

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 546 (IL 94)
SECTION (25BC-BR)I
CONTRACT MAINTENANCE
MERCER COUNTY

C-94-098-15

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	(25BC-BR)I	MERCER	20	1
ILLINOIS			CONTRACT NO. 68C76	

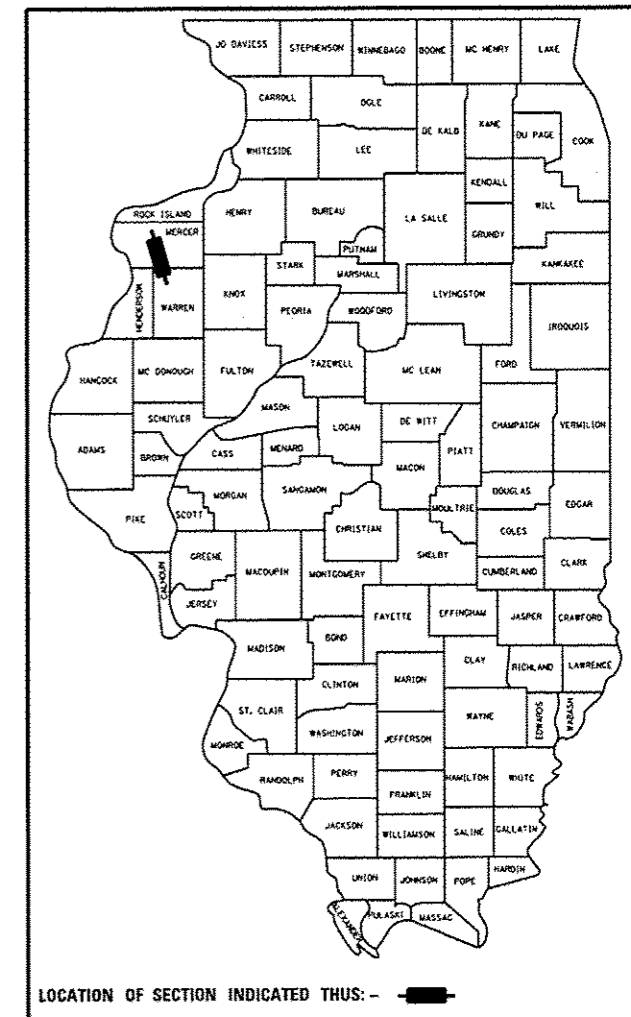
D-94-058-15

INDEX OF SHEETS

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- 2 GENERAL NOTES AND PROJECT SPECIFIC NOTES
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- 10-11 TRAFFIC CONTROL
- 12-14 STRUCTURE PLANS
- 15 DECK PATCHING DETAIL
- 16-20 DISTRICT 4 STANDARDS

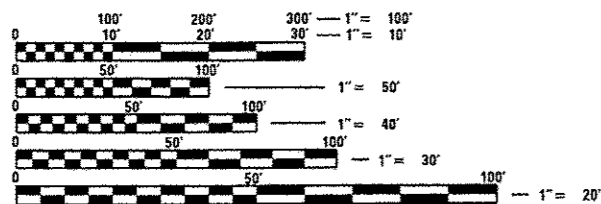
HIGHWAY STANDARDS

- 001001-02
- 542401-02
- 701001-02
- 701006-05
- 701301-04
- 701311-03
- 701321-15
- 701326-04
- 701901-05
- 704001-08
- 780001-05
- 782006



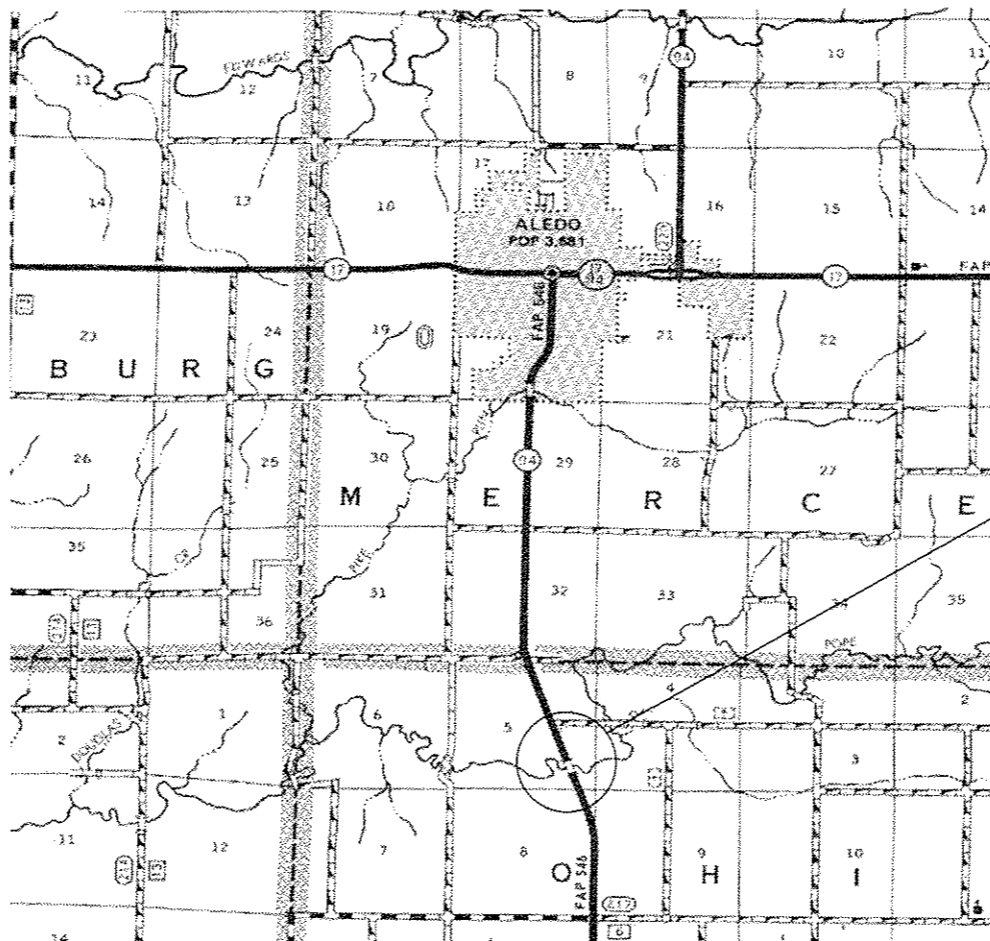
LOCATION OF SECTION INDICATED THUS: - ■ -

REPLACE EXPANSION JOINTS AND CLEAN/PAINT BEARINGS ON SOUTH PIER OF STRUCTURE CARRYING IL 94 OVER POPE CREEK (SN 066-0009), 3.9 MILES SOUTH OF ALEDO.



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



EXISTING STRUCTURE NO. 066-0009
IL 94 OVER POPE CREEK
STA. 181+34.62 TO 182+84.92

PROJECT ENGINEER: RICHARD DOTSON (309-671-3455)
PROJECT MANAGER: KEVIN HORST (309-671-3472)
CATALOG NO. 035312-00D
CONTRACT NO. 68C76

GROSS LENGTH = 150.3 FT. = 0.028 MILE
NET LENGTH = 150.3 FT. = 0.028 MILE
ADT = 1750
SU = 9.1%
MU = 4.6%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 21 2016
Kenneth A. Garnett
REGION THREE ENGINEER

Maile 2016
M. A. D. P. E. K.
ENGINEER OF DESIGN AND ENVIRONMENT

Maile 2016
DIRECTOR OF PROGRAM DEVELOPMENT

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OF THE STATE OF ILLINOIS

GENERAL NOTES

COMMITMENTS

Commitments are not to be altered without the written approval of all parties to which the commitment was made. No commitments were made.

PROPERTY OWNER ACCESS REQUIREMENT

Access must be maintained to all existing properties during construction per Article 107.09 unless arrangements are made in writing by the Contractor with the property owners with a copy to the Engineer for short-term closures.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Cultural and Natural Resources Review of Borrow Areas)
- * BDE Form 2290 (Waste/Use Area Review)
- * A location map showing the size limits and location of the use area
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form * D4 PI0101

Prior to any waste materials being removed from the construction site the required environmental resource surveys shall be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

Please note that a minimum of four weeks shall be allowed for the District to obtain the required waste site environmental clearances and six weeks for the required borrow site environmental clearances.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use:	HMA Shoulder, 8"
ACPC:	64-22
Design Air Voids:	4.0% at N=50
Mixture Composition (Gradation Mixture)	H. 9.5
Friction Aggregate	Mix C
Quality Management Program	QCOA

1. HMA Shoulder, 8" shall be placed in three lifts. The bottom lift will be 4 inches followed by the middle lift of 2 inches, and the final lift of 2 inches.
2. For design purposes, mixture weight for all mixes is determined to be 112.0 lb/sy*in unless otherwise noted.

ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS

The Contractor shall consult with the Engineer in regard to the exact length of the box/pipe culverts, storm sewers, and/or pipe drains required prior to ordering these items.

NO PASSING ZONE VERIFICATION

The resident shall contact Operations to verify the location of no passing zones prior to placement of centerline striping.

