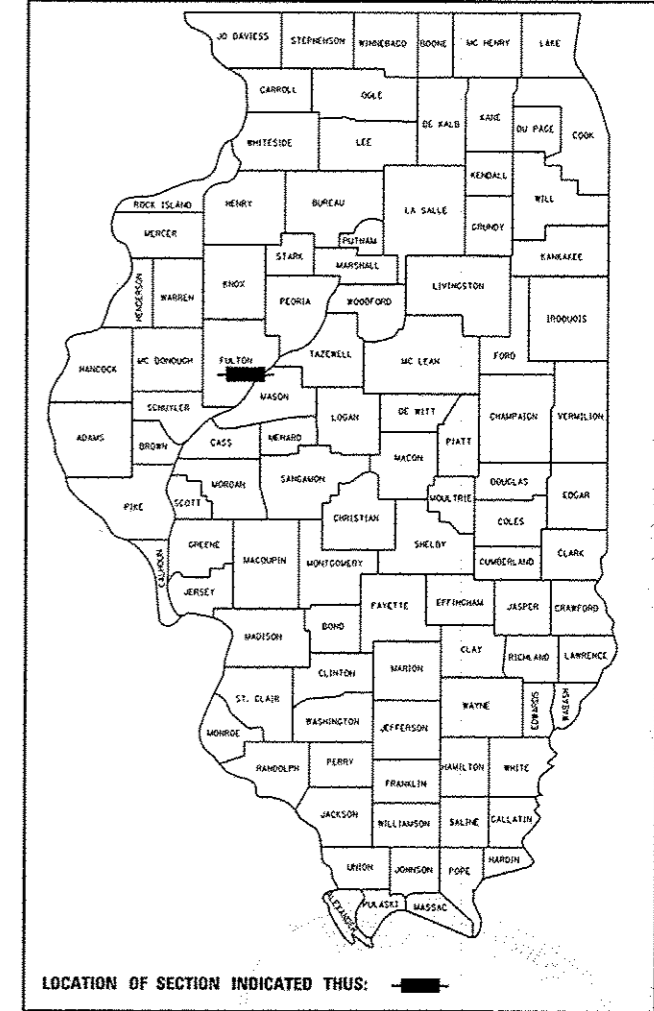


**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	1
		ILLINOIS	CONTRACT NO. 68699	

D-94-028-07



**FOR INDEX OF SHEETS, SEE SHEET NO. 2**  
**FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2**

**DESCRIPTION OF WORK**

THIS PROJECT CONSISTS OF REMOVING AND REPLACING TWO BRIDGES, ONE OVER LITTLE SISTER CREEK AND ONE OVER BIG SISTER CREEK. 3,100 FEET OF US 24 ROADWAY WILL ALSO BE IMPROVED. THE INTERSECTION OF GRAIN BIN RD/MUDD RD WITH US 24 WILL BE RELOCATED APPROXIMATELY 95 FEET TO THE WEST. CONSTRUCTION OF APPROXIMATELY 1,050 FEET OF GRAIN BIN RD AND 350 FEET OF MUDD RD WILL BE RECONSTRUCTED. THE PROJECT INCLUDES PAVEMENT WIDENING RESURFACING, GUARDRAIL IMPROVEMENTS, DRAINAGE IMPROVEMENTS, PAVEMENT MARKINGS, LANDSCAPING, CONSTRUCTION STAGING AND ALL INCIDENTAL AND COLLATERAL WORK NECESSARY TO COMPLETE THE IMPROVEMENT.

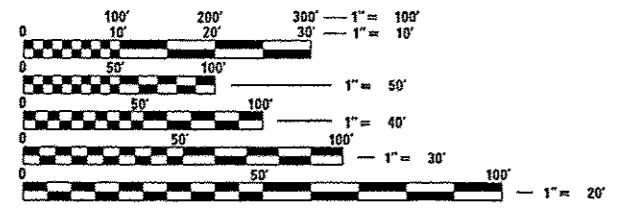
**FAP ROUTE 317 (US 24)**  
**SECTION (137BR, BR-1)BR**  
**PROJECT NHPP-0317(095)**  
**FULTON COUNTY**  
**BRIDGE REPLACEMENT**  
**C-94-032-07**

**TRAFFIC DATA**

2009 ADT = 4150  
 SU = 4.2% MU=7.2%  
 2019 ADT = 6071/6024

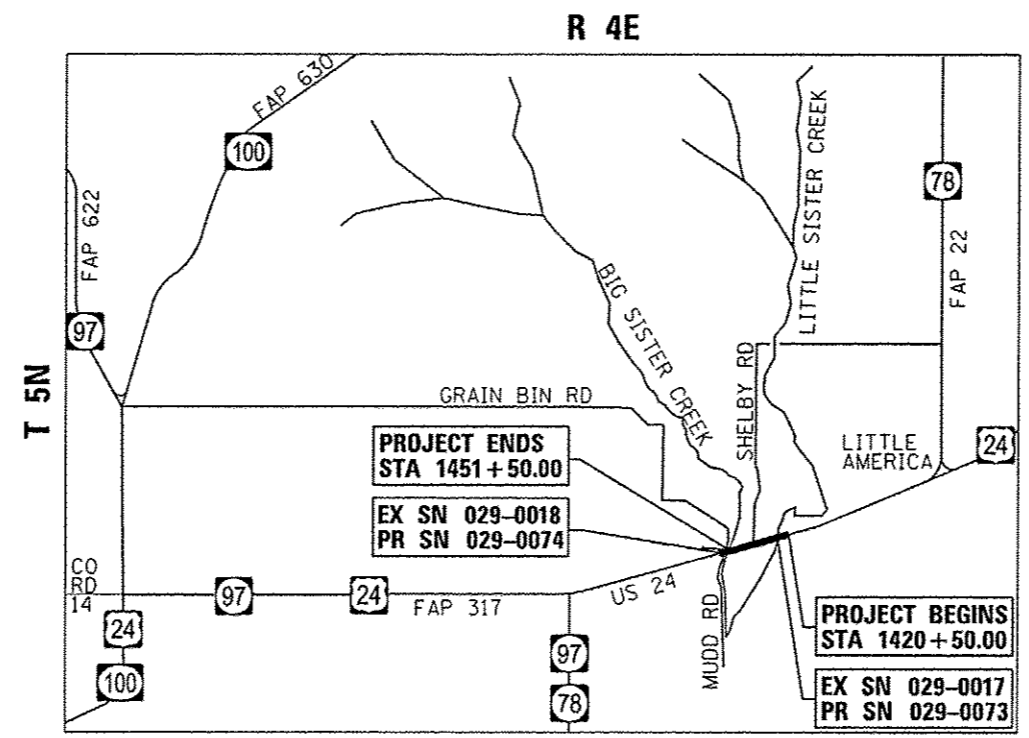
**DESIGN DESIGNATION**

OTHER PRINCIPAL ARTERIAL

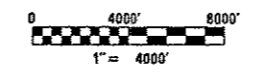


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



LOCATION MAP



GROSS LENGTH = 3,000 FT. = 0.568 MILE  
 NET LENGTH = 3,000 FT. = 0.568 MILE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

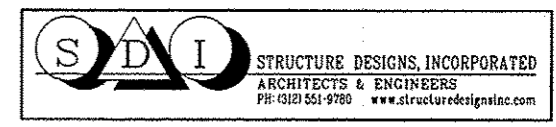
SUBMITTED Dec 21 2012  
Joseph E. [Signature]  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
Feb 1 2013  
John D. Baranzelli, P.E.  
 acting ENGINEER OF DESIGN AND ENVIRONMENT  
Feb 1 2013  
Omer Osman, P.E.  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

**NPDES Permit Required**



Signed: [Signature] 12/19/2012  
 OLUFEMI A. OLADEINDE, P.E., S.E. Date  
 LICENSE EXPIRES 11-30-2013



DESIGN BY: STRUCTURE DESIGNS, INC.

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS AND HIGHWAY STANDARDS
3	GENERAL NOTES
4-5	STATUS OF UTILITIES
6-14	SUMMARY OF QUANTITIES
15-18	SCHEDULES OF QUANTITIES
19-21	TYPICAL SECTIONS
22	ALIGNMENT AND BENCHMARKS
23	ALIGNMENT CONTROL POINTS AND TIES
24-26	RIGHT OF WAY PLANS
27-30	TRAFFIC CONTROL PLAN - STAGING
31	STAGING DETAILS
32-35	PROPOSED IMPROVEMENT PLAN, PROFILE AND DRAINAGE
36-38	INTERSECTION DETAILS
39-40	PAVEMENT MARKING AND LANDSCAPING PLAN
41-42	TEMPORARY EROSION CONTROL PLAN
43-44	EXISTING UTILITY AND REMOVAL PLANS
45-84	STRUCTURAL PLANS

**HIGHWAY STANDARDS**

STD. NO.	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-09	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-01	METAL END SECTION FOR PIPE CULVERT
<del>601101-01</del>	<del>CONCRETE HEADWALL FOR PIPE DRAIN</del>
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL TYPE 2
631031-11	TRAFFIC BARRIER TERMINAL TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT OF WAY MARKERS
667101-02	PERMANENT SURVEY MARKERS
701006-04	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-03	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701321-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-03	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS
BLR-21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**DISTRICT CADD STANDARDS**

85	SLOPE STEPS DETAIL (205001)
86	SETTLEMENT PLATFORM (205101)
87	BLANK
88	EROSION CONTROL AGGREGATE DITCH CHECK (280101)
89	RIPRAR DITCH FOR EROSION CONTROL (281001)
90-92	BUTT JOINTS (406101)
93-94	RURAL ENTRANCES FOR 3R PROJECTS (406301)
95	MAILBOX TURNOUTS FOR 3R PROJECTS (406401)
96	BRIDGE APPROACH DETAIL (420401)
97	HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING) (440001)
98	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL (630011)
99-100	GUARDRAIL EROSION CONTROL (630101)
101-103	BLANK
104	PERMANENT SURVEY TIE AND PERMANENT SURVEY MARKERS TYPE I & TYPE II (667101)
105	NIGHT TIME LIGHTING INSPECTION (701301)
106	TYPICAL PAVEMENT MARKINGS (780001)
107-118	CROSS SECTIONS

FILE NAME \*  
FILES



USER NAME * #USER#	DESIGNED - JL / RY	REVISED -
	DRAWN - JL / RY	REVISED -
PLOT SCALE * #SCALE#	CHECKED - JES	REVISED -
PLOT DATE * #DATE#	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS AND HIGHWAY STANDARDS  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	2
CONTRACT NO. 68699			ILLINOIS FED. AID PROJECT	

**AVAILABILITY OF ELECTRONIC FILES**

MICRO STATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.

**UTILITIES - LOCATIONS / INFORMATION ON PLANS**

THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN --- ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S MEAN SEA LEVEL DATUM.

**ENGINEERS FIELD OFFICE**

ALL ENGINEERS FIELD OFFICES SHALL CONTAIN ONE FULLY EQUIPPED FIRST AID CABINET. THIS ITEM WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE PAY ITEM FOR ENGINEERS FIELD OFFICE

ALL OF THE TELEPHONE LINES PROVIDED SHALL HAVE UNPUBLISHED NUMBERS.

**TREE REMOVAL**

THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.

**BUTT JOINT CUTTING TIME RESTRICTION**

BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

**PAVING SURFACE COURSE**

CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.

**COMMITMENTS**

NONE

**SIGNING**

SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.

ALL WOOD POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.

