATCHES, TYPE II, 10 INCH | SQ YD | 80 | 80 | | | | X4006549 | SUPERPAVE, MIX "F", N90 | 1011 | | 0.0 | | | |
| 44201769 | CLASS D PATCHES, TYPE III, 10 INCH | SQ YD | 100 | 100 | | | | X4067100 | POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50 | TON | 264 | 264 | | • | |
| 60300310 | FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) | EACH | 9 | 9 | | | | Z0048665 | RAILROAD PROTECTIVE LIABILITY INSURANCE | L SUM | 1 | 1 | | | |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 3 | 3 | | | | | | | | | | | |
| 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 | | | | | | | | | | | |
| 70300100 | SHORT-TERM PAVEMENT MARKING | FOOT | 1023 | 1023 | | | | | | | | | | | |
| 70300210 | TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS | SQ FT | 391 | 391 | | | | | | | | | | | ALL MANAGEMENT AND ALL MANAGEMEN |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | 2547 | 2547 | | | | | | | | | | | |
| 70300240 | TEMPORARY PAVEMENT MARKING - LINE 6" | FOOT | 362 | 362 | | | | | | | | | | | |
| 70300280 | TEMPORARY PAVEMENT MARKING - LINE 24" | FOOT | 131 | 131 | | | | | | | | | | | |
| 70300510 | | SQ FT | 391 | 391 | | | | | | | | | | | |
| 70300520 | PAVEMENT MARKING TAPE, TYPE III 4" | FOOT | 2901 | 2901 | | | | | | | | | | | |

* SPECIALTY ITEMS

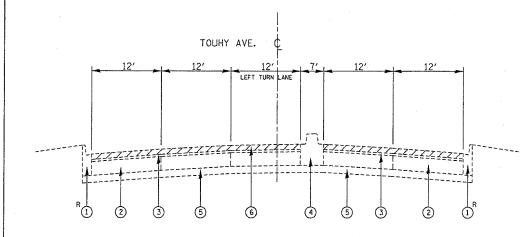
| REVISIONS | 5 |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES F.A.P. RTE. 375 (TOUHY AVE.) AT U.S. 12/45 (MANNHEIM RD.)

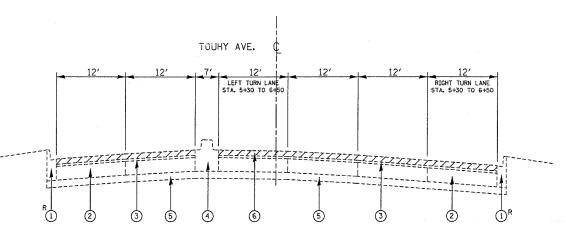
PLOT DATE: 6/7/2005

| F.A.P. | SECTION | COUNTY | TOTAL | SHEE | NO. | 375 | 3035-Z-Y-1-RS-1 | COOK | 23 | 4 | STA. | TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID | PROJECT

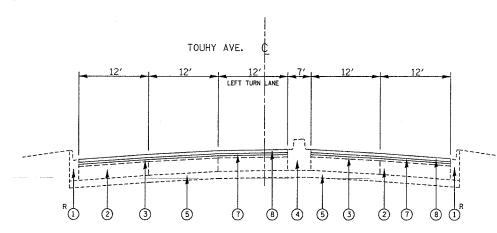
CONTRACT NO. 62941



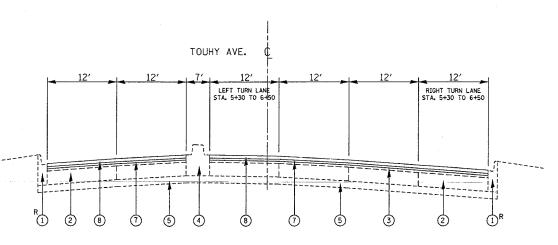
EXISTING TYPICAL SECTION STA. 2+00 TO 3+55



EXISTING TYPICAL SECTION STA. 3+55 TO 5+66



PROPOSED TYPICAL SECTION STA. 2+00 TO 3+55



PROPOSED TYPICAL SECTION STA. 3+55 TO 5+66

LEGEND:

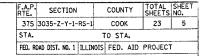
- (1) EXISTING CONCRETE CURB AND GUTTER, TYPE B-6.24
- (2) EXISTING P.C.C. PAVEMENT, 10"
- (3) EXISTING BITUMINOUS SURFACE, 3" & VARIES
- 4 EXISTING BARRIER MEDIAN
- (5) EXISTING STABILIZED SUB-BASE
- (6) PROPOSED BITUMINOUS SURFACE REMOVAL, 21/2"
- 7 PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, 3/4"
- 8 PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "F", N90, 13/4"
- R CURB AND GUTTER REMOVAL AND REPLACEMENT (LOCATION AS DIRECTED BY ENGINEER)

MIXTURE REQUIREMENTS

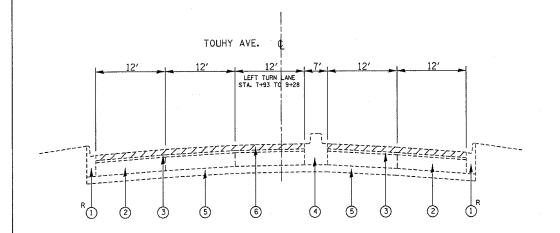
| MIX TORE REG | OTTEMENTS | | |
|---|------------------|-------------|------------------|
| MIXTURE USE | AC/PG | RAP % (MAX) | DESIGN AIR VOIDS |
| BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "F", N90 | SBS/SBR PG 70-22 | 0 | 4% @ 90 |
| POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75. N50 | SBS/SBR PG 76-28 | 0 | 2.5% & 50 |
| BITUMINOUS REPLACEMENT OVER PATCHES, IL-19MM | PG 64-22 | 15 | 4% € 70 |
| CLASS "D" PATCHES, 10" BINDER COURSE, IL-19 | PG 64-22 | 15 | 4% e 70 |

NOTE:
THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS SURFACE MIX QUANTITIES IS 112 LBS./SQ. YD./ IN.

| REVISION | | THE TNOTE DEPART | MENT OF TRANSPORTATION | | | | |
|----------|------|----------------------------|------------------------|--|--|--|--|
| NAME | DATE | ILLINOIS DEI AIN | MENT OF TRANSPORTATION | | | | |
| | | | | | | | |
| | | TYPIO | CAL SECTIONS | | | | |
| | | F.A.P. 375 (TOUHY AVE.) AT | | | | | |
| | | U.S. 12/45 (MANNHEIM RD.) | | | | | |
| | | | | | | | |
| | | SCALE: VERT. HORIZ. | DRAWN BY | | | | |
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| | | DATE | CHECKED BY | | | | |



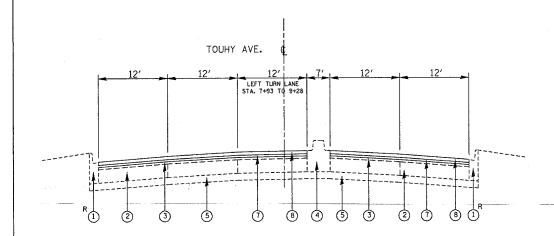
CONTRACT NO. 62941

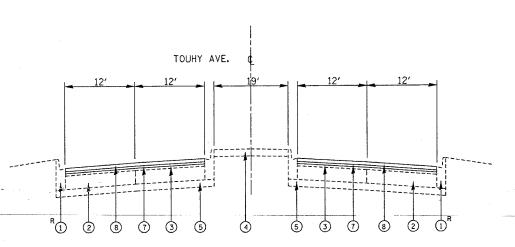


EXISTING TYPICAL SECTION STA. 7+94 TO 9+28

TOUHY AVE.

EXISTING TYPICAL SECTION STA. 9+28 TO 13+10





PROPOSED TYPICAL SECTION STA. 7+94 TO 9+28

PROPOSED TYPICAL SECTION STA. 9+28 TO 13+10

LEGEND:

- 1 EXISTING CONCRETE CURB AND GUTTER, TYPE B-6.24
- 2) EXISTING P.C.C. PAVEMENT, 10"
- (3) EXISTING BITUMINOUS SURFACE, 3" & VARIES
- 4 EXISTING BARRIER MEDIAN
- (5) EXISTING STABILIZED SUB-BASE
- 6 PROPOSED BITUMINOUS SURFACE REMOVAL, 21/2"
- 7 PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, $3/4^{\prime\prime}$
- B PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "F", N90, 134"
- R CURB AND GUTTER REMOVAL AND REPLACEMENT (LOCATION AS DIRECTED BY ENGINEER)

ILLINOIS DEPARTMENT OF TRANSPORTATION

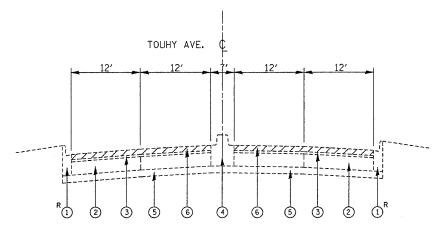
TYPICAL SECTIONS F.A.P. 375 (TOUHY AVE.) AT U.S. 12/45 (MANNHEIM RD.)

