

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

| F.A.P. RTE. | SECTION | COUNTY   | TOTAL SHEETS       | SHEET NO. |
|-------------|---------|----------|--------------------|-----------|
| 856         | EX-RS-4 | WILL     | 20                 | 1         |
|             |         | ILLINOIS | CONTRACT NO. 60P48 |           |

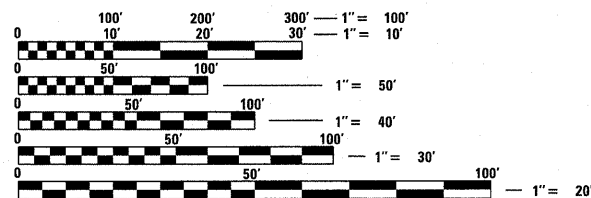
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT IS LOCATED IN THE CITY OF JOLIET.

**PROPOSED  
HIGHWAY PLANS**  
FAP RTE 856: US 6 (CHANNAHON RD)  
0.1 MI N OF TERRY DR TO 0.2 MILES OF EMPRESS RD  
SECTION: EX-RS-4  
RESURFACING (3P)  
PROJECT: F-0856(026)  
WILL COUNTY

TRAFFIC DATA

2009 ADT = 14,300  
POSTED SPEED LIMIT = 50 MPH



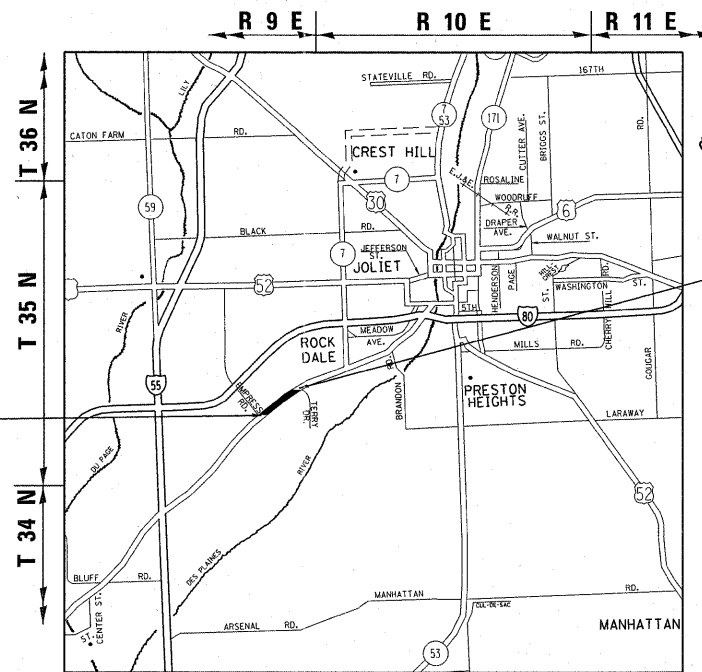
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: BOB BORO (847) 705-4237  
PROJECT MANAGER: ISSAM RAYYAN

CONTRACT NO. 60P48

C-91-558-11

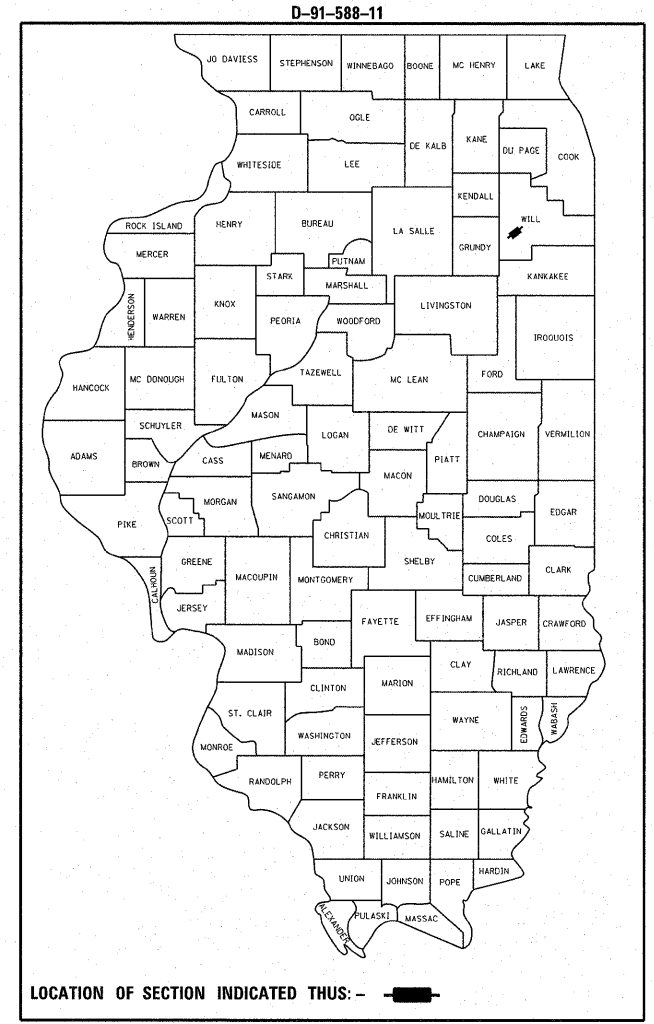


PROJECT BEGINS  
STATION 22 + 7.90

PROJECT ENDS  
STATION 73 + 4.50

TROY TOWNSHIP

GROSS LENGTH = 5,096.6 FT. = 0.965 MILE  
NET LENGTH = 5,096.6 FT. = 0.965 MILE



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED OCTOBER 20 20 11

*Diana M. O'Keefe*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9 20 11  
*Scott E. Stitt P.E.*  
Acting ENGINEER OF DESIGN AND ENVIRONMENT

December 9 20 11  
*William R. Frey*  
Interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

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## STATE STANDARDS

| STANDARD NO.         | DESCRIPTION  |
|----------------------|--|
| 442201-03            | CLASS C AND D PATCHES  |
| 701301-04            | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS  |
| 701306-03            | LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > OR = TO 45 MPH |
| 701311-03            | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY                                 |
| 701336-06            | LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS > OR = TO 45MPH             |
| 701426-04            | LANE CLOSURE MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS > OR = TO 45 MPH  |
| <del>701501-02</del> | <del>URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED</del>                                   |
| 701502-04            | URBAN LANE CLOSURE, 2L, 2W, WITH BEIDIRECTIONAL LEFT TURN LANE                     |
| 701601-07            | URBAN LANE CLOSURE, MULTILANE 1W, OR 2W WITH NONTRAVERSABLE MEDIAN                 |
| 701701-08            | URBAN LANE CLOSURE, MULTILANE INTERSECTION   |
| 701901-02            | TRAFFIC CONTROL DEVICES  |

## GENERAL NOTES

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS- RAISED REFLECTIVE PAVEMENT MAKERS (SNOW-PLOW RESISTANT)" SHOWN IN THE PLANS.

LOCATIONS OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT (OF THE TYPE SPECIFIED ON THE PLANS), WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE ENGINEER SHALL CONTACT MR. LAWRENCE HILL, TRAFFIC FIELD ENGINEER, AT (815) 485-6475 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDED ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

DRAINAGE ADJUSTMENT OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTRACT.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF CONSTRUCTION.

THE CONTRACTOR SHALL BE REQUIRED TO PROVED ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND ITS REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 (OR 811) FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED).

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF JOLIET.

THE CONTRACTOR WILL NOT BE ABLE TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE DEPARTMENT.

ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINE (RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

OVERNIGHT LANE CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURES AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS.

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

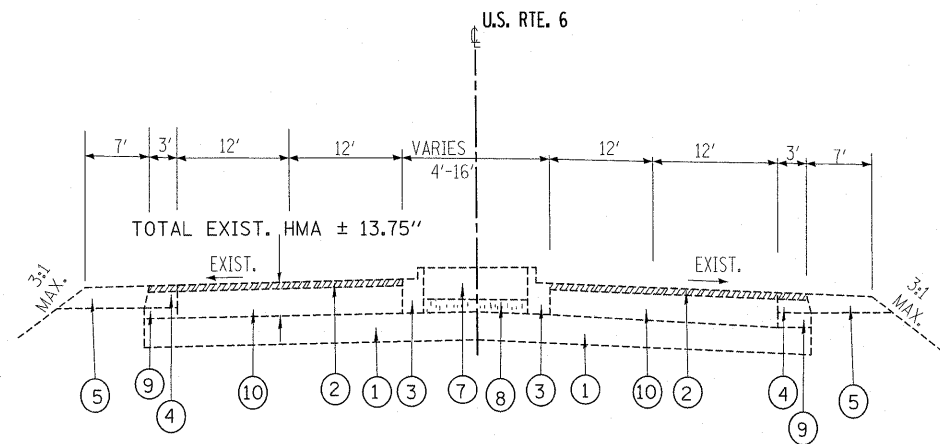
|   |                     |            |           |   |   |         |      |                    |         |        |                 |              |
|---|---------------------|------------|-----------|---|---|---------|------|--------------------|---------|--------|-----------------|--------------|
| FILE NAME =   | USER NAME = patelar | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>US ROUTE 6 (CHANNAHON RD.)<br/>INDEX OF SHEETS AND STATE STANDARDS</b> |         |      | F.A.P.<br>RTE.     | SECTION | COUNTY | TOTAL<br>SHEETS | SHEET<br>NO. |
| ct:\pw_work\pedit\patelar\0267987\015511-aht-plan.dgn | 11-aht-plan.dgn     | DRAWN -    | REVISED - |   | 856   | EX-RS-4 | WILL | 20                 | 2       |        |                 |              |
| PLOT SCALE = 50.0000' / in.                           |                     | CHECKED -  | REVISED - |   | SCALE: SHEET NO. OF SHEETS STA. TO STA.                                   |         |      | CONTRACT NO. 60P48 |         |        |                 |              |
| PLOT DATE = 10/20/2011                                |                     | DATE -     | REVISED - |   | ILLINOIS FED. AID PROJECT   |         |      |                    |         |        |                 |              |