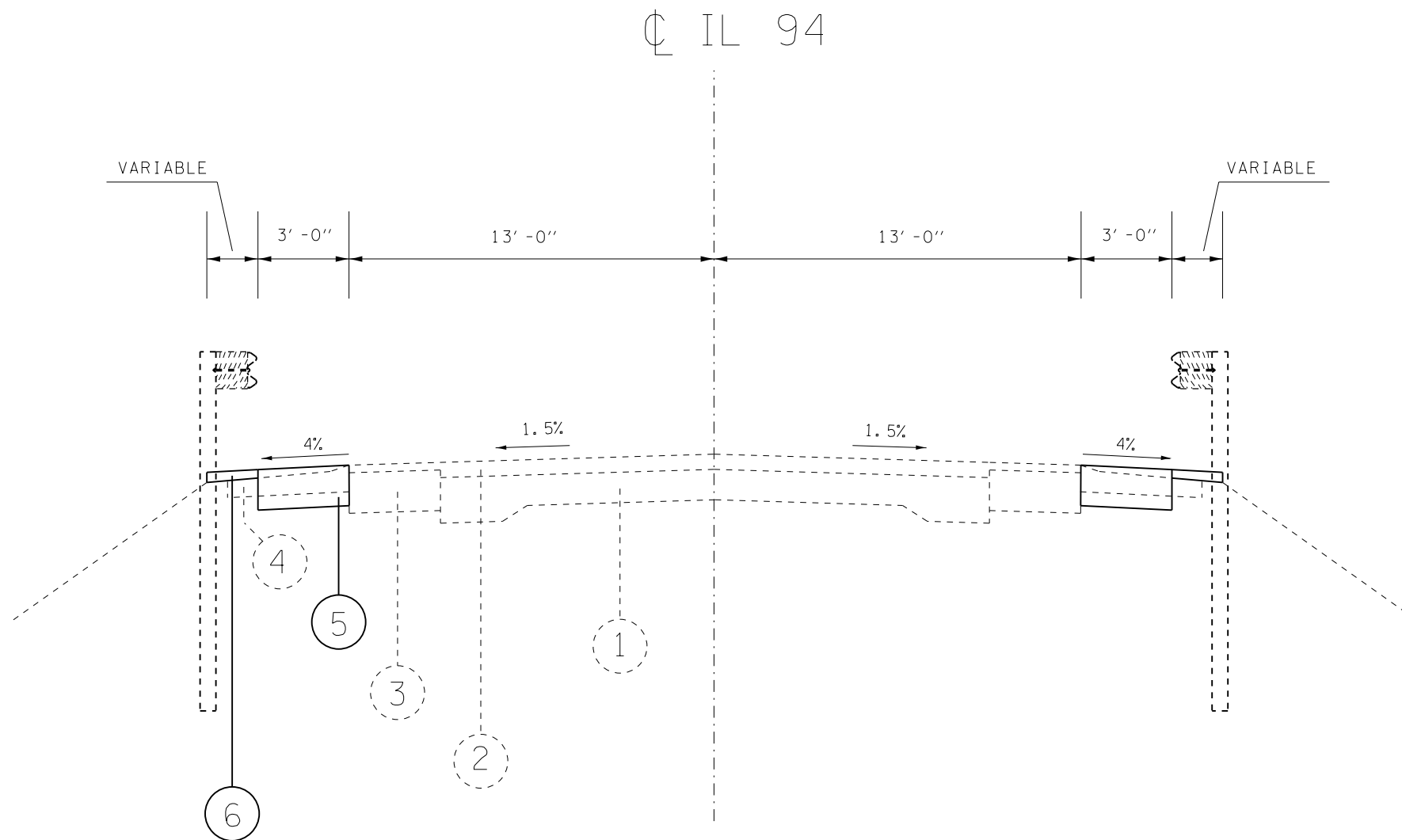
PROJECT SPECIFIC NOTES

1. Any work required to connect the proposed pipe drain to the existing inlet at IL 94 sta. 181+03.6 LT shall be included in the cost of PIPE DRAINS 12".
2. The aggregate for the guardrail aggregate erosion control shall be ca1 gradation in accordance with Article 1004.01(c) of the Standard Specifications. The aggregate shall be deposited and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

FILE NAME : 0468C76-sheets.dgn	USER NAME : aubreyga	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND PROJECT SPECIFIC NOTES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	PLOT SCALE * 100.0000 / in.	DRAWN -	REVISED -		546	(258C-BR1)	MERCER	20	2		
	PLOT DATE * 3/24/2016	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 68C76				
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT						

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				ROADWAY	SN 066-0009
				0005	0014
20200500	EARTH EXCAVATION (WIDENING)	CU YD	35.4	35.4	
21101615	TOPSOIL FURNISH & PLACE, 4"	SO YD	67	67	
48203029	HOT - MIX ASPHALT SHOULDERS, 8"	SO YD	159.3	159.3	
50102400	CONCRETE REMOVAL	CU YD	16.5		16.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	16.5		16.5
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2350		2350
50800515	BAR SPLICERS	EACH	54		54
52000110	PREFORMED JOINT STRIP SEAL	FOOT	132		132
54210182	PIPE ELBOW, 12"	EACH	1	1	
54215547	METAL END SECTIONS 12"	EACH	1	1	
60100945	PIPE DRAINS 12"	FOOT	26	26	
61000050	CONCRETE THRUST BLOCKS	EACH	1	1	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	

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LEGEND

- ① EXISTING PCC PAVEMENT
- ② EXISTING HMA OVERLAY
- ③ EXISTING BASE COURSE WIDENING
- ④ EXISTING AGGREGATE SHOULDER
- ⑤ PROPOSED HMA SHOULDER, 8"
- ⑥ PROPOSED GUARDRAIL AGGREGATE EROSION CONTROL (APPROXIMATELY 2" THICK)

PROPOSED SECTION

STA. 179+94 TO 181+01
 STA. 183+04 TO 184+36

FILE NAME = D468C76-sheets.dgn	USER NAME = aubreygs	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTION				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100.0000' / 1".	CHECKED -	REVISED -						546	(25BC-BR1)	MERCER	20	6
Default	PLOT DATE = 3/24/2016	DATE -	REVISED -	SCALE: SHEET OF SHEETS STA. TO STA.				ILLINOIS FED. AID PROJECT CONTRACT NO. 68C76					

EARTH EXCAVATION (WIDENING)			
STATION TO STATION			VOLUME (CY)
STAGE 1			
179+94	TO	181+01	7.9
183+04	TO	184+36	9.8
STAGE 2			
179+94	TO	181+01	7.9
183+04	TO	184+36	9.8
TOTAL			35.4

HMA SHOULDER, 8"			
STATION TO STATION			AREA (SY)
STAGE 1			
179+94	TO	181+01	36
183+04	TO	184+36	44
STAGE 2			
179+94	TO	181+01	36
183+04	TO	184+36	44
TOTAL			160

PIPE ELBOW, 12"		
LOCATION	EACH	
STA. 181+03.6 LT	2	
TOTAL	2	

METAL END SECTIONS 12"		
LOCATION	EACH	
STA. 181+03.6 LT	1	
TOTAL	1	

GUARDRAIL AGGREGATE ERSOSION CONTROL		
LOCATION	LT/RT	WEIGHT
		TONS
179+94 TO 181+01	LT	3.0
179+94 TO 181+02	RT	3.0
183+04 TO 184+36	LT	3.8
183+04 TO 184+37	RT	3.8
TOTAL		13.6

CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUE	
LOCATION	L SUM
5 BEARINGS ON SOUTH SIDE OF SOUTH PIER	1
TOTAL	1

PIPE DRAINS, 12"	
LOCATION	LENGTH (FEET)
STA. 181+03.6 LT	26
TOTAL	26

CONCRETE THRUST BLOCKS	
LOCATION	EACH
STA. 181+03.6 LT	1
TOTAL	1

TRAFFIC CONTROL & PROTECTION STANDARD 701321	
LOCATION	L SUM
JOBSITE	1
TOTAL	1

TEMPORARY CONCRETE BARRIER			
STATION TO STATION			LENGTH (FT)
STAGE 1			
179+83.5	TO	184+46	462.5
TOTAL			462.5

RELOCATE TEMPORARY CONCRETE BARRIER			
STATION TO STATION			LENGTH (FT)
STAGE 2			
180+03	TO	184+28	425.0
TOTAL			425

TEMPORARY BRIDGE TRAFFIC SIGNALS			
STATION TO STATION			EACH
STAGE 1 & 2			
178+70	TO	185+66	1.0
TOTAL			1

TRAFFIC CONTROL SURVEILLANCE	
LOCATION	CAL DAY
WIDENING	2
TOTAL	2

TEMPORARY RUMBLE STRIP	
STATION TO STATION	EACH
STAGE 1 & 2	
161+20	1.0
166+20	1.0
171+20	1.0
193+16	1.0
198+16	1.0
203+16	1.0
TOTAL	6

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	
STATION TO STATION	EACH
STAGE 1	
179+83.5	1.0
184+46	1.0
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3	
STATION TO STATION	EACH
STAGE 2	
180+03	1.0
184+28	1.0
TOTAL	2