SCALE: VERT. HORIZ.

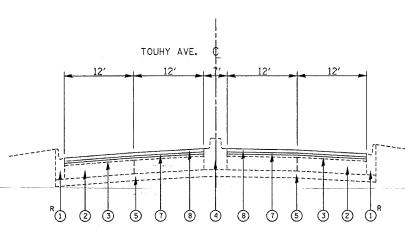
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F.A.P. SECTION COUNTY
375 3035-Z-Y-I-RS-I COOK 23 6 STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 62941



EXISTING TYPICAL SECTION STA. 13+10 TO 13+83

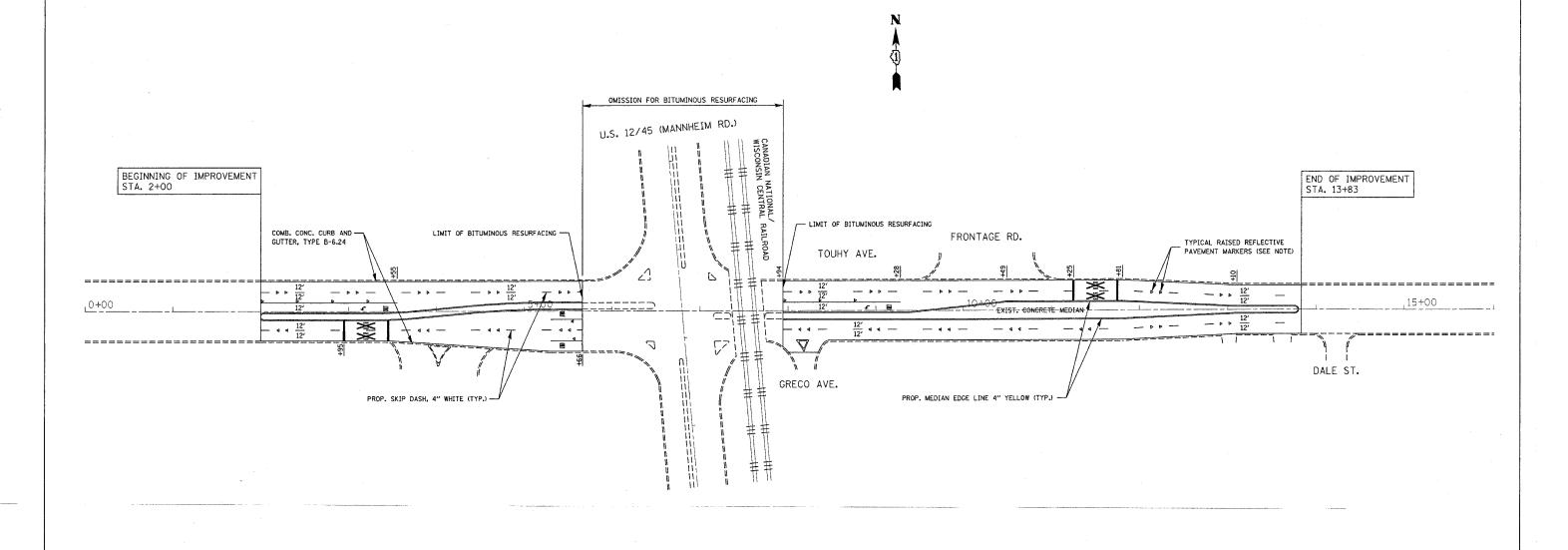


PROPOSED TYPICAL SECTION STA. 13+10 TO 13+83

LEGEND:

- (1) EXISTING CONCRETE CURB AND GUTTER, TYPE B-6.24
- 2) EXISTING P.C.C. PAVEMENT, 10"
- (3) EXISTING BITUMINOUS SURFACE, 3" & VARIES
- 4 EXISTING BARRIER MEDIAN
- (5) EXISTING STABILIZED SUB-BASE
- (6) PROPOSED BITUMINOUS SURFACE REMOVAL, 21/2"
- 7 PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, 3/4"
- 8 PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "F", N90, 174"
- R CURB AND GUTTER REMOVAL AND REPLACEMENT (LOCATION AS DIRECTED BY ENGINEER)

ILLINOIS DEPARTMENT OF TRANSPORTATION TYPICAL SECTIONS F.A.P. 375 (TOUHY AVE.) AT U.S. 12/45 (MANNHEIM RD.) SCALE: VERT. DRAWN BY



NOTES

PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (OF THE EXTRUDED TYPE) AND SHOULD BE PLACED IN ACCORDANCE WITH "DISTRICT ONE TYPICAL PAVEMENT MARKINGS" DETAIL. (TC-13)

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS DETAIL."

THE RESIDENT ENGINEER SHOULD CONTACT MR. WALTER CZARNY, AREA TRAFFIC FIELD ENGINEER, AT (773) 685-8386 PRIOR TO PLACING ANY PERMANENT PAVEMENT MARKINGS.

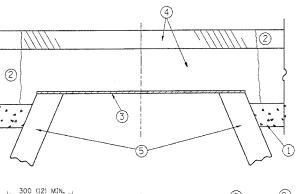
| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION | | | | | | |
|-----------|------|---------------------------------------|----------------------|--|--|--|--|--|
| NAME | DATE | TECTION DEL ALLINE | NI OF TRANSFORTATION | | | | | |
| | | | | | | | | |
| | | ROADWAY AND PAVE | EMENT MARKING PLANS | | | | | |
| | | F.A.P. 375 (| TOUHY AVE.) AT | | | | | |
| | | U.S. 12/45 | (MANNHEIM RD.) | | | | | |
| | | | | | | | | |
| | | SCALE: VERT. | DRAWN BY: P. STEED | | | | | |

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| F. A. RTE. | SECTION | | COUNTY | TOTAL | SHEE |
|---------------|--------------|------|--------|-------|------|
| 375 | 3035-Z-Y-1-F | RS-1 | соок | 23 | 8 |
| STA. | | TO | STA. | | |



300 (12) MIN. PROPOSED - BRICK, MORTAR, OR CONC. PROPOSED SAND FILL ADJUSTING RINGS

SAND FILL

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.

1) SUB-BASE GRANULAR MATERIAL

2 EXISTING PAVEMENT

3 900 (36) DIAMETER METAL PLATE

PROPOSED CRUSHED STONE AND BITUMINOUS MATERIAL

5 EXISTING STRUCTURE

CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 300 (12) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 900 (36) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 40 (11/2) THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE BITUMINOUS MATERIAL 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 BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL 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.

- 6 FRAME AND LID (SEE NOTES)
- CLASS SI CONCRETE, BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL
- 8 PROPOSED BITUMINOUS CONCRETE SURFACE COURSE
- PROPOSED BITUMINOUS CONCRETE
 BINDER COURSE

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: FRAMES AND LIDS TO BE ADJUSTED, SPECIAL EACH

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

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE

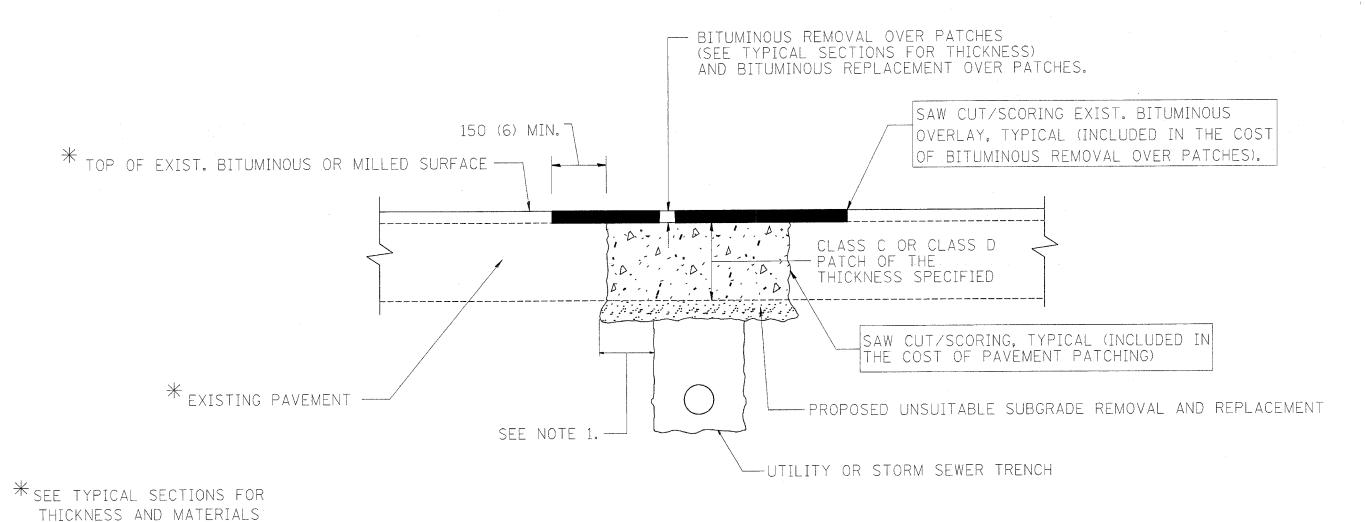
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62941