Rev

| SUMMARY OF QUANTITIES |  |                  | URBAN<br>80% FED.<br>20% STATE<br>TOTAL<br>QUANTITIES |              |  |  |  | CONSTRUCTION TYPE CODE 0005 |  |  |  |            | SUMMARY OF QUANTITIES   |       |       | URBAN<br>80% FED.<br>20% STATE<br>TOTAL<br>QUANTITIES |  |  |  |  | CONSTRUCTION TYPE CODE 0005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|--|------------------|---|--------------|--|--|--|-----------------------------|--|--|--|------------|---|-------|-------|---|--|--|--|--|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| CODE NO               | ITEM   | UNIT             |   |              |  |  |  |                             |  |  |  | CODE NO    | ITEM  | UNIT  |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       |  |                  |   |              |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40600200              | BITUMINOUS MATERIALS (PRIME COAT)                              | TON              | 21  | 21           |  |  |  |                             |  |  |  | 70300280   | TEMPORARY PAVEMENT MARKING<br>- LINE 24"                        | FOOT  | 64    | 64  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40600300              | AGGREGATE (PRIME COAT)   | TON              | 103   | 103          |  |  |  |                             |  |  |  | * 78000100 | THERMOPLASTIC PAVEMENT MARKING<br>- LETTERS AND SYMBOLS         | SO FT | 519   | 519   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40600400              | MIXTURE FOR CRACKS, JOINTS,<br>AND FLANGEWAYS                  | TON              | 39  | 39           |  |  |  |                             |  |  |  | * 78000200 | THERMOPLASTIC PAVEMENT MARKING<br>- LINE 4"                     | FOOT  | 26406 | 26406   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40600982              | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT<br>JOINT                | SO YD            | 112   | 112          |  |  |  |                             |  |  |  | * 78000400 | THERMOPLASTIC PAVEMENT MARKING<br>- LINE 6"                     | FOOT  | 1624  | 1624  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40601005              | HOT-MIX ASPHALT REPLACEMENT OVER<br>PATCHES                    | TON              | 124   | 124          |  |  |  |                             |  |  |  | * 78000500 | THERMOPLASTIC PAVEMENT MARKING<br>- LINE 8"                     | FOOT  | 148   | 148   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40603340              | HOT-MIX ASPHALT SURFACE COURSE,<br>MIX "D", N70                | TON              | 2236  | 2236         |  |  |  |                             |  |  |  | * 78000600 | THERMOPLASTIC PAVEMENT MARKING<br>- LINE 12"                    | FOOT  | 803   | 803   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 42001300              | PROTECTIVE COAT  | SO YD            | 26  | 26           |  |  |  |                             |  |  |  | * 78000650 | THERMOPLASTIC PAVEMENT MARKING<br>- LINE 24"                    | FOOT  | 64    | 64  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44000158              | HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"                        | SO YD            | 25838   | 25838        |  |  |  |                             |  |  |  | * 78100100 | RAISED REFLECTIVE PAVEMENT MARKER                               | EACH  | 259   | 259   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44002212              | HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3"                       | SO YD            | 736   | 736          |  |  |  |                             |  |  |  | 78300200   | RAISED REFLECTIVE PAVEMENT MARKER<br>REMOVAL                    | EACH  | 259   | 259   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44201811              | CLASS D PATCHES, TYPE I, 14 INCH                               | SO YD            | 10  | 10           |  |  |  |                             |  |  |  | * 88600600 | DETECTOR LOOP REPLACEMENT                                       | FOOT  | 245   | 245   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44201815              | CLASS D PATCHES, TYPE II, 14 INCH                              | SO YD            | 160   | 160          |  |  |  |                             |  |  |  | X2020110   | GRADING AND SHAPING SHOULDERS                                   | UNIT  | 92    | 92  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44201819              | CLASS D PATCHES, TYPE III, 14 INCH                             | SO YD            | 40  | 40           |  |  |  |                             |  |  |  | 40600821   | POLYMERIZED LEVELING BINDER (MACHINE<br>METHOD), IL-4.75, N50   | TON   | 1098  | 1098  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44201821              | CLASS D PATCHES, TYPE IV, 14 INCH                              | SO YD            | 800   | 800          |  |  |  |                             |  |  |  | X6030310   | FRAMES AND LIDS TO BE ADJUSTED<br>(SPECIAL)                     | EACH  | 4     | 4   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48102100              | AGGREGATE WEDGE SHOULDER, TYPE B                               | TON              | 516   | 516          |  |  |  |                             |  |  |  | Z0004562   | COMBINATION CONCRETE CURB AND GUTTER<br>REMOVAL AND REPLACEMENT | FOOT  | 200   | 200   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 67000400              | ENGINEER'S FIELD OFFICE, TYPE A                                | CAL MO           | 3   | 3            |  |  |  |                             |  |  |  | Z0030850   | TEMPORARY INFORMATION SIGNING                                   | SO FT | 51.4  | 51.4  |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 67100100              | MOBILIZATION   | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70100460              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701306             | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70100600              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701336             | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <del>70102620</del>   | <del>TRAFFIC CONTROL AND PROTECTION,<br/>STANDARD 701501</del> | <del>L SUM</del> | <del>1</del>  | <del>1</del> |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70102622              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701502             | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70102630              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701601             | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70102635              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701701             | L SUM            | 1   | 1            |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300100              | SHORT TERM PAVEMENT MARKING                                    | FOOT             | 7716  | 7716         |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300210              | TEMPORARY PAVEMENT MARKING<br>LETTERS AND SYMBOLS              | SO FT            | 519   | 519          |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300220              | TEMPORARY PAVEMENT MARKING<br>- LINE 4"                        | FOOT             | 26406   | 26406        |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300240              | TEMPORARY PAVEMENT MARKING<br>- LINE 6"                        | FOOT             | 1624  | 1624         |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300250              | TEMPORARY PAVEMENT MARKING<br>- LINE 8"                        | FOOT             | 148   | 148          |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70300260              | TEMPORARY PAVEMENT MARKING<br>- LINE 12"                       | FOOT             | 803   | 803          |  |  |  |                             |  |  |  |            |   |       |       |   |  |  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

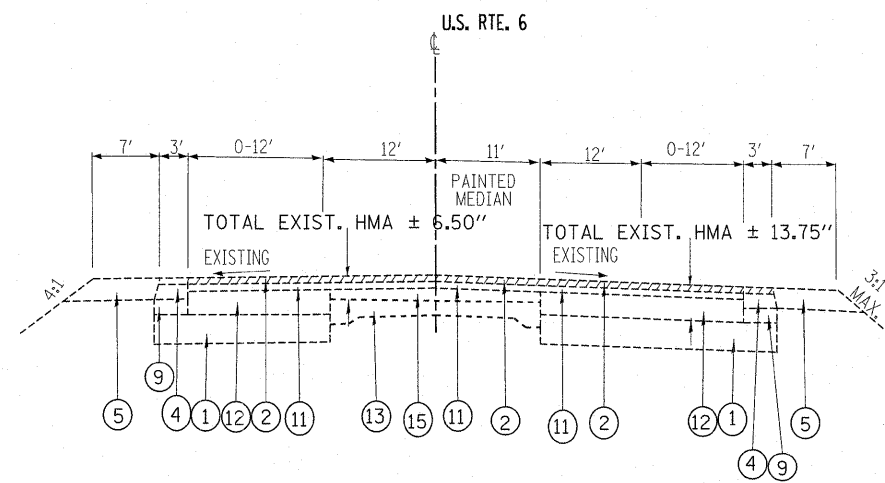
**LEGEND**

- ① EXIST. AGGREGATE SUBGRADE- 12"
- ② EXIST. HOT-MIX ASPHALT SURFACE REMOVAL - 2 1/4"
- ③ EXIST. COMBINATION CONCRETE CURB AND GUTTER TYPE M-2.12
- ④ EXIST. HMA SHOULDER- 8"
- ⑤ EXIST. AGGREGATE SHOULDER
- ⑥ PROP. AGGREGATE WEDGE SHOULDER
- ⑦ EXIST. STABILIZED MEDIAN SURFACE- 12"
- ⑧ EXIST. SAND FILL
- ⑨ EXIST. AGGREGATE SUBGRADE
- ⑩ EXIST. REMAINING HMA AFTER MILLING, (±) 11.5"
- ⑪ EXIST. REMAINING HMA AFTER MILLING (±) 0.75"
- ⑫ EXIST. HMA BINDER COURSE- 10 3/4"
- ⑬ EXIST. CONCRETE BASE COURSE- 8"
- ⑭ EXIST. P.C.C. PAVEMENT
- ⑮ EXIST. HMA BINDER COURSE
- ⑯ EXIST. BITUMINOUS SHOULDER
- ⑰ PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1/2"
- ⑱ PROP. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"



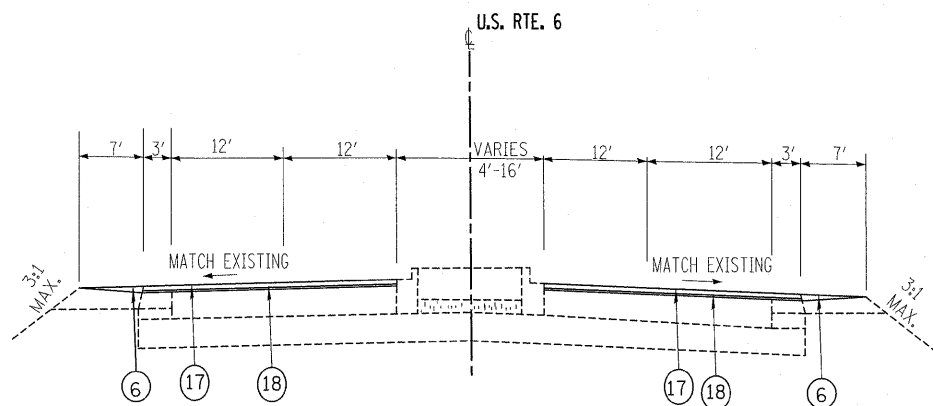
**EXISTING TYPICAL SECTION  
U.S. ROUTE 6**

STA. 22+7.90 TO 24+55



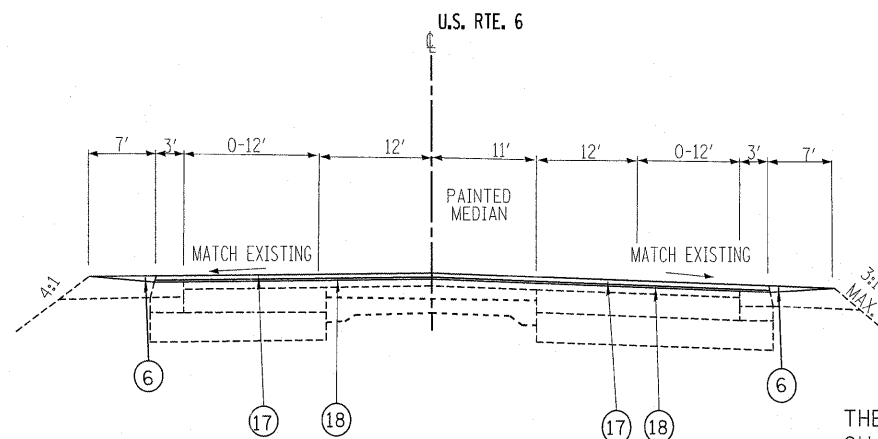
**EXISTING TYPICAL SECTION  
U.S. ROUTE 6**

STA. 24+55 TO STA 35+92



**PROPOSED TYPICAL SECTION  
U.S. ROUTE 6**

STA. 22+7.90 TO 24+55



**PROPOSED TYPICAL SECTION  
U.S. ROUTE 6**

STA. 24+55 TO STA 35+92

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

| MIXTURE USE  | AIR VOIDS @ NDES |
|--|------------------|
| HMA SURFACE COURSE, MIX "D", N70 (IL 9.5 mm)       | 4% @ 70 Gyr.     |
| POLY. LEVELING BINDER (MM), IL-4.75, N50           | 4% @ 50 Gyr.     |
| CLASS D PATCH (HMA BINDER IL-19 mm)                | 4% @ 70 Gyr.     |
| HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm) | 4% @ 70 Gyr.     |

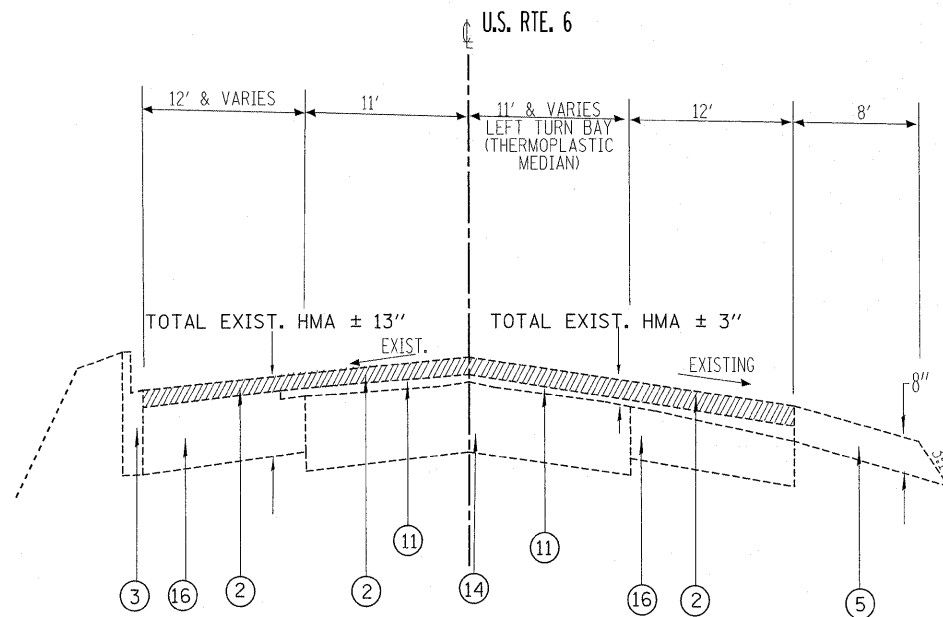
THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