**POLYMERIZED PRIME COAT RATES**

SURFACE TYPE	ESTIMATED TRUCK APPLICATION RATE	RESIDUAL RATE
MILLED (HMA OR PCC)	0.08 GAL/SY (0.00034 TON/SY)	0.040 GAL/SY
EXISTING PAVEMENT	0.05 GAL/SY (0.00022 TON/SY)	0.025 GAL/SY
FOG COAT (BETWEEN LIFTS)	0.05 GAL/SY (0.00022 TON/SY)	0.025 GAL/SY

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

PAY ITEMS	40600827	40603535	40701861		35600708	40603310	40603000	40800050
LOCATION	OVERLAY SECTION AND POSSIBLY BUILD-UP AREA	MAINLINE ENTIRE JOB	BUILD UP SECTION & SHOULDERS	BUILD UP SECTION & SHOULDERS	SEE PLANS	GRAIN BIN RD & MUDD RD	GRAIN BIN RD & MUDD RD	ENTRANCES, MAIL BOX TURNOUTS, SHELBY RD
MIXTURE USE(S):	LEVEL BINDER 3/4" (INCLUDES SHOULDER)	SURFACE COURSE 1.5" (INCLUDES SHOULDER SURFACE)	POLYMERIZED BINDER COURSE TOP LIFT - 2 1/4"	BINDER COURSE LOWER LIFTS - 6 3/4"	HMA WIDENING - 8"	2" SURFACE LIFT	4" BOTTOM LIFT & WEDGE CONNECTOR	INCIDENTAL SURFACE COURSE
AC/PG:	SBS OR SBR 70-28	SBS OR SBR 70-28	SBS OR SBR 70-28	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX):	10%	10%	10%	25%	25%	15%	25%	15%
DESIGN AIR VOIDS:	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 4.75	IL 9.5 OR IL12.5	IL 12.5	IL12.5	IL12.5	IL 9.5 OR IL12.5	IL12.5	IL 9.5 OR IL12.5
FRICITION AGGREGATE	N.A.	MIXTURE D (DOLOMITE ONLY)	N.A.	N.A.	N.A.	MIXTURE C	N.A.	MIXTURE C

FILE NAME \*  
#FILES\*



USER NAME * #USER*	DESIGNED - JL / RY	REVISED -
	DRAWN - JL / RY	REVISED -
PLOT SCALE * #SCALE*	CHECKED - JES	REVISED -
PLOT DATE * #DATE*	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES**

**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	3
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



Status of Utilities

Name of Utility Company \_\_\_\_\_

Spoon River Electric Co-Operative

Route FAP 317 (US 24)  
 Section (137BR, BR-1)BR  
 County Fulton  
 Contract No. 68699  
 Catalog No. 033474-00D

Route	Offset	Location	Type of Utility	Type of Conflict	Disposition
US 24	53' Lt	1423+22	Power Pole	New Ditch	Relocate
US 24	53' Lt	1426+40	Power Pole	New Ditch	Relocate
US 24	50' Lt	1427+65	Power Pole	New Ditch	Relocate
US 24	48' Lt	1429+48	Power Pole	New Ditch	Relocate
US 24	40' Lt	1437+60	Power Pole	New Ditch	Relocate
US 24	40' Lt	1440+80	Power Pole	New Ditch	Relocate
US 24	40' Lt	1442+48	Power Pole	New Ditch	Relocate
US 24	40' Lt	1444+50	Power Pole	New Ditch	Relocate
US 24	40' Lt	1446+03	Power Pole	New Ditch	Relocate
US 24	40' Lt	1447+80	Power Pole	New Ditch	Relocate
US 24	40' Lt	1449+38	Power Pole	New Ditch	Relocate
NOTE: Please check all your facilities within the construction limits of this project.					



Status of Utilities

Name of Utility Company \_\_\_\_\_

South Fulton Water District

Route FAP 317 (US 24)  
 Section (137BR, BR-1)BR  
 County Fulton  
 Contract No. 68699  
 Catalog No. 033474-00D

Route	Offset	Location	Type of Utility	Type of Conflict	Disposition
US	52' Lt	1442+50 to 1448+24	6" Water Main	New Ditch	Relocate
US	52' Lt to 60' Rt	1448+24	6" Water Main	New Ditch	Relocate
NOTE: Please check all your facilities within the construction limits of this project.					





80% FED.  
20% ST.

S. P.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
					0004	0005	0011	0011
					ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
					BUILD-UP NONE	OVERLAY NONE	S. N. 029-0073	S. N. 029-0074
	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	24	24			
	20200100	EARTH EXCAVATION	CU YD	5,478	5,478			
	20200500	EARTH EXCAVATION (WIDENING)	CU YD	171	171			
	20300100	CHANNEL EXCAVATION	CU YD	1,056			206	850
	20400800	FURNISHED EXCAVATION	CU YD	1,255	1,255			
	20800150	TRENCH BACKFILL	CU YD	181	181			
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SO YD	6,463	6,463			
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	26,018	26,018			
*	25000210	SEEDING CLASS, 2A	ACRE	5	5			
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	484	484			
*	25000500	PHOSPHOROUS FERTILIZER NUTRIENT	POUND	484	484			
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	484	484			
*	25100115	MULCH, METHOD 2	ACRE	5	5			
*	25100630	EROSION CONTROL BLANKET	SO YD	26,018	26,018			

FILE NAME \*  
#FILES\*



**STRUCTURE DESIGNS, INCORPORATED**  
ARCHITECTS & ENGINEERS  
PH: (312) 651-9780 www.structuredesigninc.com

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PLOT DATE * #DATE*	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	6
CONTRACT NO. 68699			ILLINOIS FED. AID PROJECT	

SCALE: SHEET NO. 1 OF 9 SHEETS STA. TO STA.

80% FED  
20% ST.

S. P.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
					0004	0005	0011	0011
					ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
BUILD-UP NONE	OVERLAY NONE	S. N. 029-0073	S. N. 029-0074					
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	538	538			
	28000305	TEMPORARY DITCH CHECKS	FOOT	1,152	1,152			
	28000400	PERIMETER EROSION BARRIER	FOOT	8,179	8,179			
	28100109	STONE RIPRAP, CLASS A5	SO YD	2,063		693	1,370	
	28200200	FILTER FABRIC	SO YD	1,520		693	827	
	31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	1,909	1,909			
	35100900	AGGREGATE BASE COURSE, TYPE A, 10"	SO YD	3,444	3,444			
	35600708	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	SO YD	431	123	308		
	40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	248	248			
	40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	1,519	1,519			
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	367	367			
	40600115	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	GAL	1,865	1,507	358		
	40600300	AGGREGATE (PRIME COAT)	TON	15	8	7		
	40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75, N50	TON	166		166		

FILE NAME: 9  
#FILE# 9



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	DATE - 12-17-2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK			
SCALE:	SHEET NO. 2 OF 9 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-I) BR	FULTON	118	7
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
				BUILD-UP NONE	OVERLAY NONE	S.N. 029-0073	S.N. 029-0074
40600982	HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160		160		
40600990	TEMPORARY RAMP	SQ YD	1,120	1,120			
40603000	HOT-MIX ASPHALT BINDER COURSE, IL 12.5, N50	TON	954	954			
40603310	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	386	386			
40603535	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	620	293	327		
40701861	HOT MIX ASPHALT PAVEMENT (FULL DEPTH), 9"	SQ YD	3,719	3,719			
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	48	48			
44000100	PAVEMENT REMOVAL	SQ YD	3,614	3,614			
44000152	HOT-MIX ASPHALT SURFACE REMOVAL, 3/4"	SQ YD	3,952	41	3911		
44004250	PAVED SHOULDER REMOVAL	SQ YD	202	202			
44213200	SAW CUTS	FOOT	775	220	555		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	4,146	120	4026		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	911	911			
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	88	67	21		

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DRAWN - JL / RY	CHECKED - JES	REVISED -
DATE - 12-17-2012		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68699	

SCALE: SHEET NO. 3 OF 9 SHEETS STA. TO STA.

80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
BUILD-UP NONE	OVERLAY NONE	S.N. 029-0073	S.N. 029-0074				
48203003	HOT-MIX ASPHALT SHOULDER, 1 1/2"	SQ YD	2,149	1,113	1,036		
48203033	HOT-MIX ASPHALT SHOULDER, 9"	SQ YD	948	948			
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	2			1	1
50105220	PIPE CULVERT REMOVAL	FOOT	377	377			
50200100	STRUCTURE EXCAVATION	CU YD	139			64	75
50300100	FLOOR DRAINS	EACH	22			10	12
50300225	CONCRETE STRUCTURES	CU YD	121.6			59	62.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	518			249	269
50300260	BRIDGE DECK GROOVING	SQ YD	1,112			529	583
50300280	CONCRETE ENCASEMENT	CU YD	15.4			6.6	8.8
50300300	PROTECTIVE COAT	SO YD	1,383			657	726
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1			0.5	0.5
50500505	STUD SHEAR CONNECTORS	EACH	3,582			1,962	1,620
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	128,530			61,740	66,790

M

FILE NAME \*  
#FILE#



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PLOT SCALE * #SCALE#	DRAWN - JL / RY	REVISED -
PLOT DATE * #DATE#	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 4 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	9
CONTRACT NO. 68699			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
				BUILD-UP	OVERLAY	S. N. 029-0073	S. N. 029-0074
50800515	BAR SPLICERS	EACH	1,202			580	622
51201900	FURNISHING STEEL PILES HP14X89	FOOT	725			291	434
51202305	DRIVING PILES	FOOT	725			291	434
51203900	TEST PILE STEEL HP14X89	EACH	2			1	1
51500100	NAME PLATES	EACH	2			1	1
52100520	ANCHOR BOLTS, 1"	EACH	48			24	24
542A0223	PIPE CULVERTS, CLASS A, TYPE 1 18"	FOOT	290	290			
542A1063	PIPE CULVERTS, CLASS A, TYPE 2 18"	FOOT	314	314			
542A1069	PIPE CULVERTS, CLASS A, TYPE 2 24"	FOOT	65	65			
542A1081	PIPE CULVERTS, CLASS A, TYPE 2 36"	FOOT	75	75			
542D1069	PIPE CULVERTS CLASS D, TYPE 2 24"	FOOT	80	80			
54214503	REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND SIZE 18"	EACH	18	18			
54214509	REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND SIZE 24"	EACH	2	2			

80% FED.  
20% ST.

FILE NAME \*  
SHEET#



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PLOT SCALE * #SCALE#	CHECKED - JES	REVISED -
PLOT DATE * #DATE#	DATE - 12-17-2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	10
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 5 OF 9 SHEETS STA. TO STA.



80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
BUILD-UP	OVERLAY	S. N. 029-0073	S. N. 029-0074				
NONE	NONE						
54214521	REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND SIZE 36"	EACH	2	2			
54215559	METAL END SECTIONS, 24"	EACH	2	2			
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	184			81	103
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	500	500			
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4	4			
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	8			
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4			
63200310	GUARDRAIL REMOVAL	FOOT	1,563	1,563			
63301990	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	1	1			
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	49	49			
66700205	PERMANENT SURVEY MARKER, TYPE 1	EACH	2	2			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	24			
67000600	ENGINEER'S FIELD LABORATORY	CAL MO	11	11			
67100100	MOBILIZATION	L SUM	1	1			

\* SPECIALTY ITEM

FILE NAME \*  
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	DATE - 12-17-2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

SCALE: SHEET NO. 6 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	11
			CONTRACT NO. 68699	
ILLINOIS FED. AID PROJECT				

80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
BUILD-UP	OVERLAY	S. N. 029-0073	S. N. 029-0074				
NONE	NONE						
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	2			
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1			
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1			
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1			
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	330	330			
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1			
70106800	CHANGEABLE MESSAGE SIGNS	CAL MO	22	22			
70300100	SHORT TERM PAVEMENT MARKING	FOOT	5,014	5,014			
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	8,626	8,626			
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	2,096	2,096			
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	74	74			
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	5,744	5,744			
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2,100	2,100			
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2,100	2,100			

FILE NAME \*  
PFILES



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PLOT DATE * #DATE*	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 7 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	12
CONTRACT NO. 68699				
[ILLINOIS] FED. AID PROJECT				

80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY		LITTLE SISTER CREEK BRIDGE	BIG SISTER CREEK BRIDGE
				BUILD-UP NONE	OVERLAY NONE	S.N. 029-0073	S.N. 029-0074
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4			
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4			
* 72000100	SIGN PANEL - TYPE 1	SQ FT	28	28			
72400100	REMOVE SIGN PANEL ASSEMBLY, TYPE A	EACH	3	3			
* 72900100	METAL POST, TYPE A	FOOT	54	54			
* 72900200	METAL POST, TYPE B	FOOT	12	12			
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	8,626	8,626			
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	2,096	2,096			
* 78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	74	74			
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	33	33			
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	8			
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	2,318	2,318			
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	255			130	125
X6430110	REMOVE IMPACT ATTENUATORS, SALVAGE	EACH	4	4			

\*SPECIALTY ITEM

FILE NAME \*  
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PLOT DATE * #DATE#	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES**  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

SCALE: SHEET NO. 8 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	13
			CONTRACT NO. 68699	
[ILLINOIS] FED. AID PROJECT				

80% FED.  
20% ST.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				0004	0005	0011	0011
				ROADWAY BUILD-UP NONE		OVERLAY NONE	LITTLE SISTER CREEK BRIDGE S.N. 029-0073
X7011830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	EACH	1	1			
X7016500	TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)	EACH	1				1
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	52	52			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1			
Z0026407	TEMPORARY SHEET PILING	SO FT	1,132			427	705
Z0034105	MATERIAL TRANSFER DEVICE	TON	6,644	5926	718		
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	260			128	132
Z0065100	SETTLEMENT PLATFORMS	EACH	4	4			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137DR, BR-1) BR	FULTON	118	14
CONTRACT NO. 68699			ILLINOIS FED. AID PROJECT	

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PLOT DATE *#DATE*	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -

SCALE: SHEET NO. 9 OF 9 SHEETS STA. TO STA.