NOTES:

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

SEQUENCE OF CONSTRUCTION

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

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

| NAME | DATE |
|-----------|----------|
| R. SHAH | 10/25/9 |
| R. SHAH | 01/14/95 |
| R. SHAH | 03/23/9 |
| R. SHAH | 04/24/99 |
| A. HOUSEH | 03/15/96 |
| A. ABBAS | 03/21/97 |
| A. ABBAS | 01/20/98 |
| ART ABBAS | 04/27/9 |

ILLINOIS DEPARTMENT OF TRANSPORTATION

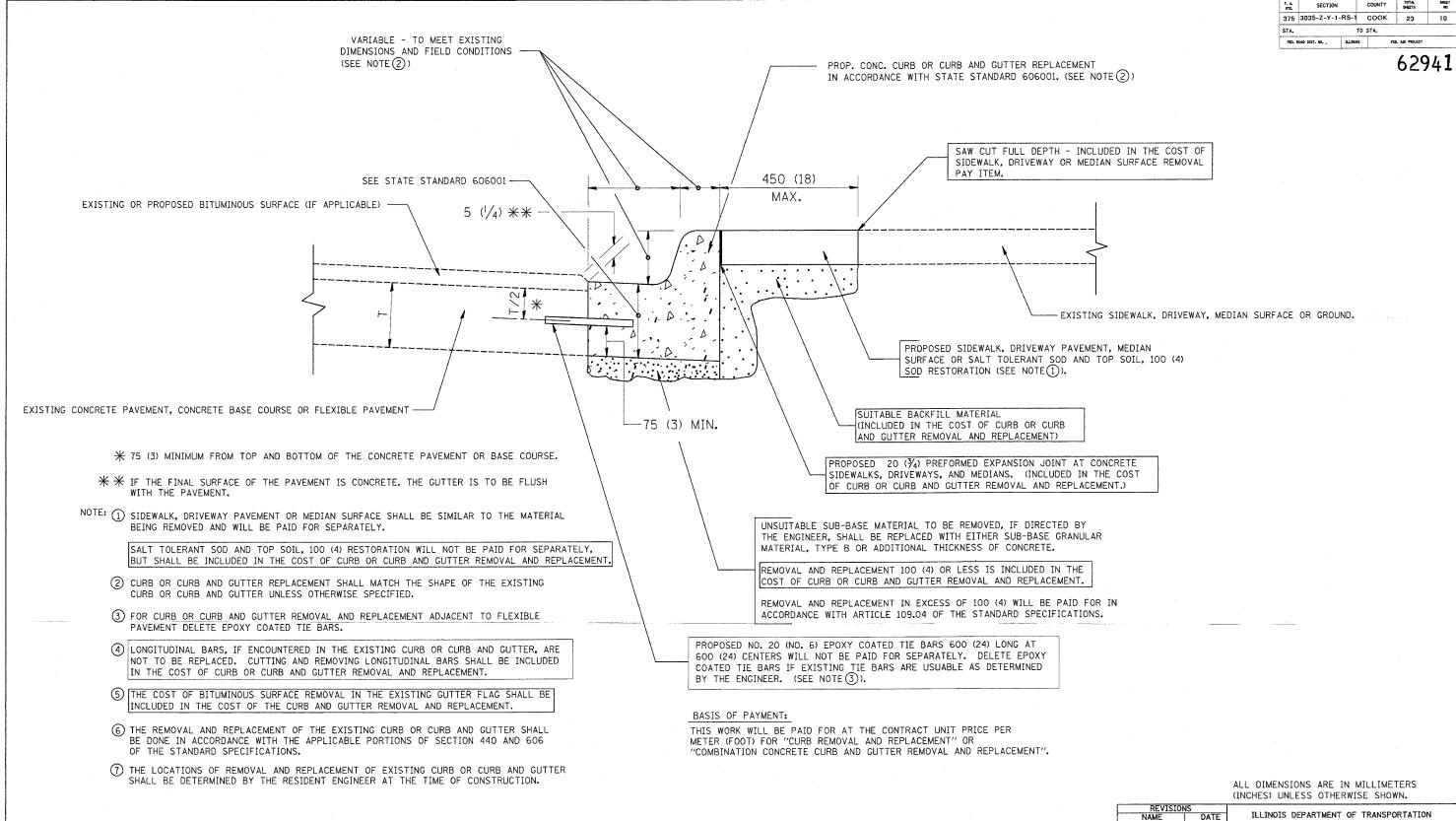
PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT

SCALE: VERT. HORIZ. DATE 6/4/2005

DRAWN BY CHECKED BY

BD400-04 (BD-22) REVISION DATE:04/27/98

W:\diststd\bd22dgr 6/4/2005 VI=BD22



CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

M. DE YONG 05/28/91 A. HOUSEH 03/11/94 R. SHAH 02/24/9 R. SHAH 03/02/95 R. SHAH 08/19/96 R. SHAH R. SHAH R. SHAH A. ABBAS 01/22/01

CURB OR **CURB AND GUTTER**

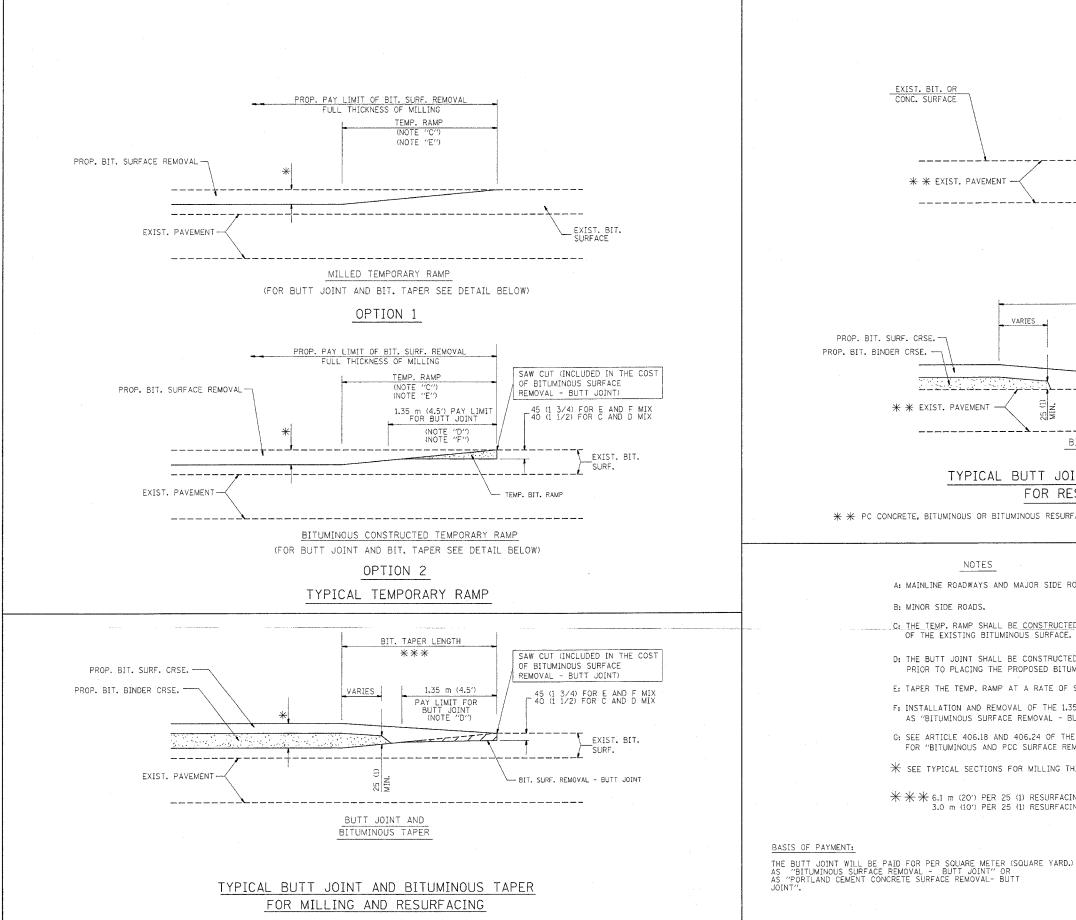
REMOVAL AND REPLACEMENT

DATE 6/4/2005

CHECKED BY BD600-06 (BD-24)