PIPE DRAIN REMOVAL	
LOCATION	LENGTH (FEET)
STA. 181+03.6 LT	26
TOTAL	26

TRAFFIC CONTROL & PROTECTION STANDARD 701326	
LOCATION	L SUM
JOBSITE	1
TOTAL	1

MOBILIZATION	
LOCATION	L SUM
JOBSITE	1
TOTAL	1

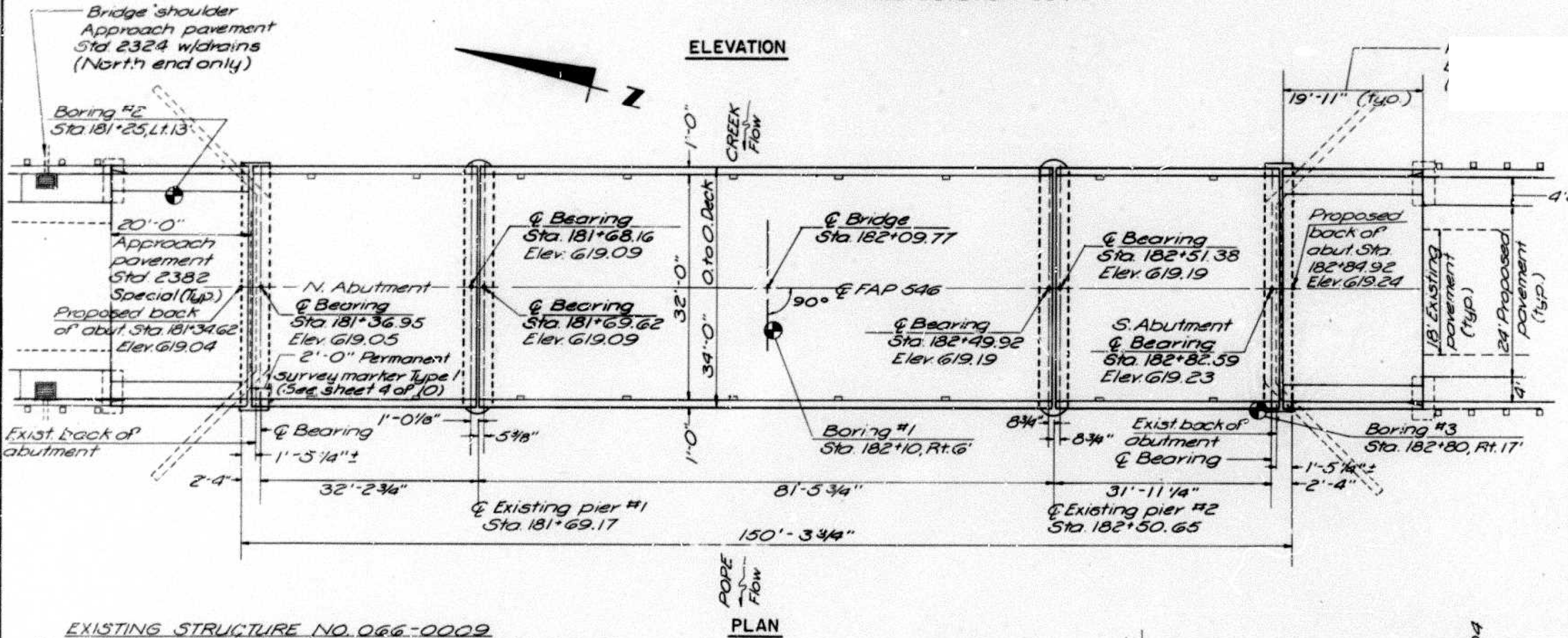
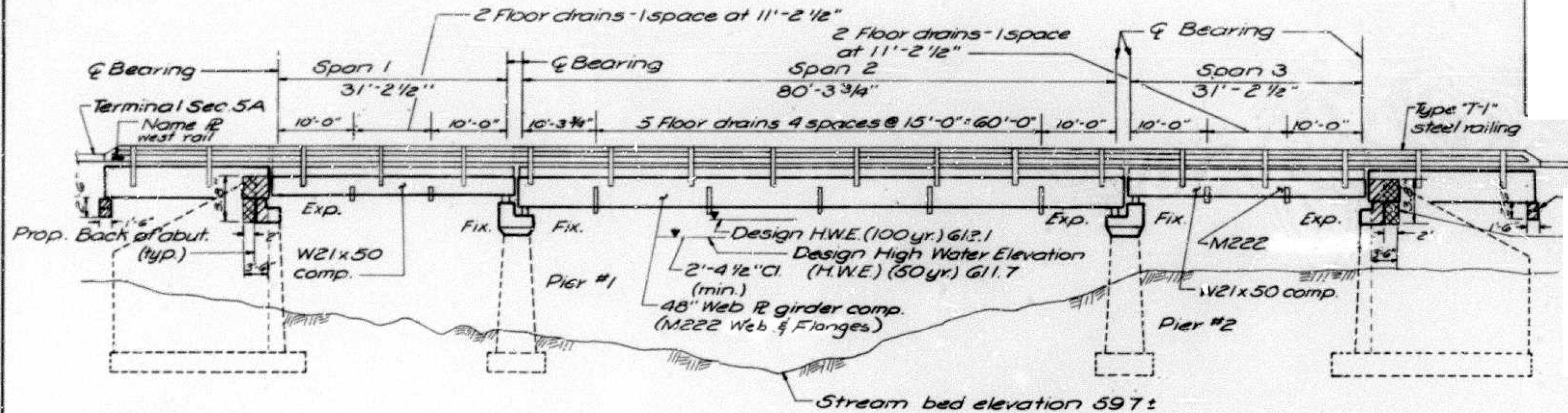
EPOXY PAVEMENT MARKING-LINE 4"					
STATION TO STATION			YELLOW SOLID 4" (FT)	YELLOW SKIP-DASH 4" (FT)	WHITE SOLID 4" (FT)
178+42.00	TO	185+76.00		190.0	1468.0
178+42.00	TO	183+64.00	522.0		
SUB-TOTAL			522.0	190.0	1468.0
TOTAL			712.0		1468.0
GRAND TOTAL			2180.0		

PAVEMENT MARKING BLACKOUT TAPE, 6"					
STATION TO STATION			CENTERLINE (FT)	STAGE 1 EDGELINE (FT)	STAGE 2 EDGELINE (FT)
178+42.00	TO	179+98.00	156.0		
184+32.00	TO	185+76.00	144.0		
179+94.00	TO	184+36.00		442.0	442.0
SUB-TOTAL			300.0	442.0	442.0
TOTAL			1184.0		

DECK SLAB REPAIR (PARTIAL)	
LOCATION	AREA (SY)
4 LOCATIONS	
LOCATION 1 (4 FT X 4 FT)	1.8
LOCATION 2 (4 FT X 4 FT)	1.8
LOCATION 3 (4 FT X 4 FT)	1.8
LOCATION 4 (4 FT X 4 FT)	1.8
TOTAL	7.2

CLEANING AND PAINTING BEARINGS	
LOCATION	EACH
5 BEARINGS ON SOUTH SIDE OF SOUTH PIER	5
TOTAL	5

SHORT TERM PAVEMENT MARKING REMOVAL					
STATION TO STATION			CENTERLINE (SF)	STAGE 1 EDGELINE (SF)	STAGE 2 EDGELINE (SF)
178+42.00	TO	179+98.00	78.0		
184+32.00	TO	185+76.00	72.0		
179+94.00	TO	184+36.00		221.0	221.0
SUB-TOTAL			150.0	221.0	221.0
TOTAL			592.0		



EXISTING STRUCTURE NO. 066-0009
 Built in 1923 as S.B. Rte 3 Span 2&R at Sta 182+10

FILE NAME - D468C76-sheets.dgn	USER NAME - aoubreys	DESIGNED - DRAWN -	REVISED - REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED - DATE -	REVISED - REVISED -
	PLOT DATE = 3/24/2016		

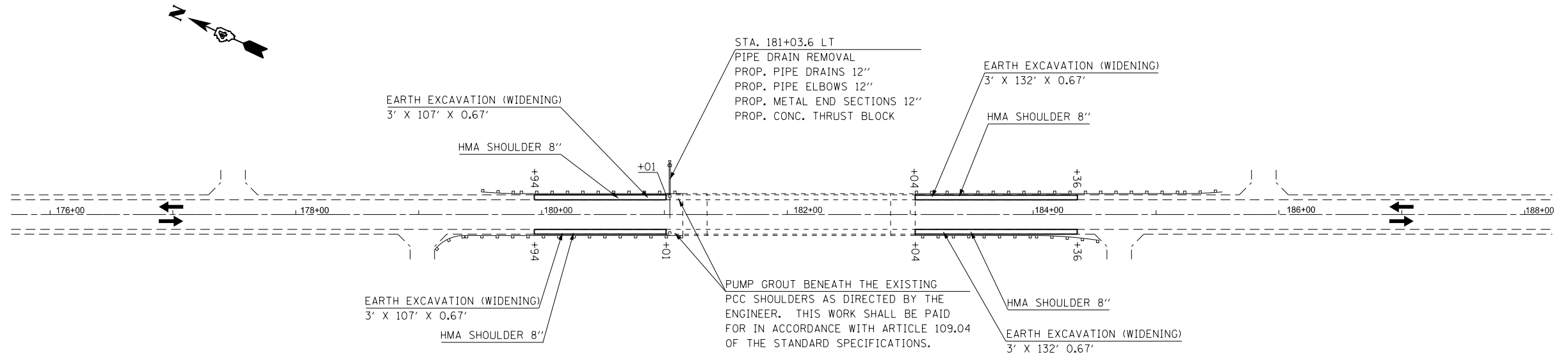
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 (FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 546	SECTION (25BC-BR1)	COUNTY MERCER	TOTAL SHEETS 20	SHEET NO. 8
CONTRACT NO. 68C76				
ILLINOIS FED. AID PROJECT				