**EARTH WORK**

STATION		EARTH EXCAVATION WIDENING	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXC. ADJ. FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	TOPSOIL - FURNISH & PLACE 4"
FROM	TO	CU YD	CU YD	CU YD	CU YD	CU YD	SQ YD
1420+50.00	1423+75.00	7.1	542.1	406.5	567.8	-161.2	2,500.2
1425+00.00	1446+00.00	134.2	2,804.9	2,103.7	1,481.5	622.1	11,482.7
1448+00.00	1451+50.00	29.8	201.4	151.0	593.4	-442.4	1,924.1
08+50.00	11+48.00		221.1	165.8	1,383.0	-1,217.1	2,133.3
12+48.00	13+60.00		37.9	28.4	749.0	-720.5	988.0
102+50.00	110+93.13		1,670.6	1,252.9	588.5	664.4	6,989.2
TOTALS		171.1	5,478.0	4,108.6	5,363.3	-1,254.7	26,017.5

**SEEDING AND EROSION CONTROL**

LOCATION	SEEDING, CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER
QUADRANT	ACRE	POUND	POUND	POUND	ACRE	SQ YD	POUND	FOOT	FOOT
NORTHEAST	2.08	187.2	187.2	187.2	2.08	10,068	208.0	576.0	3,414.3
SOUTHEAST	2.20	198.0	198.0	198.0	2.20	10,648	220.0	576.0	3,071.9
SOUTHWEST	0.36	32.1	32.1	32.1	0.36	1,728	35.7		428.2
NORTHWEST	0.74	66.5	66.5	66.5	0.74	3,574	73.8		1,264.9
TOTALS	5.00	484.0	484.0	484.0	5.00	26,018	538.0	1152.0	8,179.0

NOTE: QUADRANT AXES ARE US 24 / GRAIN BIN - MUDD RD

**GEOTECHNICAL FABRIC FOR GROUND STABILIZATION**

STATION		SQ YD
FROM	TO	
9+50.00	13+95.18	3,957
104+50.00	107+00.00	1389
1419+90.00	1421+00.00	183
1440+00.00	1444+00.00	667
TEMP ACC ON NOTT RD		267
TOTALS		6,463

**SUBBASE GRANULAR MATERIAL, TYPE A**

STATION		TON
FROM	TO	
1422+41.00	1428+31.00	469.4
1440+60.00	1450+08.00	1,439.1
TOTALS		1,909.0

**HMA BASE COURSE WIDENING, 8"**

STATION		SQ YD
FROM	TO	
1421+39.00	1422+01.00	34.4
1426+91.00	1428+92.00	111.6
1439+89.00	1445+01.00	284.4
TOTALS		431.0

**LEVELING BINDER**

STATION		AGGREGATE (PRIME COAT)	POLYMERIZED LEVELING BINDER MACHINE METHOD, N50
FROM	TO	TON	TON
1421+00.00	1451+00.00	15.0	
1428+31.00	1440+60.00		166.0
TOTALS		15.0	166.0

**POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)**

STATION		GAL
FROM	TO	
1421+00.00	1423+25.00	18
1423+25.00	1423+78.38	46
1425+17.65	1426+81.20	140
1426+81.20	1428+31.00	128
1428+31.00	1440+60.00	524
1440+60.00	1444+50.00	333
1444+50.00	1446+15.75	141
1447+69.24	1448+23.47	46
1448+23.47	1449+50.00	108
1449+45.00	1451+00.00	32
STRIP REFLECTIVE CRACK CONTROL		74
TOTALS		1,590

**HMA SURFACE REMOVAL - BUTT JOINTS**

STATION	SQ YD
1420+70.00	80
1451+00.00	80
TOTALS	160

**TEMPORARY RAMPS**

BRIDGE	SQ YD
LITTLE SISTER CREEK	400
BIG SISTER CREEK	400
SIDEROADS	320
TOTALS	1,120

**AGGREGATE FOR TEMPORARY ACCESS**

STAGING	OFFSET	LENGTH	TON
I	NORTH	150	228
II	NORTH	150	228
	NORTH	700	1,063
TOTAL			1,519

**PAVEMENT REMOVAL**

STATION		PAVEMENT REMOVAL
FROM	TO	SQ YD
09+88.00	11+50.00	540.0
12+13.00	13+83.18	567.3
103+41.14	110+93.13	2,506.6
TOTALS		3,614.0

**HOT-MIX ASPHALT PAVEMENT**

STATION		BITUMINOUS MATERIALS PRIME COAT	HMA BINDER COURSE, IL-12.5, N50	POLYMERIZED HMA SURFACE COURSE, MIX D, N50	HMA SURFACE COURSE, MIX "C"	POLY. BIT. MATERIALS PRIME COAT	HMA PAVEMENT FULL DEPTH 9"
FROM	TO	GAL	TON	TON	TON	GAL	TON
1420+70.00	1423+78.38			69.0			414.4
1425+17.62	1446+15.75			470.0			2,819.8
1447+69.25	1451+30.00			80.8			484.8
08+50.00	11+48.00	64.0	178.0		89.0	64.0	
12+13.00	13+83.18	45.0	128.0		64.0	45.0	
102+50.00	110+93.13	167.0	466.3		234.0	167.0	
WEDGE CONNECTORS			100.0				
TOTALS		275.0	872.0	620.0	387.0	275.0	3,719.0

**AGGREGATE BASE COURSE TYPE A, 10"**

STATION		SQ YD
FROM	TO	
08+50.00	11+48.00	795
12+13.00	13+83.18	567
102+50.00	110+93.13	2,081
TOTALS		3,444

**ENTRANCES**

STATION	OFFSET	AGGREGATE SURFACE COURSE, TYPE A	BITUMINOUS MATERIALS PRIME COAT	HMA BINDER COURSE	INCIDENTAL HMA SURFACE COURSE
		TONS	GAL	TONS	TONS
1421+30.00	LT	58	10.5	9.5	5.5
1430+60.00	RT	38	10.5	9.5	5.5
1431+93.00	LT	38	10.5	9.5	5.5
1431+93.00	RT	38	10.5	9.5	5.5
1441+39.00	RT	38	10.5	9.5	5.5
1444+82.00	RT	38	10.5	9.5	5.5
SHELBY RD			28.4	24.8	14.9
TOTAL		248	91.4	81.8	47.9

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USER NAME = #USER#	DESIGNED - JL / RY	REVISED -
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PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES	
<b>US RTE 24 OVER BIG SISTER CREEK &amp; LITTLE SISTER CREEK</b>	
SCALE:	SHEET NO. 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 15
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68699	

**HMA SURFACE REMOVAL, 3/4"**

STATION		HMA SURFACE REMOVAL
FROM	TO	SO YD
1420+70.00	1422+41.00	349.3
1428+31.00	1440+60.00	3,277.3
1450+08.00	1451+30.00	325.3
TOTALS		3,952.0

**STRIP REFLECTIVE CRACK CONTROL TREATMENT**

STATION		FOOT
FROM	TO	
1420+70.00	1422+01.00	262
1426+81.00	1445+01.00	3,640
1450+08.00	1451+00.00	244
TOTALS		4,146

**PAVED SHOULDER REMOVAL AND SAW CUTS**

STATION		OFFSET	SO YD	FOOT
FROM	TO			
1421+39.00	1422+01.00	NORTH	21.0	62.0
1426+91.00	1428+92.00	NORTH	67.0	201.0
1439+89.00	1445+01.00	SOUTH	114.0	512.0
TOTALS			202.0	775.0

**AGGREGATE SHOULDER, TYPE B**

STATION		TON
FROM	TO	
1426+81.00	1428+31.00	47.5
1426+71.00	1428+31.00	50.6
1440+60.00	1444+57.00	251.2
8+50.00	13+95.18	220.8
102+50.00	110+93.13	341.4
TOTALS		911.4

**AGGREGATE WEDGE SHOULDER, TYPE B**

STATION		TON
FROM	TO	
1428+31.00	1440+60.00	88.0
TOTAL		88.0

**HOT-MIX ASPHALT SHOULDER, 1 1/2"**

STATION		SO YD
FROM	TO	
1421+00.00	1422+01.20	101.2
1422+01.20	1423+25.00	165.1
1423+78.38	1425+17.65	185.7
1428+31.00	1440+60.00	819.3
1440+60.00	1446+15.75	370.5
1447+69.24	1449+50.00	241.0
1449+50.00	1451+00.00	266.7
TOTALS		2,149.0

**HOT-MIX ASPHALT SHOULDER, 9"**

STATION		SO YD
FROM	TO	
1423+25.00	1423+78.38	71
1425+17.65	1426+81.20	212
1426+81.20	1428+31.00	103
1440+60.00	1444+50.00	260
1444+50.00	1446+15.75	221
1447+69.24	1448+23.47	72
1449+45.00	1449+50.00	9
TOTALS		948

**PIPE CULVERT REMOVAL**

LOCATION	DIRECTION	FOOT
1421+28.47	SOUTH	50.0
1425+40.00	SOUTH	80.0
1431+90.88	SOUTH	32.0
1430+46.27	NORTH	76.0
1431+95.03	NORTH	65.0
1441+43.38	NORTH	33.0
1444+87.26	NORTH	41.0
TOTALS		377.0

**PIPE CULVERTS, CLASS A, TYPE 1, 18", FLARED END SECTIONS AND TRENCH BACKFILL**

STATION	OFFSET	ALIGNMENT	STATION	OFFSET	ALIGNMENT	LENGTH	FES	TBF
1421+03.80	LT	US 24	1421+51.70	LT	US 24	50	2	12.9
1430+05.30	RT	US 24	1430+83.70	RT	US 24	80	2	2.1
1431+62.70	RT	US 24	1432+17.70	RT	US 24	55	2	3.0
1431+67.60	LT	US 24	1432+22.60	LT	US 24	55	2	6.7
1441+13.60	RT	US 24	1441+63.60	RT	US 24	50	2	20.2
TOTALS						290	10	44.9

**PIPE CULVERTS, CLASS A, TYPE 2 24", FLARED END SECTIONS AND TRENCH BACKFILL**

STATION	OFFSET	ALIGNMENT	STATION	OFFSET	ALIGNMENT	LENGTH	FES	TBF
1444+51.00	RT	US 24	1445+16.00	RT	US 24	65	2	20.2
TOTALS						65	2	20.2

**PIPE CULVERTS, CLASS A, TYPE 2 36", FLARED END SECTIONS AND TRENCH BACKFILL**

STATION	OFFSET	ALIGNMENT	STATION	OFFSET	ALIGNMENT	LENGTH	FES	TBF
10+12.00	RT	MUDD RD	10+17.00	LT	MUDD RD	75	2	37.8
TOTALS						75	2	37.8

**PIPE CULVERTS, CLASS A, TYPE 2 18", FLARED END SECTIONS AND TRENCH BACKFILL**

STATION	OFFSET	ALIGNMENT	STATION	OFFSET	ALIGNMENT	LENGTH	FES	TBF
1448+40.00	LT	US 24	1449+31.00	LT	US 24	91	2	23.2
1448+40.00	RT	US 24	1449+33.00	RT	US 24	93	2	36.4
13+64.80	RT	GRAIN BIN RD	13+64.80	LT	GRAIN BIN RD	70	2	10.2
108+00.00	RT	GRAIN BIN/NOTT RD	108+00	LT	GRAIN BIN/NOTT RD	60	2	7.8
TOTALS						314	8	77.6

**PIPE CULVERTS, CLASS D, TYPE 2, 24" AND METAL END SECTIONS**

STATION	OFFSET	ALIGNMENT	LENGTH	MES	TBF
1425+40.00	LT	US 24	80	2	0



**GUARDRAIL**

LOCATION		STEEL PLATE BEAM GUARDRAIL, TYPE A, 6' POSTS	TRAFFIC BARRIER TERMINAL, TYPE 2	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	REMOVE & REERECT TRAFFIC BARRIER TERMINAL, TYPE 1
BRIDGE	QUADRANT	FOOT	EACH	EACH	EACH	EACH
LITTLE SISTER CREEK BRIDGE	NORTHEAST	100.0		1	1	
	SOUTHEAST	100.0	1	1		
	SOUTHWEST	87.5		1	1	
	NORTHWEST	87.5	1	1		
BIG SISTER CREEK BRIDGE	NORTHEAST	25.0		1	1	
	SOUTHEAST	87.5	1	1		
	SOUTHWEST	12.5		1	1	1
	NORTHWEST	12.5	1	1		
TOTALS		500.0	4	8	4	1

**GUARDRAIL REMOVAL**

STATION		DIRECTION	FOOT
FROM	TO		
1422+15.22	1426+86.12	SOUTH	471.0
1445+01.24	1447+97.73		445.0
1448+33.29	1449+36.69		296.0
1421+82.42	1426+27.53	NORTH	247.0
1445+01.24	1447+47.91		103.0
TOTALS			1,563.0

**SHORT TERM PAVEMENT MARKING**

STATION		4"		24"
		FOOT		FOOT
FROM	TO	SOUTH	NORTH	
1419+90.00	1430+41.00	1,051	1,051	
1438+34.00	1452+30.00	1,396	1,396	
1419+90.00				24
1430+41.00				24
1438+34.00				24
1452+30.00				24
12+50.00				12
11+30.00				12
TOTALS		2,447	2,447	120