REVISION DATE: 12/06/88

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SECTION COUNTY TOTAL SHEETS 375 3035-Z-Y-1-RS-1 COOK 23 TO STA. FED. ROAD DIST. NO. _ ILLINOIS

> 62941 SAW CUT (INCLUDED IN THE COST OF BITUMINOUS SURFACE

45 (1 3/4) FOR E AND F MIX 40 (1 1/2) FOR C AND D MIX

REMOVAL - BUTT JOINT)

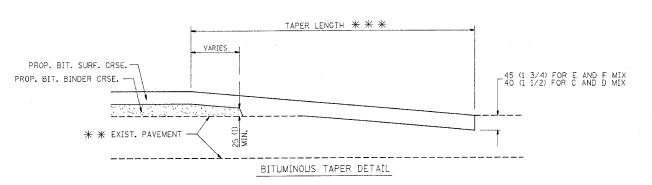
BUTT JOINT DETAIL

PROP. BIT. OR P.C.C.

SURFACE REMOVAL - BUTT JOINT
9.0 m (30ft.) (NOTE "A")

4.5 m (15ft.) (NOTE "B")

(NOTE "D")



TYPICAL BUTT JOINT AND BITUMINOUS TAPER FOR RESURFACING ONLY

* * PC CONCRETE, BITUMINOUS OR BITUMINOUS RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.

EXIST. BIT. OR CONC. SURFACE

* * EXIST. PAVEMENT

- C: THE TEMP, RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING BITUMINOUS SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 ft.) PER INCH OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".
- G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- * * * 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A") 3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND BITUMINOUS TAPER DETAILS

M. DE YONG

R. SHAH

09/09/94

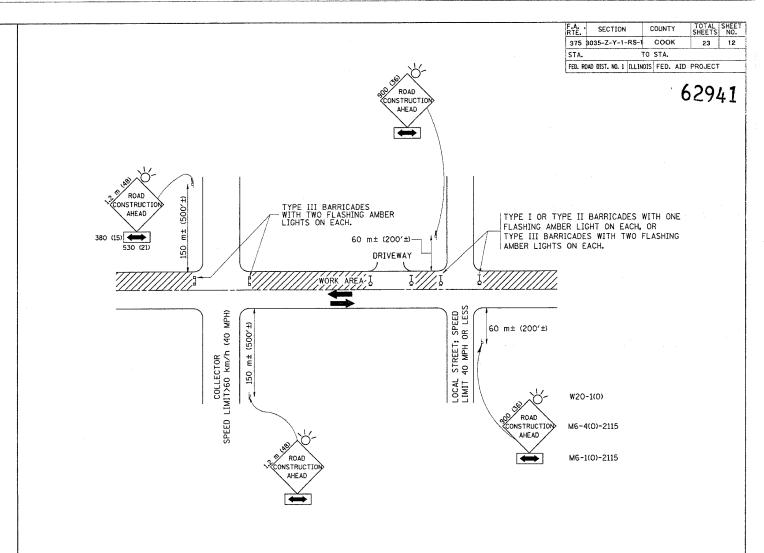
10/25/94 03/21/97 SCALE: NONE 04/06/01 DATE PLOTTED:6/4/2005

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BD400-05 (VI=BD32)

6/4/2005 W:\diststd\bd32.dgn VI=BD32

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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O) ONE ROAD CONSTRUCTION AHEAD SIGN 900×900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- a) ONE ROAD CONSTRUCTION AHEAD SIGN 1.2 m \times 1.2 m (48 \times 48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSUKE.

- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

| REVISIO | NS | |
|--------------|----------|----|
| NAME. | DATE | |
| LHA | 6/89 | 7 |
| T. RAMMACHER | 09/08/94 | 1 |
| J. OBERLE | 10/18/95 | |
| A. HOUSEH | 03/06/96 | |
| A. HOUSEH | 10/15/96 | |
| T. RAMMACHER | 01/06/00 | |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION
FOR

SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: VERT. HORIZ. DATE 6/4/2005

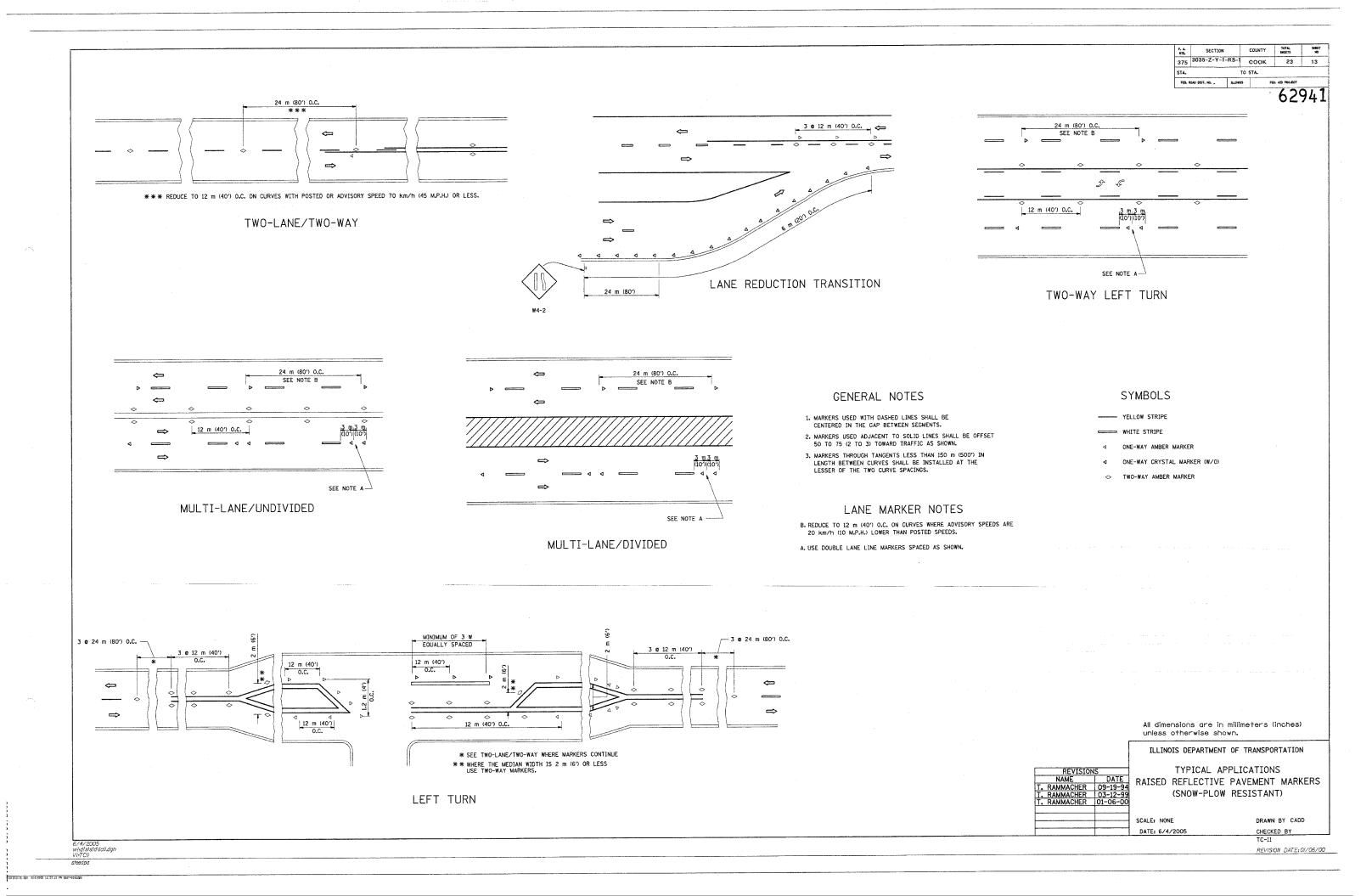
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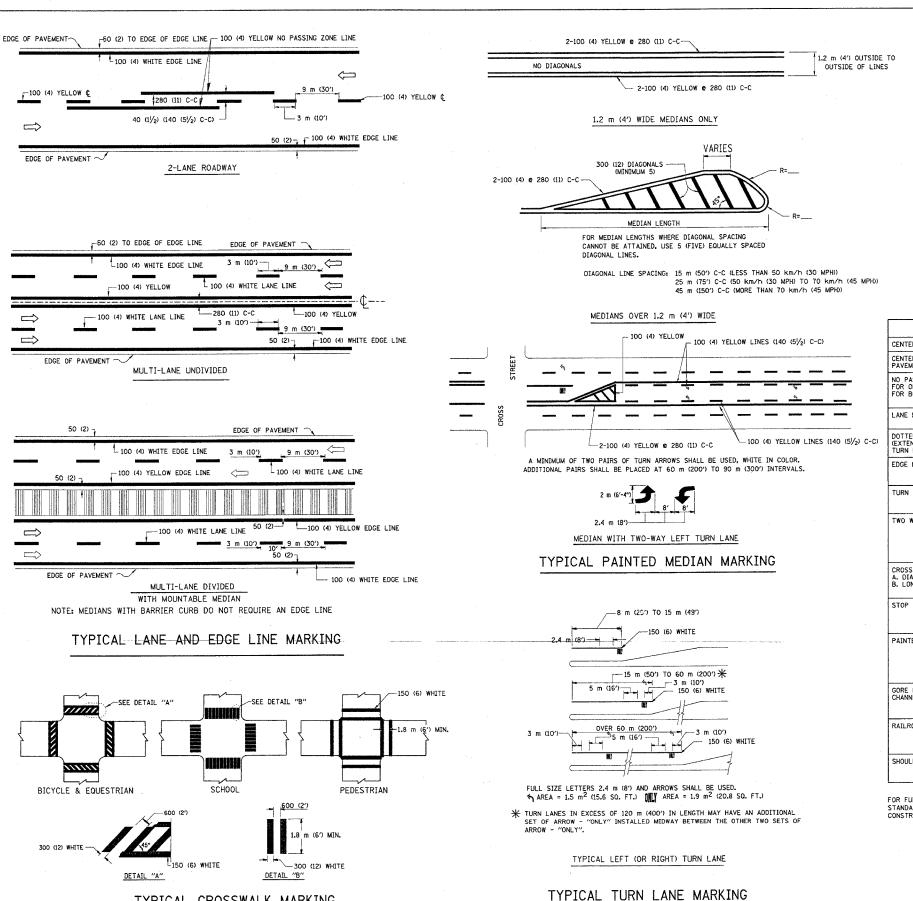
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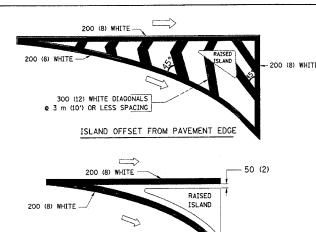
REVISION DATE: 01/06/00