04

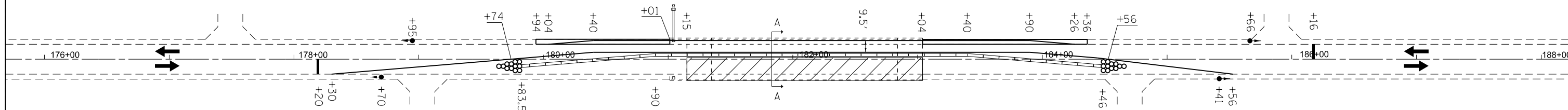
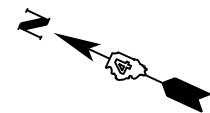






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	PLOT DATE = 3/25/2016	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

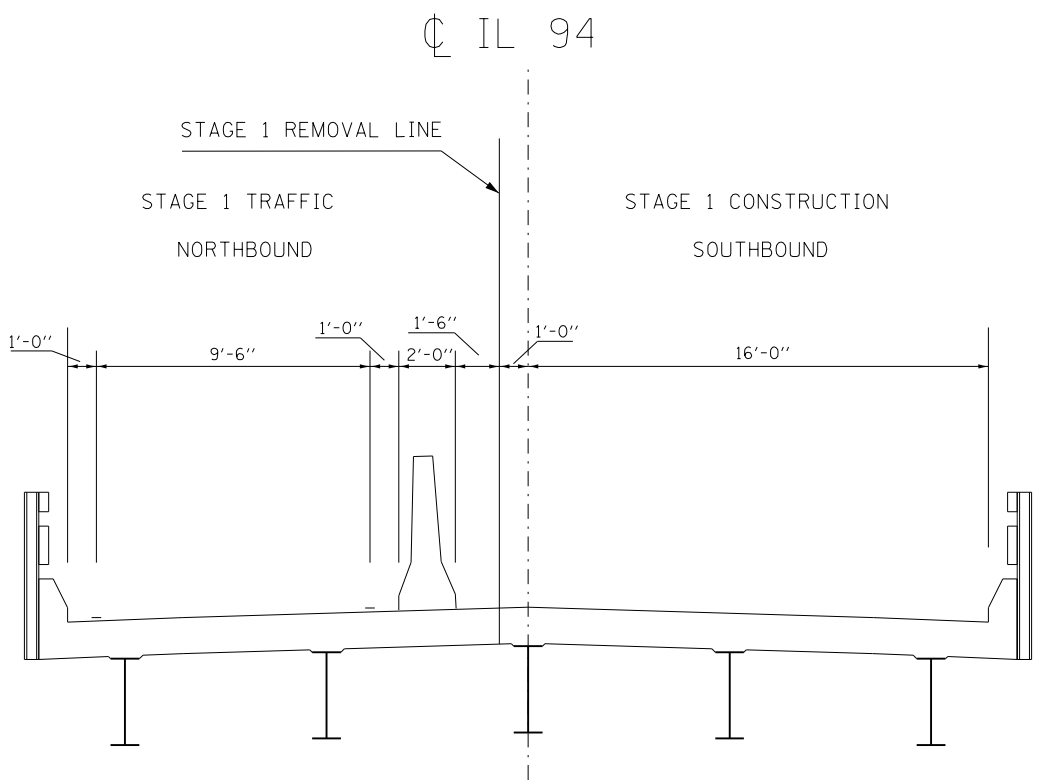
PROPOSED PLAN			
SCALE:	SHEET	OF	SHEETS
	STA.		TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	(25BC-BR1)	MERCER	20	9
CONTRACT NO. 68C76			ILLINOIS FED. AID PROJECT	



LEGEND	
	STOP BAR
	TEMPORARY CONCRETE BARRIER
	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
	TEMPORARY BRIDGE TRAFFIC SIGNALS

PLAN VIEW



SECTION A-A

FILE NAME =
D468C76-sheets.dgn
Default

USER NAME = aubreys
PLOT SCALE = 80.0000' / in.
PLOT DATE = 3/25/2016

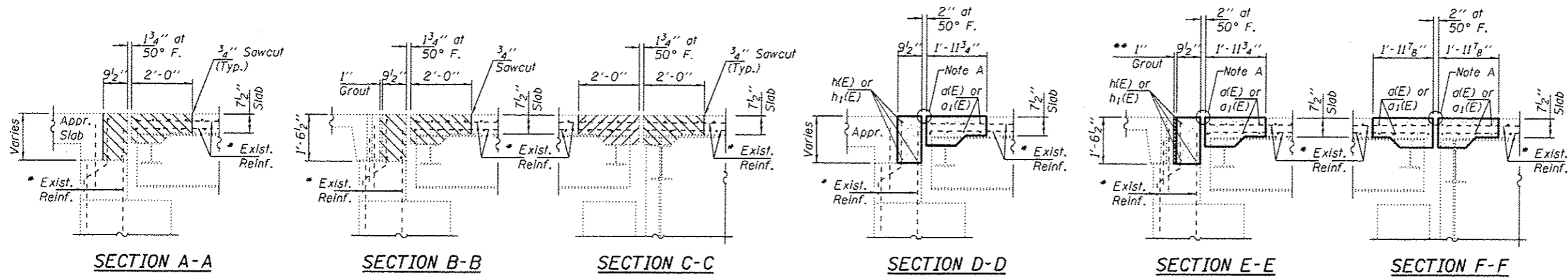
DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
STAGE 1
SCALE: SHEET OF SHEETS STA. TO STA.

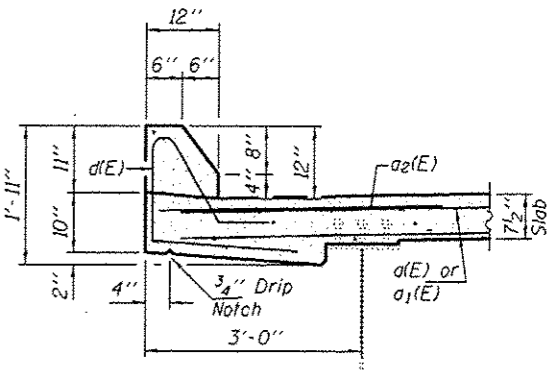
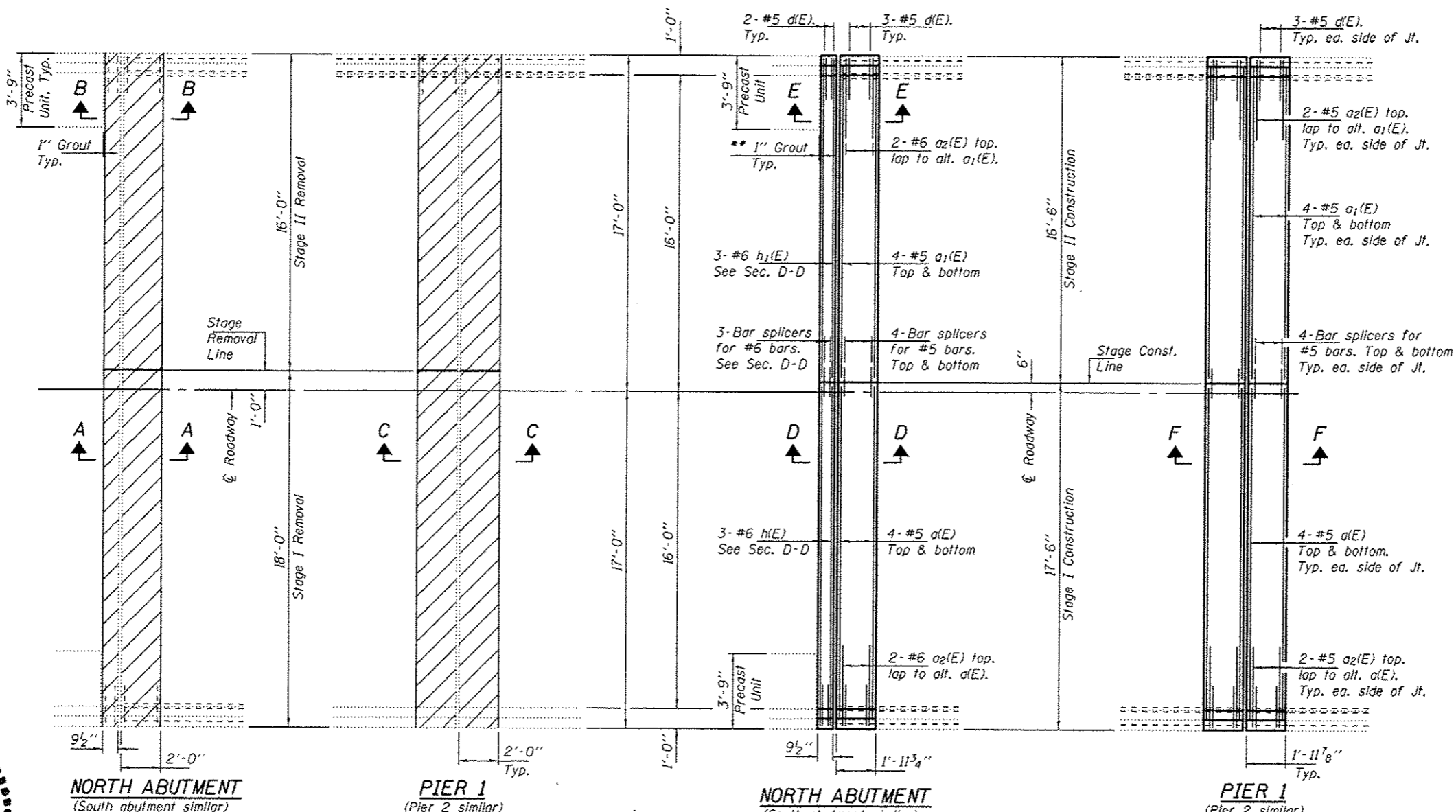
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	(25BC-BR1)	MERCER	20	10
CONTRACT NO. 68C76				
ILLINOIS FED. AID PROJECT				



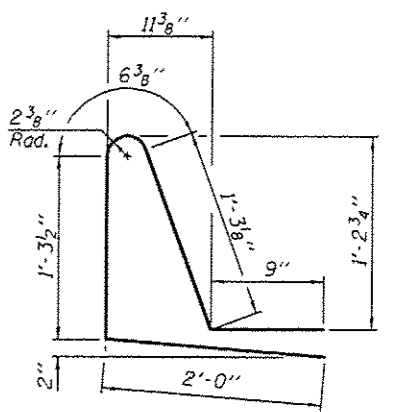
* Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

** Cost Included with Concrete Superstructure.

Note A:
For Joint Details see sheet 2 of 3.