**PERMANENT SURVEY MARKERS, TYPE 1**

LOCATION	
LITTLE SISTER CREEK BRIDGE	1
BIG SISTER CREEK BRIDGE	1
TOTAL	2

**FURNISHING AND ERECTING RIGHT OF WAY MARKERS**

LOCATION	OFFSET	
	NORTH	SOUTH
US 24	11	15
MUDD ROAD	5	4
GRAIN BIN ROAD	6	8
TOTAL	22	27

**TEMPORARY PAVEMENT MARKING - LINE 4"**

STATION		FOOT	
FROM	TO	SOUTH	NORTH
1421+00.00	1451+00.00	3,000.0	3,000.0
08+50.00	11+48.00	298.0	298.0
12+12.00	13+83.18	171.2	171.2
102+50.00	110+93.13	843.1	843.1
TOTALS		4,313.0	4,313.0

**TEMPORARY PAVEMENT MARKING - LINE 6"**

STATION		FOOT
FROM	TO	CENTER
1421+00.00	1451+00.00	750.0
08+50.00	11+70.00	80.0
12+30.00	13+80.00	300.0
102+50.00	104+70.00	55.0
105+50.00	109+93.00	886.0
109+93.00	110+93.13	25.0
TOTALS		2,096.0

**TEMPORARY PAVEMENT MARKING - LINE 24"**

STATION	ALIGNMENT	FOOT
1435+00.00	SHELBY RD	12
104+70.00	NOTT RD	12
11+70.00	GRAIN BIN RD	20
12+30.00	GRAIN BIN RD	30
TOTALS		74

**WORK ZONE PAVEMENT MARKING REMOVAL**

TYPE	4"	6"	24"
	SQ. FT.	SQ. FT.	SQ. FT.
SHORT TERM	1,871		
TEMPORARY	2,875		
TEMPORARY		850	
TEMPORARY			148
TOTALS	4,746	850	148

**MATERIAL TRANSFER DEVICE**

HOT-MIX ASPHALT	TON
HMA BASE COURSE WIDENING	193
POLY. LEVELING BINDER	166
HMA BINDER COURSE	854
HMA SURFACE COURSE, MIX "C"	386
POLY. HMA SURFACE COURSE	620
HMA PAVEMENT FULL DEPTH, 9"	3,719
INCIDENTAL HMA SURFACING	48
HMA SHOULDER, 1 1/2"	181
HMA SHOULDER, 9"	478
TOTAL	6,644

**TEMPORARY CONCRETE BARRIER**

LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER
	FOOT	FOOT
LITTLE SISTER CREEK BRIDGE	1,000	1,000
BIG SISTER CREEK BRIDGE	1,100	1,100
TOTALS (MAXIMUM)	2,100	2,100

**REMOVE SIGN PANEL ASSEMBLY TYPE A**

STATION	DIRECTION	EACH
1435+25	NORTH	1
1447+95	NORTH	1
1447+97	SOUTH	1
TOTAL		3

**SIGN PANEL - TYPE 1**

STATION	ALIGNMENT	SQ FT
1435+00.00	SHELBY RD	6.25
1448+50.00		3.00
104+70.00	NOTT RD	6.25
11+70.00	GRAIN BIN RD	6.25
12+30.00	GRAIN BIN RD	6.25
TOTALS		28.00

**MODIFIED URETHANE PAVEMENT MARKING - LINE 4"**

STATION		FOOT	
FROM	TO	SOUTH	NORTH
1421+00.00	1451+00.00	3,000.0	3,000.0
08+50.00	11+48.00	298.0	298.0
12+12.00	13+83.18	171.2	171.2
102+50.00	110+93.13	843.1	843.1
TOTALS		4,313.0	4,313.0

**MODIFIED URETHANE PAVEMENT MARKING - LINE 6"**

STATION		FOOT
FROM	TO	CENTER
1421+00.00	1451+00.00	750.0
08+50.00	11+70.00	80.0
12+30.00	13+80.00	300.0
102+50.00	104+70.00	55.0
105+50.00	109+93.00	886.0
109+93.00	110+93.13	25.0
TOTALS		2,096.0

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USER NAME = *USER*	DESIGNED - JL / RY	REVISED -
PLOT SCALE = *SCALE*	DRAWN - JL / RY	REVISED -
PLOT DATE = *DATE*	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK			
SCALE:	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	17
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

**GUARDRAIL MARKERS, TYPE A**

STATION		EACH
FROM	TO	
1422+10.00	1426+81.00	9
1422+01.00	1426+71.00	9
1444+57.00	1448+65.00	8
1445+12.00	1448+25.00	6
TOTALS		33

**METAL POSTS**

SIGNS	TYPE	FOOT
STOP SIGNS	A	54
STREET SIGNS	B	12

**MODIFIED URETHANE PAVEMENT MARKING - LINE 24"**

STATION	ALIGNMENT	FOOT
1435+00.00	SHELBY RD	12
104+70.00	NOTT RD	12
11+70.00	GRAIN BIN RD	20
12+30.00	GRAIN BIN RD	30
TOTALS		74

**IMPACT ATTENUATORS**

DESCRIPTION	UNIT	QUANTITY
REMOVE IMPACT ATTENUATORS, SALVAGE	EACH	4
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4

**TERMINAL MARKER DIRECT APPLIED**

BRIDGE	EACH
LITTLE SISTER CREEK	4
BIG SISTER CREEK	4
TOTAL	8

**TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)**

BRIDGE	EACH
BIG SISTER CREEK BRIDGE	1
TOTAL	1

**HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH**

STATION		SQ YD
FROM	TO	
1425+17.65	1428+31.00	836
1440+60.00	1446+15.75	1,482
TOTALS		2,318

**GUARDRAIL AGGREGATE EROSION CONTROL**

LOCATION		
BRIDGE	QUADRANT	TON
LITTLE SISTER CREEK BRIDGE	NORTHEAST	10.1
	SOUTHEAST	10.1
	SOUTHWEST	8.8
	NORTHWEST	8.8
BIG SISTER CREEK BRIDGE	NORTHEAST	2.5
	SOUTHEAST	8.8
	SOUTHWEST	1.2
	NORTHWEST	1.2
TOTALS		52.0

**MISCELLANEOUS PAY ITEMS**

DESCRIPTION	UNIT	QUANTITY
TREE REMOVAL	UNIT	24
CHANNEL EXCAVATION	CU YD	850
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24
ENGINEER'S FIELD LABORATORY	CAL MO	11
MOBILIZATION	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2
TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
TRAFFIC CONTROL SURVEILLANCE	CAL DA	330
CHANGEABLE MESSAGE SIGNS	CAL MO	22
TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	EACH	1
CONSTRUCTION LAYOUT	L SUM	1
SETTLEMENT PLATFORMS	EACH	4

**TEMPORARY BRIDGE TRAFFIC SIGNALS**

BRIDGE	EACH
LITTLE SISTER CREEK BRIDGE	1
TOTAL	1

FILE NAME \*  
REFLECT



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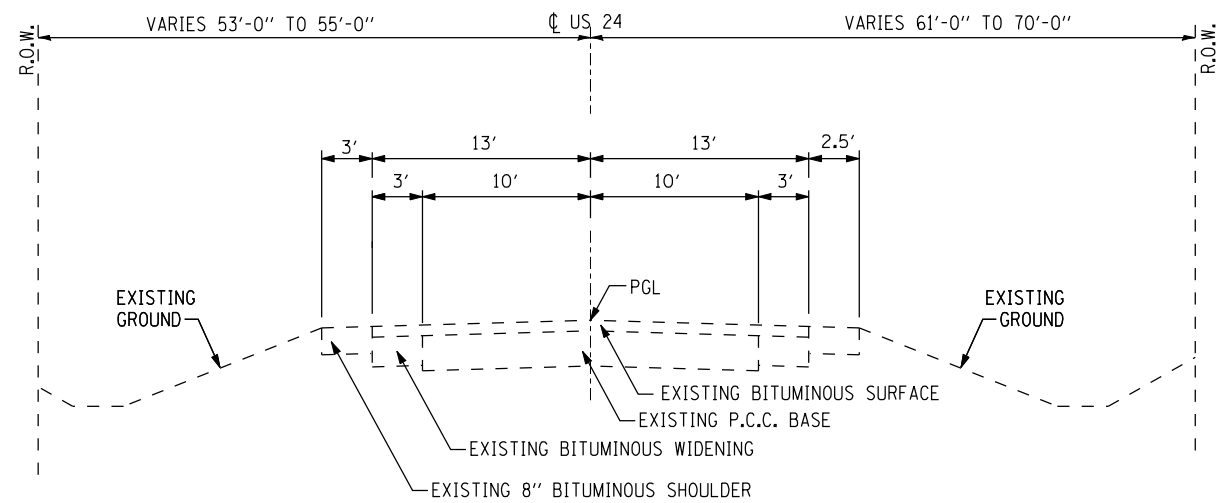
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

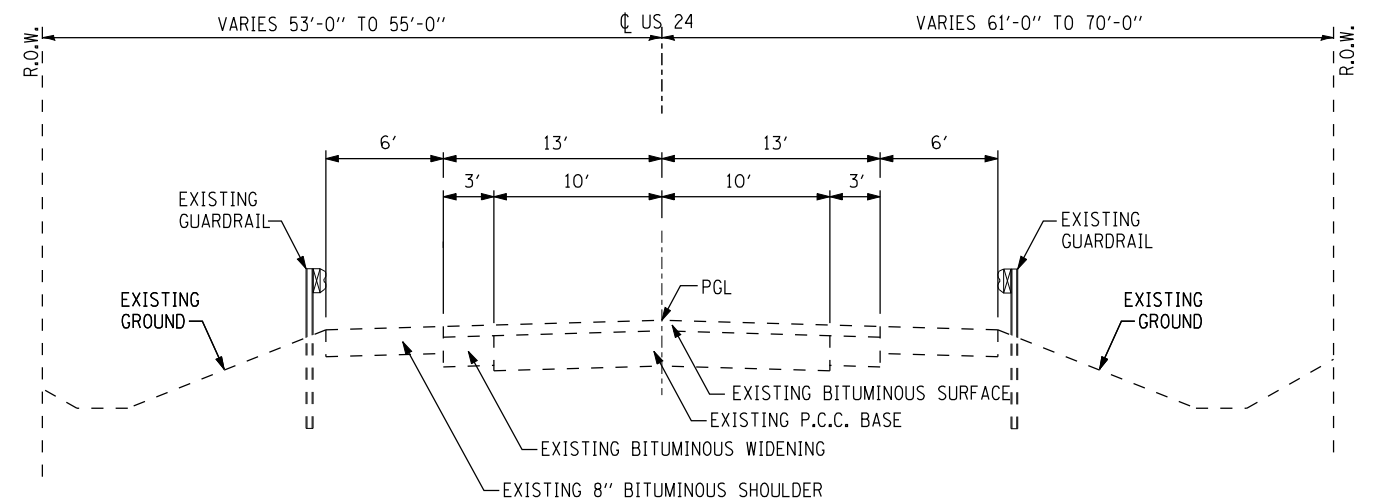
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	18
			CONTRACT NO. 68699	
ILLINOIS FED. AID PROJECT				

