

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 70619		

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

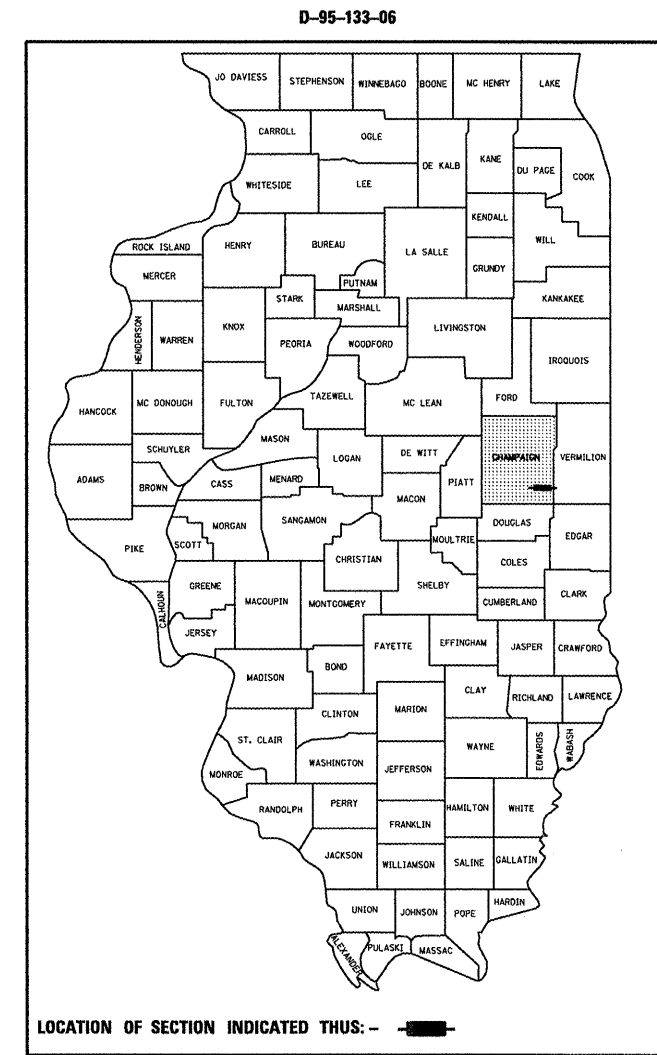
**PROPOSED**  
**HIGHWAY PLANS**

**F.A.S. ROUTE 514 (ALLEN ST.)**  
**SECTION 81-15D,CR**

**CHAMPAIGN COUNTY**  
**C-95-150-06**

**FOR INDEX OF SHEETS, SEE SHEET NO. 2**  
**FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4-5**

CURRENT ADT:  
FAS 514 800 (2007)



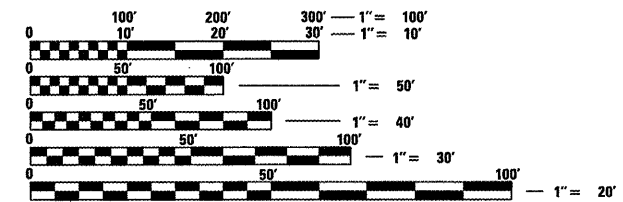
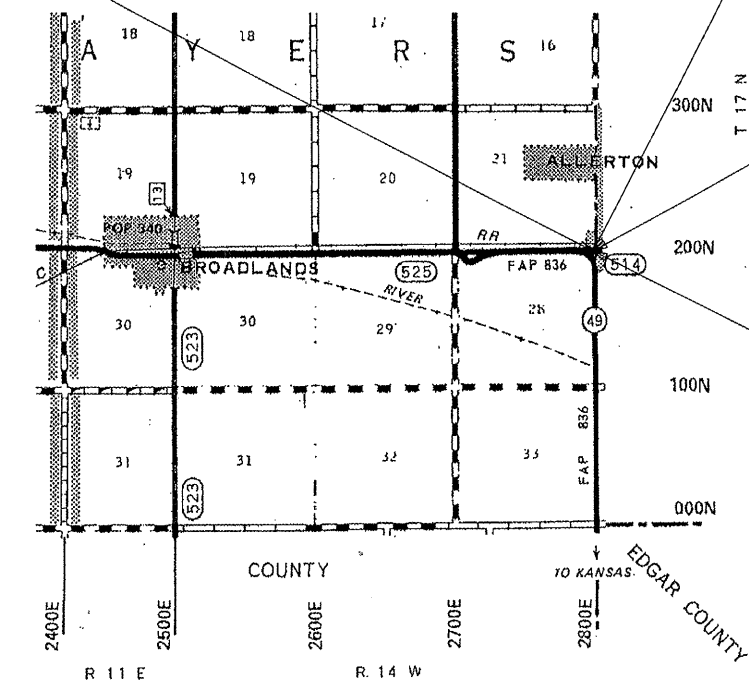
PROPOSED S.N. 010-8130  
STATION 356+28.00, PCBC 12'x2'x33'

**BOX CULVERT REPLACEMENT**  
**(DITCH SOUTH OF ALLERTON)**

EXISTING S.N. 010-8107  
STATION 356+31.43

SECTION 81-15D,CR  
BEGIN STATION 356+17.00

SECTION 81-15D,CR  
END STATION 356+39.00



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: KEVIN TRAPP (217-465-4181)**  
**PROJECT DESIGNER: DANA HENNESS**  
**SQUAD LEADER: MICHAEL LEROY**  
**CONTRACT NO. 70619**

GROSS & NET LENGTH OF SECTION & PROJECT = 22.00 FEET = 0.004 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 3/2 20 10  
Jessell K. Ouellet  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 20 10  
Scott E. Still, P.E.  
acting ENGINEER OF DESIGN AND ENVIRONMENT

May 7 20 10  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

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## HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS

FILE NAME = c:\pw_work\PWIDOT\HENNESSDM\dms86853\7	USER NAME = hennessdm 0619PLANS.DGN	DESIGNED - D. HENNESS DRAWN - CADD	REVISED - REVISED -
PLOT SCALE = 48.0000 / IN.	CHECKED -	REVISED -	REVISED -
PLOT DATE = 3/5/2010	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS AND HIGHWAY STANDARDS				
SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.

F.A.S. RTE. 514	SECTION 81-150.CR	COUNTY CHAMPAIGN	TOTAL SHEETS 30	SHEET NO. 2
CONTRACT NO. 70619				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

## GENERAL NOTES

G.N.-100

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.09A (SPECIAL)

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON AN ASSUMED VERTICAL DATUM. THIS DATUM WAS ESTABLISHED AT THE NORTHWEST CORNER OF THE SOUTH HEADWALL OF EXISTING S.N. 010-8107, WITH AN ASSUMED ELEVATION OF 100.00'.

G.N.-107.31

UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C & OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800) 892-0123 OR 811.

G.N.-202 (SPECIAL)

GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR DITCH CLEANING AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N.-250C

SEEDING, CLASS 7 AND MULCH, METHOD 2 IS INCLUDED IN THIS CONTRACT TO SEED NEW EARTH SHOULDERS DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE CLASS 7 SEEDING AND MULCH WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH SHOULDERS AT THE TIME OF THEIR COMPLETION.

G.N.-406H

MIXTURE REQUIREMENTS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

LOCATION	FAS 514	FAS 514
MIXTURE USE	CLASS D PATCH (BOTTOM 8")	CLASS D PATCH (TOP 2")
AC/PG	PG 64-22	PG 64-22
RAP % (MAX)	25	15
DESIGN AIR VOIDS	4.0% @ Ndes = 50	4.0% @ Ndes = 50
MIX COMP (GRADATION)	IL 19.0	IL 9.5
FRICTION AGGREGATE	N/A	MIX C

G.N.-540

THE CONTRACTOR SHALL ASSEMBLE AND MATCH-MARK THE PRECAST BOX CULVERT SECTIONS AND END SECTIONS PRIOR TO SHIPMENT OF THESE COMPONENTS FROM THE MANUFACTURER, AND AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER FIT ON EACH JOINT. ANY SECTIONS OR END SECTIONS WHICH DO NOT PROVIDE A PROPER FIT AT THE JOINT SHALL BE REJECTED BY THE ENGINEER AND REPLACED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION BEING ALLOWED.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED.

G.N.-542

BEFORE ORDERING PIPE CULVERTS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR THE EXACT LENGTHS.

G.N.-542B

ALL THE ENTRANCE CULVERTS LENGTHS SHOWN IN THE PLANS WERE CALCULATED WITH THE ASSUMPTION THAT METAL PIPES AND METAL END SECTIONS WOULD BE USED.

G.N.-667

THE RESIDENT ENGINEER SHALL CONTACT THE PROGRAM DEVELOPMENT CHIEF OF SURVEYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE FOR INSTRUCTION AS TO SETTING OF TEMPORARY OR PERMANENT TIES FOR CENTERLINE ALIGNMENT CONTROL SURVEY MARKERS (PC'S, PT'S AND PI'S). PROJECT IMPLEMENTATION PERSONNEL WILL BE RESPONSIBLE FOR SETTING THESE MARKERS.

G.N.-1004.01

COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

NO COMMITMENTS ON THIS PROJECT.

FILE NAME =	USER NAME = hennessdm	DESIGNED - D. HENNESS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 3/1/2010	DATE -	REVISED -				SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

## SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAS 514 (ALLEN STREET)  
 CHAMPAIGN COUNTY  
 S.N. 010-8130  
 STA. 356+17.00  
 TO  
 STA. 356+39.00  
 RURAL 2-LANE  
 100% STATE  
 Y007

CONSTRUCTION TYPE CODE:

CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY
20700220	POROUS GRANULAR EMBANKMENT	CUYD	19.0
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	100.0
* 25000210	SEEDING, CLASS 2A	ACRE	0.2
* 25000350	SEEDING, CLASS 7	ACRE	0.2
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18.0
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18.0
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18.0
* 25100115	MULCH, METHOD 2	ACRE	0.2
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20.0
28000305	TEMPORARY DITCH CHECKS	FOOT	69.0
28000400	PERIMETER EROSION BARRIER	FOOT	324.0
28000500	INLET & PIPE PROTECTION	EACH	1.0
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	16.0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	6.0
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	52.0
48101498	AGGREGATE SHOULDERS, TYPE B 4"	SQ YD	16.0
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.0
50104400	CONCRETE HEADWALL REMOVAL	EACH	2.0
50105220	PIPE CULVERT REMOVAL	FOOT	17.0
51500100	NAME PLATES	EACH	1.0

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 3/1/2010		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

## SUMMARY OF QUANTITIES (CONT'D)

LOCATION OF WORK:

FAS 514 (ALLEN STREET)  
 CHAMPAIGN COUNTY  
 S.N. 010-8130  
 STA. 356+17.00  
 TO  
 STA. 356+39.00  
 RURAL 2-LANE  
 100% STATE  
 Y007

CONSTRUCTION TYPE CODE:

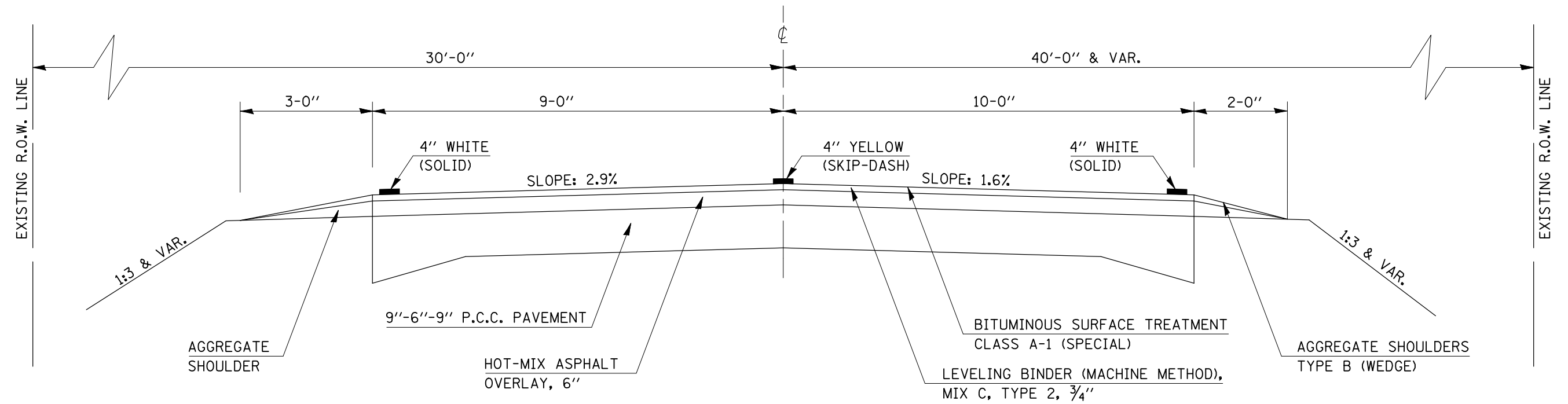
CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY
54001001	BOX CULVERT END SECTION, CULVERT NO. 1	EACH	2.0
54021202	PRECAST CONCRETE BOX CULVERT 12' X 2' (M273)	FOOT	33.0
54213450	END SECTIONS 15"	EACH	2.0
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	31.0
67100100	MOBILIZATION	L SUM	1.0
70103800	TRAFFIC CONTROL (SPECIAL)	L SUM	1.0
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	36.0
X0300247	REMOVE WOOD POST	EACH	1.0
XX006084	REMOVE EXISTING MONUMENT	EACH	1.0
Z0010555	DITCH CLEANING	FOOT	650.0

\* SPECIALTY ITEMS

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 3/1/2010		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

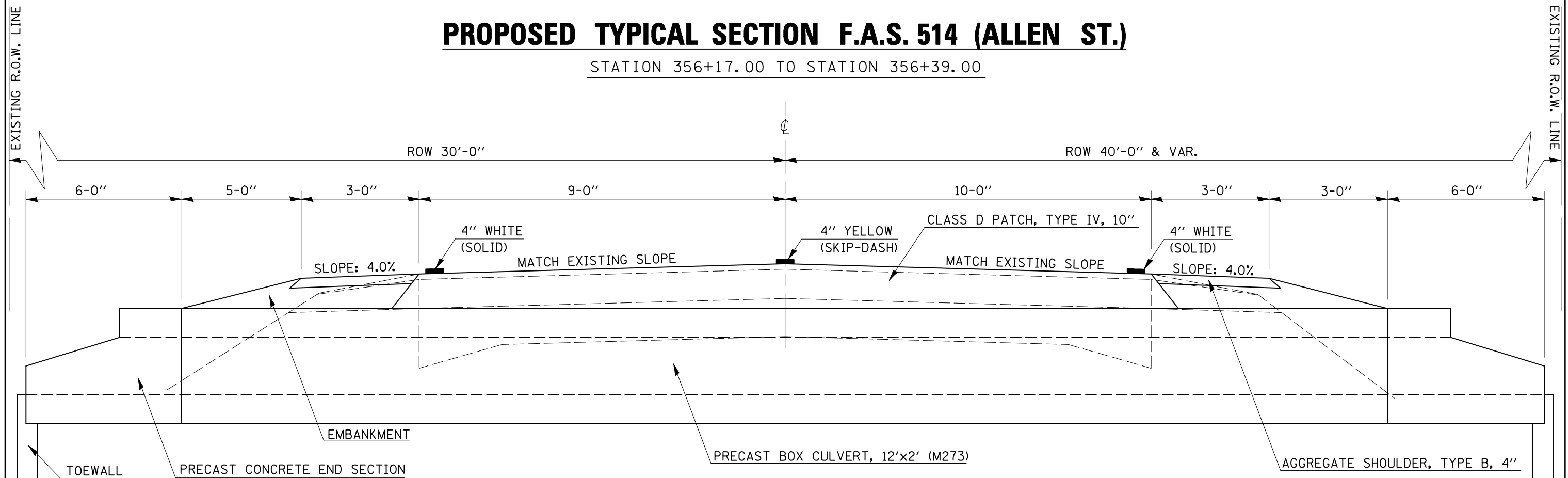
# EXISTING TYPICAL SECTION F.A.S. 514 (ALLEN ST.)