TYPICAL CURB DETAIL



BAR d(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	48	#5	16'-10"	
a1(E)	48	#5	15'-10"	
a2(E)	24	#6	4'-0"	
d(E)	44	#5	5'-10"	
h(E)	6	#6	18'-2"	
h1(E)	6	#6	15'-0"	
Concrete Removal			Cu. Yd.	16.5
Concrete Superstructure			Cu. Yd.	16.5
Bar Splicers			Each	54
Reinforcement Bars, Epoxy Coated			Pound	2350



DESIGNED: *David Carl Puzey*
 CHECKED: *Alison T. Halgway*
 DRAWN: *Steffen*
 CHECKED: *CCG ATH*

DATE: APRIL 25, 2016

REVISOR: _____
 REVISION: _____

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS
 SN 066-0009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	1258C-BR11	MERCER	20	12

CONTRACT NO. 68C76

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

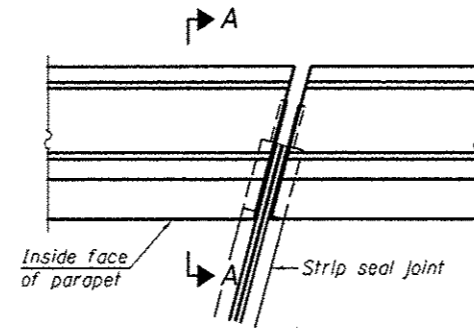
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

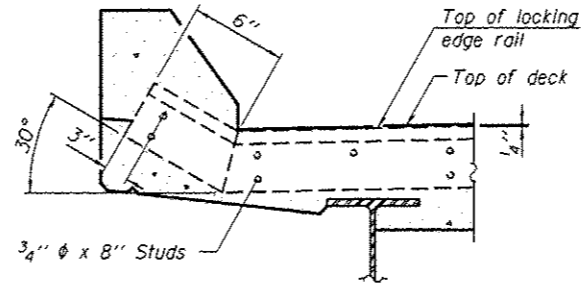
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

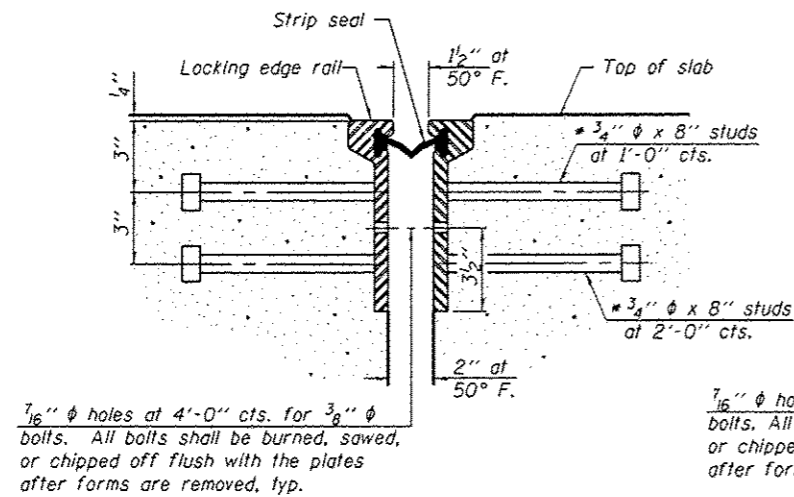
Parapet plates and anchorage studs for skewers > 30° included in the cost of Preformed Joint Strip Seal.



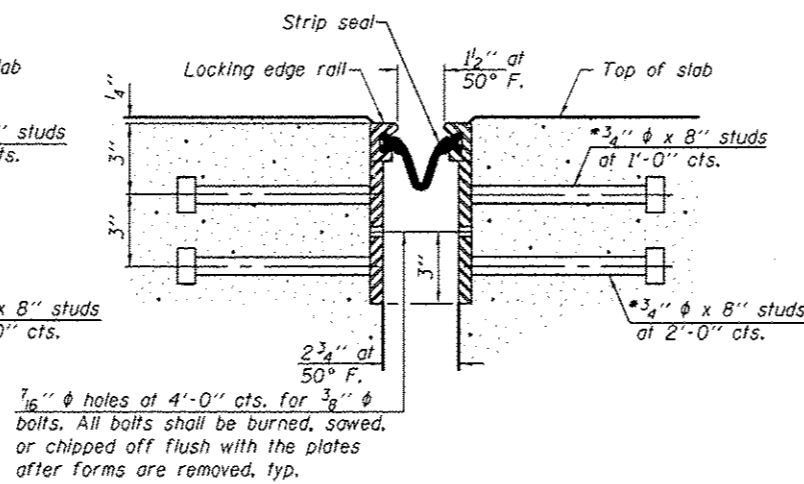
PLAN
(For skewers ≤ 30°)



SECTION A-A



SECTION THRU ROLLED RAIL JOINT

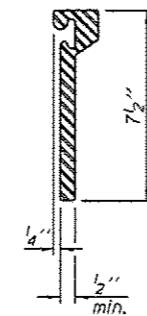


SECTION THRU WELDED RAIL JOINT

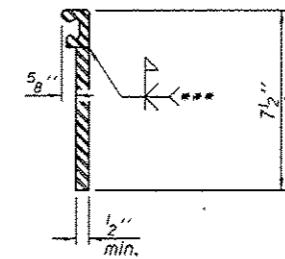
7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

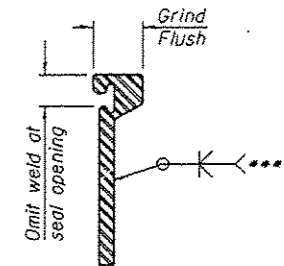
• Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	132

DESIGNED CCC
CHECKED ATH
DRAWN Steffen
CHECKED CCC ATH

PASSED
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE APRIL 25, 2016
REVISED
REVISED

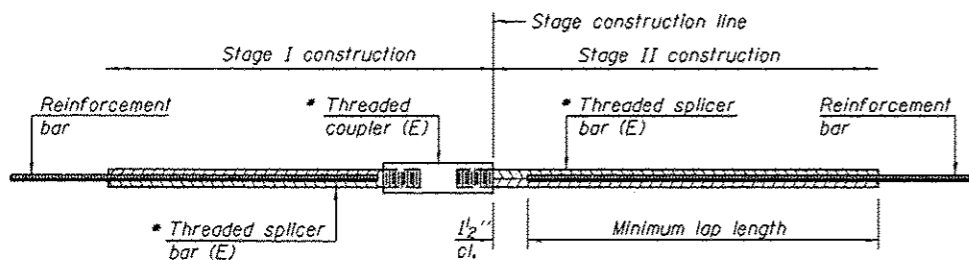
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
SN 066-0009

SHEET NO. 2 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	I258C-BR11	MERCER	20	13

CONTRACT NO. 68C76
ILLINOIS FED. AID PROJECT

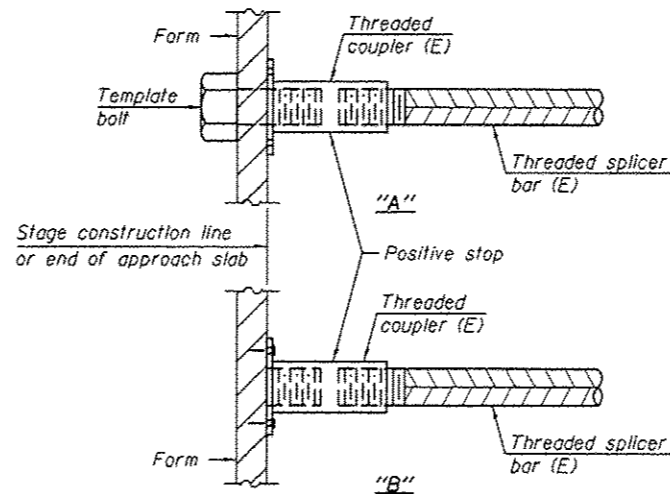


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	48	3'-6"
Abutments	#6	6	4'-0"