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



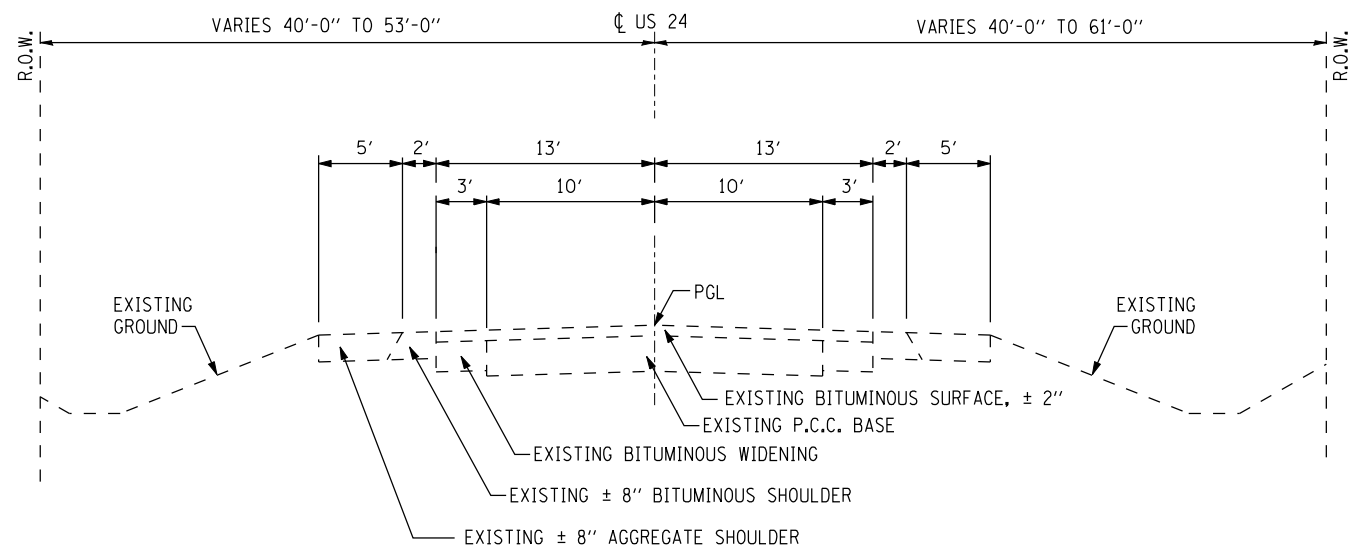
**EXISTING ROADWAY TYPICAL SECTION**

FROM STA. 1421+00± TO STA. 1421+85±



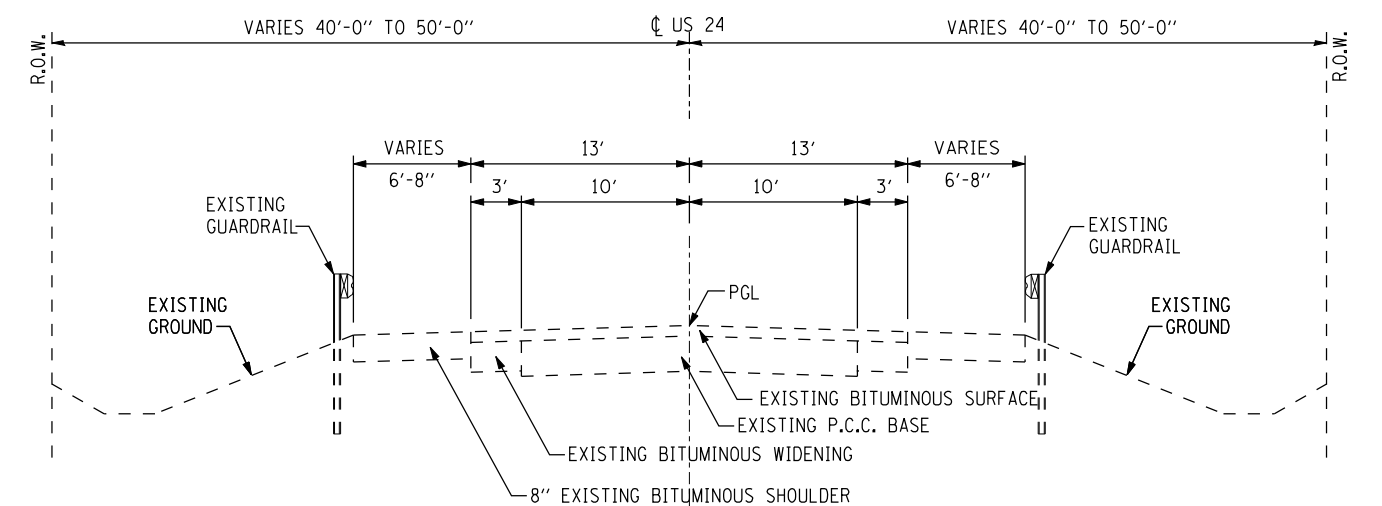
**EXISTING ROADWAY TYPICAL SECTION**

FROM STA. 1421+85± TO STA. 1423+95.84±  
 FROM STA. 1423+95.84 TO STA. 1424+72.40 - LITTLE SISTER CREEK BRIDGE  
 FROM STA. 1424+72.40± TO STA. 1426+86±



**EXISTING ROADWAY TYPICAL SECTION**

FROM STA. 1426+86± TO STA. 1446+52.02  
 FROM STA. 1446+52.02 TO STA. 1447+31.34 - BIG SISTER CREEK BRIDGE  
 FROM STA. 1447+31.34 TO STA. 1447+50±



**EXISTING ROADWAY TYPICAL SECTION**

FROM STA. 1447+50± TO STA. 1451+00±

FILE NAME =  
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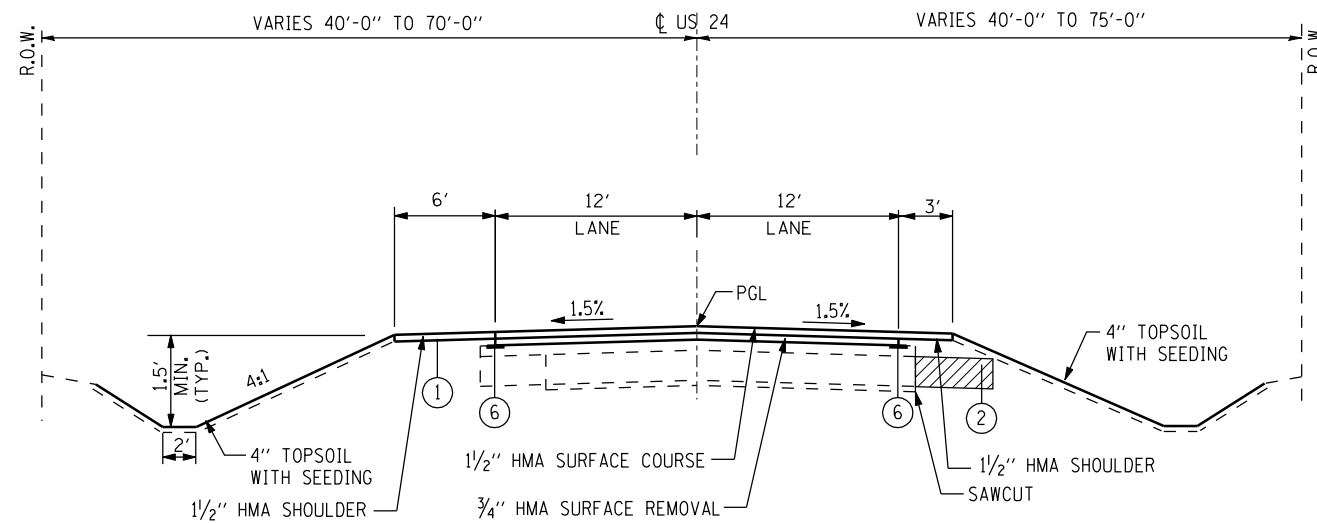
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
 US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 1 OF 3 SHEETS STA. TO STA.

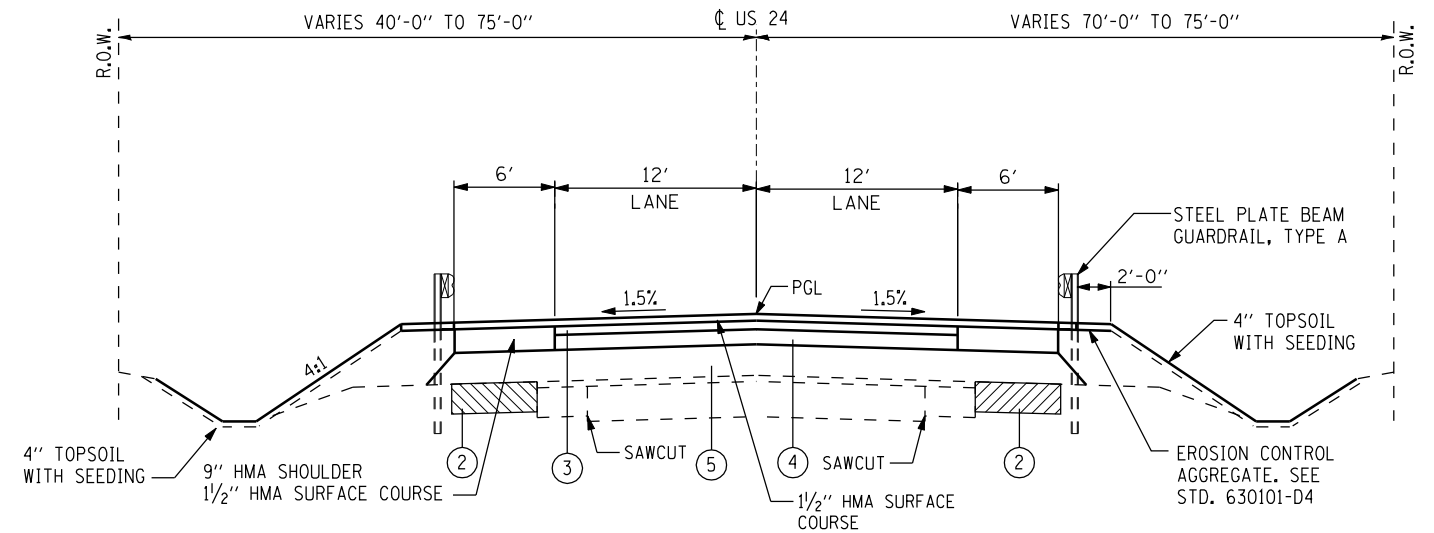
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317	(137BR, BR-1) BR	FULTON	118	19
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



**PROPOSED ROADWAY TYPICAL SECTION**

FROM STA. 1421+00 TO STA. 1422+01

- ① STA. 1421+00 TO STA. 1421+72.5- PRIVATE ENTRANCE PER PLAN AND STD. DETAIL
- ② PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 8" (5 FT. WIDE)  
STA. 1421+39 TO STA. 1422+01  
STA. 1426+91 TO STA. 1428+92  
STA. 1439+89 TO STA. 1445+01
- ③ POLYMERIZED HMA BINDER COURSE 2 1/4"
- ④ HMA BINDER COURSE 6 3/4"
- ⑤ SUB-BASE GRANULAR MATERIAL, VARIABLE DEPTH
- ⑥ STRIP REFLECTIVE CRACK CONTROL TREATMENT



**PROPOSED ROADWAY TYPICAL SECTION**

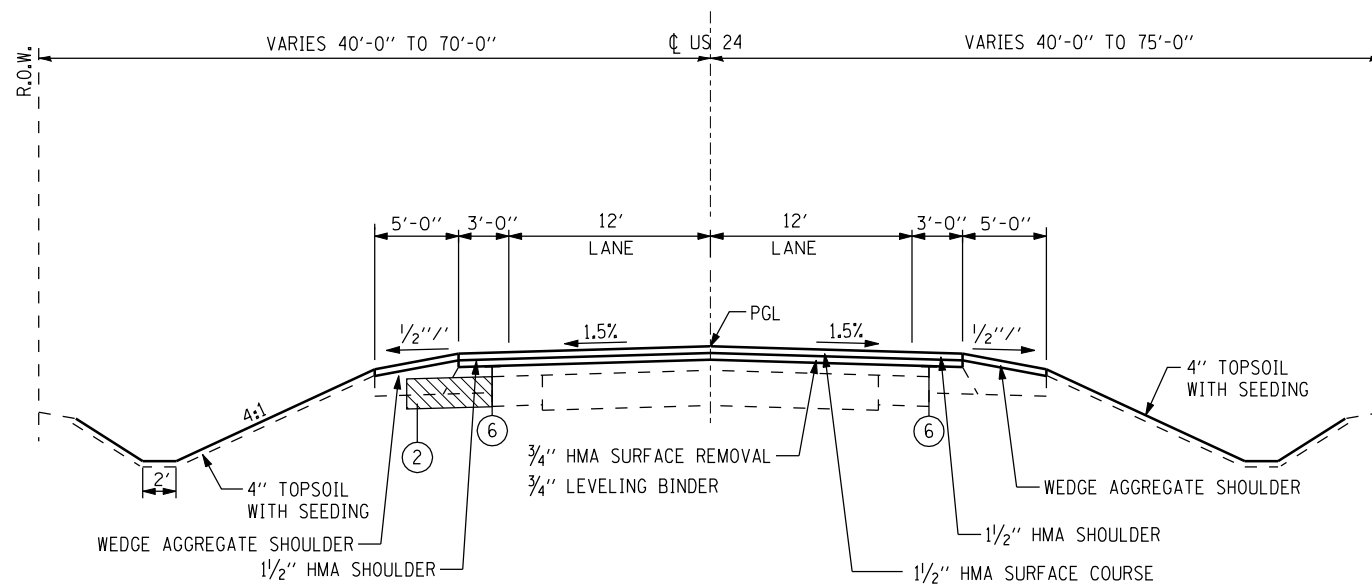
FROM STA. 1422+01.00 TO STA. 1423+78.38  
FROM STA. 1425+17.65 TO STA. 1428+31  
FROM STA. 1440+60 TO STA. 1446+15.75  
FROM STA. 1447+69.24 TO STA. 1450+08

GUARDRAIL & 6'-0" HMA SHOULDER STA. 1422+00 TO STA. 1426+85  
3'-0" BIT. & 5'-0" AGG. SHOULDERS STA. 1426+71 TO STA. 1428+50