**"THE CONTRACTOR SHALL MILL FIRST PRIOR TO PATCHING."  
(STA. 22+7.90 TO STA. 35+92)**

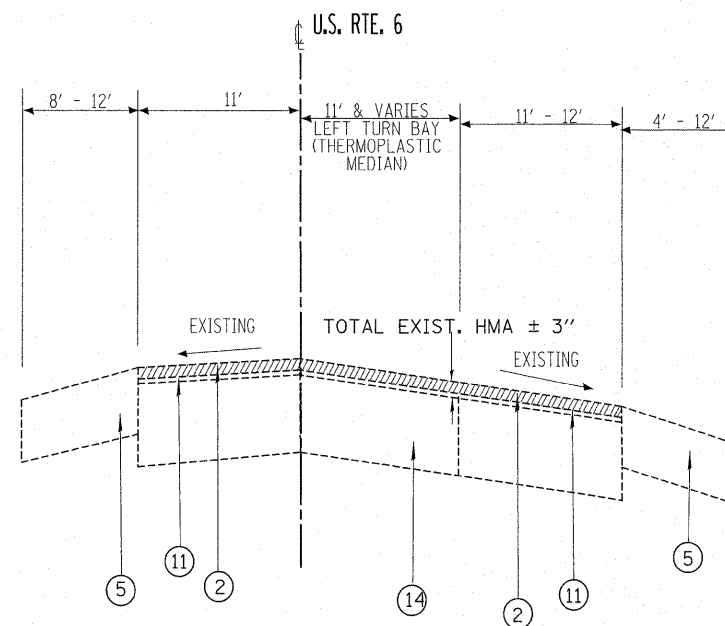
**LEGEND**

- ① EXIST. AGGREGATE SUBGRADE- 12"
- ② EXIST. HOT-MIX ASPHALT SURFACE REMOVAL - 2 1/4"
- ③ EXIST. COMBINATION CONCRETE CURB AND GUTTER TYPE M-2.12
- ④ EXIST. HMA SHOULDER- 8"
- ⑤ EXIST. AGGREGATE SHOULDER
- ⑥ PROP. AGGREGATE WEDGE SHOULDER
- ⑦ EXIST. STABILIZED MEDIAN SURFACE- 12"
- ⑧ EXIST. SAND FILL
- ⑨ EXIST. AGGREGATE SUBGRADE
- ⑩ EXIST. REMAINING HMA AFTER MILLING, (±) 11.5"
- ⑪ EXIST. REMAINING HMA AFTER MILLING (±) 0.75"
- ⑫ EXIST. HMA BINDER COURSE- 10 3/4"
- ⑬ EXIST. CONCRETE BASE COURSE
- ⑭ EXIST. P.C.C. PAVEMENT
- ⑮ EXIST. HMA BINDER COURSE
- ⑯ EXIST. BITUMINOUS SHOULDER
- ⑰ PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2"
- ⑱ PROP. LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"



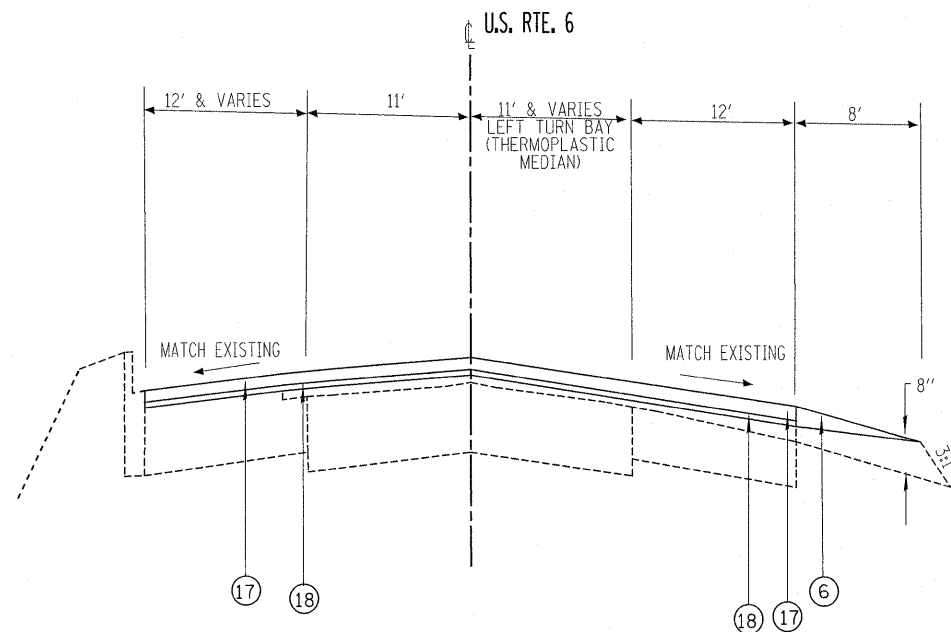
**EXISTING TYPICAL SECTION  
U.S. ROUTE 6**

STA 35+92 TO STA 45+97



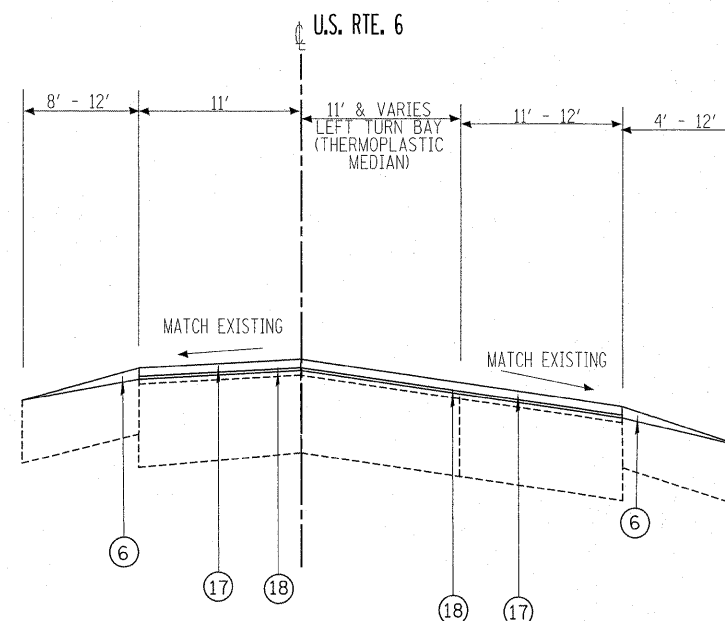
**EXISTING TYPICAL SECTION  
U.S. ROUTE 6**

STA 45+97 TO STA 73+4.50



**PROPOSED TYPICAL SECTION  
U.S. ROUTE 6**

STA 35+92 TO STA 45+97



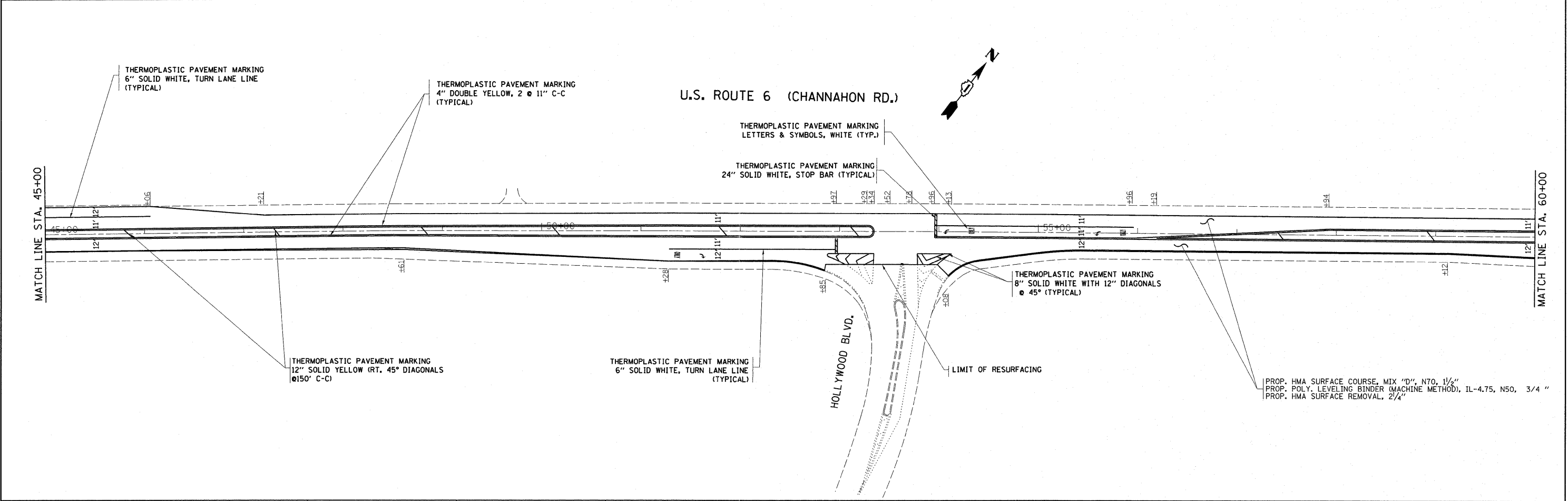
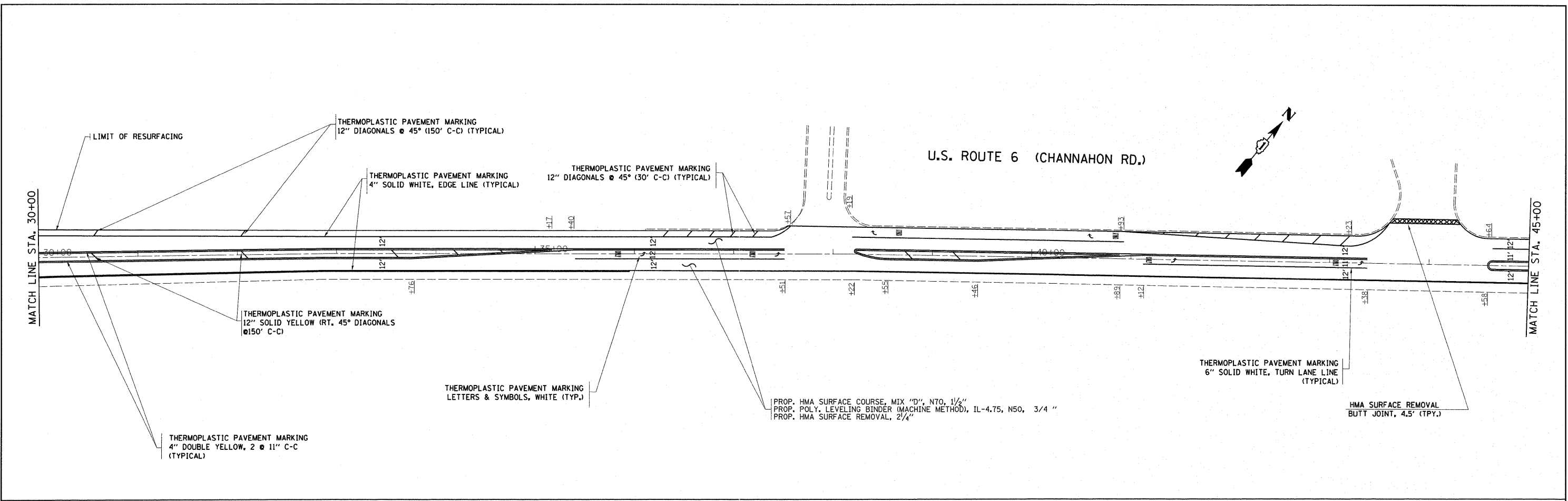
**PROPOSED TYPICAL SECTION  
U.S. ROUTE 6**

STA 45+97 TO STA 73+4.50

**"THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING".  
(STA. 35 + 92 TO STA. 73 + 4.50)**

|   |                         |            |           |   |   |         |      |    |                    |         |        |              |           |
|---|-------------------------|------------|-----------|---|---|---------|------|----|--------------------|---------|--------|--------------|-----------|
| FILE NAME =   | USER NAME = velichkovVV | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>U.S. ROUTE 6 (CHANNAHON RD.)<br/>0.1 MILES N/O TERRY DR. TO 0.2 MILES S/O EMPRESS ROAD</b> |         |      |    | F.A.P. RTE.        | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pw\work\pzd\velichkov\40267987\155811-sh-t-plan.dgn | 155811-sh-t-plan.dgn    | DRAWN -    | REVISED - |   | 856   | EX-RS-4 | WILL | 20 | 5                  |         |        |              |           |
| PLOT SCALE = 50,0000' / 1" =                            |                         | CHECKED -  | REVISED - |   | SCALE: SHEET NO. OF SHEETS STA. +00 TO STA. +00   |         |      |    | CONTRACT NO. 60P48 |         |        |              |           |
| PLOT DATE = 10/28/2011                                  |                         | DATE -     | REVISED - |   | ILLINOIS FED. AID PROJECT   |         |      |    |                    |         |        |              |           |





FILE NAME =  
 cr\pw\work\p\rdos\velichkovv\d0267987\

USER NAME = velichkovv  
 155811-sh-t-plan.dgn  
 PLOT SCALE = 50.0000' / 1" =  
 PLOT DATE = 10/20/2011