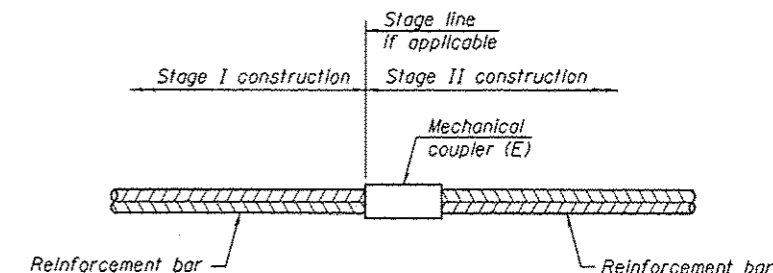


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

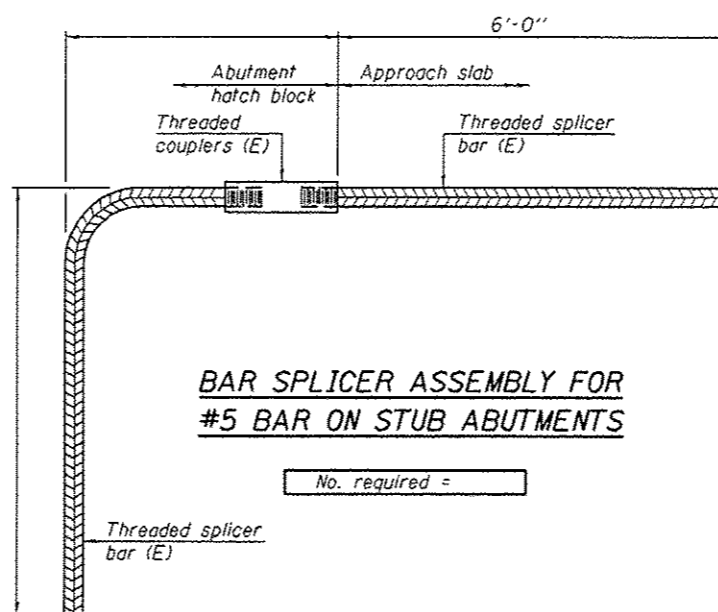
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 6-8-15

DESIGNED CCC
 CHECKED ATH
 DRAWN Steffen
 CHECKED CCC ATH

PASSED

Carl Perry
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE APRIL 25, 2016

REVISED
 REVISED

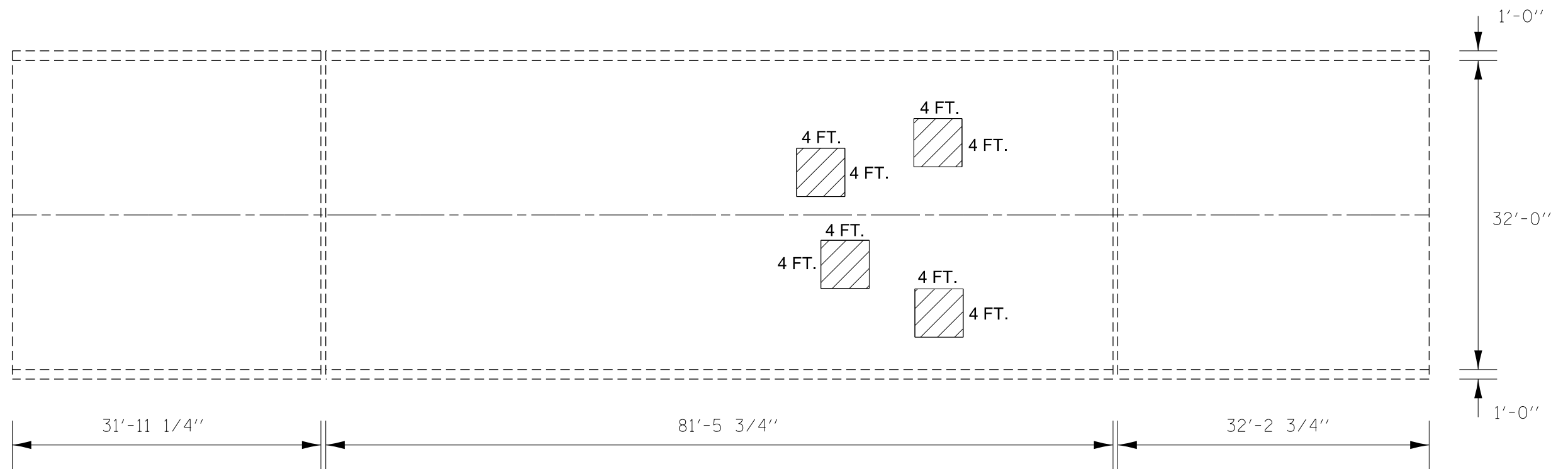
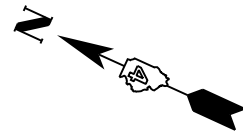
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 SN 066-0009

SHEET NO. 3 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	1250C-BR11	MERCER	20	14

CONTRACT NO. 68C76
 ILLINOIS FED. AID PROJECT

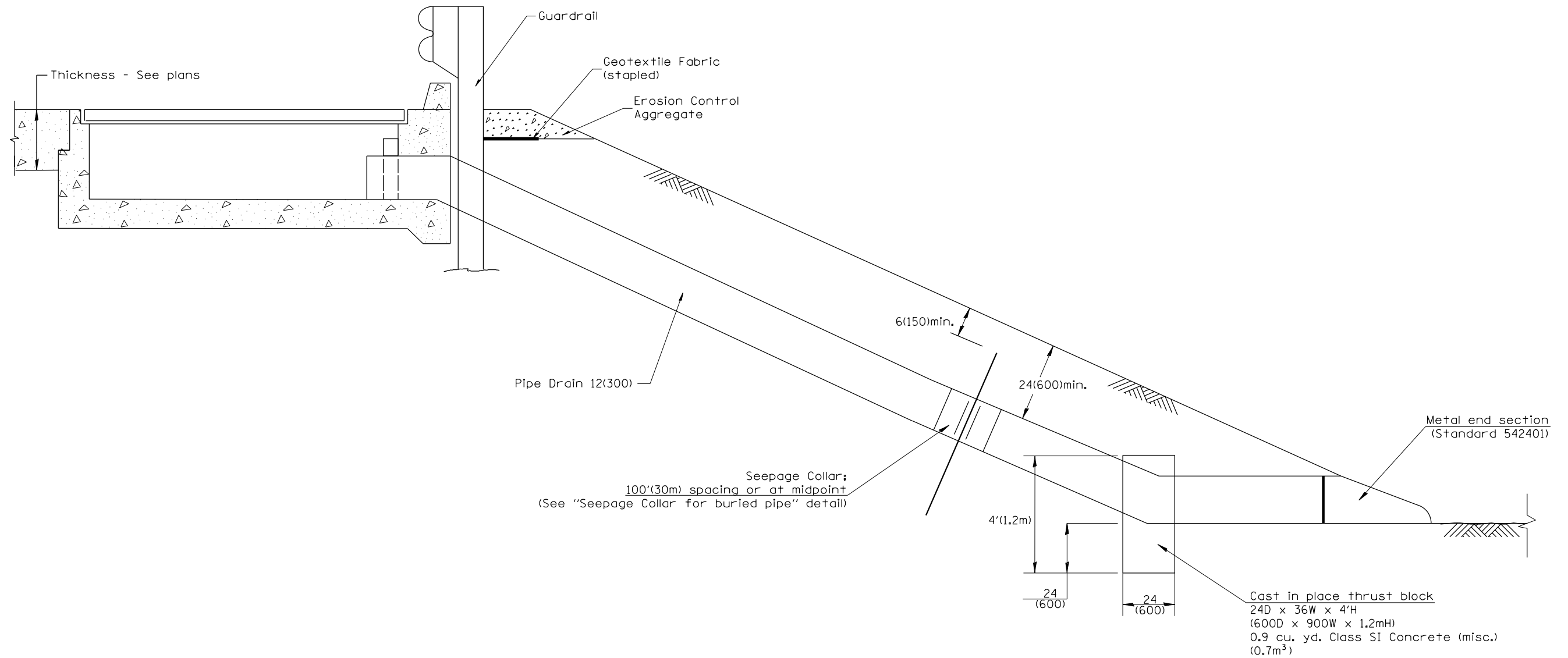


NOTES:

1. DECK SLAB REPAIR (PARTIAL) LOCATIONS ARE APPROXIMATE.
FINAL LOCATIONS TO BE DETERMINED BY THE RESIDENT ENGINEER.

LEGEND	
	= DECK SLAB REPAIR (PARTIAL)

SLOPE DRAIN FOR BURIED PIPES



GENERAL NOTES

1. The material for Pipe Drains shall be bituminous coated galvanized corrugated steel culvert pipe or bituminous coated corrugated aluminum alloy pipe in accordance with Article 601.02(b) or 601.02(e) or Polyvinyl Chloride (PVC) pipe in accordance with Article 601.02 (s).
2. An approved mastic material (Article 1055.01) shall be applied to the inside of the connecting bands.