BIT. SURFACE REMOVAL STA. 1422+01.00 TO STA. 1422+41.00  
EXISTING PAVEMENT PREPARATION PER STANDARD SPEC ARTICLE 205.03

**NOTE:**

- 1-CONSTRUCT FULL WIDTH PAVEMENT IN ONE OPERATION INCLUDING MAINLINE & SHOULDER
- 2-SEE FULL DEPTH HMA TRANSITION DETAIL FOR EXISTING PAVEMENT PREPARATION PER STANDARD SPEC. ARTICLE 205.03 LIMITS
- 3- ③ & ④ PAID AS HMA PAVEMENT, FULL DEPTH 9"

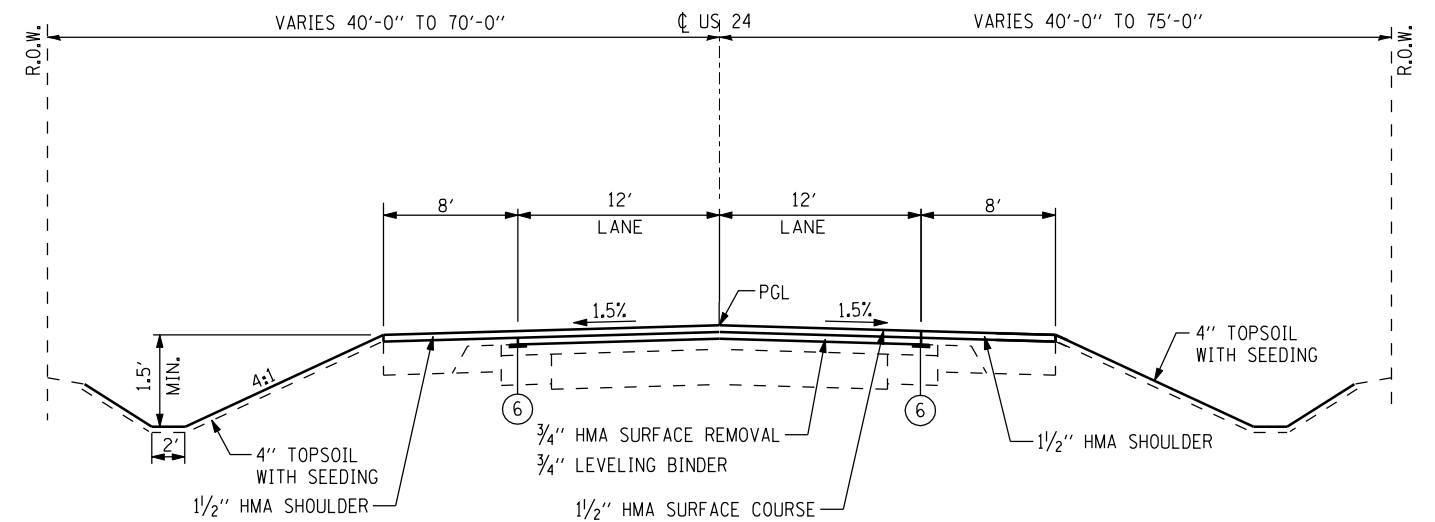


**PROPOSED ROADWAY TYPICAL SECTION**

FROM STA. 1428+31 TO STA. 1440+60

**NOTE:**

LEVELING BINDER & SURFACE SHALL BE PAVED FULL WIDTH INCLUDING SHOULDERS TO ELIMINATE THE JOINT (SEE SPECIAL PROVISIONS)



**PROPOSED ROADWAY TYPICAL SECTION**

FROM STA. 1450+08.00 TO STA. 1451+00.00

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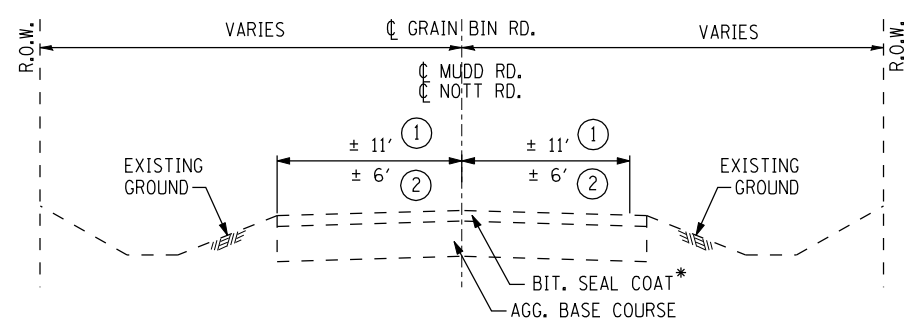
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PLOT DATE = *DATE*		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

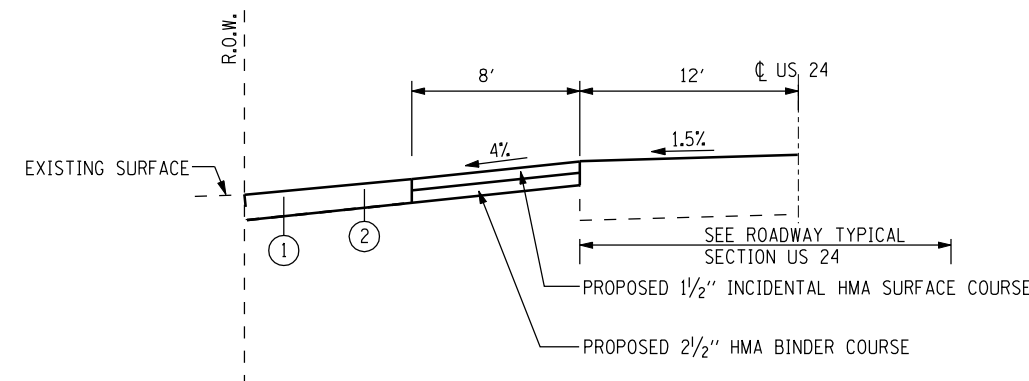
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CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



**EXISTING ROADWAY TYPICAL SECTION - SIDE ROADS**

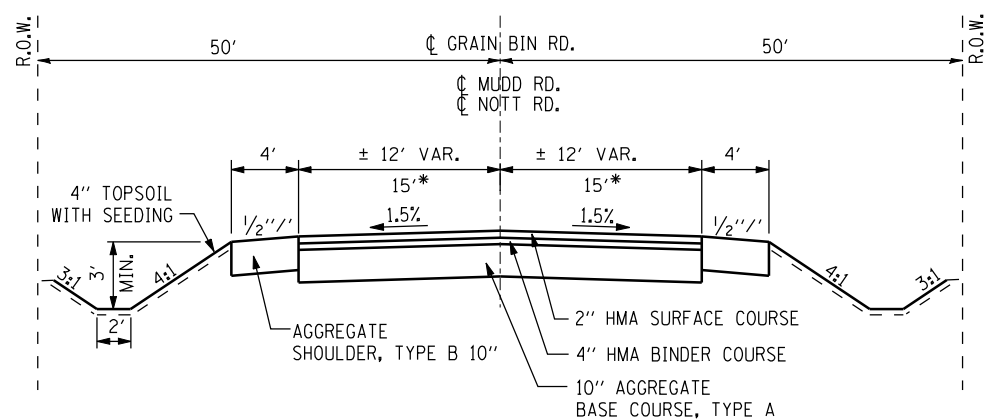
- ① EXIST. GRAIN BIN ROAD
- ② EXIST. NOTT ROAD AND MUDD ROAD

\* NOTT ROAD IS DIRT ROAD AND MUDD ROAD IS PARTIALLY HMA (FROM STA. 10+00.00 TO 11+88.00)



**TYPICAL SECTION ENTRANCES AND NORTH SHELBY ROAD**

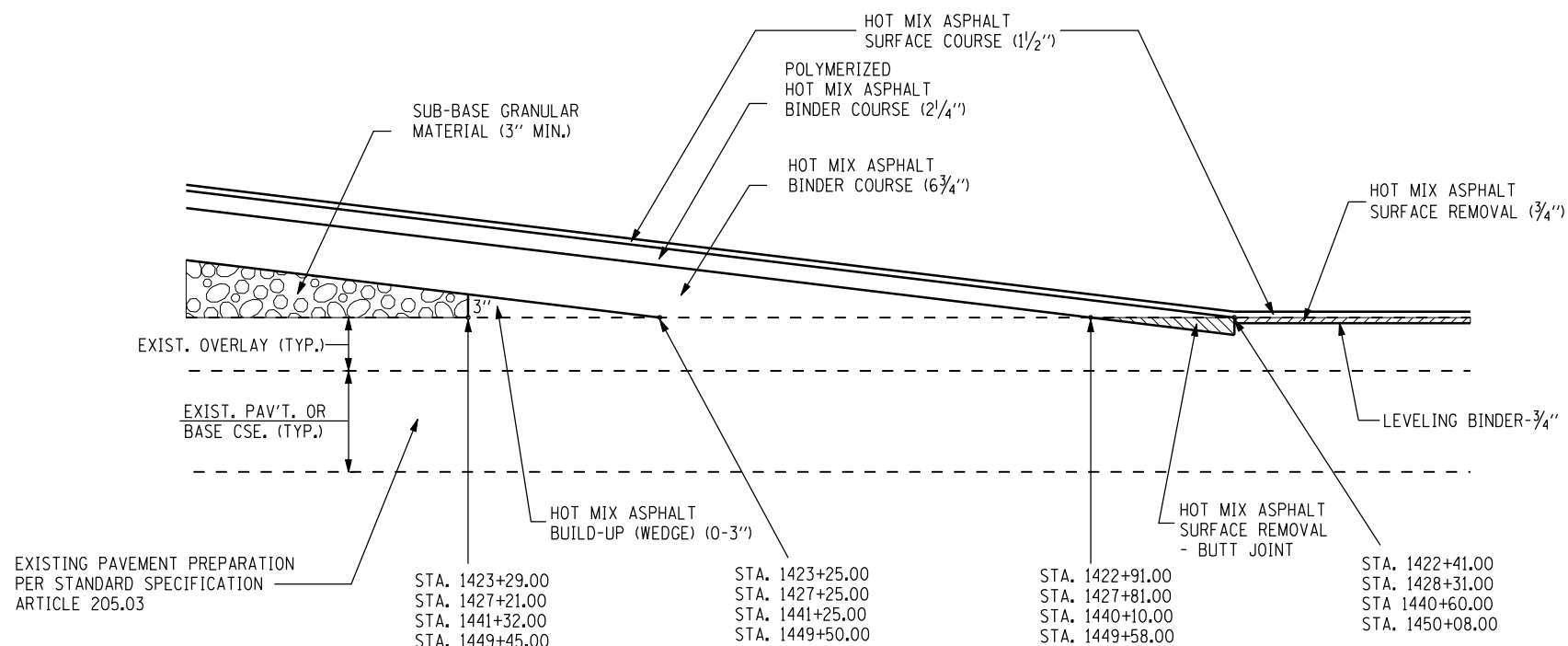
- ① EXTEND HMA TO MATCH EXISTING SHELBY ROAD HMA
- ② USE AGGREGATE SURFACE COURSE, TYPE A TO MEET EXISTING AGGREGATE SURFACE PER STD 406301-D4



**PROPOSED ROADWAY TYPICAL SECTION-SIDE ROAD**

FROM STA. 102+50 TO STA. 110+93.13 (NOTT ROAD/GRAIN BIN ROAD)  
 FROM STA. 8+50 TO STA. 11+48 (MUDD ROAD)  
 \* FROM STA. 12+13.00 TO STA. 13+83.18 (GRAIN BIN ROAD)

NOTE: SEE STAGE III & IV DETAIL SHEETS FOR TREATMENT OF GRAIN BIN & MUDD RADIUS RETURN AREAS



NOTE: BINDER COURSES PAID AS HMA PAVEMENT, FULL DEPTH 9"