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TYPICAL CROSSWALK MARKING



SECTION COUNTY TOTAL SHEETS 375 3035-Z-Y-1-RS-1 COOK 23 STA. TO STA.

62941

TYPICAL ISLAND MARKING

ISLAND AT PAVEMENT EDGE

-50 (2)

| TYPE OF MARKING | WIDTH OF LINE | PATTERN | COLOR | SPACING / REMARKS |
|---|---|-------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT | 100 (4) | SKIP-DASH | YELLOW | 3 m (10") LINE WITH 9 m (30") SPACE |
| CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT | 2 2 100 (4) | SOLID | YELLOW | 280 (11) C-C |
| NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS | 100 (4) 2 to 100 (4) | SOLID SOLID | YELLOW YELLOW | 140 (5½) C-C FROM SKIP-DASH CENTERLINE 280 (II) C-C OMIT SKIP-DASH CENTERLINE BETWEEN |
| LANE LINES | 100 (4) 125 (5) ON FREEWAYS | SKIP-DASH SKIP-DASH | WHITE WHITE | 3 m (10') LINE WITH 9 m (30') SPACE |
| DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) | SAME AS LINE BEING EXTENDED | SKIP-DASH | SAME AS LINE BEING EXTENDED | 600 (2') LINE WITH 1.8 m (6') SPACE |
| EDGE LINES | 100 (4) | SOLID | YELLOW-LEFT WHITE-RIGHT | OUTLINE MOUNTABLE MEDIANS IN YELLOW: EDGE LINES ARE NOT USED NEXT TO BARRIER CURB |
| TURN LANE MARKINGS | 150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8')) | SOLID | WHITE | SEE TYPICAL TURN LANE MARKING DETAIL |
| TWO WAY LEFT TURN MARKING | 2 @ 100 (4) EACH DIRECTION | SKIP-DASH AND SOLID | YELLOW | 3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5½) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE |
| | 2.4 m (8') LEFT ARROW | IN PAIRS | WHITE | SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL |
| CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL) | 2 e 150 (6) 300 (12) e 45° 300 (12) e 90° | SOLID SOLID SOLID | WHITE WHITE WHITE | NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS. |
| STOP LINES | 600 (24) | SOLID | WHITE | PLACE 1.2 m (47) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS | 2 & 100 (4) WITH 300 (12) DIAGONALS & 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS | SOLID | YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC | 280 (<u>11) C-C</u> FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. |
| GORE MARKING AND CHANNELIZING LINES | 200 (8) WITH 300 (12) DIAGONALS @ 45° | SOLID | WHITE | DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH 9 m (30') C-C (OVER 70 km/h (45 MPH)) |
| RAILROAD CROSSING | 600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6") LETTERS; 400 (16) LINE FOR "X" | SOLID | WHITE | SEE STATE STANDARD 780001 AREA 0F: "R"*0.33m2 (3.6 SQ. FT.) EACH "X"=5.0 m2 (54.0 SQ. FT.) |
| SHOULDER DIAGONALS | 300 (12) @ 45° | SOLID | WHITE - RIGHT YELLOW - LEFT | 15 m (50°) C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75°) C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH 45 m (150°) C-C (0VER 70 km/h (45 MPH)) |

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE

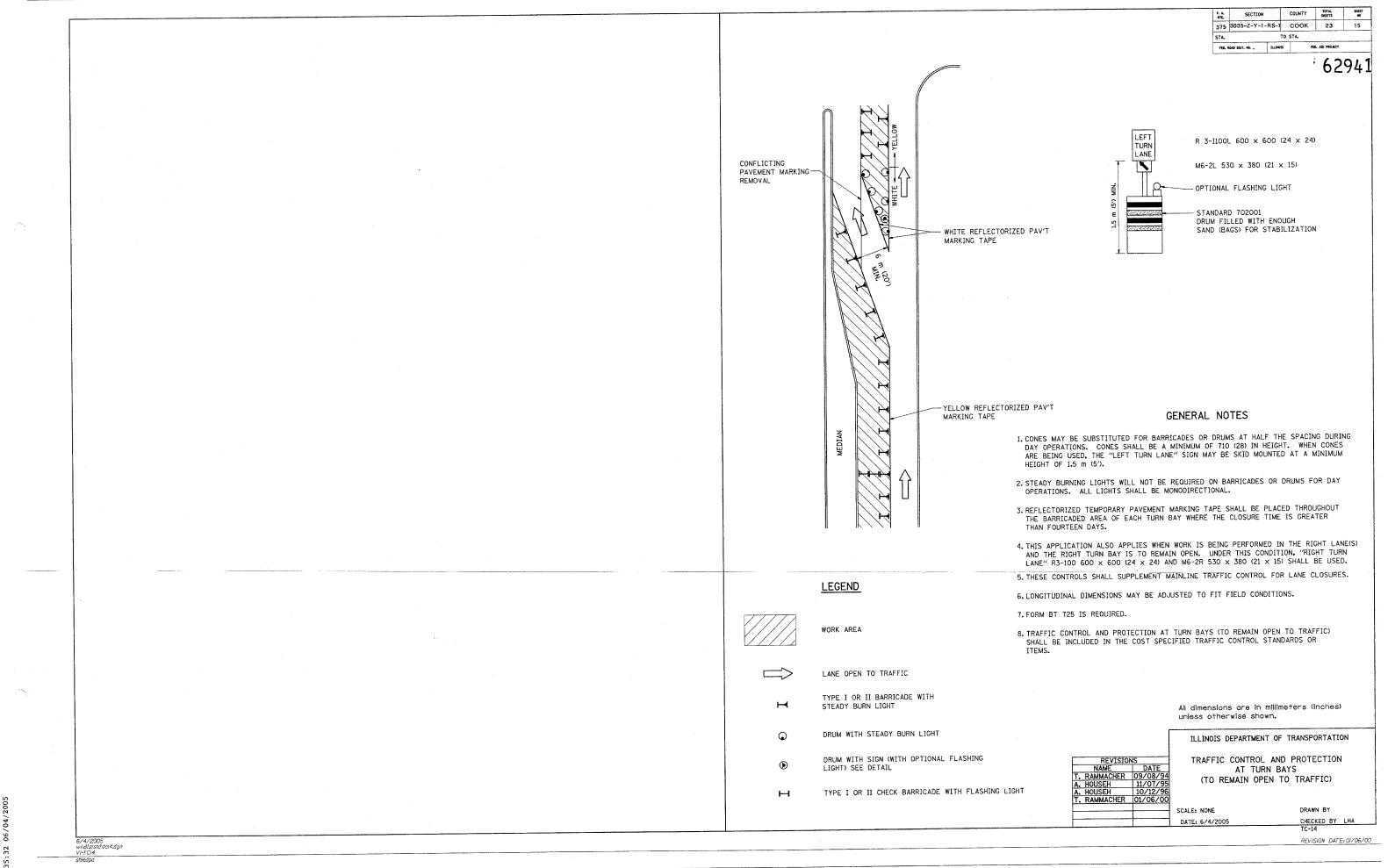
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| | 03-19-90 | , | | | | 1 11 |
| MACHER | 10-27-94 | | MΑ | RKIN | IGS | |
| IOUSEH | 10-09-96 | | | | | |
| IOUSEH | 10-17-96 | | | | | |
| MACHER | 01-06-00 | | | | | |