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

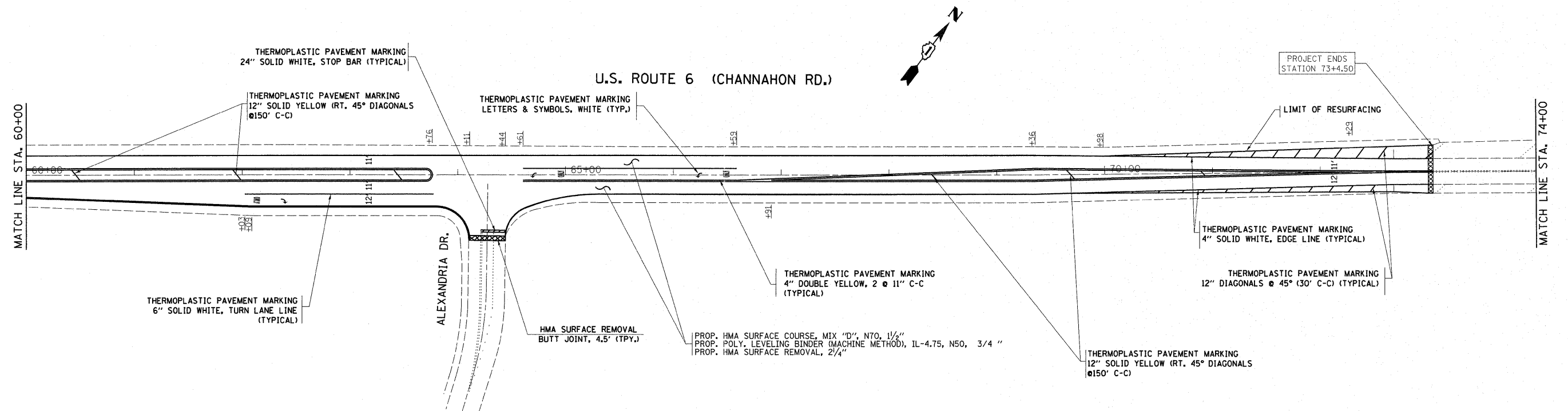
REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 6 (CHANNAHON RD.)  
 0.1 MILES NO TERRY DR. TO 0.2 MILES S/O EMPRESS ROAD**

SCALE: SHEET NO. OF SHEETS STA. +00 TO STA. +00

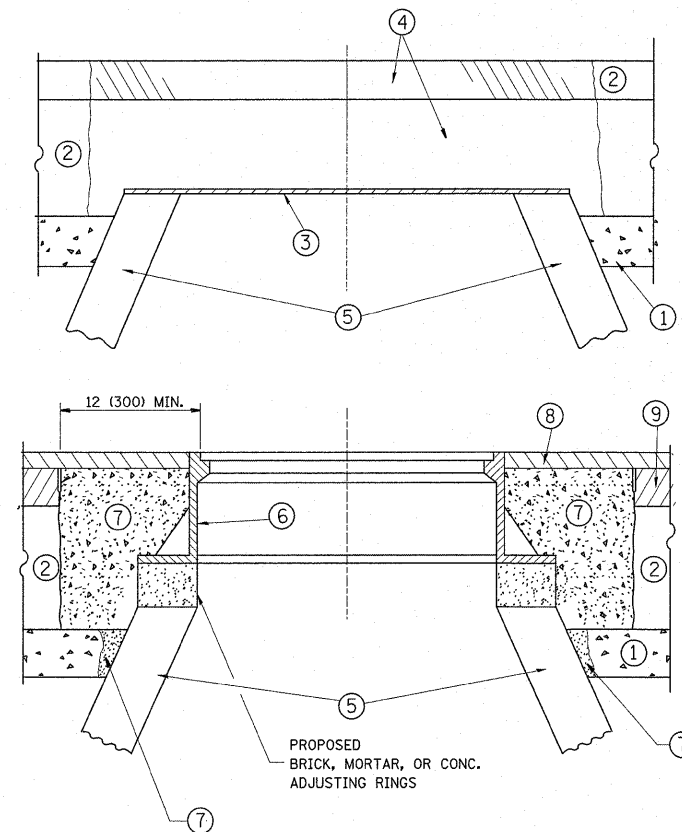
| F.A.P. RTE.               | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 856                       | EX-RS-4 | WILL   | 20           | 7         |
| CONTRACT NO. 60P48        |         |        |              |           |
| ILLINOIS FED. AID PROJECT |         |        |              |           |



|  |                              |            |           |   |   |           |    |                       |                    |                |                       |                   |  |
|--|------------------------------|------------|-----------|---|---|-----------|----|-----------------------|--------------------|----------------|-----------------------|-------------------|--|
| FILE NAME =<br>c:\pw_work\p\dot\velichkovv\d0267987\155811-shit-plan.dgn | USER NAME = velichkovV       | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>U.S. ROUTE 6 (CHANNAHON RD.)<br/>0.1 MILES NO TERRY DR. TO 0.2 MILES SO EMPRESS ROAD</b> |           |    | F.A.P.<br>RTE:<br>856 | SECTION<br>EX-RS-4 | COUNTY<br>WILL | TOTAL<br>SHEETS<br>20 | SHEET<br>NO.<br>8 |  |
|  | PLOT SCALE = 50.0000' / 1" = | CHECKED -  | REVISED - |   | SCALE:  | SHEET NO. | OF | SHEETS                | STA. +00           | TO STA. +00    | CONTRACT NO. 60P48    |                   |  |
|  | PLOT DATE = 10/20/2011       | DATE -     | REVISED - |   | ILLINOIS FED. AID PROJECT   |           |    |                       |                    |                |                       |                   |  |
|  |                              |            |           |   |   |           |    |                       |                    |                |                       |                   |  |







**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 1/2 (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 PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

\*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

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 PP-1\* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

**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.

**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.

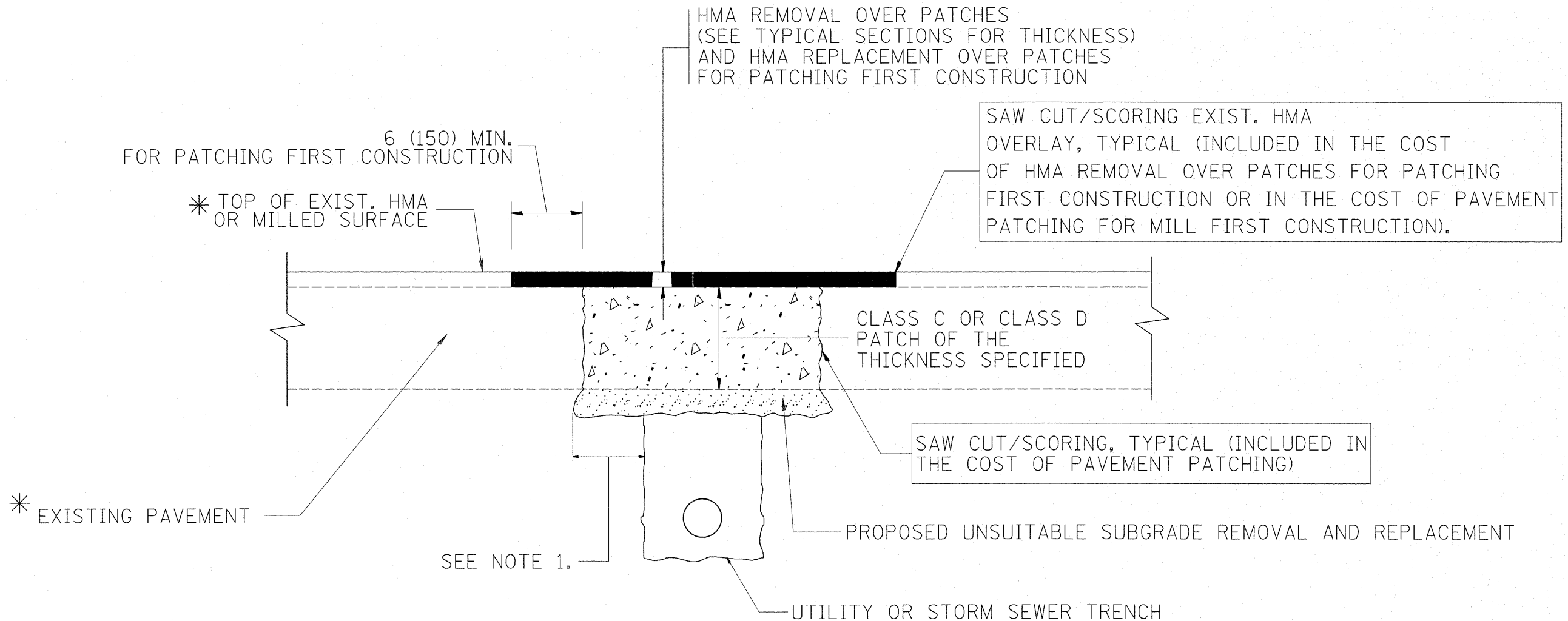
THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

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.

**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

|                                      |                              |                    |                                |   |  |                         |              |                        |                 |                    |                 |              |
|--------------------------------------|------------------------------|--------------------|--------------------------------|---|--|-------------------------|--------------|------------------------|-----------------|--------------------|-----------------|--------------|
| FILE NAME =                          | USER NAME = velichkovVV      | DESIGNED - R. SHAH | REVISED - A. ABBAS 03-21-97    | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>DETAILS FOR<br/>FRAMES AND LIDS ADJUSTMENT WITH MILLING</b> |                         |              | F.A.P. RTE. 856        | SECTION EX-RS-4 | COUNTY WILL        | TOTAL SHEETS 20 | SHEET NO. 10 |
| ci:\pwork\pwork\velichkovvv\d0267987 | 155811-shit-plan.dgn         | DRAWN -            | REVISED - R. WIEDEMAN 05-14-04 |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. TO STA. | <b>BD600-03 (BD-8)</b> |                 | CONTRACT NO. 60P48 |                 |              |
|                                      | PLOT SCALE = 50.0000' / 1in. | CHECKED -          | REVISED - R. BORO 01-01-07     |   | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT                |                         |              |                        |                 |                    |                 |              |
|                                      | PLOT DATE = 10/20/2011       | DATE - 10-25-94    | REVISED - R. BORO 03-09-11     |   |  |                         |              |                        |                 |                    |                 |              |



\* 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 (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

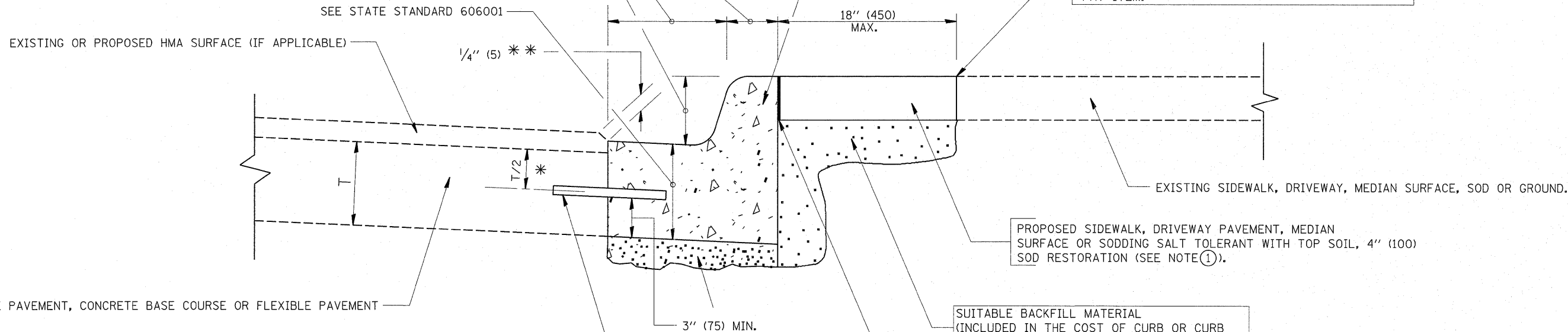
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

|   |                         |                    |                             |   |  |                         |              |   |         |        |              |           |
|---|-------------------------|--------------------|-----------------------------|---|--|-------------------------|--------------|---|---------|--------|--------------|-----------|
| FILE NAME =   | USER NAME = VelichkovVV | DESIGNED - R. SHAH | REVISED - A. ABBAS 04-27-98 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>PAVEMENT PATCHING FOR<br/>HMA SURFACED PAVEMENT</b> |                         |              | F.A.P. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ci:\pw_work\p\sidot\velichkovvv\d0267987\155811-sh-t-plen.dgn |                         | DRAWN -            | REVISED - R. BORO 01-01-07  |   | 856  | EX-RS-4                 | WILL         | 20  | 11      |        |              |           |
| PLOT SCALE = 50.0000' / 1" =                                  |                         | CHECKED -          | REVISED - R. BORO 09-04-07  |   | <b>BD400-04 (BD-22)</b>                                |                         |              | <b>CONTRACT NO. 60P48</b>                       |         |        |              |           |
| PLOT DATE = 10/20/2011  |                         | DATE - 10-25-94    | REVISED - K. ENG 10-27-08   |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. TO STA. | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |              |           |

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.



PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SODDING SALT TOLERANT WITH TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

**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".

\* 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.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ 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.

⑥ 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.

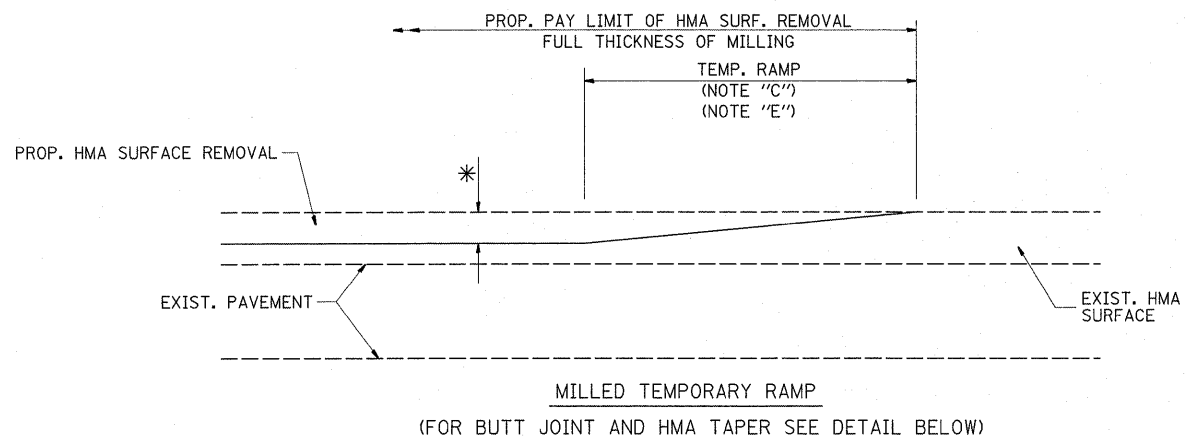
⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ 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.

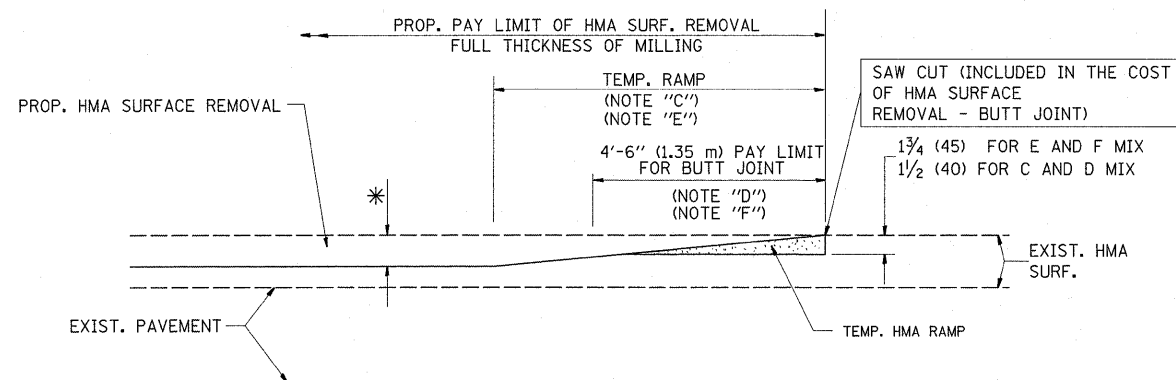
# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

|   |                         |                      |                             |   |  |                         |      |                    |   |        |              |           |
|---|-------------------------|----------------------|-----------------------------|---|--|-------------------------|------|--------------------|---|--------|--------------|-----------|
| FILE NAME =   | USER NAME = velichkovVV | DESIGNED - A. HOUSEH | REVISED - R. SHAH 10-03-96  | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>CURB OR CURB AND GUTTER<br/>REMOVAL AND REPLACEMENT</b> |                         |      | F.A.P. RTE.        | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct\pw_work\pwr\dot\velichkovvv\d0267987\155811-shr-plan.dgn |                         | DRAWN -              | REVISED - A. ABBAS 03-21-97 |   | 856  | EX-RS-4                 | WILL | 20                 | 12  |        |              |           |
| PLOT SCALE = 50.0000' / 1in.                                |                         | CHECKED -            | REVISED - M. GOMEZ 01-22-01 |   | BD600-06 (BD-24)   |                         |      | CONTRACT NO. 60P48 |   |        |              |           |
| PLOT DATE = 10/20/2011                                      |                         | DATE - 03-11-94      | REVISED - R. BORO 12-15-09  |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.            | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |        |              |           |

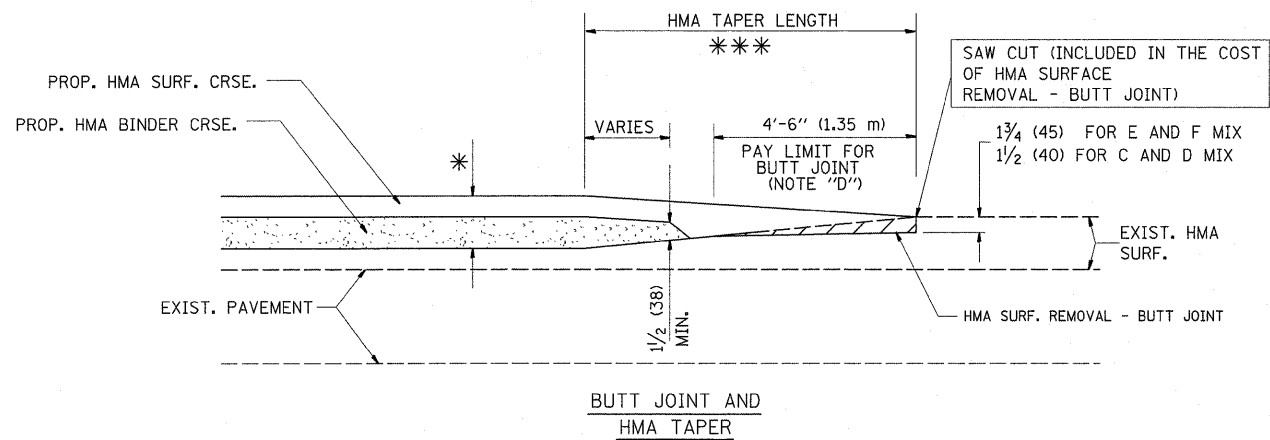


**OPTION 1**

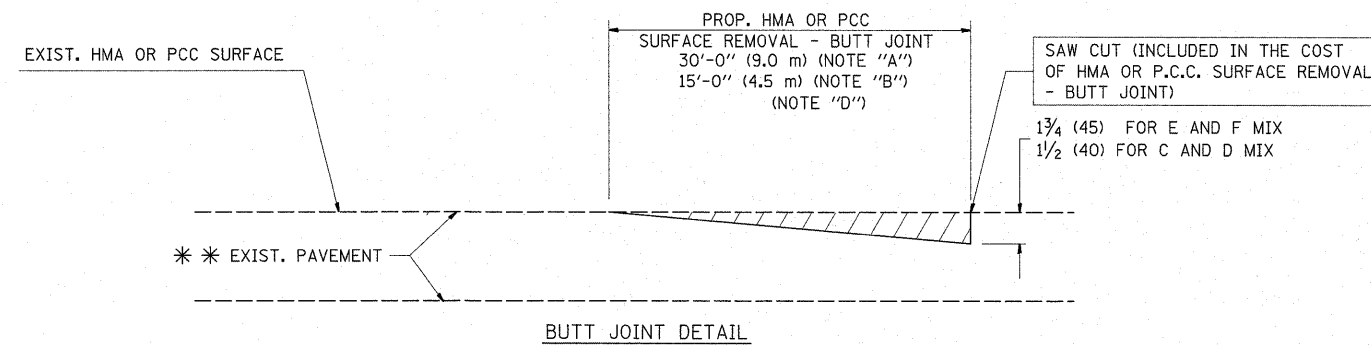


**OPTION 2**  
**HMA CONSTRUCTED TEMPORARY RAMP**  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

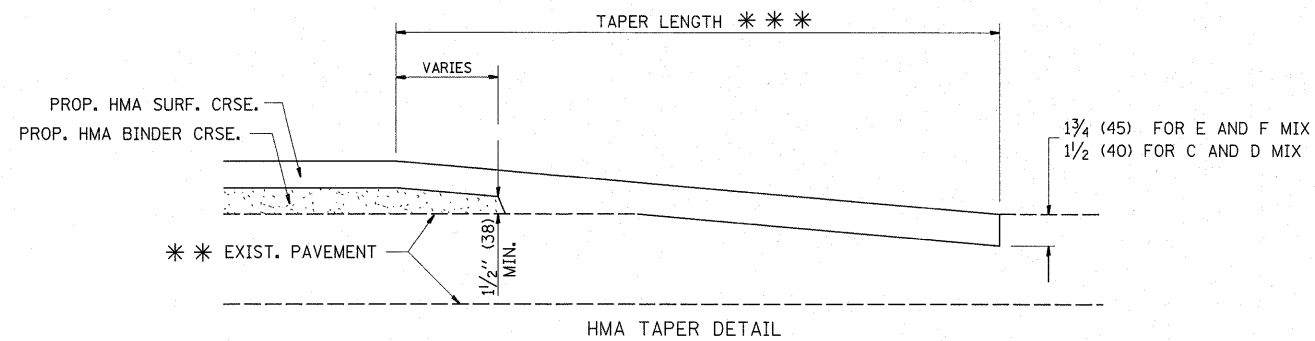
**TYPICAL TEMPORARY RAMP**



**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")

**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".

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

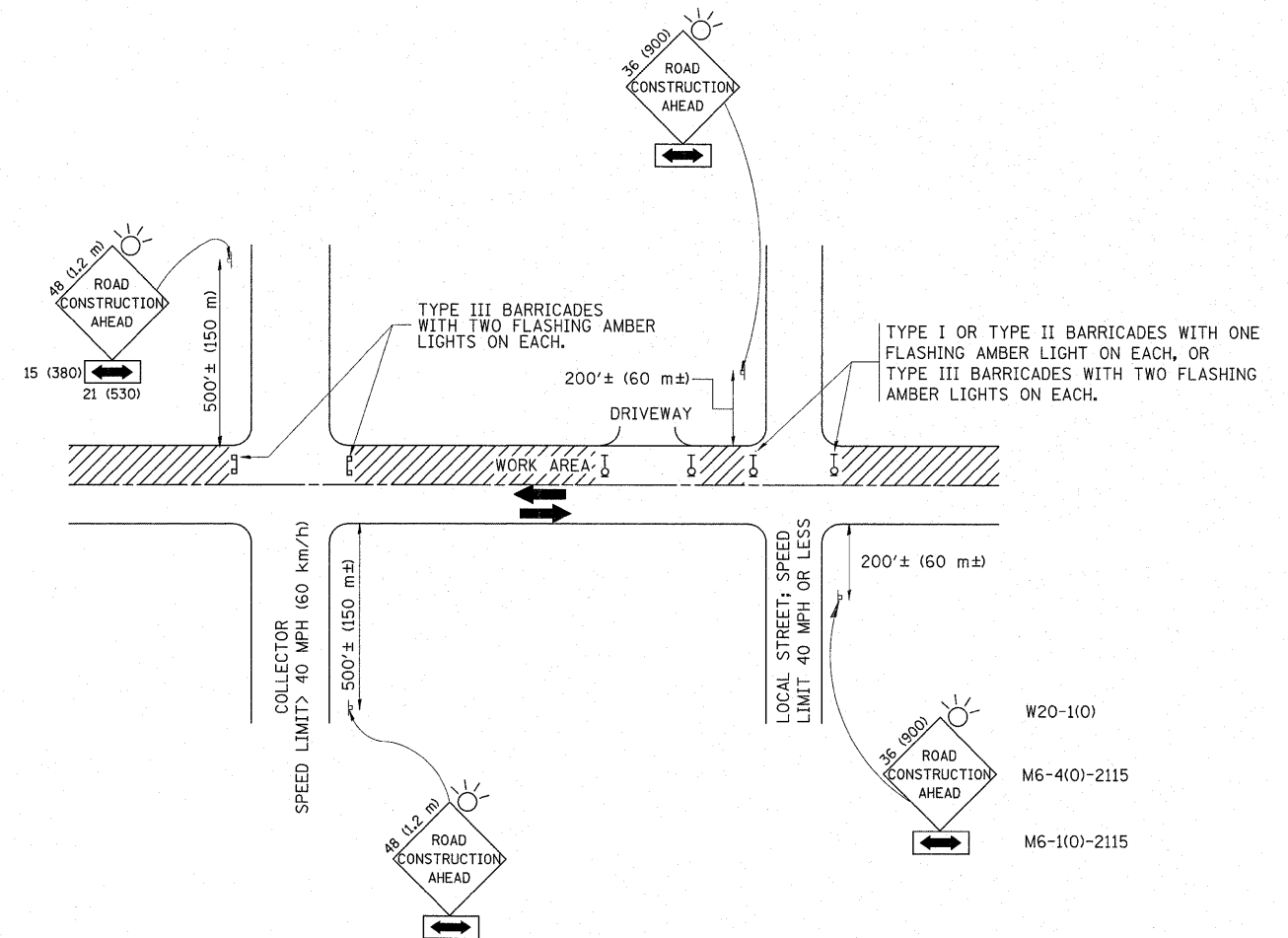
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| FILE NAME =  | USER NAME = velichkovv | DESIGNED - M. DE YONG | REVISED - R. SHAH 10-25-94  |
| ct:\pw_work\p\sdot\velichkovv\d0267987\155811-shr-plen.dgn |                        | DRAWN -               | REVISED - A. ABBAS 03-21-97 |
| PLOT SCALE = 50.0000' / in.                                |                        | CHECKED -             | REVISED - M. GOMEZ 04-06-01 |
| PLOT DATE = 10/20/2011                                     |                        | DATE - 06-13-90       | REVISED - R. BORO 01-01-07  |