**FULL DEPTH HMA PAVEMENT TO OVERLAY TRANSITION - DETAIL**

FILE NAME =  
 \$FILES\$



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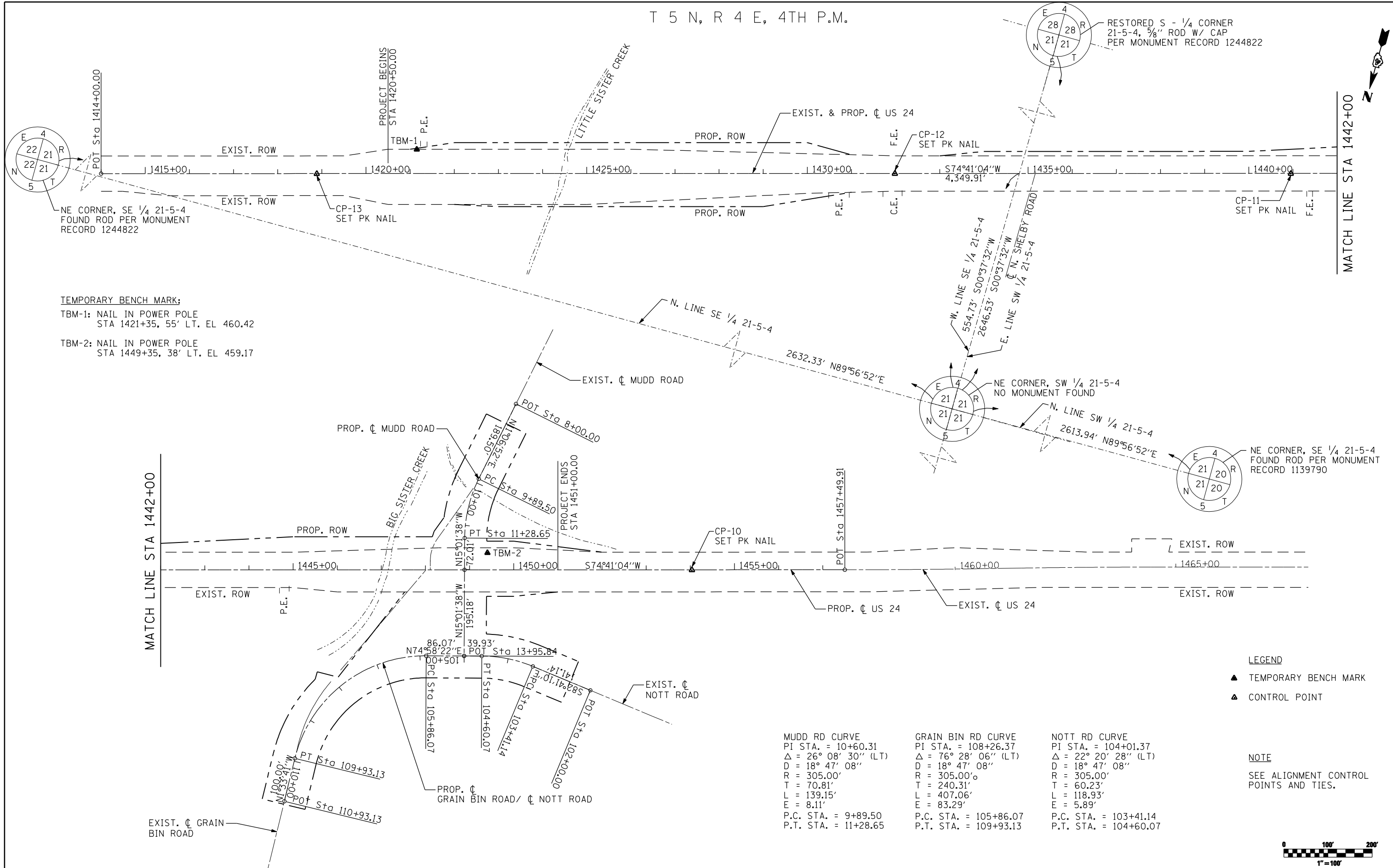
**STATE OF ILLINOIS  
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**TYPICAL SECTIONS  
 US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	21
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

T 5 N, R 4 E, 4TH P.M.

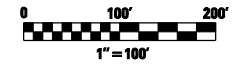


TEMPORARY BENCH MARK:  
 TBM-1: NAIL IN POWER POLE  
 STA 1421+35, 55' LT. EL 460.42  
 TBM-2: NAIL IN POWER POLE  
 STA 1449+35, 38' LT. EL 459.17

LEGEND  
 ▲ TEMPORARY BENCH MARK  
 ▲ CONTROL POINT

NOTE  
 SEE ALIGNMENT CONTROL POINTS AND TIES.

<b>MUDD RD CURVE</b> PI STA. = 10+60.31 $\Delta = 26^\circ 08' 30''$ (LT) $D = 18^\circ 47' 08''$ $R = 305.00'$ $T = 70.81'$ $L = 139.15'$ $E = 8.11'$ P.C. STA. = 9+89.50 P.T. STA. = 11+28.65	<b>GRAIN BIN RD CURVE</b> PI STA. = 108+26.37 $\Delta = 76^\circ 28' 06''$ (LT) $D = 18^\circ 47' 08''$ $R = 305.00'$ $T = 240.31'$ $L = 407.06'$ $E = 83.29'$ P.C. STA. = 105+86.07 P.T. STA. = 109+93.13	<b>NOTT RD CURVE</b> PI STA. = 104+01.37 $\Delta = 22^\circ 20' 28''$ (LT) $D = 18^\circ 47' 08''$ $R = 305.00'$ $T = 60.23'$ $L = 118.93'$ $E = 5.89'$ P.C. STA. = 103+41.14 P.T. STA. = 104+60.07
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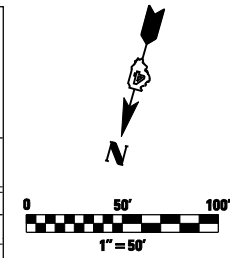
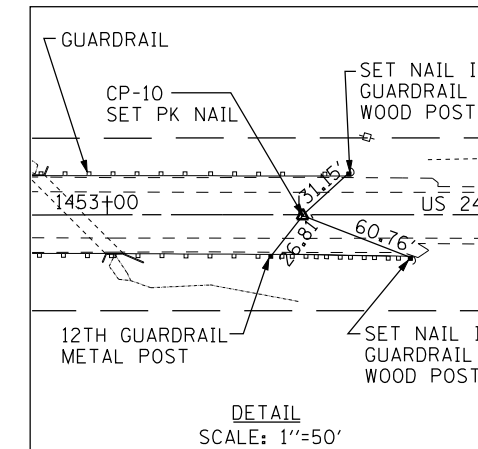
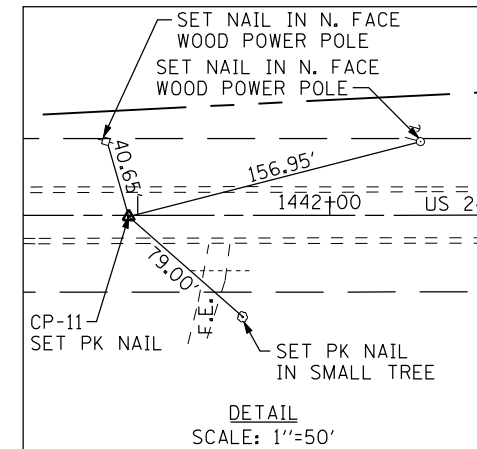
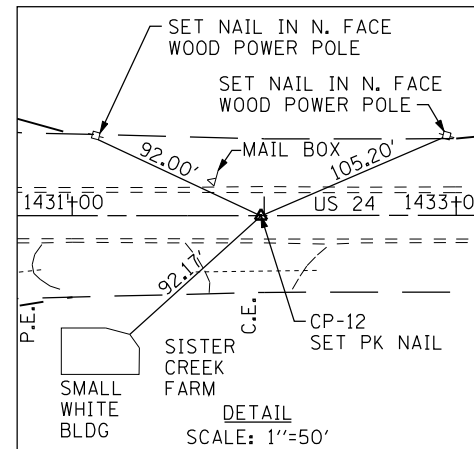
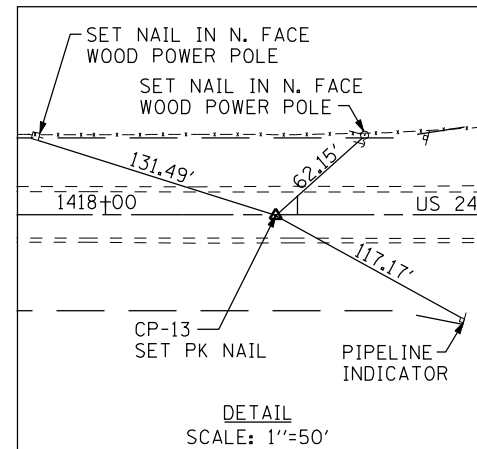
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PLOT DATE = #DATE#		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ALIGNMENT AND BENCHMARKS  
 US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK  
 SCALE: 1" = 100' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	22
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				





CONTROL POINTS

POINT NO.	STATION	OFFSET	NORTHING	EASTING
CP-13	1418+88.58	0.37' RT	1,359,719.82	2,327,941.62
CP-12	1431+98.29	0.26' RT	1,359,373.98	2,326,678.39
CP-11	1440+95.33	0.68' RT	1,359,137.59	2,325,813.06
CP-10	1454+03.71	0.71' RT	1,358,792.23	2,324,551.08

ALIGNMENT POINTS

STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
1414+00.00	☐	1,359,923.14	2,328,541.00	POT
1457+49.91	☐	1,358,774.18	2,324,345.58	POT
8+00.00	☐	1,358,608.36	2,325,163.28	POT
9+89.50	☐	1,358,794.30	2,325,199.80	PC
11+28.65	☐	1,358,932.17	2,325,195.09	PT
13+95.84	☐	1,359,190.22	2,325,125.82	POT
102+00.00	☐	1,359,189.89	2,324,829.35	POT
103+41.14	☐	1,359,171.92	2,324,969.35	PC
104+60.07	☐	1,359,179.87	2,325,087.25	PT
105+86.07	☐	1,359,212.54	2,325,208.94	PC
109+93.13	☐	1,359,515.33	2,325,434.41	PT
110+93.13	☐	1,359,615.29	2,325,431.69	POT

FILE NAME =  
SFILES



USER NAME = #USER#	DESIGNED - JL / RY	REVISED -
	DRAWN - JL / RY	REVISED -
PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

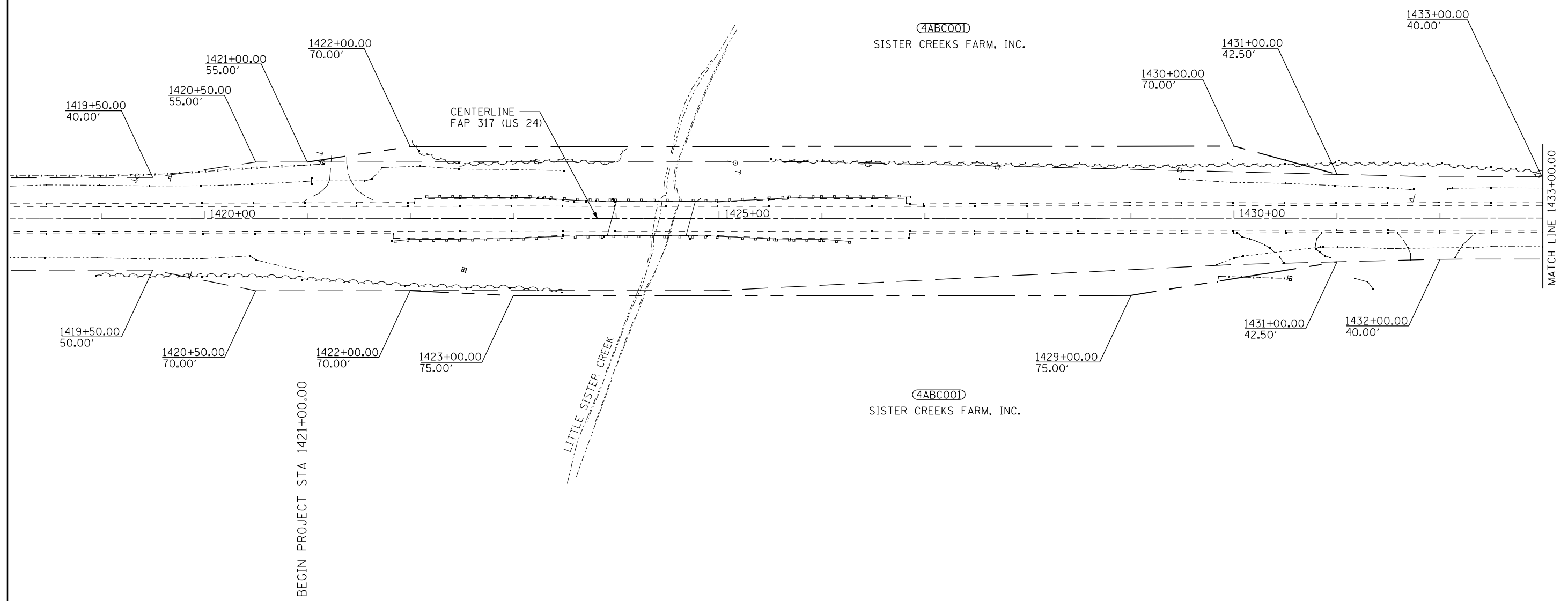
ALIGNMENT CONTROL POINTS AND TIES  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

SCALE: 1" = 50' SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	23
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

LEGEND:  
 EXISTING R.O.W. ———  
 PROPOSED R.O.W. - - - -  
 TEMP. EASEMENT // // // //

T 5 N, R 4 E, 4TH P.M.  
 SOUTHEAST QUARTER SECTION 21



SOUTHEAST QUARTER SECTION 21

FILE NAME \$FILEL\$	USER NAME = \$USER\$	DESIGNED - JL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RIGHT OF WAY PLANS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = \$SCALE\$	DRAWN - JL	REVISED -		PROJECT	JOB NO. R-94-001-11	317	(137 BR, BR-1) BR	FULTON	118	24	
PLOT DATE = \$DATE\$	CHECKED - OAO	REVISED -	SCALE: 1"=50'		SHEET NO. 1 OF 3 SHEETS	STA. 1419+00 TO STA. 1433+00	CONTRACT NO. 68699					
	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT									