SCALE: NONE

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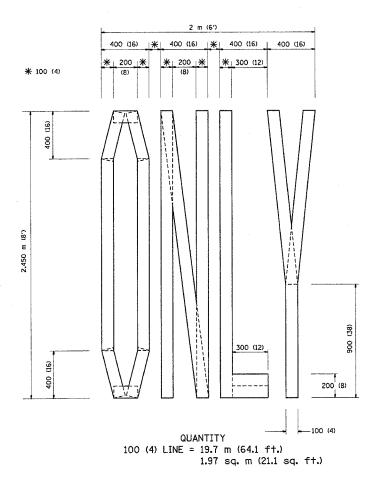
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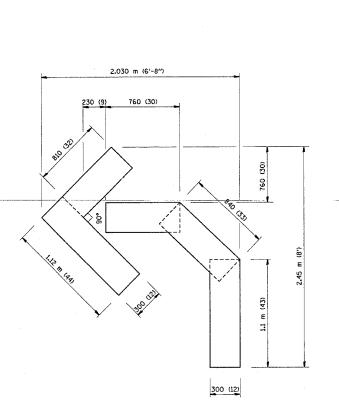
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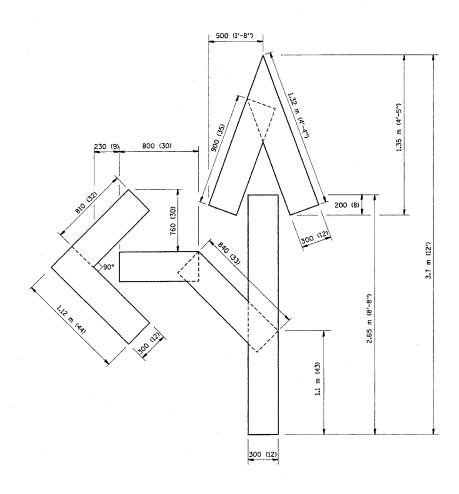
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QUANTITY 100 (4) LINE = 13.9 m (45.5 ft.) 1.39 sq. m (15.2 sq. ft.)



OUANTITY 100 (4) LINE = 25.3 m (82.5 ft.) 2.53 sq. m (27.5 sq. ft.)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

REVISIONS
NAME DATE
MACHER 09/18/94
IRLE 06/01/96
MACHER 06/05/96
MACHER 06/05/96
MACHER 06/05/96

SCALE: NONE DATE 6/4/2005 DRAWN BY CADD CHECKED BY TC-16

TC-16

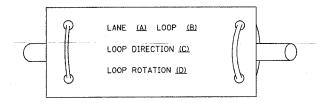
REVISION DATE: 08/28/00

6/4/2005 w:\diststd\tcl6.dgn VI-TCl6

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.

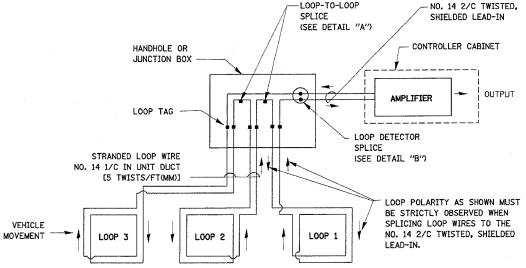
LOOP LEAD-IN CABLE TAG



- 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.

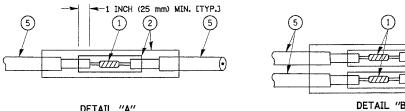


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DETECTOR LOOP WIRING SCHEMATIC

- 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.

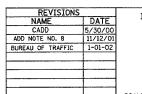


DETAIL "A" LOOP-TO-LOOP SPLICE

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.



ILLINOIS DEPARTMENT OF TRANSPORTATION

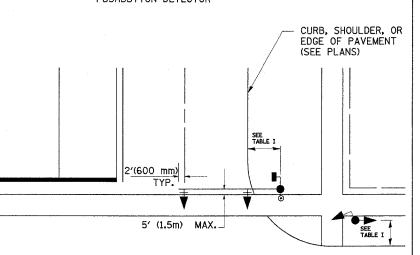
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ. DATE 6/4/2005 DRAWN BY: RWP DESIGNED BY: DAD CHECKED BY: DAZ SHEET 1 OF 4

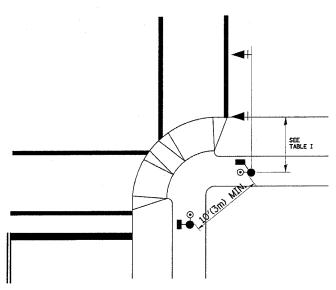
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TRAFFIC SIGNAL MAST ARM AND POST

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 MUTCO (SEE NOTE 1). TO MEET MUTCO REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

RTE. SECTION COUNTY TOTAL SHEE 375 3035-Z-Y-1-RS-1 COOK 23 18 STA. TO STA.__ FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT F62941

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 ADDROBUTED DISBUTTON

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
- 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

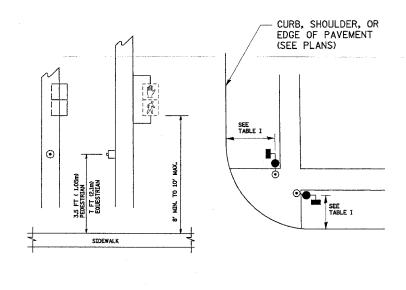


TABLE I

| 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 |

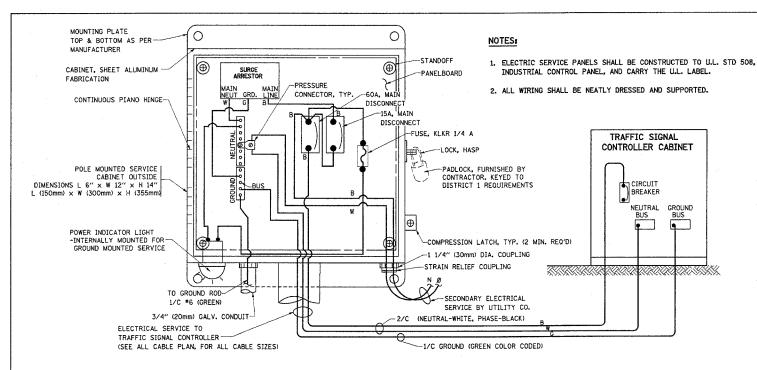
ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ. NONE DATE 6/4/2005

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

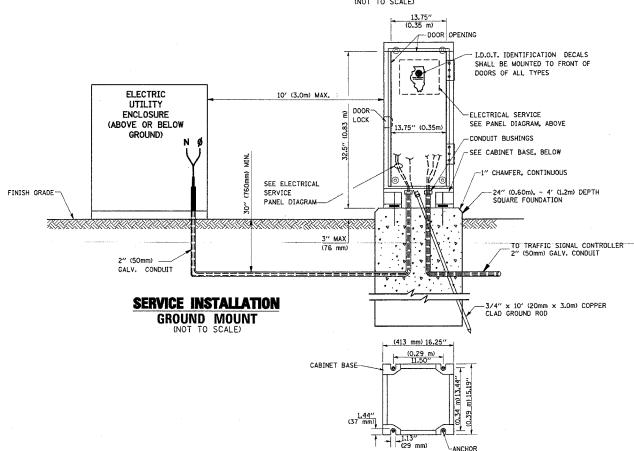
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ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)



CABINET - BASE BOLT PATTERN

BOLT LOCATIONS

NOTES:

HANDHOLE COVER

DETAIL "A"

DETAIL "B"

RECESSED COVER

DIRECT BURIAL

HEAVY DUTY COPPER COMPRESSION GROUNDING TERMINAL. (TYPICAL)

- GROUNDING CABLE (PAID FOR SEPARATELY)

GROUND CABLES TO CONTROLLER
DOUBLE HANDHOLE

-TO POLE OR

SEE DETAIL "B"

HANDHOLE COVER

CAST CORNER FRAME WEB -UL LISTED GROUND COMPRESSION CONNECTOR

COMPRESSION CONNECTOR --WITH STAINLESS STEEL NUT

£1/C #6

(GREEN)

HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

ANTI-CORROSION COMPOUND -

SHALL BE APPLIED ON ALL BOLT/ CONNECTION ASSEMBLIES.