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

**BUTT JOINT AND**  
**HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |         |        |                    |           |
|---|---------|--------|--------------------|-----------|
| F.A.P. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 856   | EX-RS-4 | WILL   | 20                 | 13        |
| BD400-05 BD32                                   |         |        | CONTRACT NO. 60P48 |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |                    |           |



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
  1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) 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 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) 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 CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

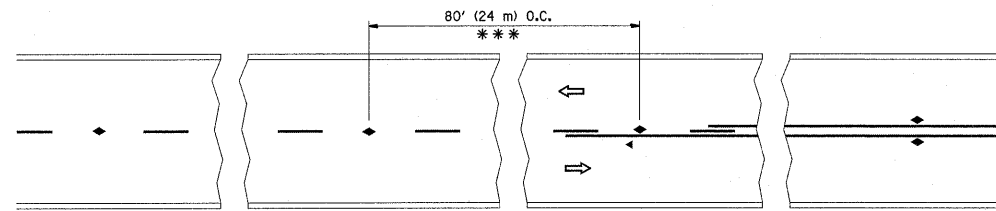
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| FILE NAME =  | USER NAME = velichkovVV     | DESIGNED - LHA | REVISED - J. OBERLE 10-18-95    |
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|  | PLOT SCALE = 50.0000' / in. | CHECKED -      | REVISED - A. HOUSEH 10-15-96    |
|  | PLOT DATE = 10/20/2011      | DATE - 06-89   | REVISED - T. RAMMACHER 01-06-00 |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

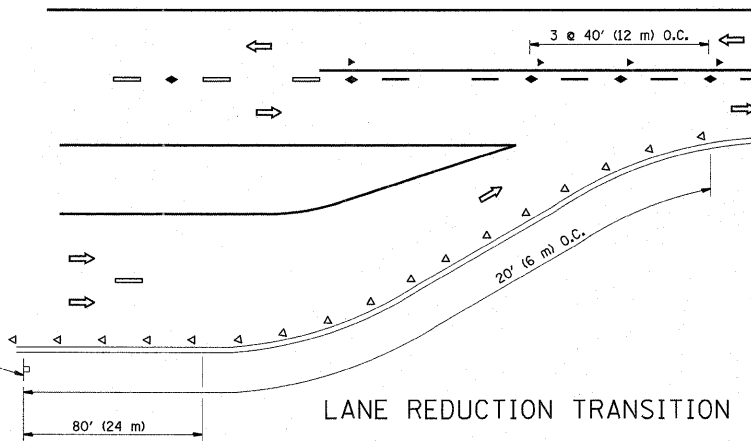
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |         |        |                    |           |
|---|---------|--------|--------------------|-----------|
| F.A.P. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 856   | EX-RS-4 | WILL   | 20                 | 14        |
| TC-10   |         |        | CONTRACT NO. 60P48 |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |                    |           |

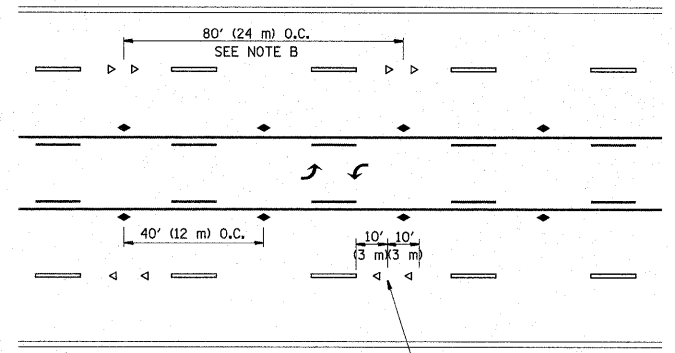


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

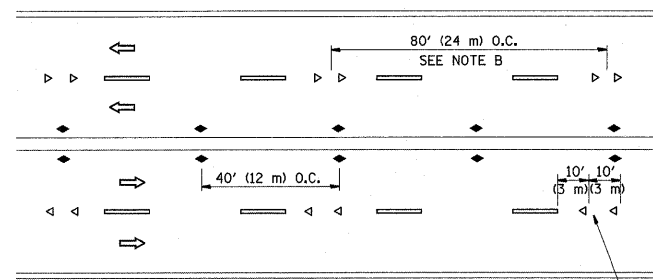
TWO-LANE/TWO-WAY



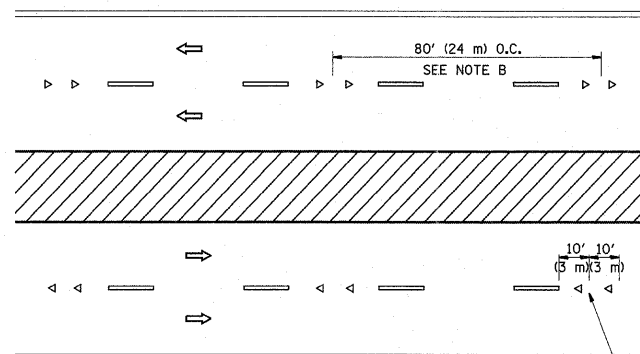
LANE REDUCTION TRANSITION



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.

SYMBOLS

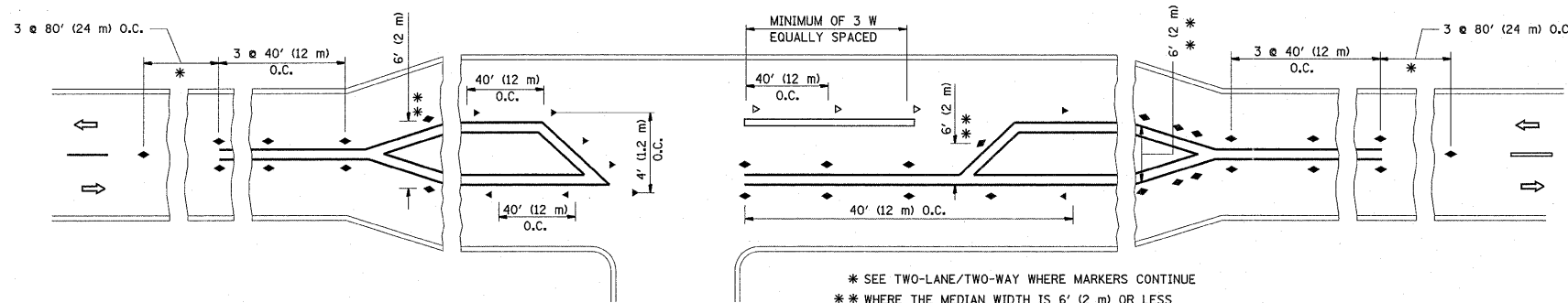
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- 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.

DESIGN NOTES

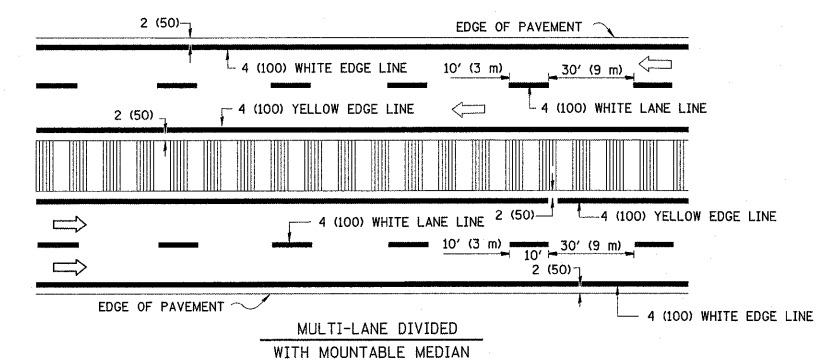
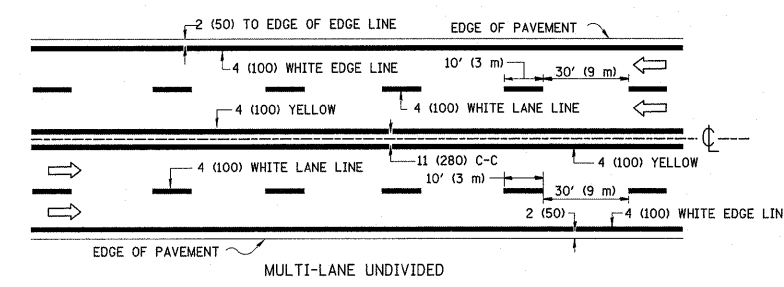
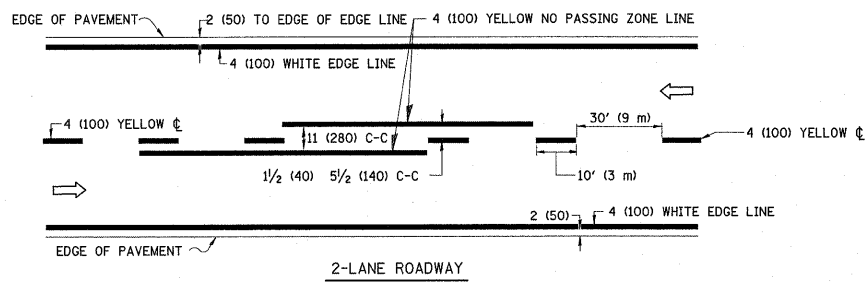
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
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

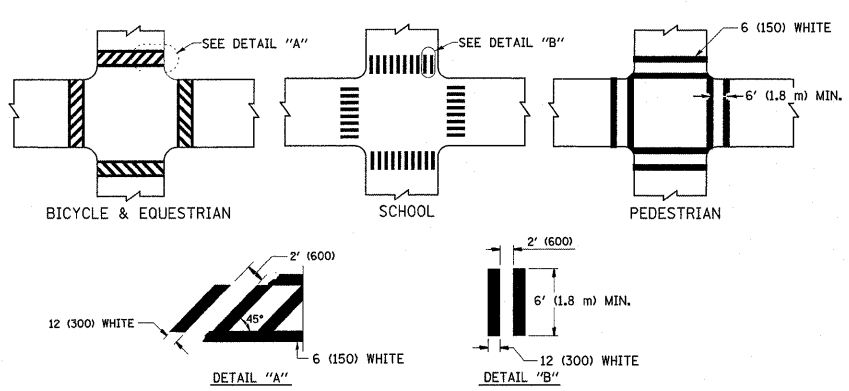
All dimensions are in inches (millimeters) unless otherwise shown.