STATION 355+00.00 TO STATION 356+45.00



# PROPOSED TYPICAL SECTION F.A.S. 514 (ALLEN ST.)

STATION 356+17.00 TO STATION 356+39.00



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED TYPICAL SECTIONS

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	6
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	



# SCHEDULES OF QUANTITIES

### EXPLORATION TRENCH, 52" DEPTH (21301052)

STATION	STATION	LENGTH (FT)
355+89.00 LT	356+39.00 LT	50.0
355+89.00 RT	356+39.00 RT	50.0
TOTAL =		100.0

### AGGREGATE SURFACE COURSE, TYPE B (40200800)

STATION	LENGTH (FT)	WIDTH (FT)	DEPTH (IN)	TONS
355+75.00 RT	23.0	16.0	6.0	16.0
TOTAL =				16.0

### BITUMINOUS MATERIALS (PRIME COAT) (40600100)

STATION	STATION	SQ YDS	GALLONS
356+17.00	356+39.00	52.0	5.2
TOTAL =			6.0

### AGGREGATE SHOULDERS, TYPE B, 4" (48101498)

STATION	STATION	LENGTH (FT)	WIDTH (FT)	SQ YDS
356+17.00 LT	356+39.00 LT	24.0	3.0	8.0
356+17.00 RT	356+39.00 RT	24.0	3.0	8.0
TOTAL =				16.0

### CONCRETE HEADWALL REMOVAL (50104400)

STATION	OFFSET	EACH
356+02.50	23.0' RT	1.0
356+19.00	23.0' RT	1.0
TOTAL =		2.0

### PIPE CULVERT REMOVAL (50105220)

STATION	OFFSET	FEET
356+11.00	23.0' RT	17.0
TOTAL =		17.0

### NAME PLATES (51500100)

STATION	OFFSET	EACH
356+24.00	19.0' RT	1.0
TOTAL =		1.0

### BOX CULVERT END SECTION, CULVERT NO. 1 (54001001)

STATION	OFFSET	EACH
356+28.00	17.0' LT	1.0
356+28.00	16.0' RT	1.0
TOTAL =		2.0

### END SECTIONS, 15" (54213450)

STATION	OFFSET	EACH
355+59.50	23.0' RT	1.0
355+90.50	23.0' RT	1.0
TOTAL =		2.0

### PIPE CULVERTS, CLASS D, TYPE 1, 15" (542D0220)

STATION	STATION	LENGTH (FT)
355+59.50 RT	355+90.50 RT	31.0
TOTAL =		31.0

### PAINT PAVEMENT MARKING - LINE 4" (78001110)

WHITE -			
STATION	STATION	LOCATION	FEET
356+17.00	356+27.00	9.0' LT	10.0
356+17.00	356+37.00	10.0' RT	20.0
SUBTOTAL =			30.0

### YELLOW -

STATION	STATION	LOCATION	FEET
356+17.00	356+39.00	SKIP-DASH	5.5
GRAND TOTAL =			36.0

### REMOVE WOOD POST (X0300247)

STATION	OFFSET	EACH
356+16.38	27.04' LT	1.0
TOTAL =		1.0

### REMOVE EXISTING MONUMENT (XX006084)

STATION	OFFSET	EACH
356+15.00	27.82' LT	1.0
TOTAL =		1.0



## SCHEDULES OF QUANTITIES (CONT'D)

### TEMPORARY DITCH CHECKS (28000305)

#### FAS 514 (ALLEN STREET) -

STATION	FEET
LT 353+50.00	13.0
RT 354+00.00	16.0
LT 356+10.00	12.0
RT 356+10.00	16.0

#### CHAMPAIGN AVENUE -

LT 426+00.00	12.0
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TOTAL = 69.0

### SEEDING SCHEDULE

#### FAS 514 (ALLEN STREET) -

STATION	STATION	AREA (ACRE)	TEMPORARY EROSION CONTROL SEEDING (POUND)	(25000210) SEEDING CLASS 2A (ACRE)	(25000350) SEEDING CLASS 7 (ACRE)	(25000400) NITROGEN FERTILIZER NUTRIENT (POUNDS)	(25000500) PHOSPHOR. FERTILIZER NUTRIENT (POUNDS)	(25000600) POTASS. FERTILIZER NUTRIENT (POUNDS)	(25100115) MULCH METHOD 2 (ACRE)
353+00.00 LT	356+28.00 LT	0.05	5.1	0.05	0.05	4.6	4.6	4.6	0.05
353+75.00 RT	356+28.00 RT	0.06	6.5	0.06	0.06	5.9	5.9	5.9	0.06

#### CHAMPAIGN AVENUE -

425+25.00 LT	426+25.00 LT	0.02	2.2	0.02	0.02	2.0	2.0	2.0	0.02
		TOTAL =	0.13	13.8	0.13	12.4	12.4	12.4	0.13
		USE =	0.2	20.0	0.2	18.0	18.0	18.0	0.2

### PERIMETER EROSION BARRIER (28000400)

STATION	STATION	LENGTH(FT)
353+00.00 LT	356+23.50 LT	323.5
		TOTAL = 324.0

### DITCH CLEANING (Z0010555)

#### FAS 514 (ALLEN STREET) -

STATION	STATION	LT (FEET)	RT (FEET)
353+00.00	353+75.00	75.0	
353+75.00	355+59.50	184.5	184.5
355+59.50	355+90.50	31.0	
355+90.50	356+28.00	37.5	37.5
		SUBTOTAL = 328.0	222.0

#### CHAMPAIGN AVENUE -

STATION	STATION	LT (FEET)	RT (FEET)
425+25.00	426+25.00	100.0	
		SUBTOTAL = 100.0	
		TOTAL = 428.0	222.0

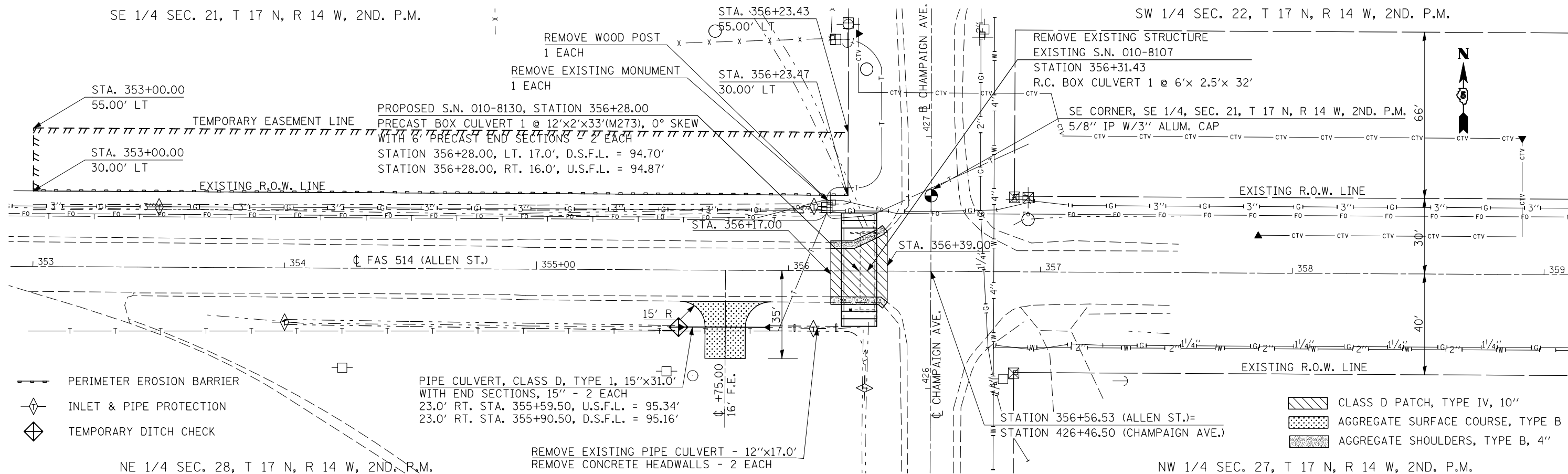
### INLET AND PIPE PROTECTION (28000500)

STATION	OFFSET	EACH
355+56.50	23.0' RT	1.0
		TOTAL = 1.0

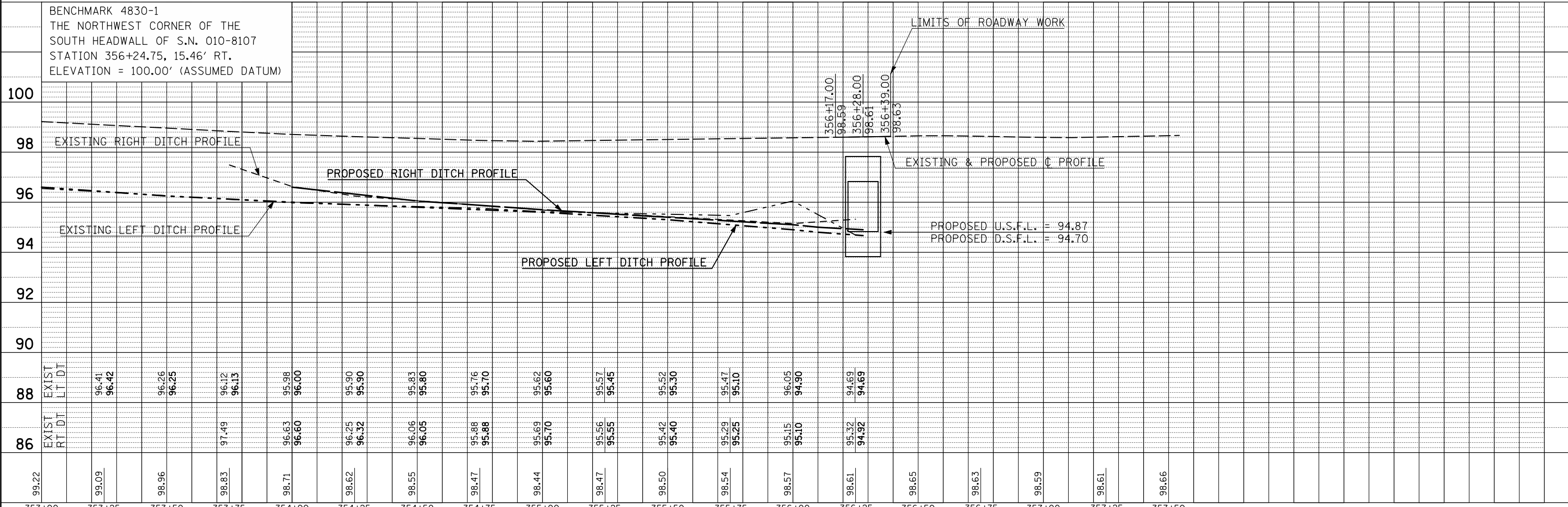
SE 1/4 SEC. 21, T 17 N, R 14 W, 2ND. P.M.

SW 1/4 SEC. 22, T 17 N, R 14 W, 2ND. P.M.

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



DATE	
BY	
PROFILE	
NOTE BOOK NO.	
SURVEYED	
PLOTTED	
CHECKED	
STRUCTURE	
NOTATION	



99.22	99.09	98.96	98.83	98.71	98.62	98.55	98.47	98.44	98.47	98.50	98.54	98.57	98.61	98.65	98.63	98.59	98.61	98.66
353+00	353+25	353+50	353+75	354+00	354+25	354+50	354+75	355+00	355+25	355+50	355+75	356+00	356+25	356+50	356+75	357+00	357+25	357+50

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

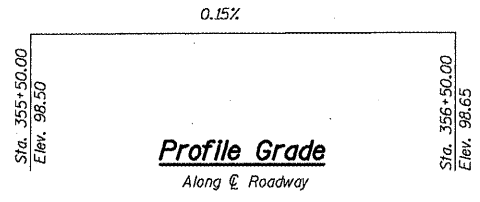
PLAN & PROFILE  
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	10
CONTRACT NO. 70619				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FILE NAME =	USER NAME = hennessdm	DESIGNED - D. HENNESS	REVISED -
ct:\pwwork\p\WIDOT\HENNESSDM\dms86853\70619\PLANS.DGN		DRAWN - CADD	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

BENCHMARK ELEV. = 100.00' (assumed datum). Chiseled square on the northwest corner of the south headwall of S.N. 010-8107.

EXISTING STRUCTURE: S.N. 010-8107, a single 6' x 2.5' reinforced concrete box culvert, was constructed in 1926 at Station 356+31.43 as part of Section 81-15D. The existing structure is to be completely removed and replaced. The project is to be completed under road closure conditions, utilizing unmarked local detour routes.