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

QUANTITIES	
CALC. BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION	

DATE	DESCRIPTION	T.P.	R.D.
01-01-97	RENUM. H-1.04, NEW REVISION BOX, REVISED TITLE BOX, REVISED DESIGNER NOTES, ADDED QUANTITY		
	CALCULATION BOX		
10-16-06	REVISED TO 2007 SPEC.	M.A.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE DRAIN DETAIL FOR BURIED PIPES

NOT TO SCALE

CADD STD. 601101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
546	(25BC-BR1)	MERCER	20	16
CONTRACT NO. 68C76				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

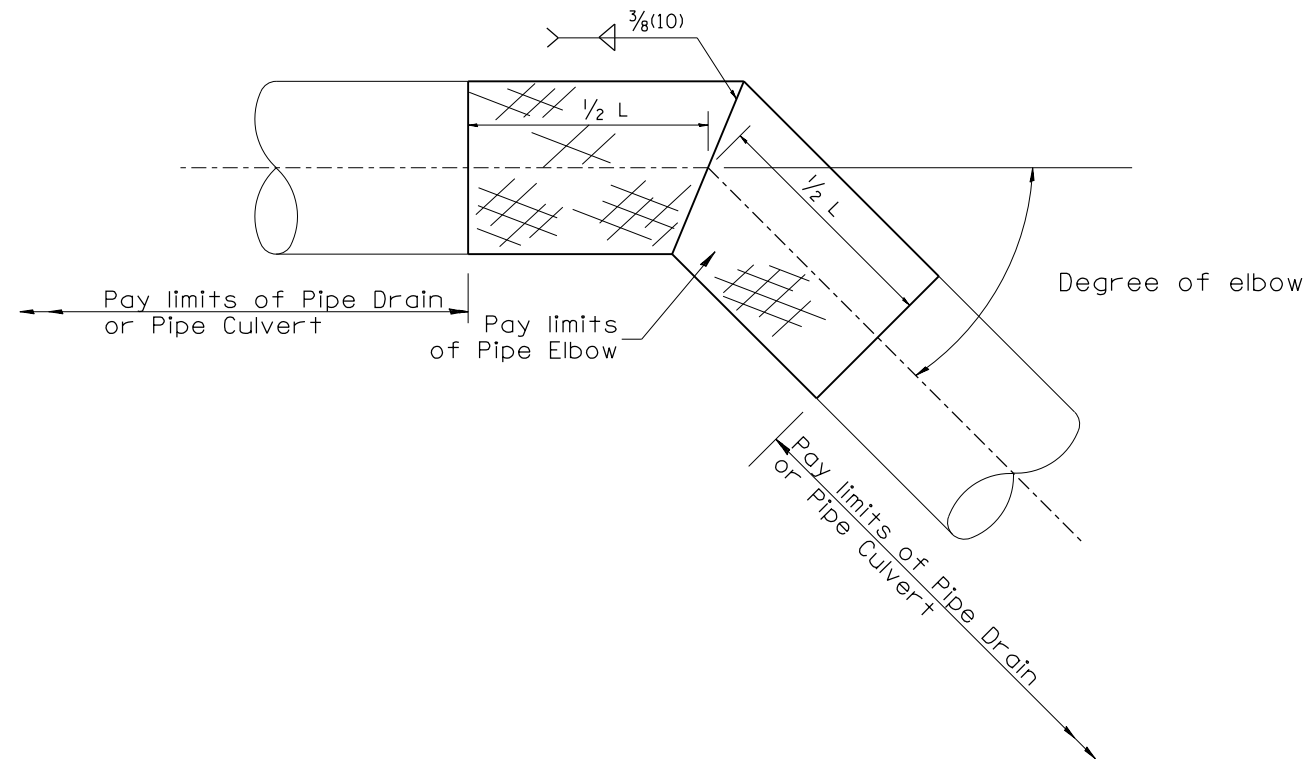
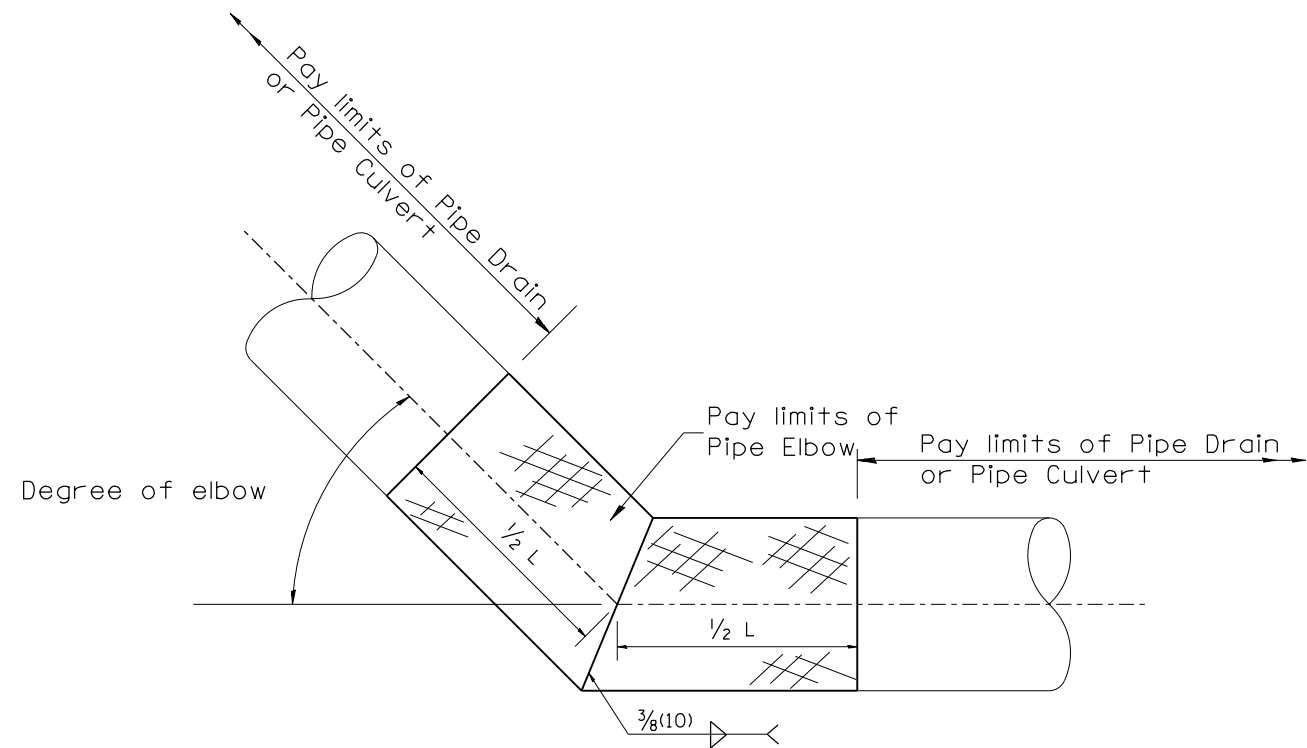


TABLE A		
ELBOW DESIGN CONTROLS		
PIPE DIAMETER	L = Pay limits of Pipe Elbow and minimum length of pipe required for fabrication	
	DEGREE OF ELBOW ≤ 45°	DEGREE OF ELBOW ≥ 46°
12(300)	24(600)	4'(1.22M)
15(375)	24(600)	4'(1.22M)
18(450)	24(600)	4'(1.22M)
21(525)	24(600)	4'(1.22M)
24(600)	4'(1.22M)	4'(1.22M)
30(750)	4'(1.22M)	6'(1.83M)
36(900)	4'(1.22M)	6'(1.83M)

TABLE B	
ELBOW DESIGN CONTROLS	
EARTH SLOPE (V:H)	DEGREE OF ELBOW *
1:6	9°
1:4	14°
1:3	18°
1:2	26°
1:1 1/2	33°

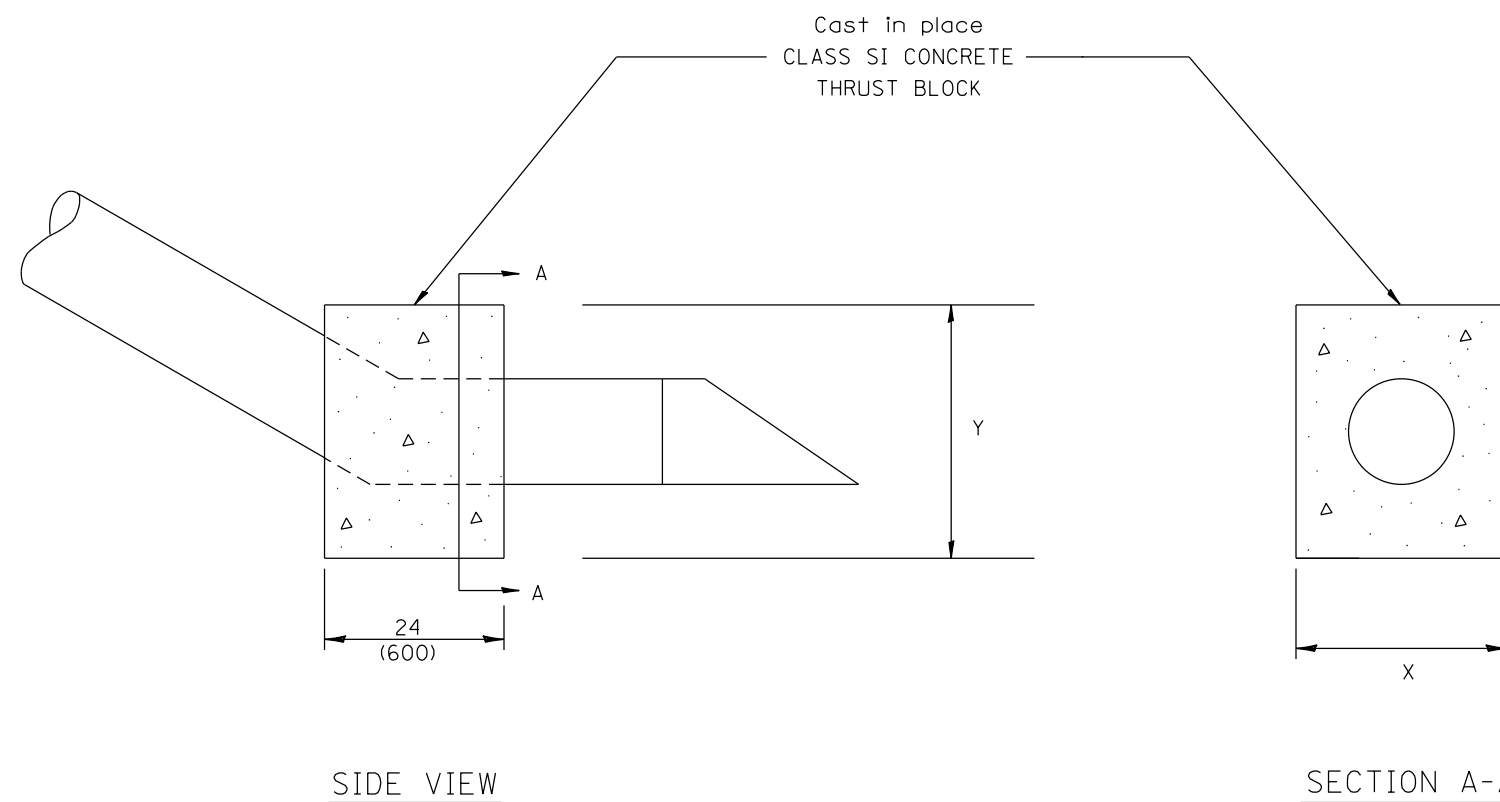
* Approximate - based upon 0.5% inlet and outlet flowlines.