-STAINLESS STEEL NUT AND 2 STAINLESS

SEE DETAIL "A"

(2) 1/2" \times 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO $\overline{}$

EXISTING HANDHOLE FRAME AND COVER

EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

FRAME AND TO COVER. (TYPICAL)

CABLE HOOKS

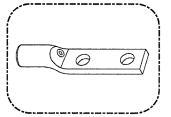
REQUIRED, ALI

GROUNDING SYSTEM

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

2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.

- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



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



RTE. SECTION COUNTY

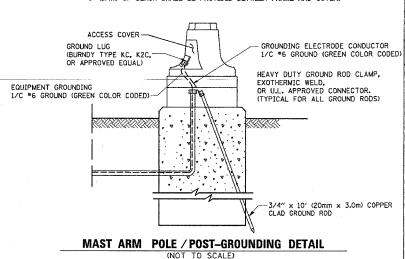
375 3035-Z-Y-1-RS-1 COOK

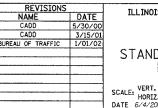
FED. ROAD DIST, NO. _ ILLINOIS FED. AID PROJECT

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

• 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.



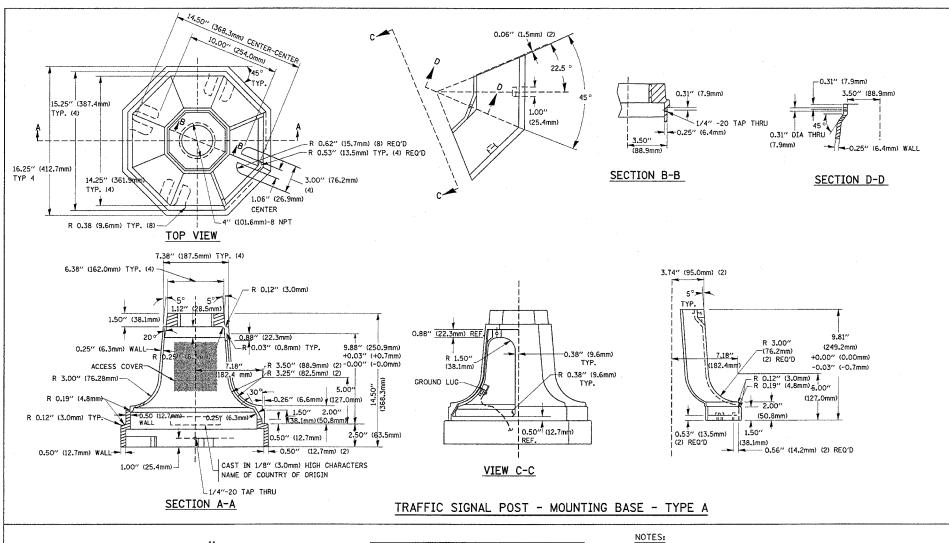


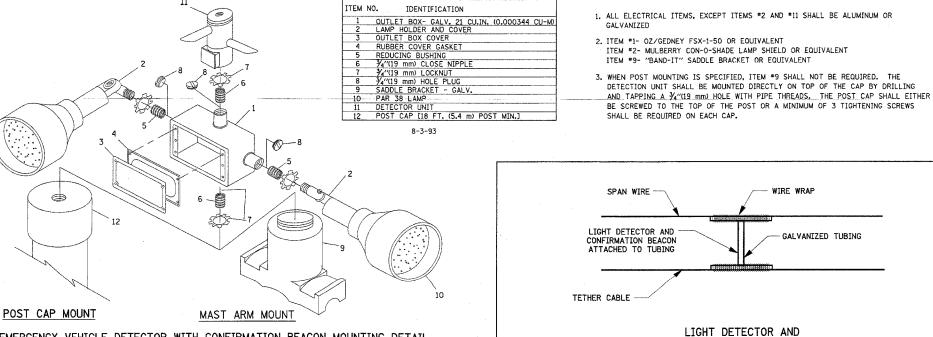
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

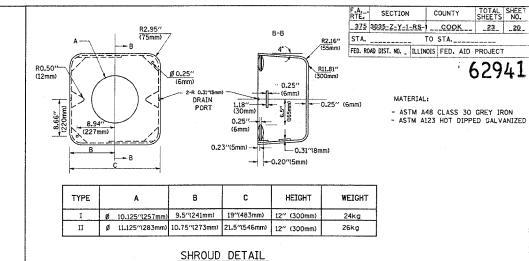
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REVISION DATE: 01/01/02

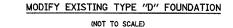


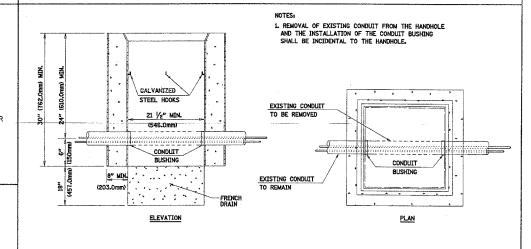


EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING. DIMENSION 7" (175mm) LARGER THAN CONTROLLER BASE DIMENSION, BOTH DIRECTIONS - 1" (25mm) BEVEL 6" (150mm BREAK DOWN EXISTING FOUNDATION 12" (300mm) 9" (230mm)-9" (230mm) No. 3 DOWEL 1'-6" (450mm) LONG ON 12" (300mm) CENTER (8 REQ'D) EXISTING CONDUIT —— 2" (50mm), 4" (100mm) & 4" (100mm) NEW TYPE "D" (MODIFIED) FOUNDATION EXISTING TYPE D (CONTROLLER) FOUNDATION (910mm) - 9" (225mm)





DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT

| | | CMOTETA | T.C |
|----|----------|---------|-----------|
| | DATE | E | NAM |
| | 5/30/00 | TRAFFIC | BUREAU OF |
| | 3/15/01 | TRAFFIC | BUREAU OF |
| | 11/12/01 | TRAFFIC | BUREAU OF |
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WIRE WRAP

CONFIRMATION BEACON MOUNTING

FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

GALVANIZED TUBING

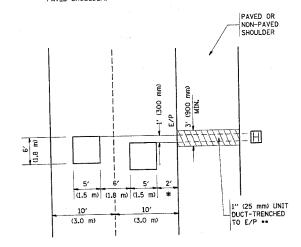
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ. DATE 6/4/2005

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



* = (600 mm)

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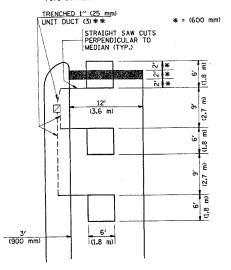
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** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

(PROTECTED / PERMITTED LEFT TURN PHASING)

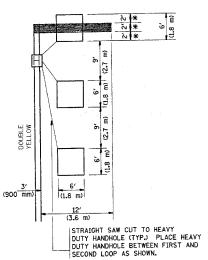
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD BI4001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS. NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH

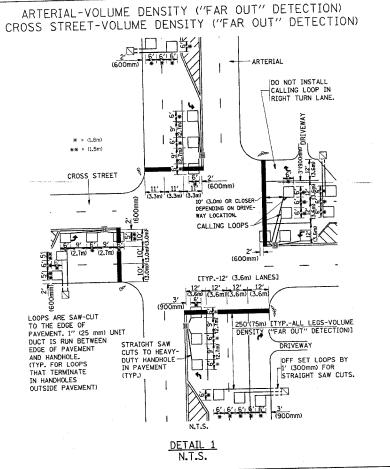
(PROTECTED / PERMITTED LEFT TURN PHASING)

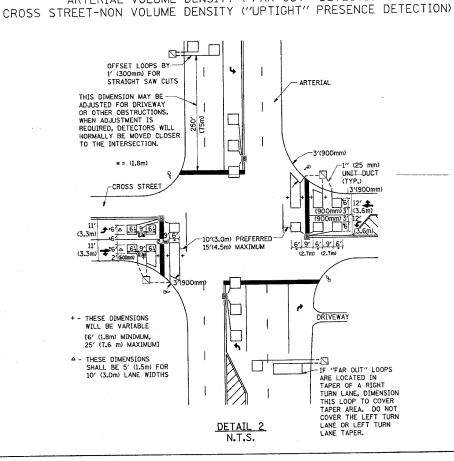
* = (600 mm)