**STATION 356+28.00**  
 BUILT 2010 BY  
 STATE OF ILLINOIS  
 F.A.S. RTE. 514 SEC. 81-15D, CR  
 LOADING HS20  
 STRUCTURE NO. 010-8130

**NAME PLATE**  
 See Std. 515001

**INDEX OF SHEETS**

1. General Plan and Elevation
2. Box Culvert End Section (Precast Option) Details
3. Porous Granular Embankment Detail

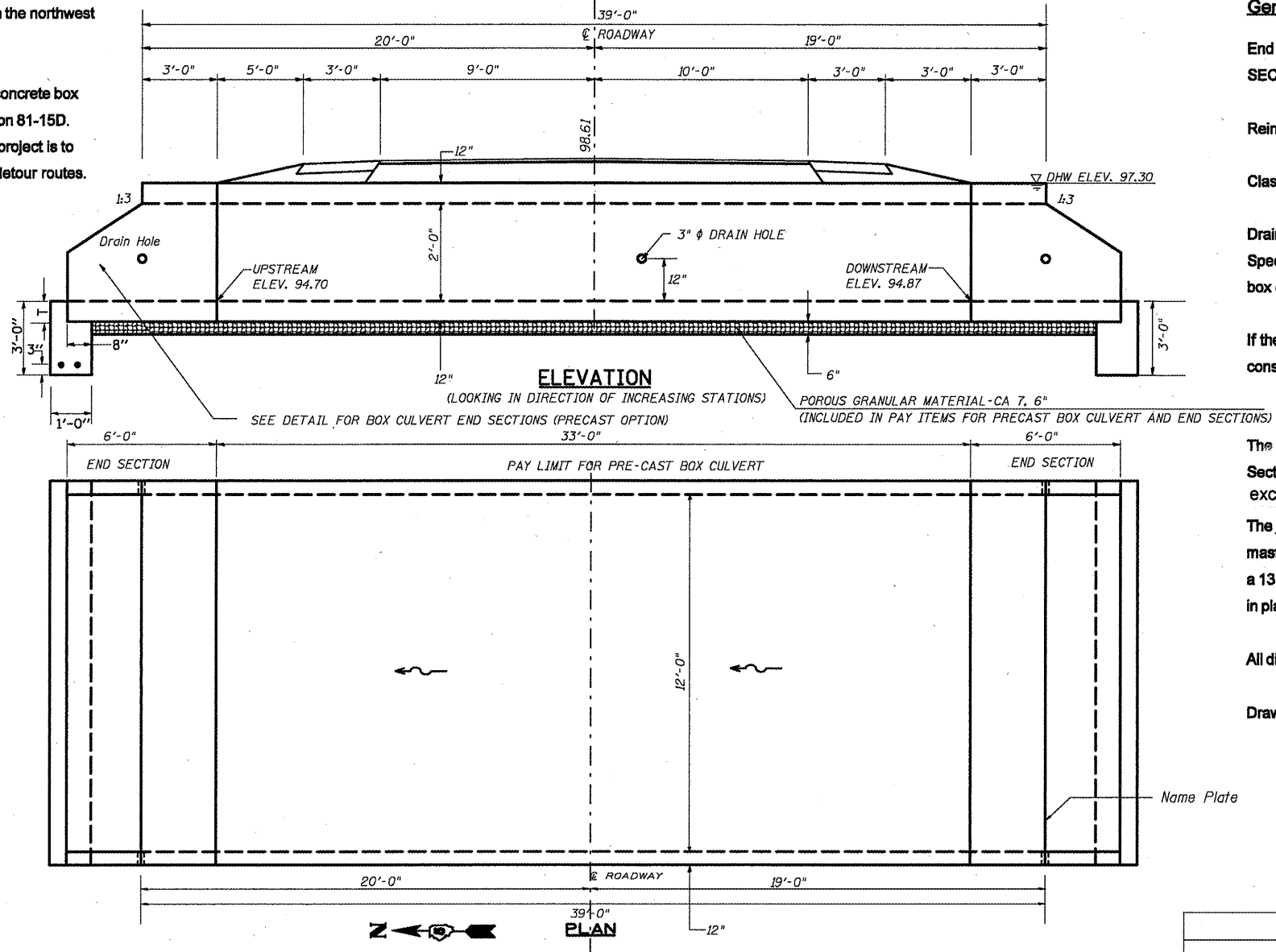
**DESIGN SPECIFICATIONS**  
 2002 AASHTO

**LOADING HS20-44**  
 Allow 50#/sq.ft. for future wearing surface

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 3,500 \text{ psi}$   
 $f_y = 60,000 \text{ psi}$  (reinforcement)  
 $f_y = 65,000 \text{ psi}$  (welded wire fabric)

**PRECAST UNITS**  
 $f'_c = 5,000 \text{ psi}$   
 $f_y = 65,000 \text{ psi}$  (welded wire fabric)



**General Notes**

End sections will be paid for at the contract unit price per each for BOX CULVERT END SECTION, CULVERT NO. 1, as outlined in Section 540 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60.

Class SI concrete shall be used throughout.

Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications. One drain hole on exterior culvert walls shall be provided for each precast box culvert section.

If the Contractor elects to use a precast cut-off wall, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval.

The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273 for a 12' x 4' box, except As1 shall be equal to 0.43 sq. in.

The joints between precast box sections shall be sealed, and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

All dimensions are in FEET ('') - INCHES (") unless otherwise noted.

Drawings are not to scale.

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Removal of Existing Structures	Each	1
Precast Concrete Box Culverts 12' x 2' (M273)	Foot	33
Box Culvert End Section, Culvert No. 1	Each	2
Name Plates	Each	1
Porous Granular Embankment	Cu Yd	18.8

Proposed Low Grade Elev. = 98.44 @ Sta. 355+00

Existing Low Grade Elev. = 98.44 @ Sta. 355+00

Drainage Area = 0.27 mi.<sup>2</sup>

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater Elevation	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
	10	88	15	19				98.2	98.8
Design	30	124	15	21				overtopped	97.3
Base	100	166	15	24				overtopped	98.1
Overtopping									
Max. Calc.	500	226	15	24				overtopped	overtopped

10 YEAR VELOCITY THROUGH EXISTING BRIDGE = 13 1/8      10 YEAR VELOCITY THROUGH PROPOSED BRIDGE = 4.5 1/8

\* Information provided using the USGS method (2004 equations)

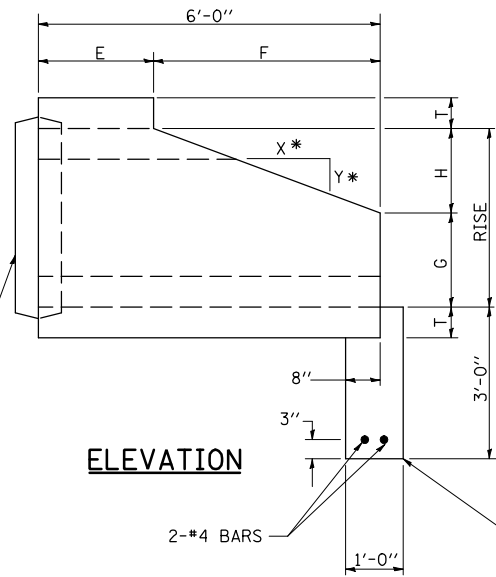
**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	N. Cut-Off Wall	S. Cut-Off Wall
	91.67	91.90

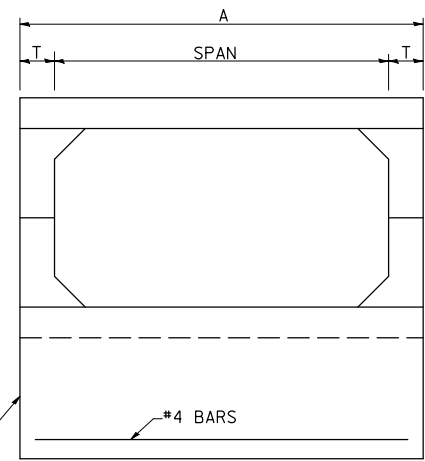
**GENERAL PLAN AND ELEVATION**  
**SINGLE 12' x 2' PRECAST BOX CULVERT**  
**F.A.S. ROUTE 514 - SECTION 81-15D, CR**  
**CHAMPAIGN COUNTY**  
**STATION 356+28.00, S.N. 010-8130**

**DIMENSIONS \*\***

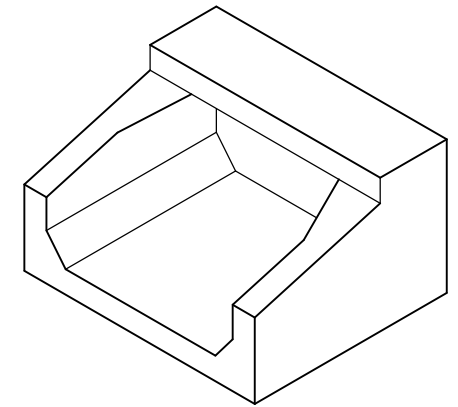
SPAN X RISE	T (INCHES)	A (FT.-IN.)	B (FT.-IN.)	C (INCHES)	E (FT.-IN.)	F (FT.-IN.)	G (FT.-IN.)	H (FT.-IN.)	SLOPE (X:Y)
2' X 2'	4	2-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 2'	4	3-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 3'	4	3-8	3-8	4	2-0	4-0	1-8	1-4	3:1
4' X 2'	5	4-10	2-10	5	3-0	3-0	1-0	1-0	3:1
4' X 3'	5	4-10	3-10	5	2-0	4-0	1-8	1-4	3:1
4' X 4'	5	4-10	4-10	5	2-0	4-0	2-0	2-0	2:1
5' X 2'	6	6-0	3-0	6	3-0	3-0	1-0	1-0	3:1
5' X 3'	6	6-0	4-0	6	2-0	4-0	1-8	1-4	3:1
5' X 4'	6	6-0	5-0	6	2-0	4-0	2-0	2-0	2:1
5' X 5'	6	6-0	6-0	6					
6' X 2'	7	7-2	3-2	7	3-0	3-0	1-0	1-0	3:1
6' X 3'	7	7-2	4-2	7	2-0	4-0	1-8	1-4	3:1
6' X 4'	7	7-2	5-2	7	2-0	4-0	2-0	2-0	2:1
6' X 5'	7	7-2	6-2	7	2-0	4-0	3-0	2-0	2:1
6' X 6'	7	7-2	7-2	7	2-0	4-0	4-0	2-0	2:1
7' X 4'	8	8-4	5-4	8	2-0	4-0	2-0	2-0	2:1
7' X 5'	8	8-4	6-4	8					
7' X 6'	8	8-4	7-4	8					
7' X 7'	8	8-4	8-4	8					
8' X 4'	8	9-4	5-4	8	2-0	4-0	2-0	2-0	2:1
8' X 5'	8	9-4	6-4	8					
8' X 6'	8	9-4	7-4	8					
8' X 7'	8	9-4	8-4	8					
8' X 8'	8	9-4	9-4	8					
9' X 5'	9	10-6	6-6	9					
9' X 6'	9	10-6	7-6	9					
9' X 7'	9	10-6	8-6	9					
9' X 8'	9	10-6	9-6	9					
9' X 9'	9	10-6	10-6	9					
10' X 5'	10	11-8	6-8	10					
10' X 6'	10	11-8	7-8	10					
10' X 7'	10	11-8	8-8	10					
10' X 8'	10	11-8	9-8	10					
10' X 9'	10	11-8	10-8	10					
10' X 10'	10	11-8	11-8	10					
11' X 4'	11	12-10	5-10	11					
11' X 6'	11	12-10	7-10	11					
11' X 8'	11	12-10	9-10	11					
11' X 10'	11	12-10	11-10	11					
11' X 11'	11	12-10	12-10	11					
12' X 2'	12	14-0	4-0	12	3-0	3-0	1-0	1-0	3:1
12' X 4'	12	14-0	6-0	12					
12' X 6'	12	14-0	8-0	12					
12' X 8'	12	14-0	10-0	12					
12' X 10'	12	14-0	12-0	12					
12' X 12'	12	14-0	14-0	12					



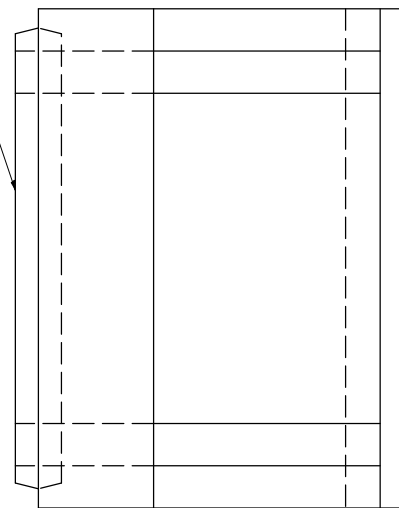
\* 2:1 SLOPE MINIMUM



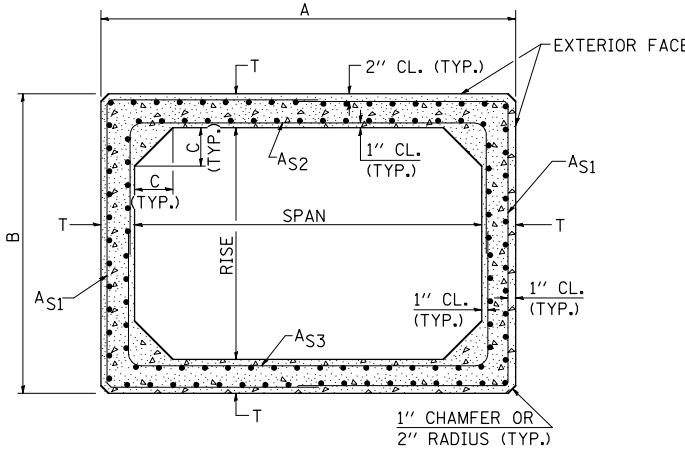
**END VIEW**



**ISOMETRIC**



**PLAN**



**CROSS SECTION**

**GENERAL NOTES**

- SHOP DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 1042.03(b) OF THE STANDARD SPECIFICATIONS.
- MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.
- THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH SECTION 1055 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THE TERMS AS1, AS2, & AS3 DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M273. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO M55-81.