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

CONCRETE THRUST BLOCK BILL OF MATERIALS

PIPE SIZE	X	Y	CLASS SI CONCRETE cu. yd. (m ³)
12(300)	24(600)	24(600)	0.2(0.2)
15(375)	27(675)	27(675)	0.3(0.2)
18(450)	30(750)	30(750)	0.3(0.2)
24(600)	36(900)	36(900)	0.4(0.3)
30(750)	3'-6" (1.07m)	3'-6" (1.07m)	0.8(0.6)



The contract unit price each for CONCRETE THRUST BLOCK shall include the cost of excavation, CLASS SI CONCRETE and compacted backfill.

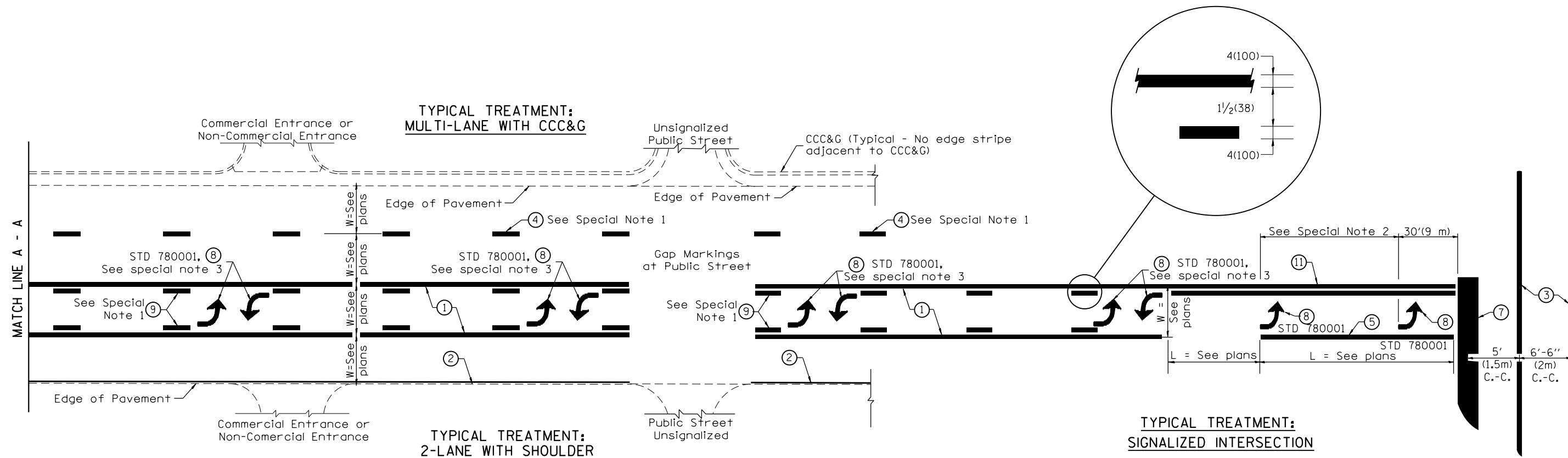
QUANTITIES	
CALC. BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION	

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

01-01-97	RENUM. J-10.04, NEW REVISION BOX, ADDED QUANTITY	T.P.				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE THRUST BLOCKS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CALCULATION BOX							546	(25BC-BR1)	MERCER	20	18
10-16-06	REVISED TO 2007 SPEC.	M.A.						CONTRACT NO. 68C76				
								FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NOT TO SCALE

CADD STD. 609001-D4



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A) ⑩
- ⑪ 4(100) Double Solid (Yellow) ⑪

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

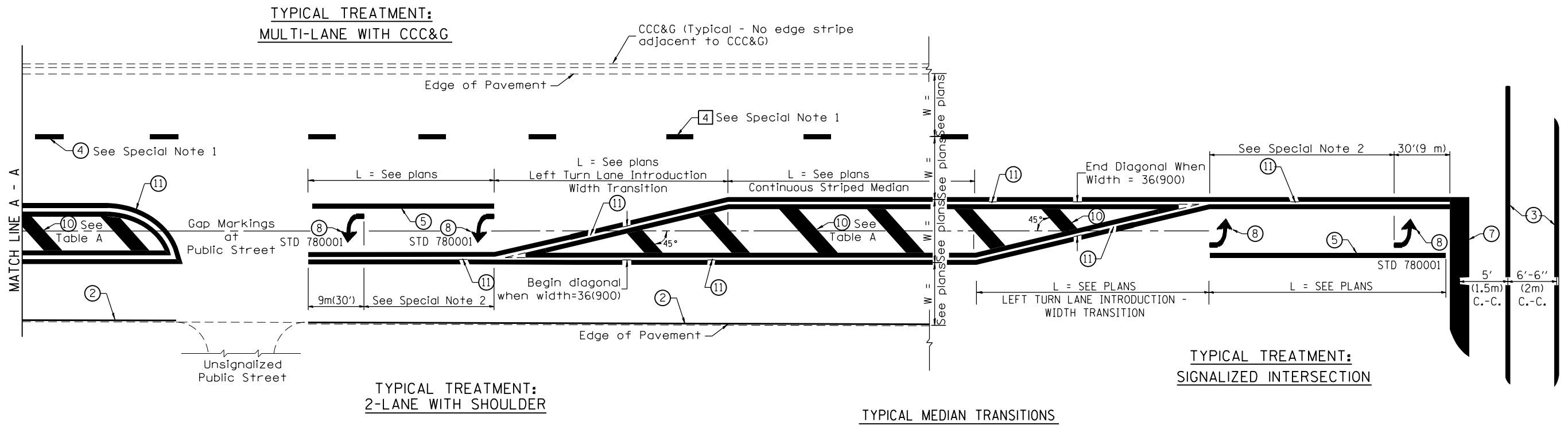
GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL PAVEMENT MARKINGS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.					546	(25BC-BR1)	MERCER	20	19
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.					SHT. 1 OF 2 CADD STD. 780001-D4				
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.					CONTRACT NO. 68C76				

NOT TO SCALE

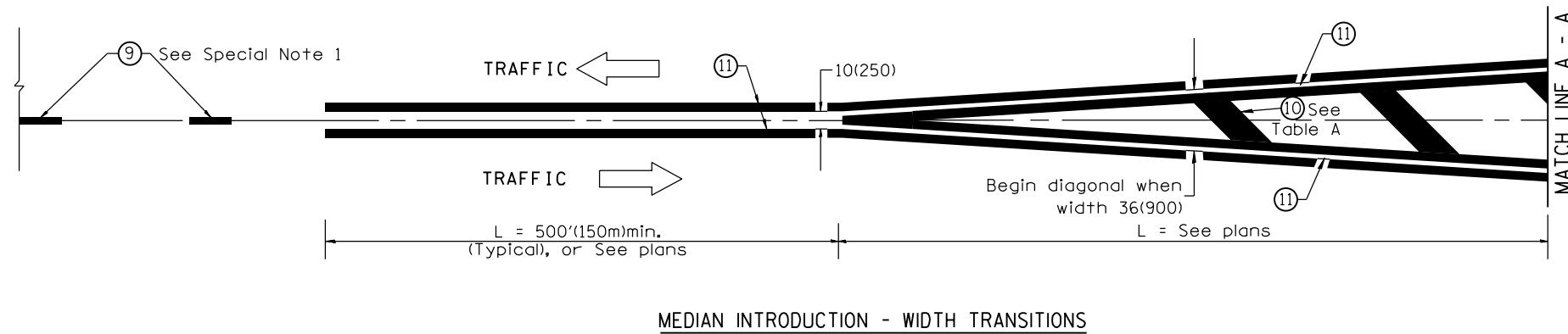
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
		(Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



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