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|---|-----------------------------|---------------------------------|---------------------------------|---|---|---------|------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME =   | USER NAME = velichkovv      | DESIGNED -                      | REVISED - T. RAMMACHER 09-19-94 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>TYPICAL APPLICATIONS</b>                     |         |      | F.A.P. RTE.               | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| er\pwwork\pwwork\velichkovv\d0267987\155811-shit-plan.dgn | PLOT SCALE = 50.0000' / in. | DRAWN -                         | REVISED - T. RAMMACHER 03-12-99 |   | 856   | EX-RS-4 | WILL | 20                        | 15      |        |              |           |
| PLOT DATE = 10/20/2011                                    | CHECKED -                   | REVISED - T. RAMMACHER 01-06-00 | REVISED - C. JUCIUS 09-09-09    |   | <b>TC-11</b>                                    |         |      | <b>CONTRACT NO. 60P48</b> |         |        |              |           |
|   | DATE -                      |                                 |                                 |   | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |      |                           |         |        |              |           |

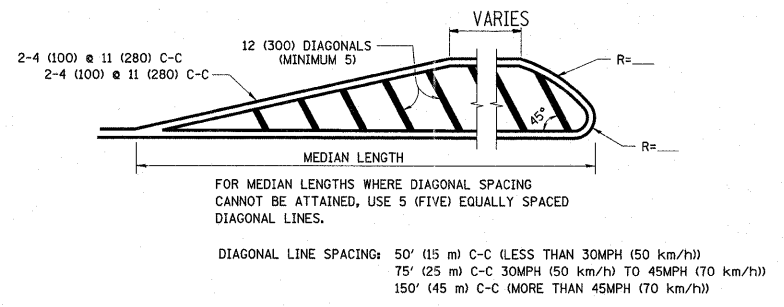
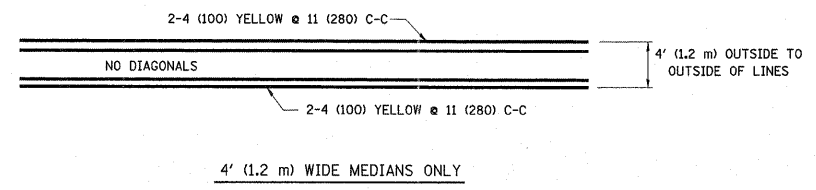


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

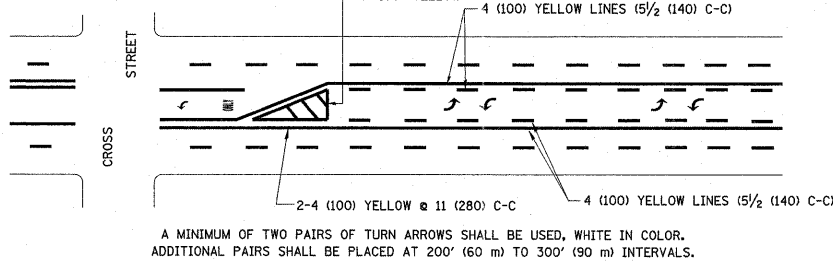
**TYPICAL LANE AND EDGE LINE MARKING**



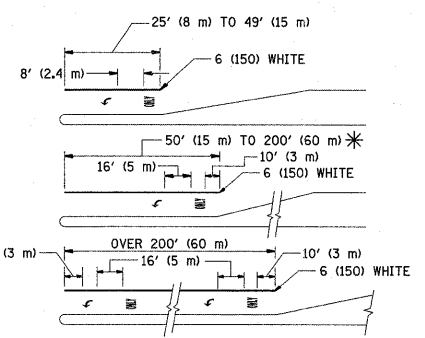
**TYPICAL CROSSWALK MARKING**



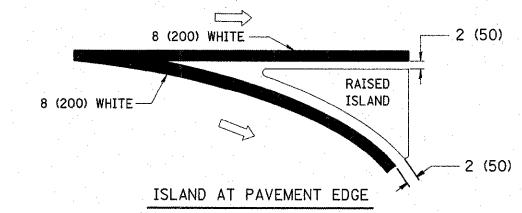
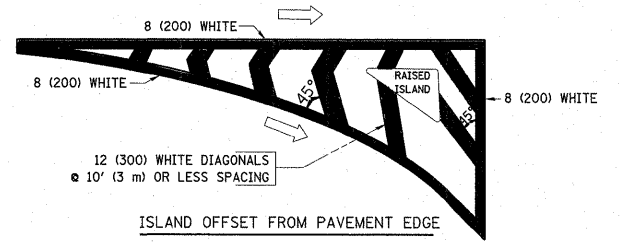
**MEDIANS OVER 4' (1.2 m) WIDE**



**TYPICAL PAINTED MEDIAN MARKING**



**TYPICAL TURN LANE MARKING**



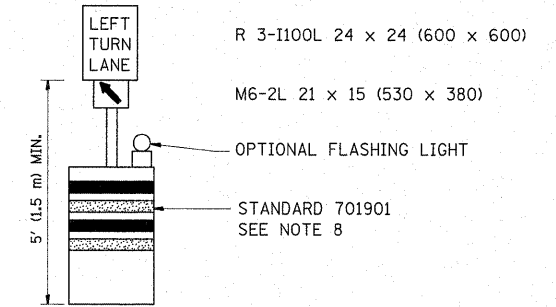
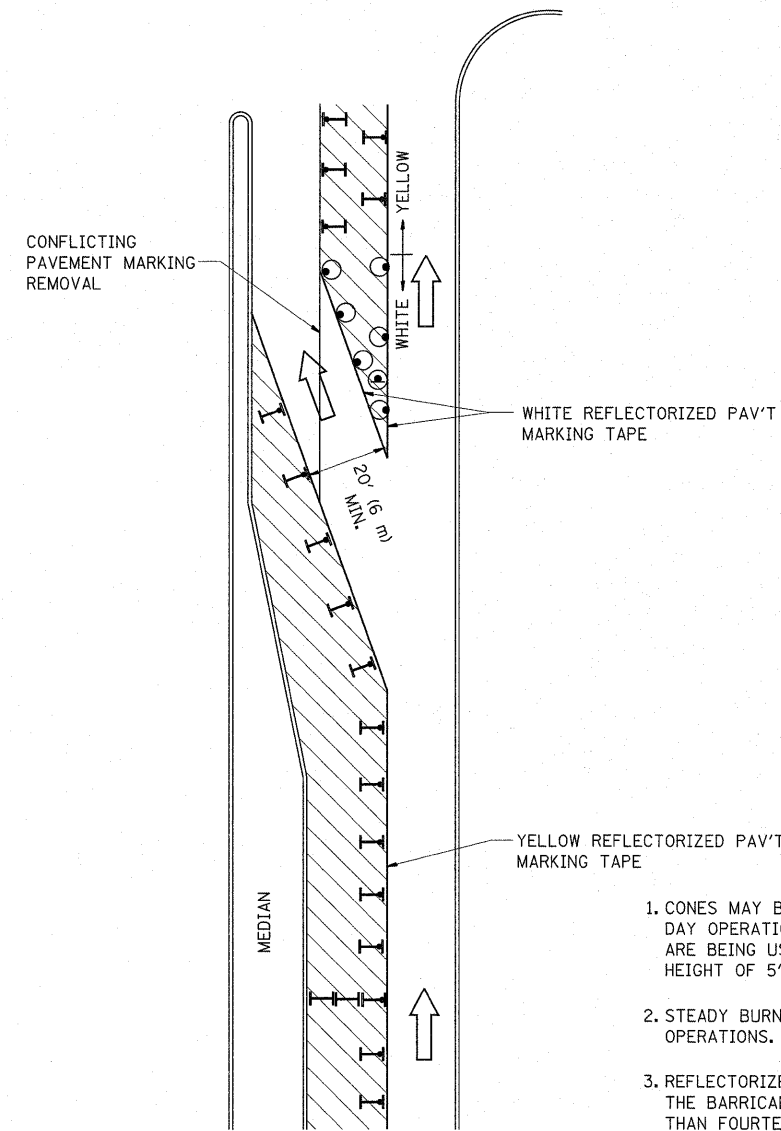
**TYPICAL ISLAND MARKING**

| TYPE OF MARKING   | WIDTH OF LINE   | PATTERN                      | COLOR  | SPACING / REMARKS  |
|---|---|------------------------------|--|--|
| CENTERLINE ON 2 LANE PAVEMENT   | 4 (100)   | SKIP-DASH                    | YELLOW   | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT   | 2 @ 4 (100)   | SOLID                        | YELLOW   | 11 (280) C-C   |
| NO PASSING ZONE LINES: FOR ONE DIRECTION  | 4 (100)   | SOLID                        | YELLOW   | 5/2 (140) C-C FROM SKIP-DASH CENTERLINE  |
| NO PASSING ZONE LINES: FOR BOTH DIRECTIONS  | 2 @ 4 (100)   | SOLID                        | YELLOW   | 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN   |
| LANE LINES  | 4 (100) 5 (125) ON FREEWAYS   | SKIP-DASH SKIP-DASH          | WHITE WHITE                                    | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| DOTTED LINES (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 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) EACH DIRECTION 8' (2.4m) LEFT ARROW   | SKIP-DASH AND SOLID IN PAIRS | YELLOW WHITE                                   | 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL                |
| CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL) | 2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°   | SOLID SOLID SOLID            | WHITE WHITE WHITE                              | NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 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° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS | SOLID                        | YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC | 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.   |
| GORE MARKING AND CHANNELIZING LINES   | 8 (200) WITH 12 (300) DIAGONALS @ 45°   | SOLID                        | WHITE  | DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 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 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)  |
| SHOULDER DIAGONALS  | 12 (300) @ 45°  | SOLID                        | WHITE - RIGHT YELLOW - LEFT                    | 50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 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.











**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

**LEGEND**

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

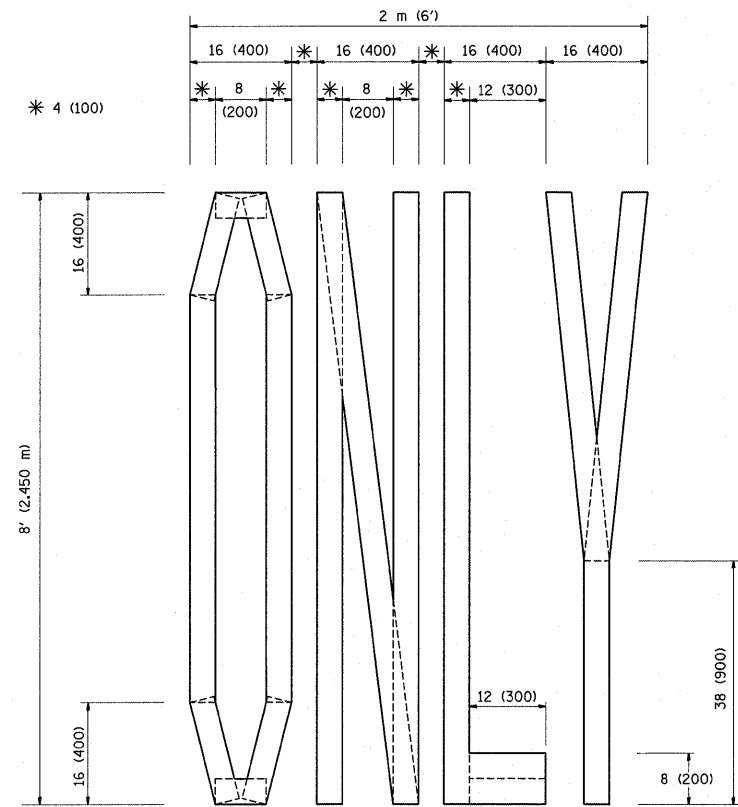
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|   | PLOT SCALE = 50.0000' / 1in. | REVISED - A. HOUSEH 10-12-96    | REVISED -                  |
|   | PLOT DATE = 10/20/2011       | REVISED - T. RAMMACHER 01-06-00 | REVISED -                  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