**\*\* NOTE:**  
THE DIMENSIONS INDICATED ARE FOR END SECTIONS THAT ARE TO BE USED WITH PRECAST BOX CULVERT SECTIONS DESIGNED FOR 2' OR MORE OF FILL. THE DIMENSIONS MUST BE MODIFIED FOR THE END SECTION TO BE COMPATIBLE WITH PRECAST CULVERT SECTIONS DESIGNED FOR LESS THAN 2' OF FILL.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 5 DETAIL NO. 54001AAA**

STD. 9-50 (FROM DISTRICT 9)

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED -
ct:\pw\work\PWID01\HENNESSDM\dms86853\0570619-sht-Details.dgn		DRAWN - JDC	REVISED -
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = 3/1/2010		DATE - 12/29/08	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

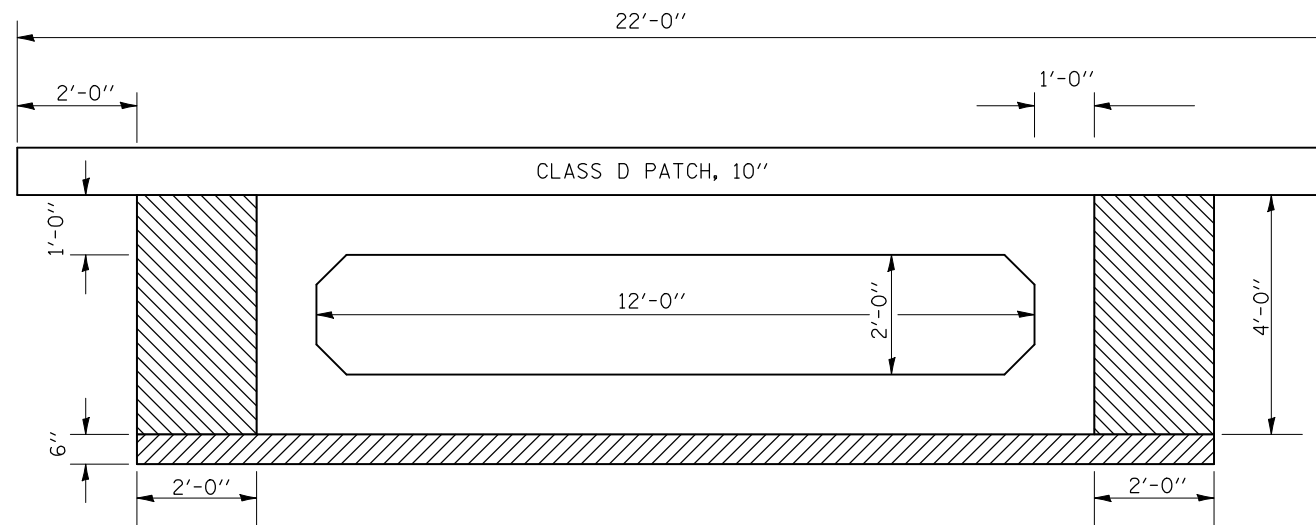
**BOX CULVERT END SECTION  
(PRECAST OPTION)**

SCALE: SHEET NO. 2 OF 3 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	12
				CONTRACT NO. 70619
ILLINOIS FED. AID PROJECT				

# DETAIL OF POROUS GRANULAR EMBANKMENT

## S.N. 010-8130



**NOTES:**

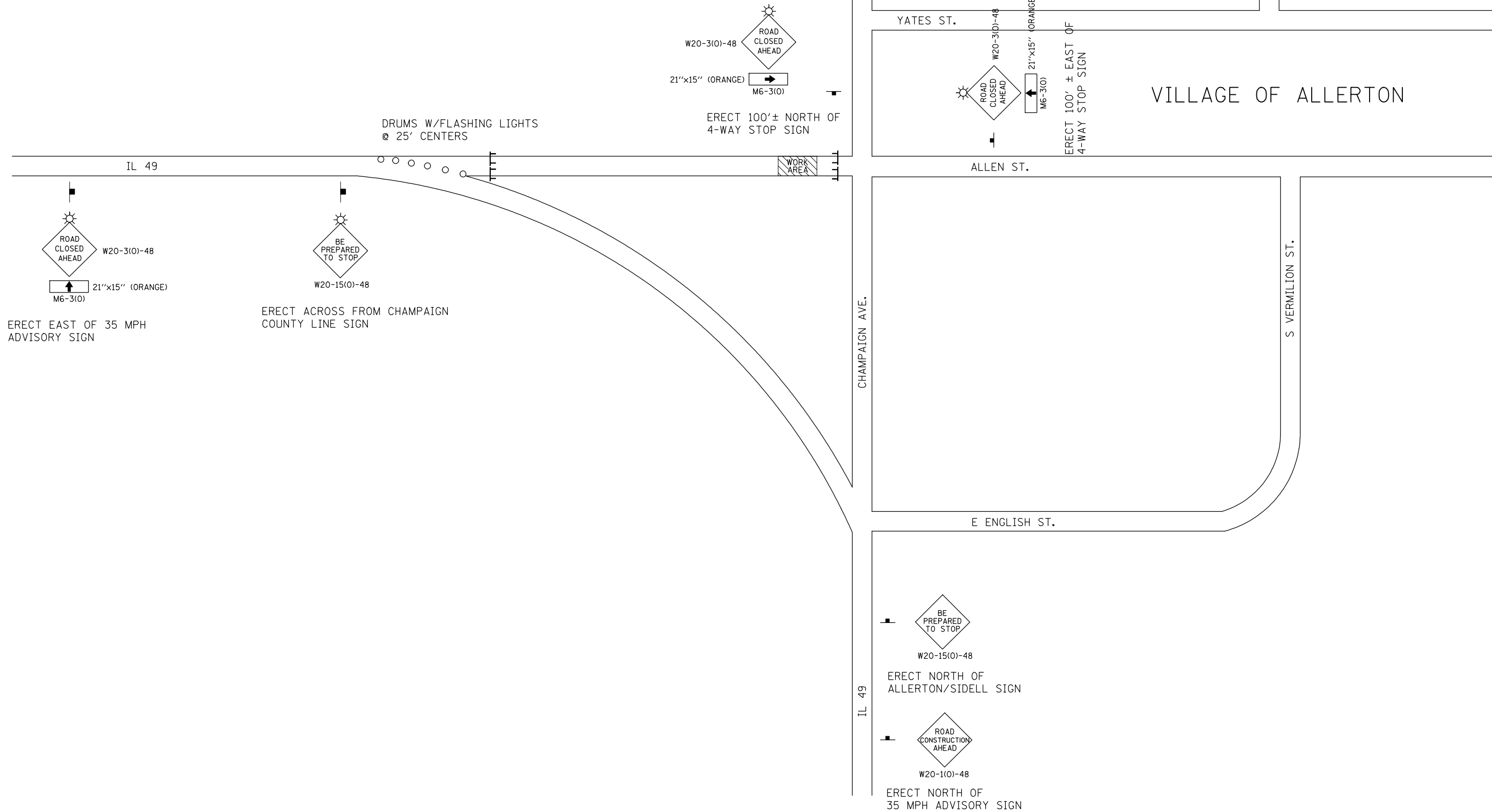
- ① POROUS GRANULAR EMBANKMENT SHALL EXTEND 2' -0" BEYOND THE AGGREGATE SHOULDER.
- ② WORK SHOWN IN THIS DETAIL SHALL BE PERFORMED ACCORDING TO THE APPLICABLE PORTIONS OF SECTION 207 AND SECTION 540 OF THE STANDARD SPECIFICATIONS.
- ③ THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR POROUS GRANULAR EMBANKMENT.
- ④ THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT SHALL NOT BE MEASURED FOR PAYMENT. THE COST OF THE EXCAVATION SHALL BE CONSIDERED AS INCLUDED IN THE COST OF PRECAST CONCRETE BOX CULVERTS AND BOX CULVERT END SECTIONS.

- PAY LIMITS OF POROUS GRANULAR EMBANKMENT - CA-6 = 18.8 CU. YDS.
- POROUS GRANULAR MATERIAL - CA 7 (INCLUDED IN PAY ITEM FOR BOX CULVERT)

FILE NAME =	USER NAME = hennesdm	DESIGNED - D. HENNESS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>POROUS GRANULAR EMBANKMENT DETAIL S.N. 010-8130</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw\work\PWIDOT\HENNESSDM\dms86853\070619-sht-Details.dgn		DRAWN - CADD	REVISED -			514	81-15D,CR	CHAMPAIGN	30	13	
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 70619					
PLOT DATE = 3/1/2010		DATE -	REVISED -			SCALE:	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT



# ROAD CLOSURE SIGNING DETAIL



FILE NAME =	USER NAME = hennessdm	DESIGNED - D. HENNESS	REVISED -
ct:\pw\work\PWIDOT\HENNESSDM\dms86853\0570619-sht-Details.dgn		DRAWN - CADD	REVISED -
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = 3/1/2010		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

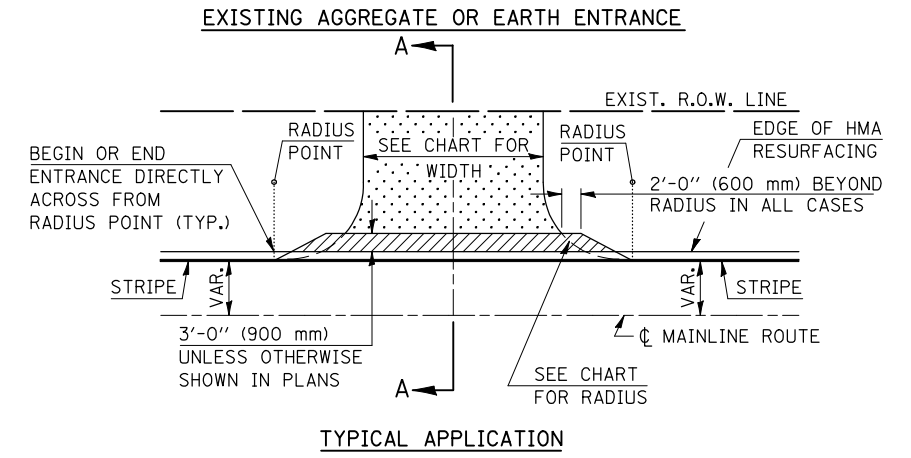
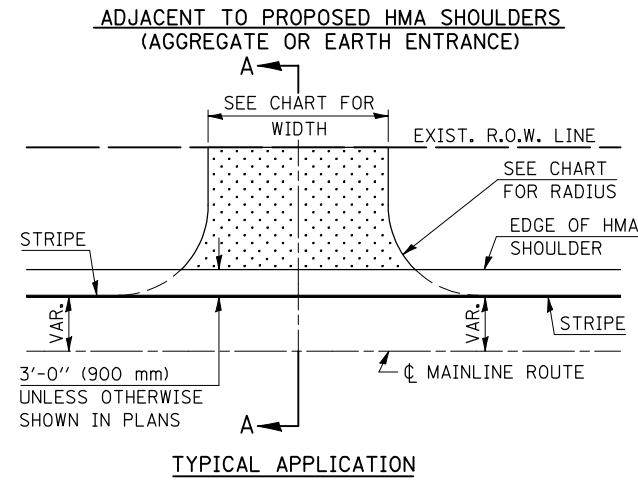
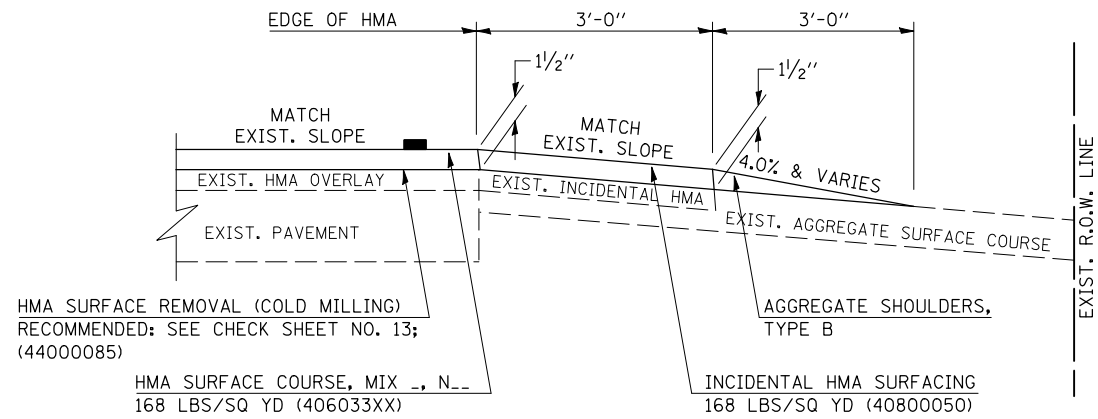
ROAD CLOSURE SIGNING DETAIL			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	15
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	

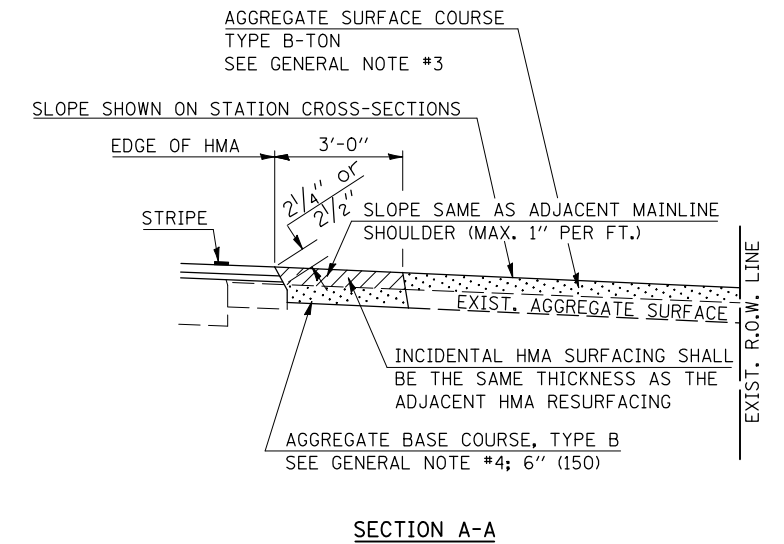
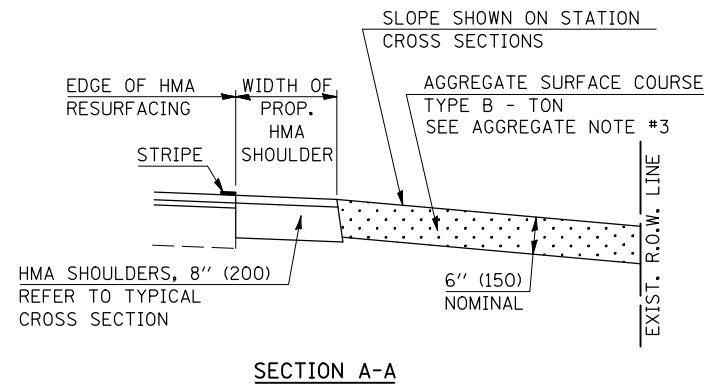
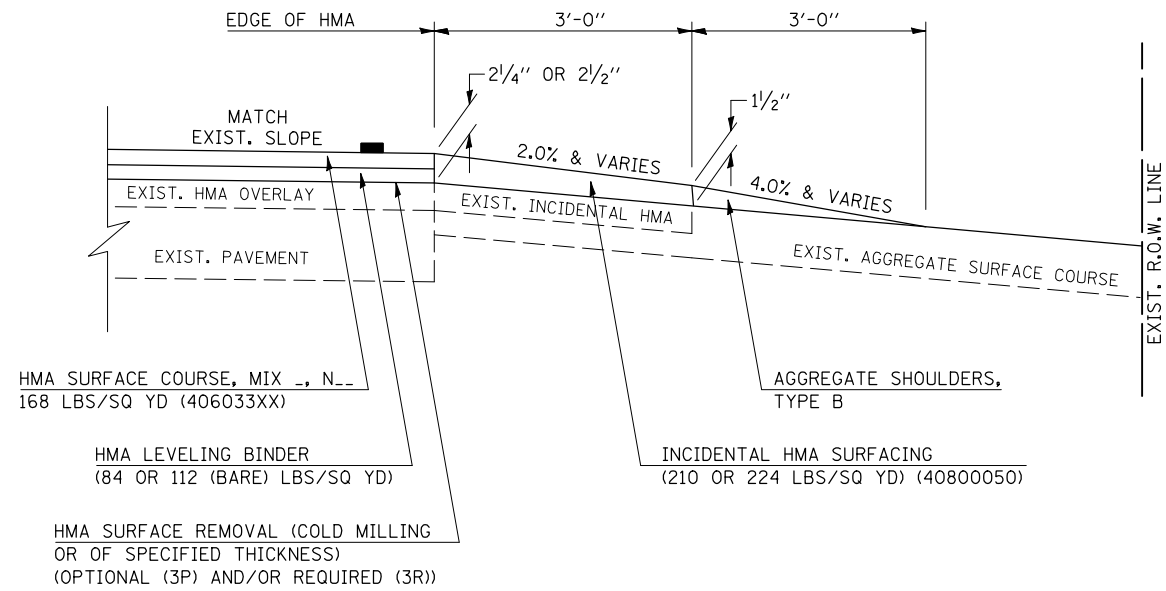
**PROJECTS WITHOUT RECONSTRUCTION**  
 ("3R" WITHOUT RECONSTRUCTION, 3P, SMART AND CM)