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

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)





62941

NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF <u>ALL</u> DETECTOR LOOPS SHALL BE SIX FEET (1,8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE.
 THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR
 (1.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON $\underline{\text{ALL}}$ SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

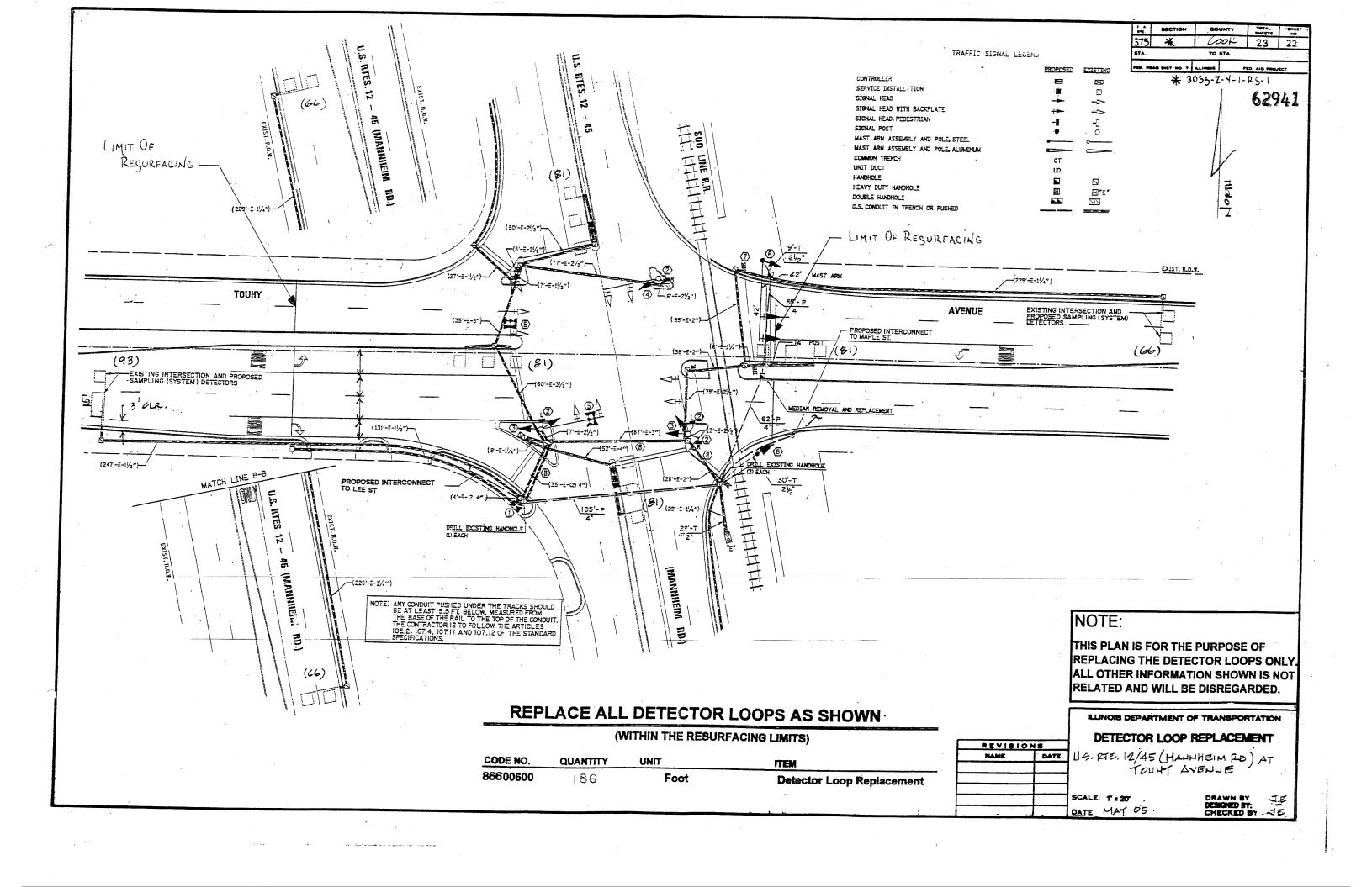
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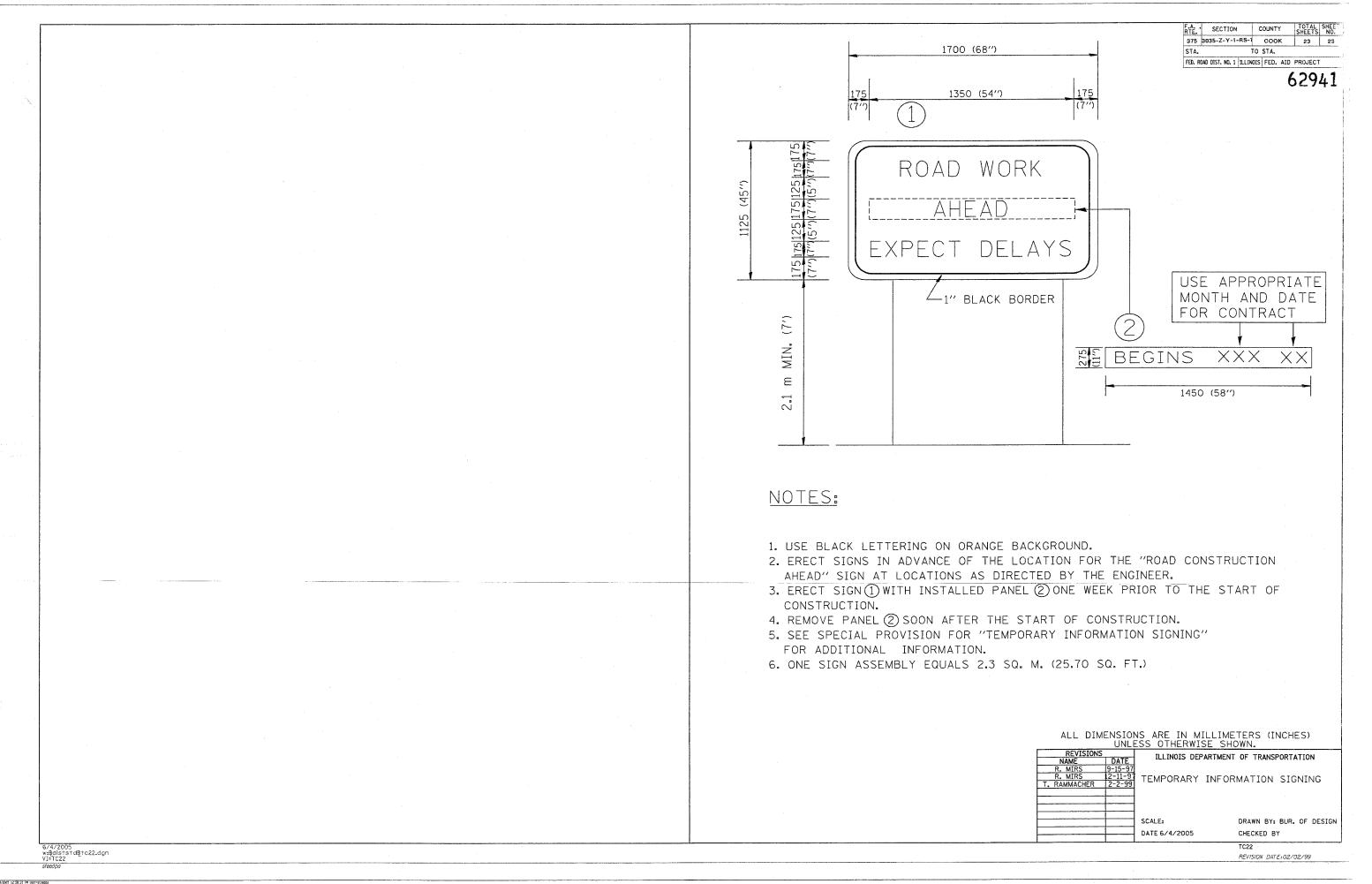
ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1
TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

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

| | ILLINOIS DEPARTMENT | OF TRANSPORTATION |
|---------------------|---------------------------|---|
| REVISIONS NAME DATE | DETECT(INSTALLATI | RICT 1 DR LOOP ON DETAILS RESURFACING |
| | SCALE: NONE DATE 6/4/2005 | DRAWN BY CADD DESIGNED BY CHECKED BY R.K.F. |

REVISION DATE:





Facility and S/