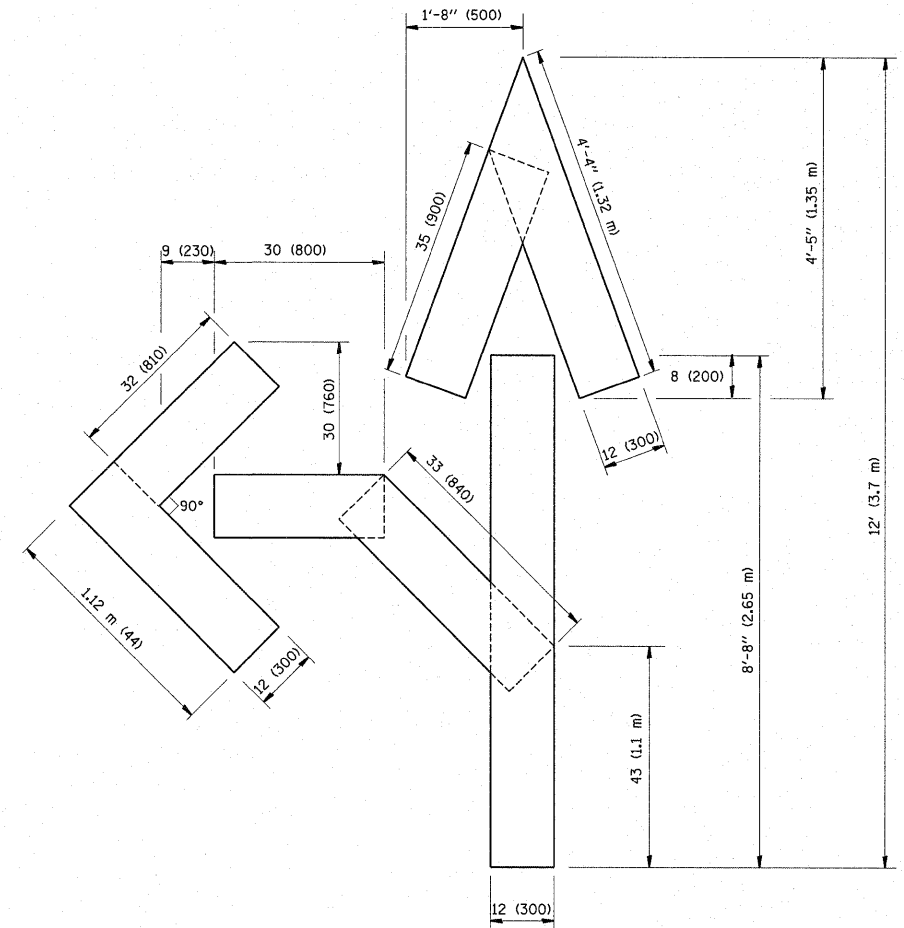
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

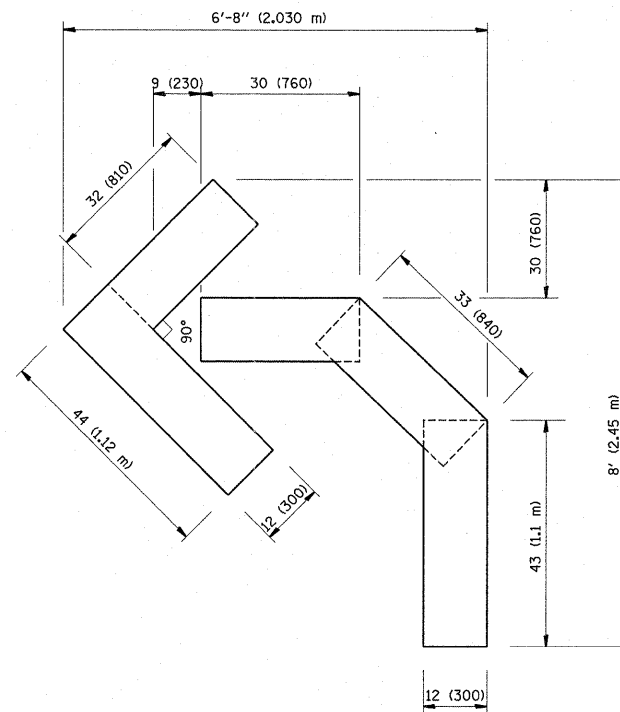
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| F.A.R. RTE.  | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 856  | EX-RS-4 | WILL                      | 20           | 17        |
| <b>TC-14</b>   |         | <b>CONTRACT NO. 60P48</b> |              |           |
| <small>FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT</small> |         |                           |              |           |



QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



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



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

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

|   |                         |                 |                                |
|---|-------------------------|-----------------|--------------------------------|
| FILE NAME =                                   | USER NAME = velichkovVV | DESIGNED -      | REVISED -T. RAMMACHER 06-05-96 |
| ci:\pw_work\pwr\d0267987\155811-shit-plan.dgn | 155811-shit-plan.dgn    | DRAWN -         | REVISED -T. RAMMACHER 11-04-97 |
| PLOT SCALE = 50.0000' / 1in.                  |                         | CHECKED -       | REVISED -T. RAMMACHER 03-02-98 |
| PLOT DATE = 10/20/2011                        |                         | DATE - 09-18-94 | REVISED -E. GOMEZ 08-28-00     |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING**

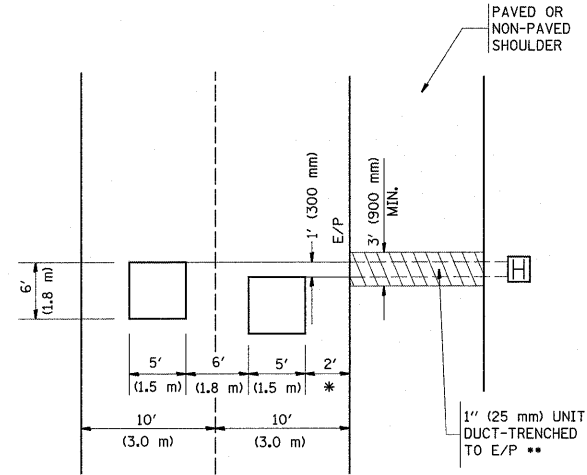
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|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.P. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 856   | EX-RS-4 | WILL               | 20           | 18        |
| TC-16   |         | CONTRACT NO. 60P48 |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |                    |              |           |



**LOOPS NEXT TO SHOULDERS**

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

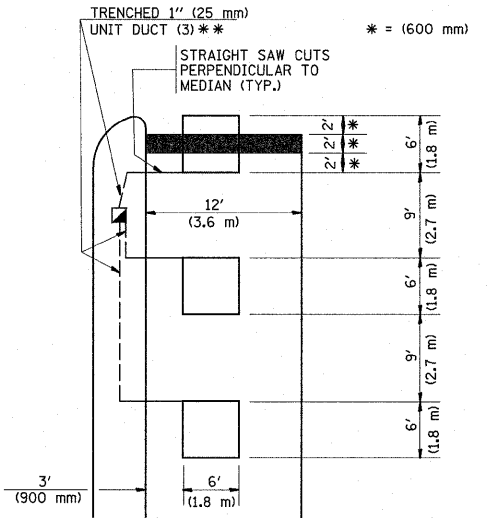


\* = (600 mm)

\*\* 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  
814001 TO ENSURE THAT HANDHOLE  
FITS IN MEDIAN.

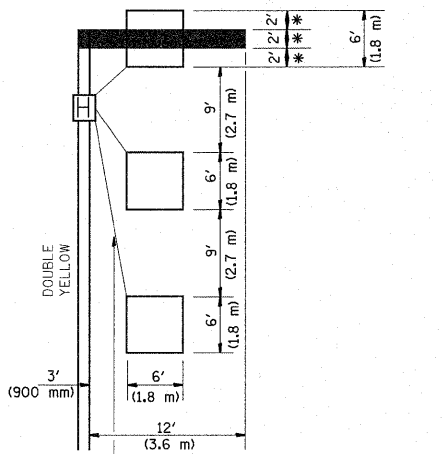


\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS  
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

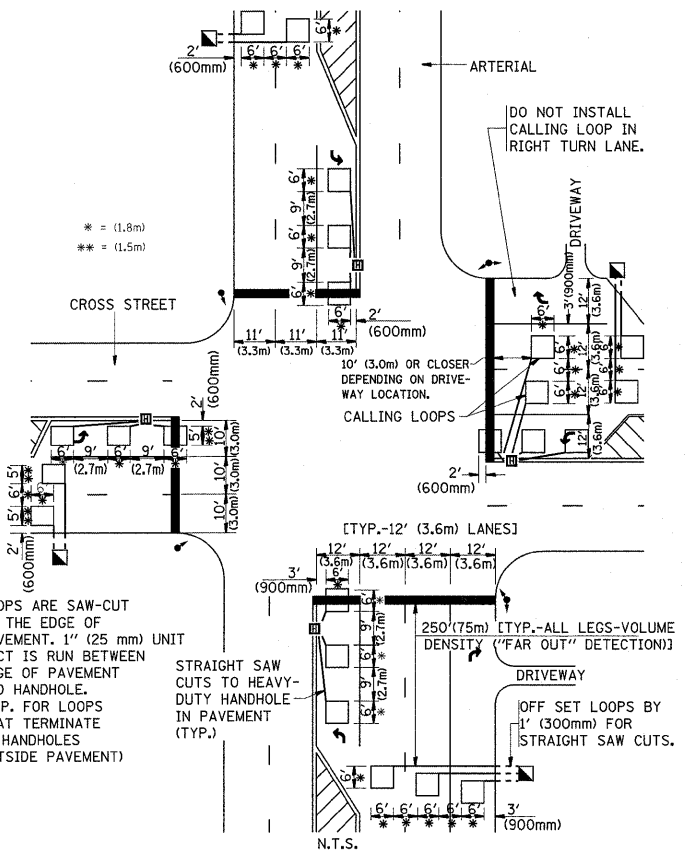
**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**

\* = (600 mm)



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

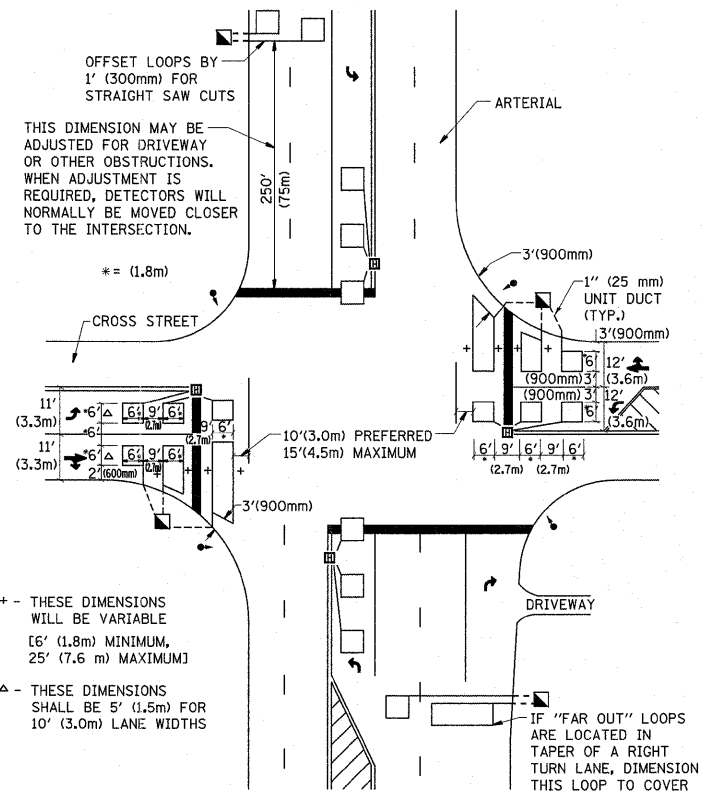
**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



LOOPS ARE SAW-CUT  
TO THE EDGE OF  
PAVEMENT. 1" (25 mm) UNIT  
DUCT IS RUN BETWEEN  
EDGE OF PAVEMENT  
AND HANDHOLE.  
(TYP. FOR LOOPS  
THAT TERMINATE  
IN HANDHOLES  
OUTSIDE PAVEMENT)

**DETAIL 1**  
N.T.S.

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



+ - THESE DIMENSIONS  
WILL BE VARIABLE  
[6' (1.8m) MINIMUM,  
25' (7.6 m) MAXIMUM]

Δ - THESE DIMENSIONS  
SHALL BE 5' (1.5m) FOR  
10' (3.0m) LANE WIDTHS

**DETAIL 2**  
N.T.S.

**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 SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF ALL 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 (i.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 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.

**NOTE:**

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.

|  |                        |                  |           |   |  |                         |              |                 |                 |             |                 |              |
|--|------------------------|------------------|-----------|---|--|-------------------------|--------------|-----------------|-----------------|-------------|-----------------|--------------|
| FILE NAME =  | USER NAME = velichkovv | DESIGNED -       | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>DISTRICT 1 - DETECTOR LOOP INSTALLATION<br/>DETAILS FOR ROADWAY RESURFACING</b> |                         |              | F.A.P. RTE. 856 | SECTION EX-RS-4 | COUNTY WILL | TOTAL SHEETS 20 | SHEET NO. 20 |
| or:\pw\work\pws\dos\velichkovv\d0267987\155811-sh-t-plan.dgn | 155811-sh-t-plan.dgn   | DRAWN -          | REVISED - |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. TO STA. | <b>TS-07</b>    |                 |             |                 |              |
| PLOT SCALE = 50.0000' / 1" =                                 |                        | CHECKED - R.K.F. | REVISED - |   | CONTRACT NO. 60P48   |                         |              |                 |                 |             |                 |              |
| PLOT DATE = 10/28/2011                                       |                        | DATE             | REVISED - |   | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT                                    |                         |              |                 |                 |             |                 |              |