**PROJECTS WITH RECONSTRUCTION**  
 ("3R" IMPROVEMENTS AND SMART/3P "SPOT" LOCATIONS)

**S.M.A.R.T. IMPROVEMENTS**  
 (POLICY RESURFACING; BDE 53-4.03; 1/2")



**"3P" OR "3R" IMPROVEMENTS**  
 (POLICY RESURFACING; BDE 53-4.02; 2/4" OR 2/2" ON BARE CONCRETE)



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 5 DETAIL NO. 40800050A**

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 12/01/06 TJB
ct:\pw\work\PWID01\HENNESSDM\dms86853\0570619-sht-Details.dgn		DRAWN -	REVISED - 09/21/07 KAG
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED - 04/30/08 KJT
	PLOT DATE = 3/2/2010	DATE -	REVISED -

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

**FIELD ENTRANCES (NONCOMMERCIAL RURAL)**

SCALE: NA SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	16
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	



**GENERAL NOTES**

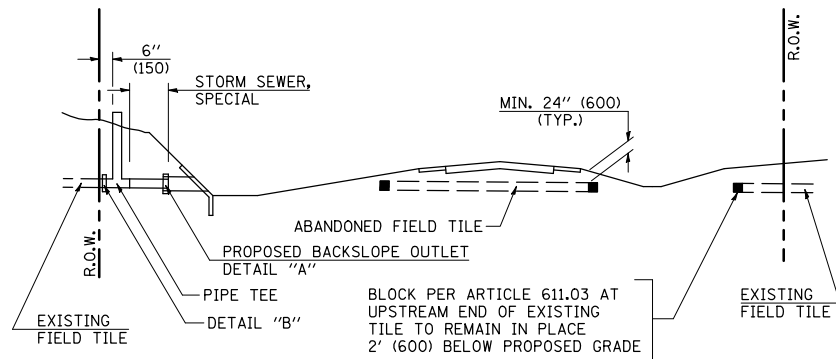
1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.
2. ANY NECESSARY WORK BEHIND THE HMA SHOULDER OR THE INCIDENTAL HMA SURFACING SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
3. EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF THE AGGREGATE SURFACE COURSE SHALL BE INCLUDED IN THE COST OF AGGREGATE SURFACE COURSE.
4. AGGREGATE BASE COURSE, TYPE B, 6" (150 mm) MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT SUFFICIENT BASE MATERIAL FOR THE PROPOSED ENTRANCES. THIS MATERIAL SHALL GENERALLY BE USED TO WIDEN ANY EXISTING RETURN OR TO CONSTRUCT NEW ENTRANCES WHERE NONE NOW EXISTS.
5. THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 12" (300 mm) WIDER THAN THE SURFACE DIMENSIONS AS SHOWN ABOVE.
6. EXISTING FIELD ENTRANCES OF AGGREGATE OR EARTH WITH NO HMA APRON SHALL NOT RECEIVE A NEW HMA APRON WITHOUT PROPER APPROVAL THROUGH THE BUREAU OF OPERATIONS "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS".
7. TO ASSURE APPROPRIATE ACCESS POLICIES ARE FOLLOWED ALL NEW ACCESS SHALL BE APPLIED FOR THROUGH THE BUREAU OF OPERATIONS PERMIT APPLICATION PROCESS. PLAN PREPARATION MEMORANDUMS 40-09 AND 40-11 ALONG WITH DISTRICT CONSTRUCTION MEMORANDUM 03/14 DISCUSS THIS PROCEDURE.

RURAL ENTRANCE DESIGN STANDARDS (PPM 40-09)																
DESIGN ELEMENT	NEW CONSTRUCTION & 3R with RECONSTRUCTION						3R w/out RECONSTRUCTION, 3P, SMART & CM									
	NONCOMMERCIAL			FIELD W/ FARM IMPLEMENTS			COMMERCIAL			NONCOMMERCIAL			COMMERCIAL			
	PRIVATE & FIELD			FIELD W/ FARM IMPLEMENTS			COMMERCIAL			PRIVATE & FIELD			COMMERCIAL			
	min.	des.	max.	min.	max.	min.	des.	max.	min.	des.	max.	min.	des.	max.		
SURFACE WIDTH (FT)	12	16	24	24	30	1 LANE, 1 WAY						1 LANE, 1 WAY				
						14 16 24						2 LANE, 2 WAY				
						24 30 35						2 LANE, 2 WAY				
RADIUS (FT)	15	25	40	30		20	30	50	resurface existing configuration; existing aggregate or earth entrances shall have the continuation of aggregate shoulders placed behind them							
SHOULDER WIDTH (FT)	2	2		2		1	3									
SHOULDER SLOPE (%)	2	4	6	4		2	4	6								
ENTRANCE GRADE (%)	0	2 to 5	10 or 12	2 to 5	10 or 12	0	2 to 5	8 or 10								
SIDE SLOPE (FT)	1:4	1:6	1:10	1:4	1:6	1:4	1:6	1:10								
<b>SURFACE TYPE</b>																
INCIDENTAL HMA SURFACING (INCH)		2		2		3 or 4			taper from hma resurfacing thickness (2 1/2", 2 1/4" or 1 1/2") to 1 1/2" to minimize aggregate shoulder							
AGGREGATE SURFACE COURSE, TYPE B (INCH)		6		6		8			if applicable use items: Preparation of Base & Aggregate Base Repair; see PPM 30-02							
PCC DRIVEWAY PAVEMENT (INCH)		6						6 or 8								

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

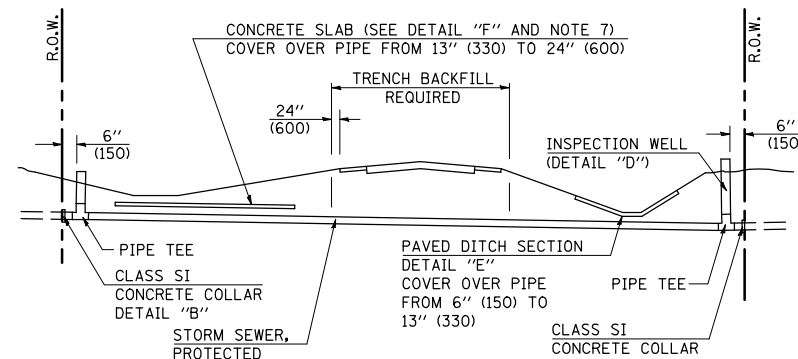
**DISTRICT 5 DETAIL NO. 40800050A**

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 12/01/06 TJB	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FIELD ENTRANCES (NONCOMMERCIAL RURAL)</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\PWIDOT\HENNESSDM\dms86853\0570619-sht-Details.dgn	DRAWN -	REVISED - 09/21/07 KAG	514			81-15D,CR	CHAMPAIGN	30	17	
PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED - 04/30/08 KJT	CONTRACT NO. 70619							
PLOT DATE = 3/2/2010	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							
				SCALE: NA	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.			



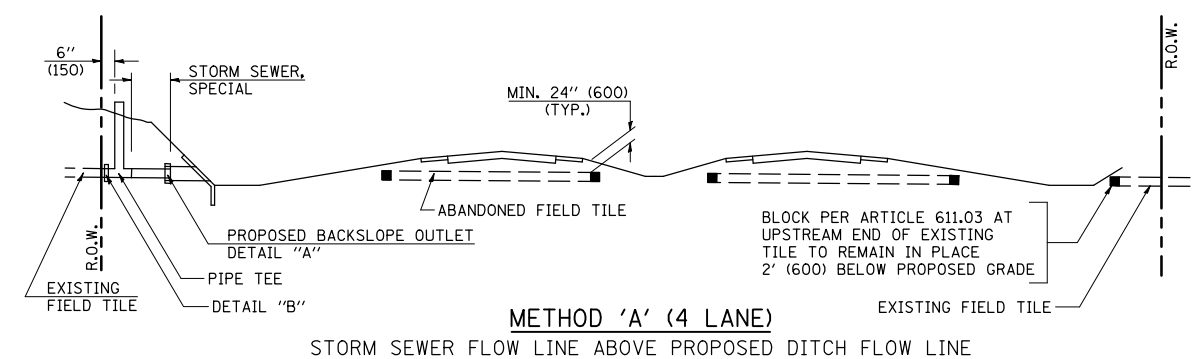
**METHOD 'A' (2 LANE)**

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



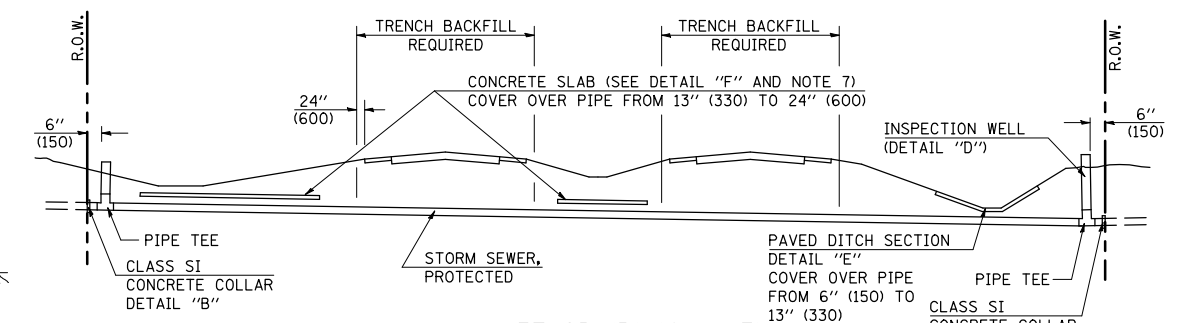
**METHOD 'B' (2 LANE)**

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



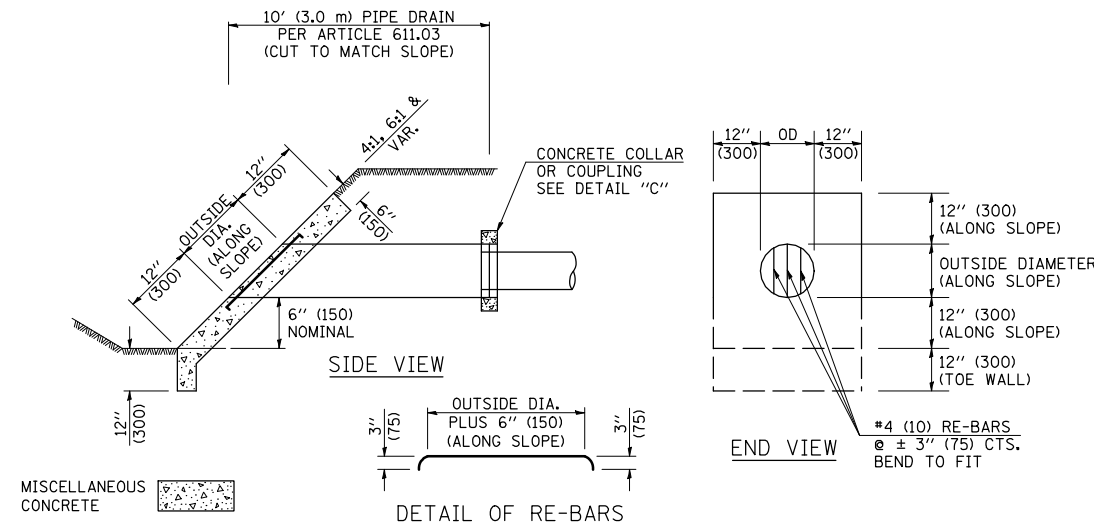
**METHOD 'A' (4 LANE)**

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE

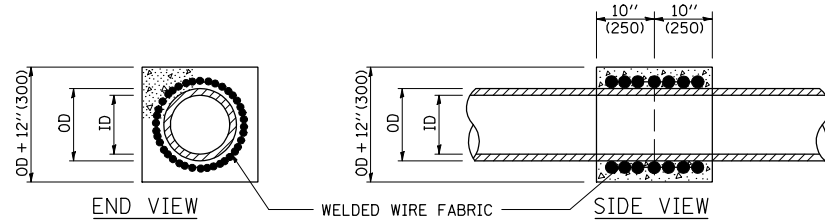


**METHOD 'B' (4 LANE)**

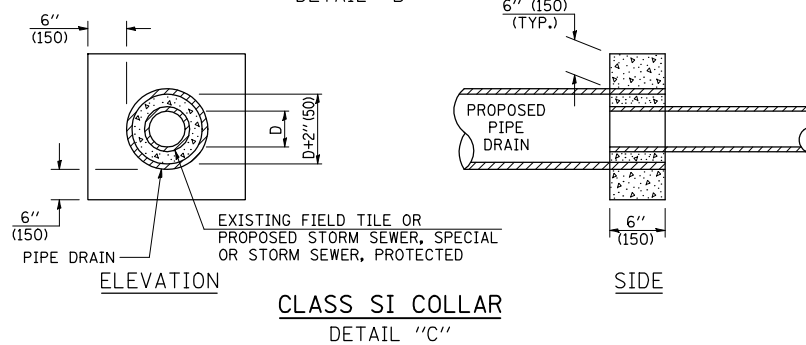
STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



**HEADWALL FOR BACKSLOPE OUTLET**  
DETAIL "A"



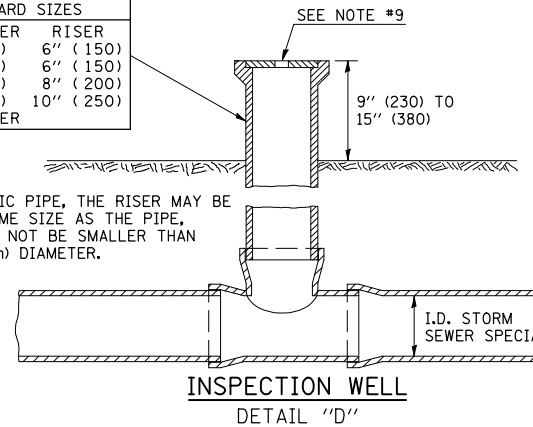
**CONCRETE COLLAR**  
DETAIL "B"



**CLASS SI COLLAR**  
DETAIL "C"

CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300)	10" (250)
OR GREATER	

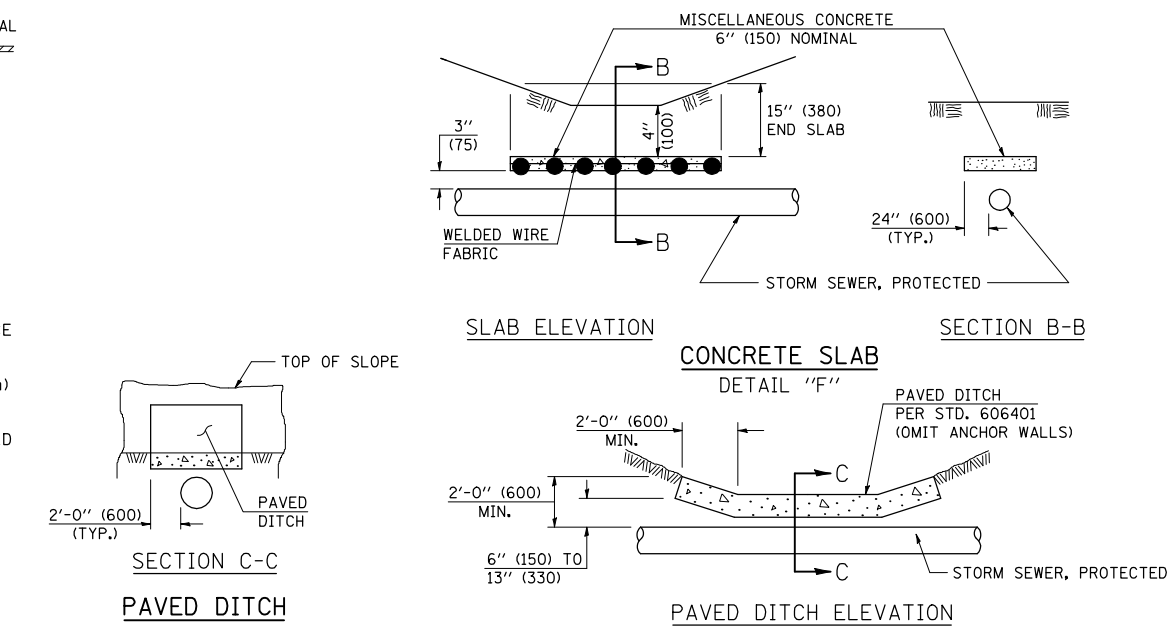
FOR PLASTIC PIPE, THE RISER MAY BE OF THE SAME SIZE AS THE PIPE, BUT SHALL NOT BE SMALLER THAN 4" (100 mm) DIAMETER.



**INSPECTION WELL**  
DETAIL "D"

**GENERAL NOTES**

- EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
- ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
- INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
- EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
- NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
- THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

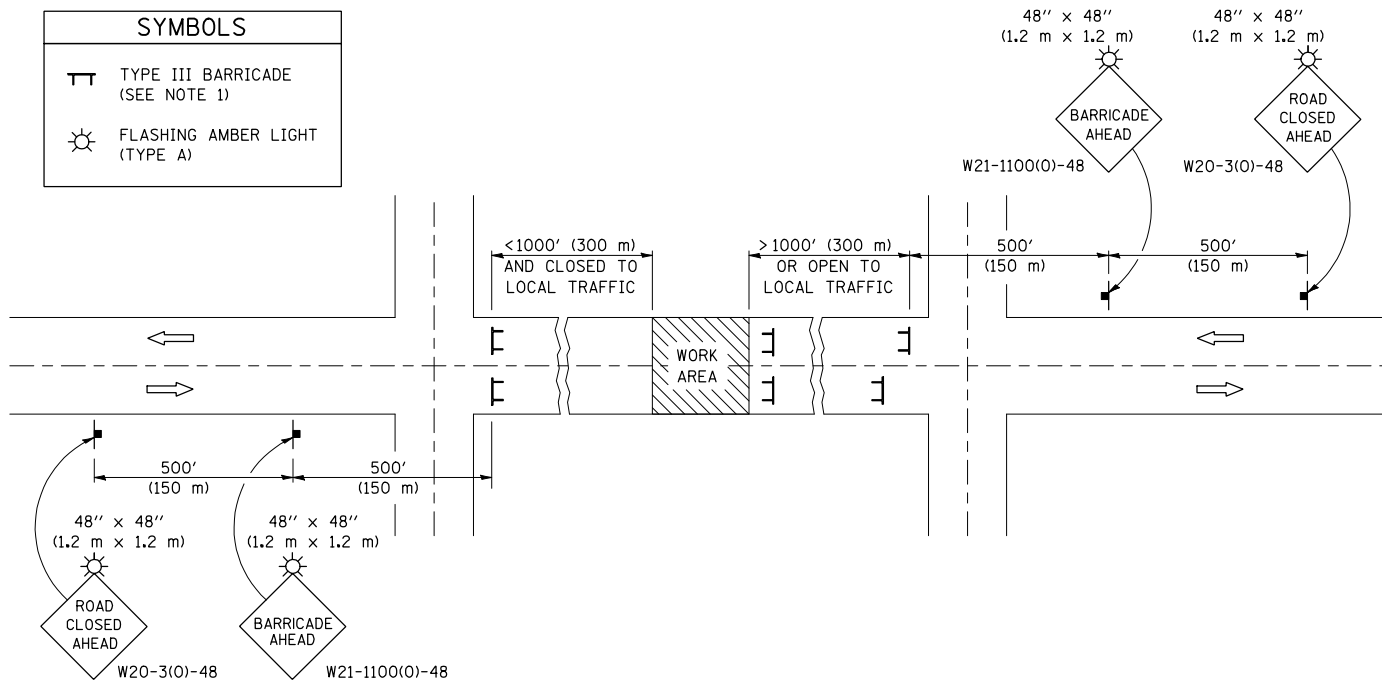
**DISTRICT 5 DETAIL NO. 61101011A**

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 11/06	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FIELD TILE SYSTEMS (TREATMENT OF EXISTING)</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\PIWID01\HENNESSDM\dms86853\070619-sht-Details.dgn	DRAWN -	REVISED -	514			81-15D,CR	CHAMPAIGN	30	17A	
PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 70619							
PLOT DATE = 3/5/2010	DATE -	REVISED -	FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT			

# ROAD CLOSURE

# SIDEROAD / STREET CLOSURE

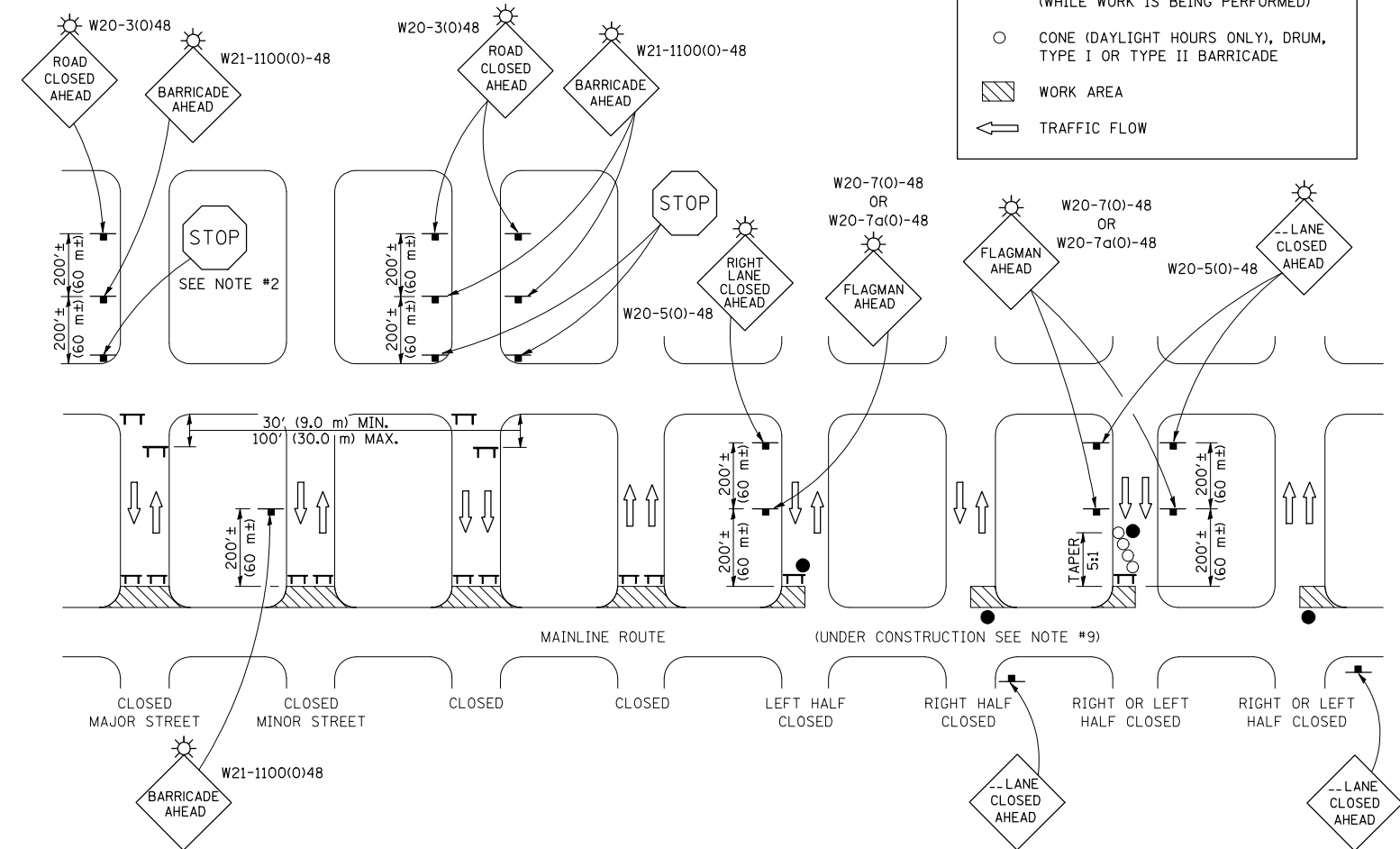
SYMBOLS	
	TYPE III BARRICADE (SEE NOTE 1)
	FLASHING AMBER LIGHT (TYPE A)



## GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 701901 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
- WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
- REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TYPE III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT. 725 AND BT. 726 ARE REQUIRED.
- WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
- AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

SYMBOLS	
	TYPE III BARRICADE (SEE NOTE)
	FLASHING LIGHT
	FLAGGER WITH TRAFFIC CONTROL SIGN (WHILE WORK IS BEING PERFORMED)
	CONE (DAYLIGHT HOURS ONLY), DRUM, TYPE I OR TYPE II BARRICADE
	WORK AREA
	TRAFFIC FLOW



## GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT 725 AND BT 726 ARE REQUIRED.
- THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
- ALL FLAGGERS REQUIRED AT SIDE ROADS AND ENTRANCES REMAINING OPEN TO TRAFFIC AND/OR ADDITIONAL BARRICADES REQUIRED BY THE ENGINEER TO CLOSE SIDE ROADS AND ENTRANCES WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

## DISTRICT 5 DETAIL NO. 7020000

FILE NAME =	USER NAME = hennesdm	DESIGNED -	REVISED - 11/06
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	PLOT DATE = 3/2/2010	DATE -	REVISED -

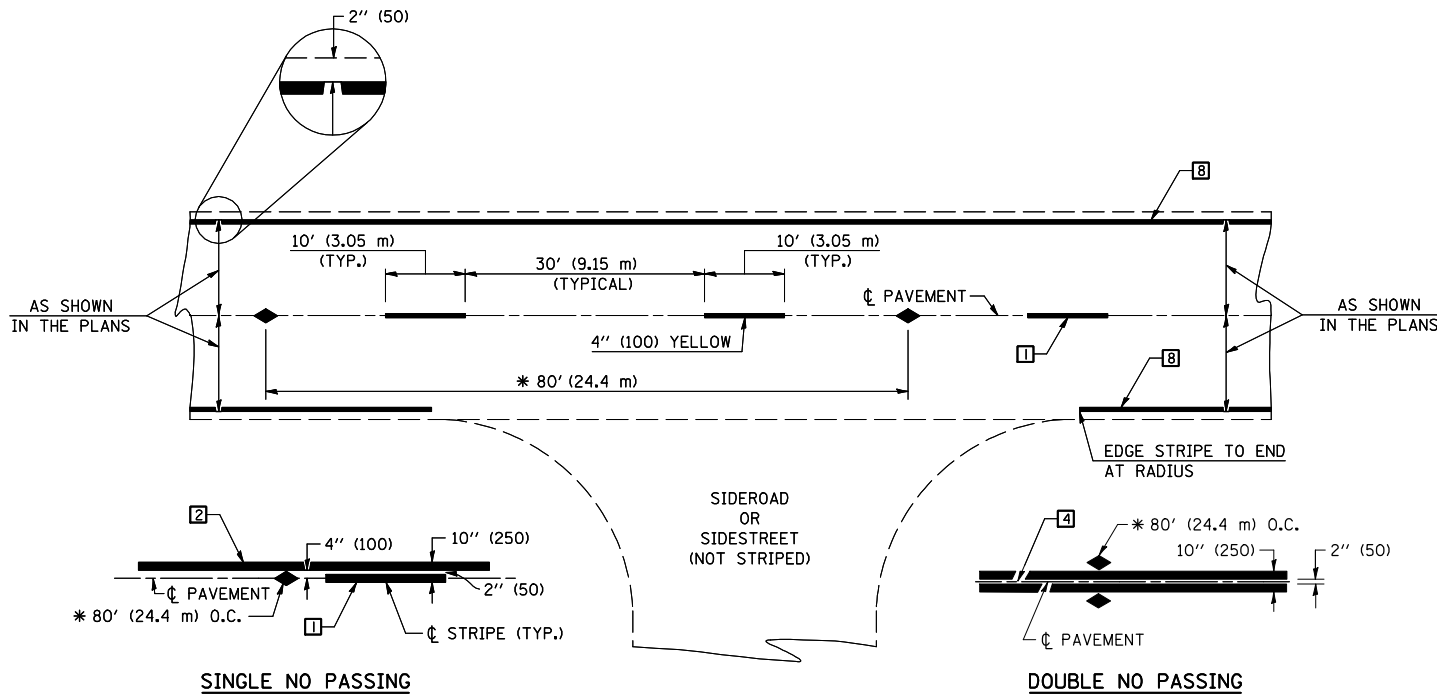
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION DEVICES  
(ROAD & SIDEROAD/STREET CLOSURES)

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	18
FED. ROAD DIST. NO.				ILLINOIS FED. AID PROJECT

CONTRACT NO. 70619



\* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

**TWO LANE/TWO WAY**

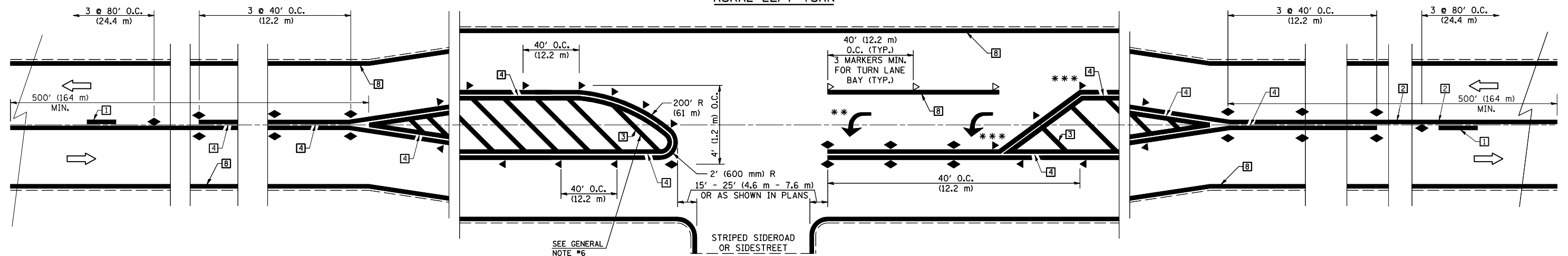
**TYPICAL PAVEMENT MARKING LEGEND**

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

**TYPICAL PAVEMENT MARKERS LEGEND**

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

**RURAL LEFT TURN**



\*\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

\*\* TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 11/06
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	PLOT DATE = 3/2/2010	DATE -	REVISED -

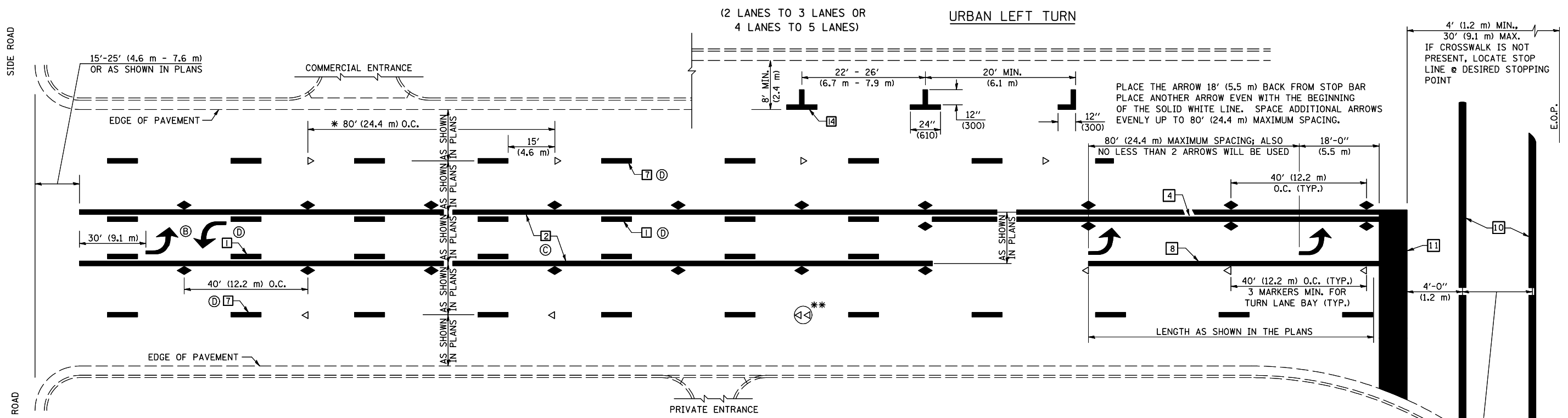
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS  
(RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

**DISTRICT 5 DETAIL NO. 7800AAA**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	19
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	

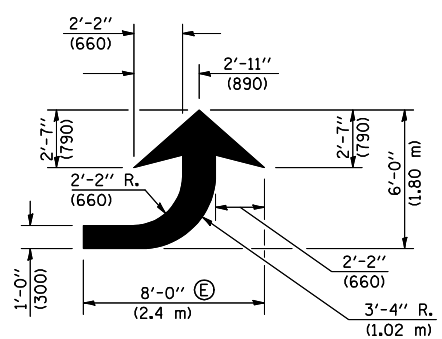


\* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

\*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

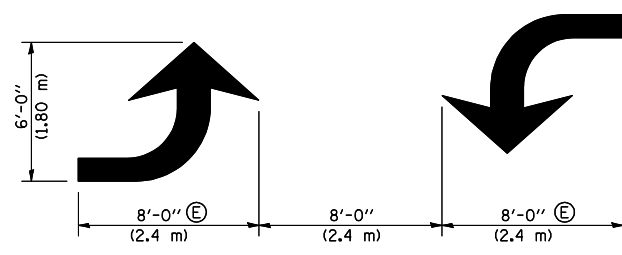
**GENERAL NOTES:**

- ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
- ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
- ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



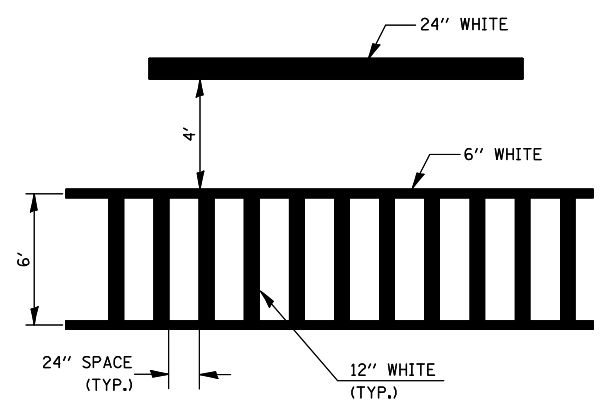
**LEFT ARROW**

REVERSE FOR RIGHT ARROW  
AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
(WHITE)

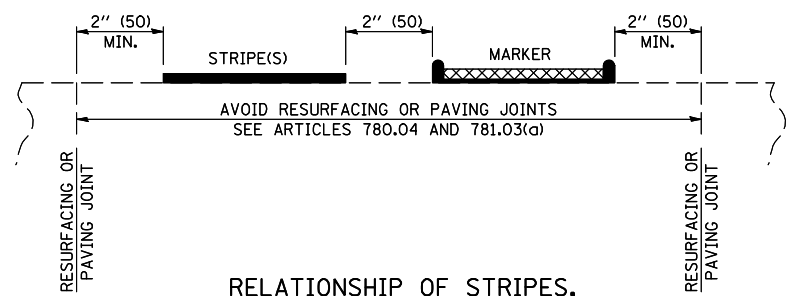


**TYPICAL DOUBLE TURN ARROWS (WHITE)**

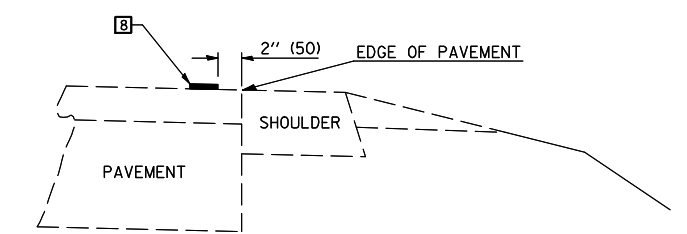
**BLOOMINGTON-NORMAL CITY LIMITS ONLY**



**TYPICAL SPACING FOR CROSSWALKS & STOP BARS**



**RELATIONSHIP OF STRIPES, MARKERS AND JOINTS**



**RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT (SAFETY SHOULDER OR PAVED SURFACE) SEE ARTICLE 780.04**

CROSSWALK WIDTH 6'-0" (1.8 m) OR AS SHOWN IN THE PLANS

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

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	PLOT DATE = 3/2/2010	DATE -	REVISED -

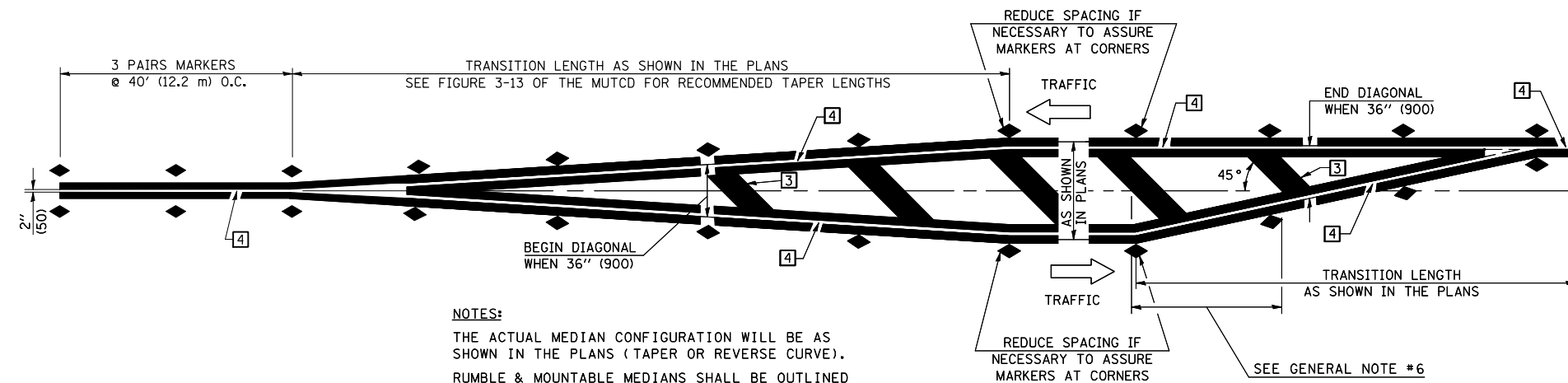
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS  
(RURAL & URBAN APPLICATIONS)**

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

**DISTRICT 5 DETAIL NO. 7800AAA**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	20
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	

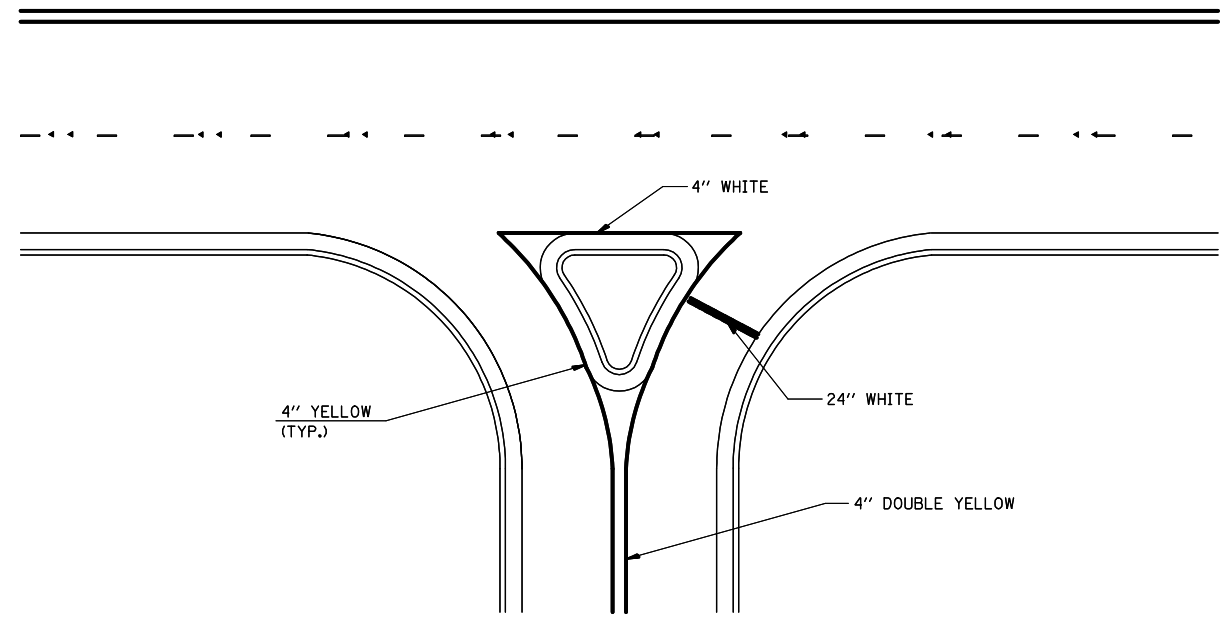


**NOTES:**  
 THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).  
 RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

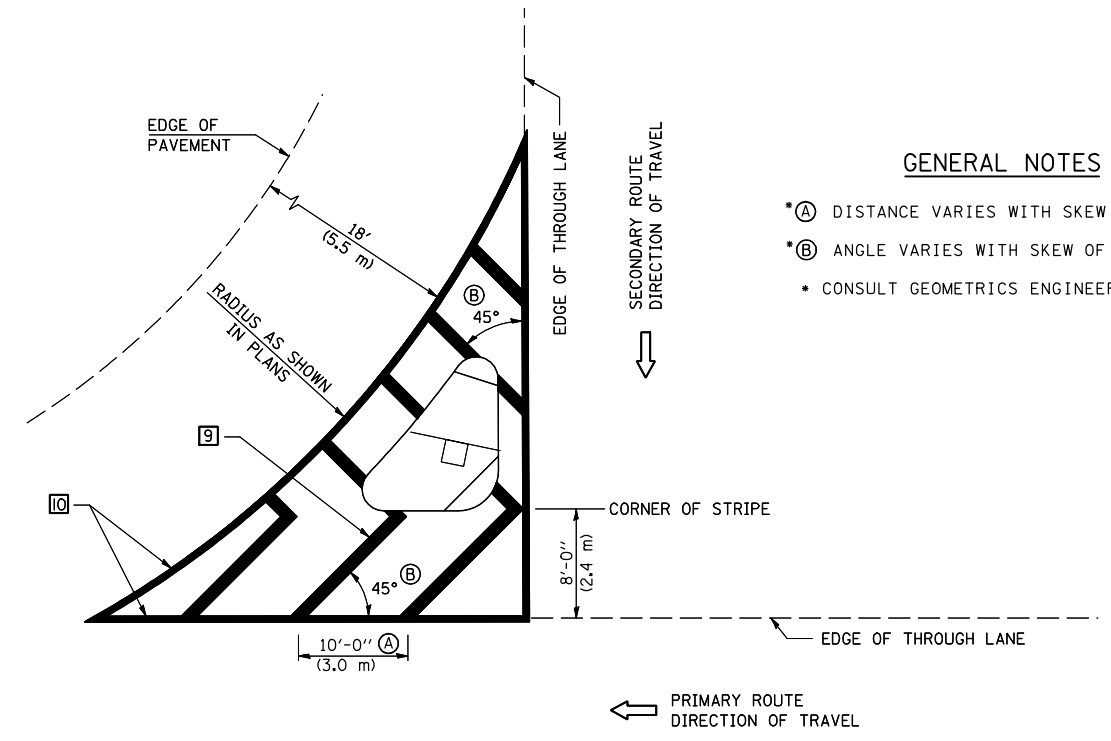
**TYPICAL MEDIAN TRANSITIONS**

**GENERAL NOTES**

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,  
 < 30 MPH USE 15' (< 50 km/h USE 4.5 m)  
 30-45 MPH USE 20' (50-75 km/h USE 6.0 m)  
 > 45 MPH USE 30' (> 75 km/h USE 9.0 m)



**RIGHT IN - RIGHT OUT ACCESS**



**ISLAND**

**GENERAL NOTES**

- \* (A) DISTANCE VARIES WITH SKEW OF INTERSECTION.
- \* (B) ANGLE VARIES WITH SKEW OF INTERSECTION.
- \* CONSULT GEOMETRICS ENGINEER

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 11/06
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	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/2/2010	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS  
 (RURAL & URBAN APPLICATIONS)**

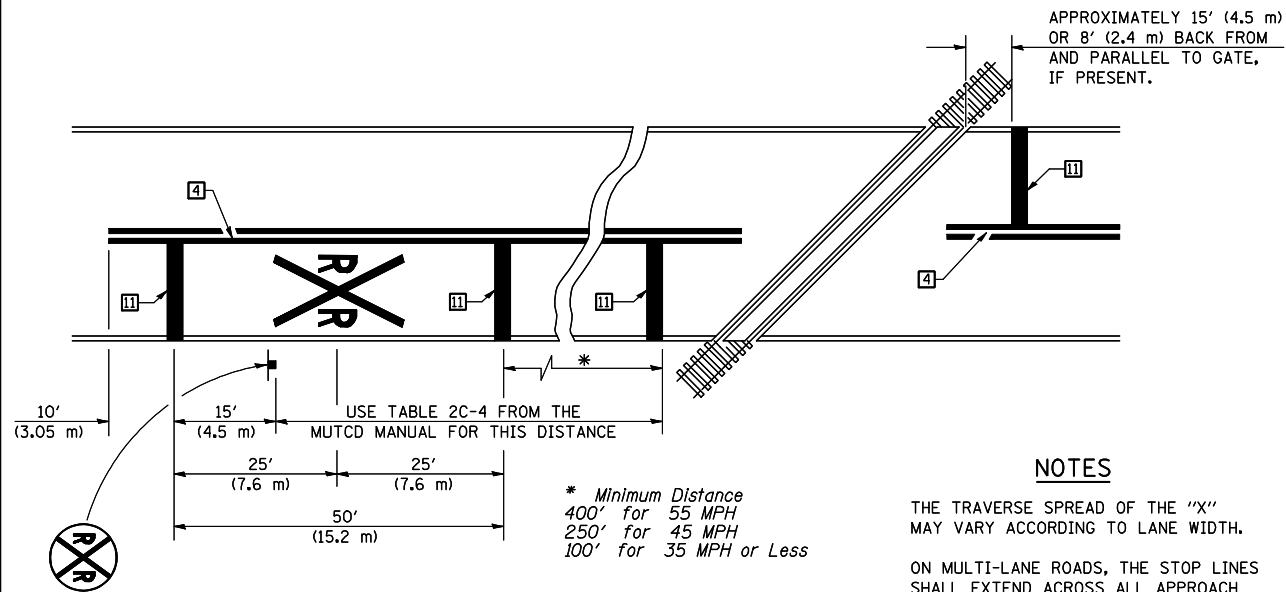
SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

**DISTRICT 5 DETAIL NO. 7800AAA**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	21
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	

RAILROAD CROSSING WITH INTERCONNECT ONLY

RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



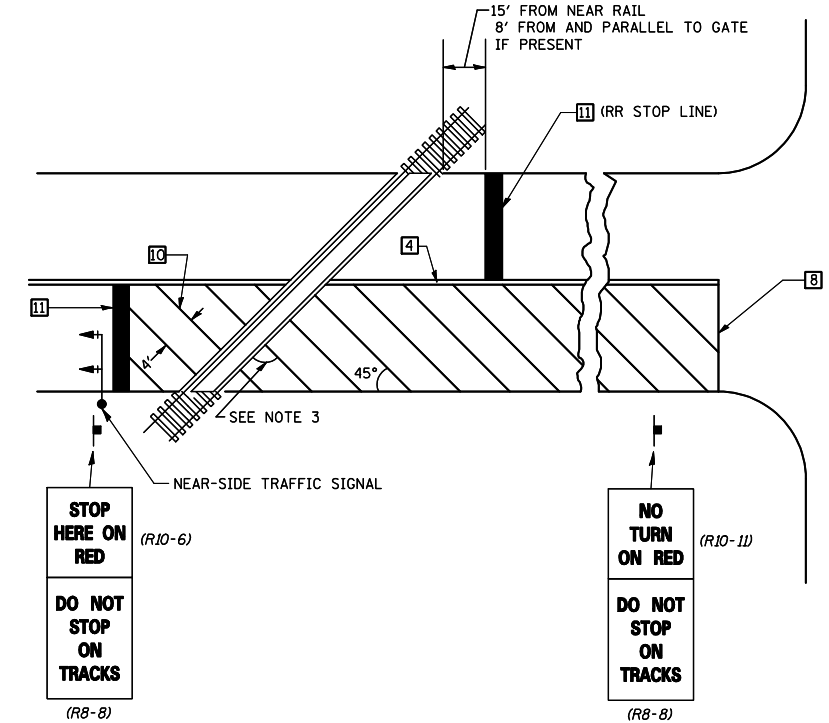
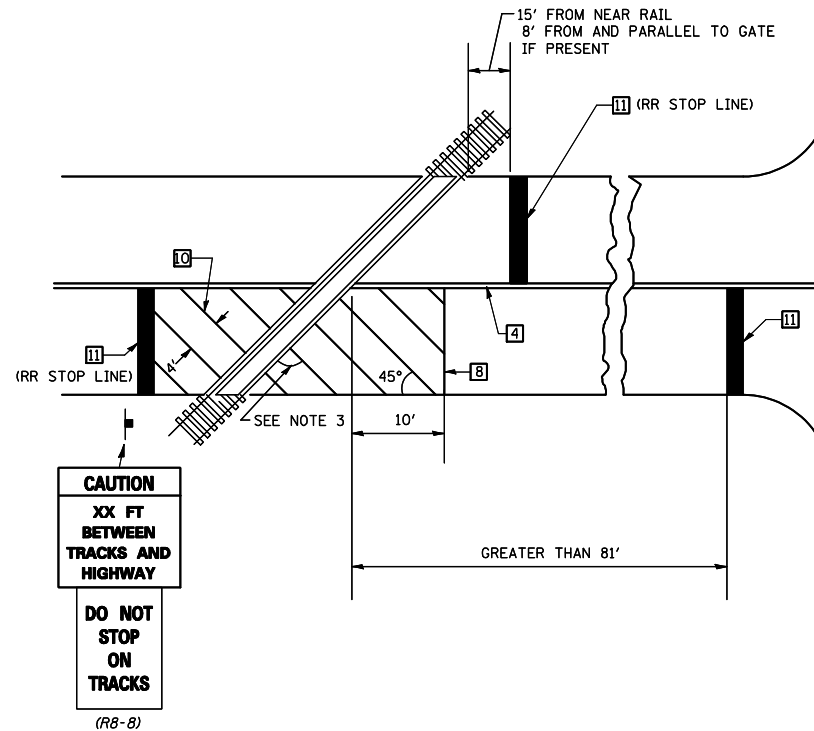
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE R XR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

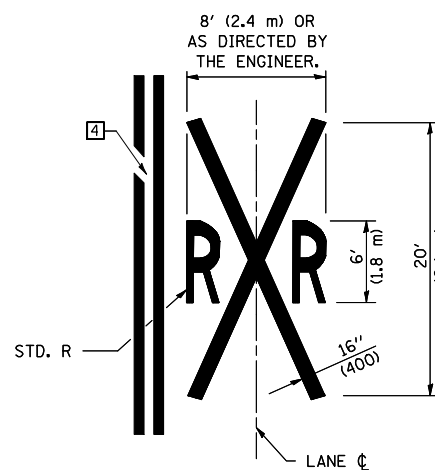
WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = hennessdm	DESIGNED -	REVISED - 11/06
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	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/2/2010	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS  
(RURAL & URBAN APPLICATIONS)

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAA

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	22
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70619	





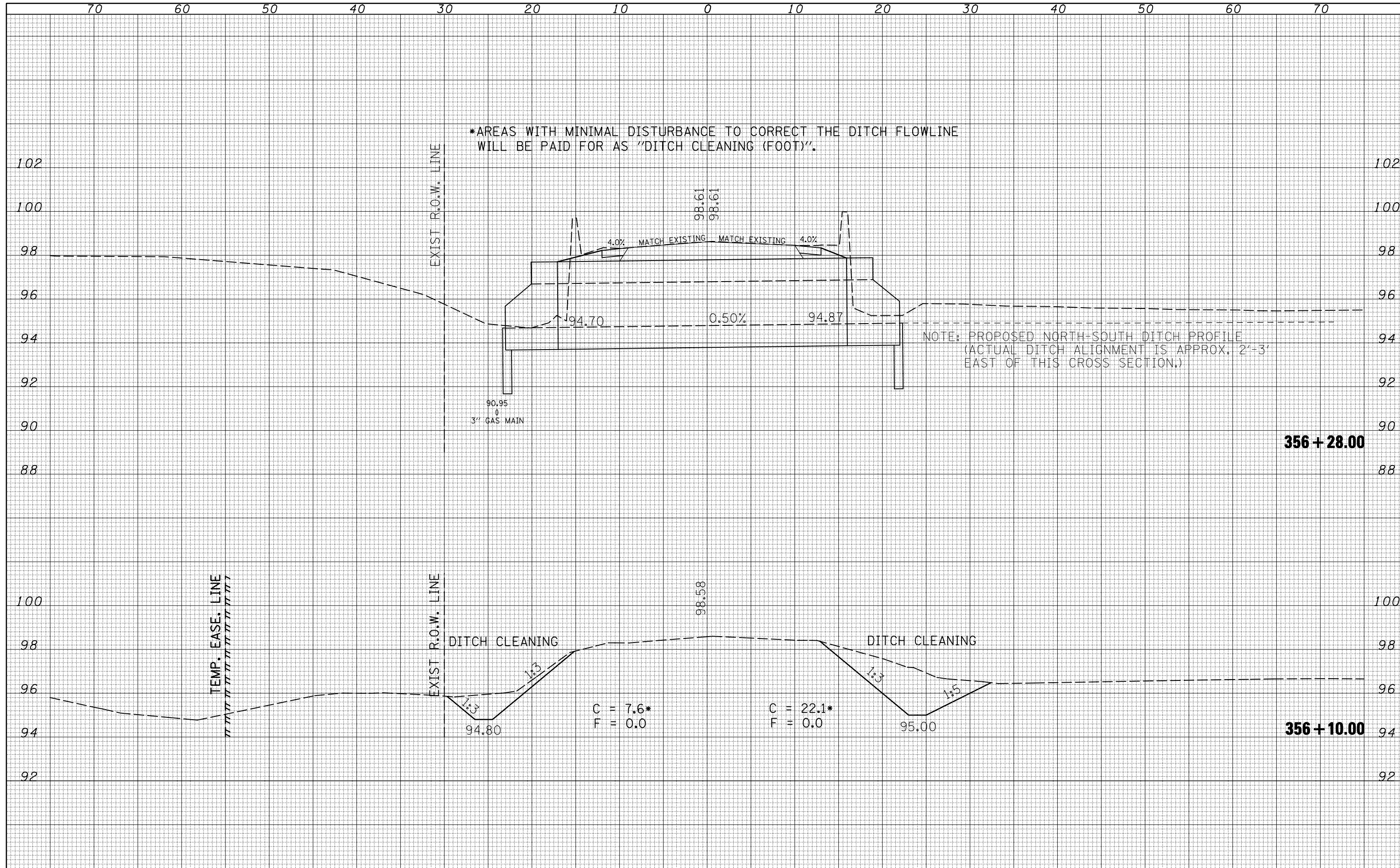






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ORIGINAL	
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NOTE BOOK	
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**F.A.S. 514 (ALLEN STREET) CROSS SECTIONS**

SCALE: SHEET NO. 5 OF 6 SHEETS STA. 356+10.00 TO STA. 356+28.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	27
CONTRACT NO.			70619	

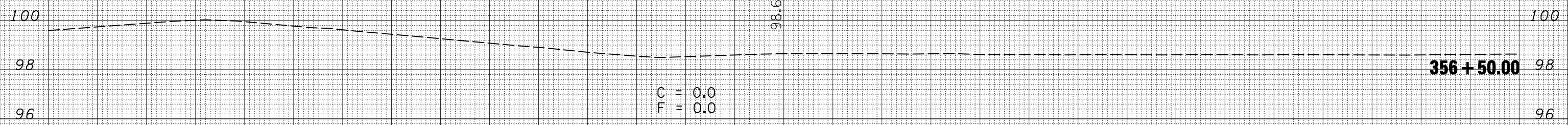
ILLINOIS FED. AID PROJECT



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



C = 0.0  
F = 0.0

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USER NAME = hennessdm  
PLOT SCALE = 10.0000' / IN.  
PLOT DATE = 3/2/2010

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**F.A.S. 514 (ALLEN STREET) CROSS SECTIONS**

SCALE: SHEET NO. 6 OF 6 SHEETS STA. 356+50.00 TO STA. 356+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
514	81-15D,CR	CHAMPAIGN	30	28
CONTRACT NO.			70619	

ILLINOIS FED. AID PROJECT



DATE	
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TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