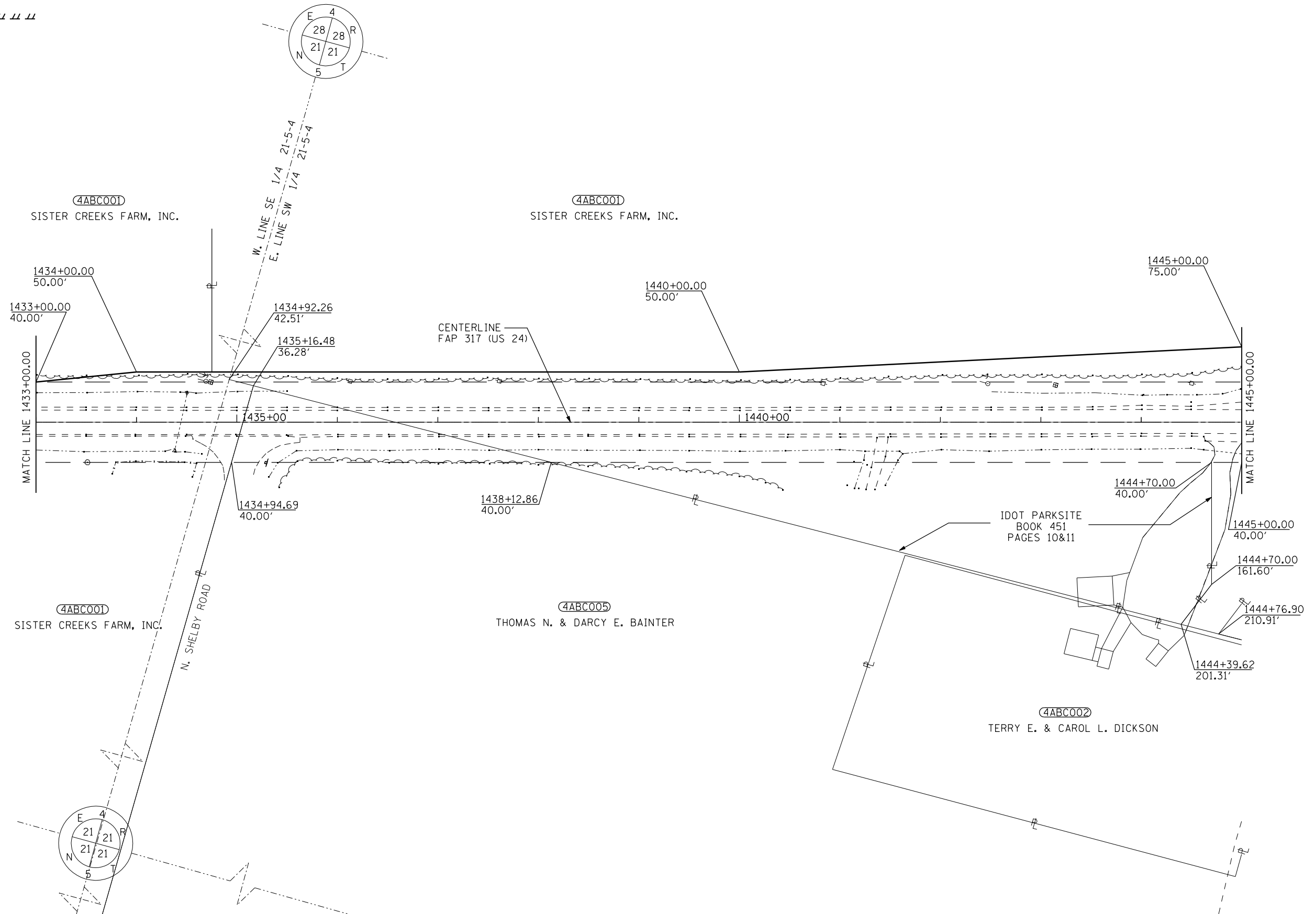
LEGEND:

EXISTING R.O.W. ————

PROPOSED R.O.W. - - - - -

TEMP. EASEMENT // // // //

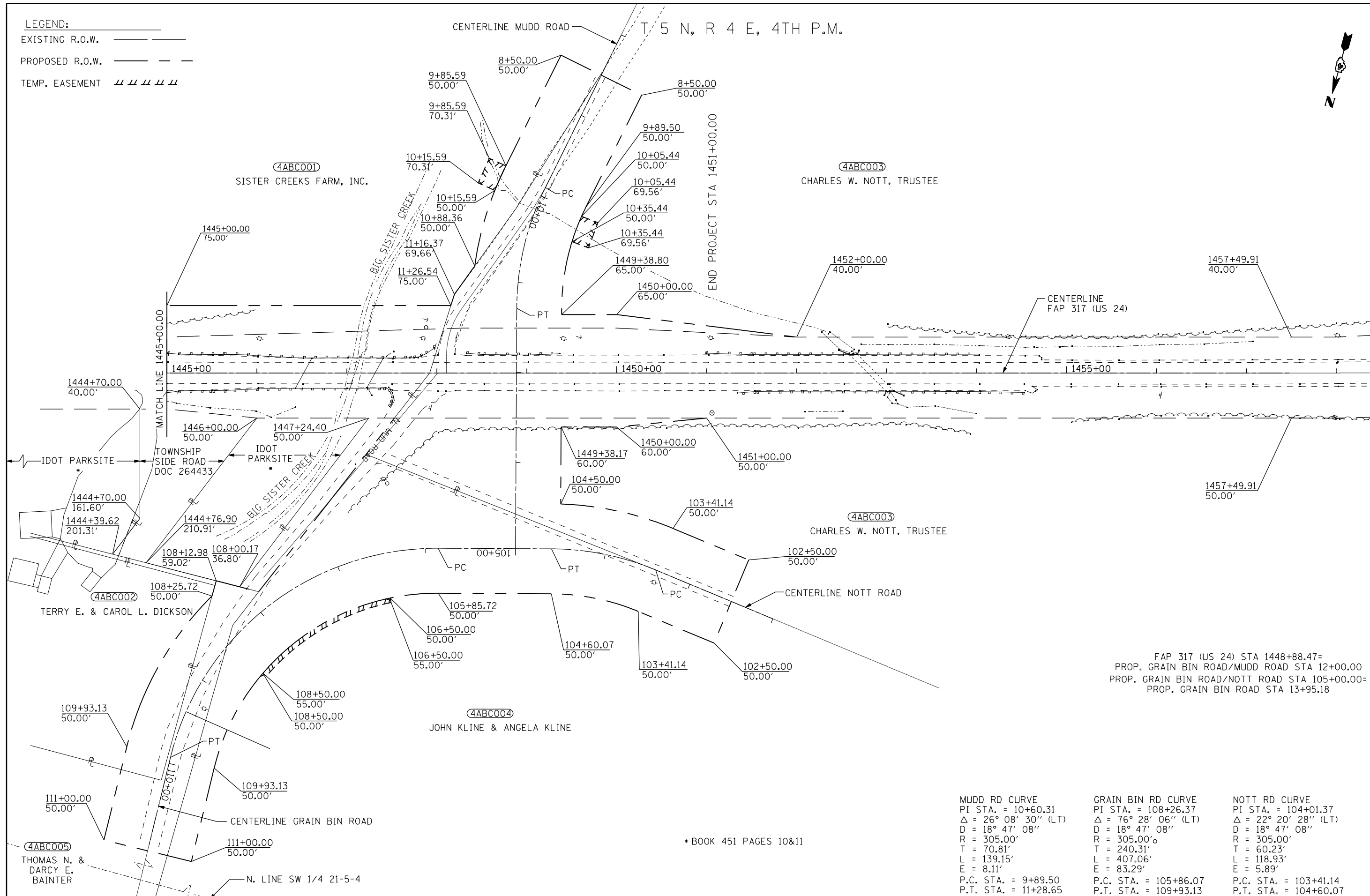
T 5 N, R 4 E, 4TH P.M.



FILE NAME \$FILEL\$	USER NAME = \$USER\$	DESIGNED - JL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RIGHT OF WAY PLANS</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = \$SCALE\$	DRAWN - JL	REVISED -		PROJECT	JOB NO. R-94-001-11	317	(137 BR, BR-1) BR	FULTON	118	25
PLOT DATE = \$DATE\$	CHECKED - OAO	REVISIED -	SCALE: 1"=50'		SHEET NO. 2 OF 3 SHEETS	STA. 1433+00 TO STA. 1445+00	CONTRACT NO. 68699				
	DATE -	REVISIED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

LEGEND:

- EXISTING R.O.W. ————
- PROPOSED R.O.W. - - - - -
- TEMP. EASEMENT // // // //

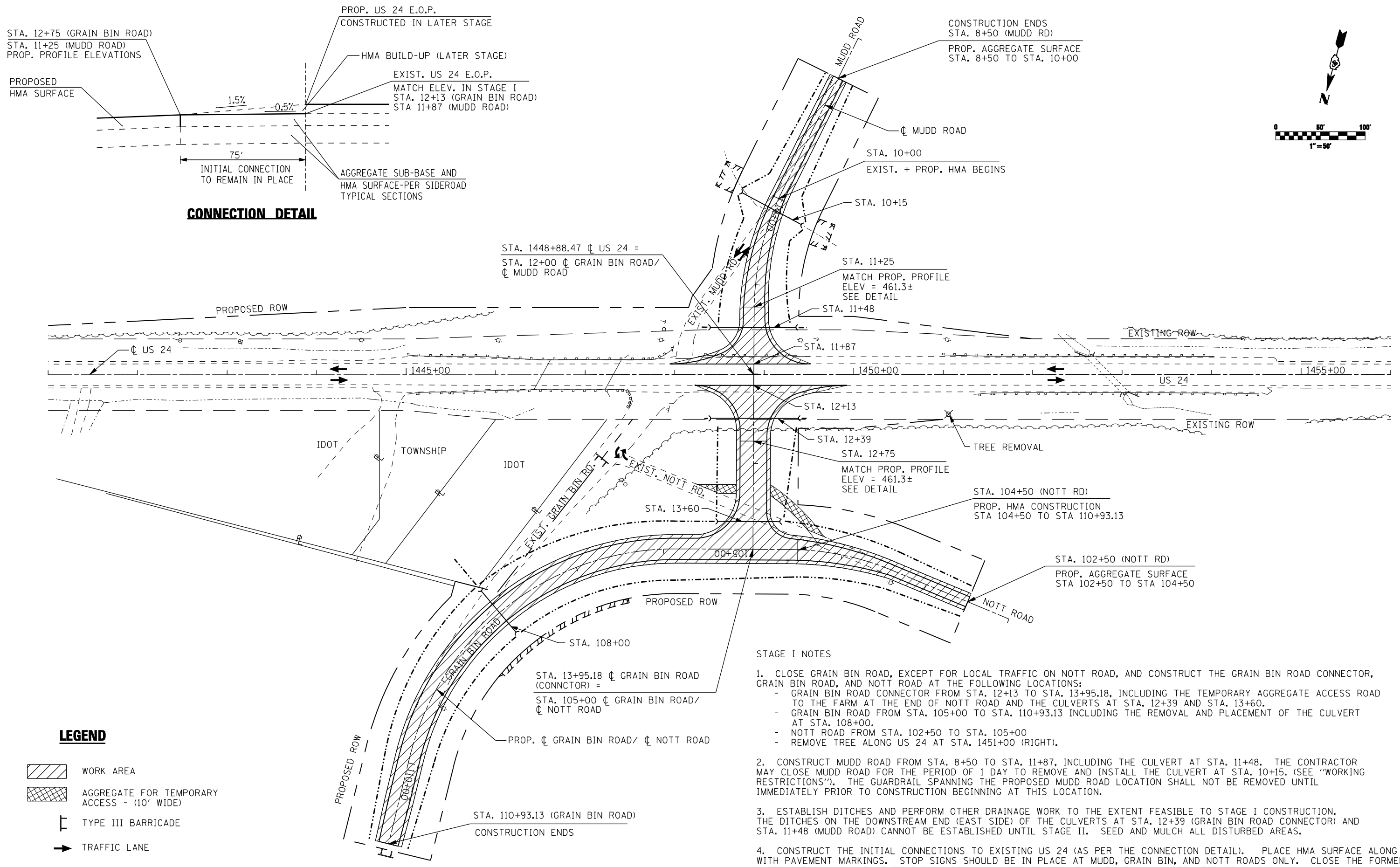


FAP 317 (US 24) STA 1448+88.47=  
 PROP. GRAIN BIN ROAD/MUDD ROAD STA 12+00.00  
 PROP. GRAIN BIN ROAD/NOTT ROAD STA 105+00.00=  
 PROP. GRAIN BIN ROAD STA 13+95.18

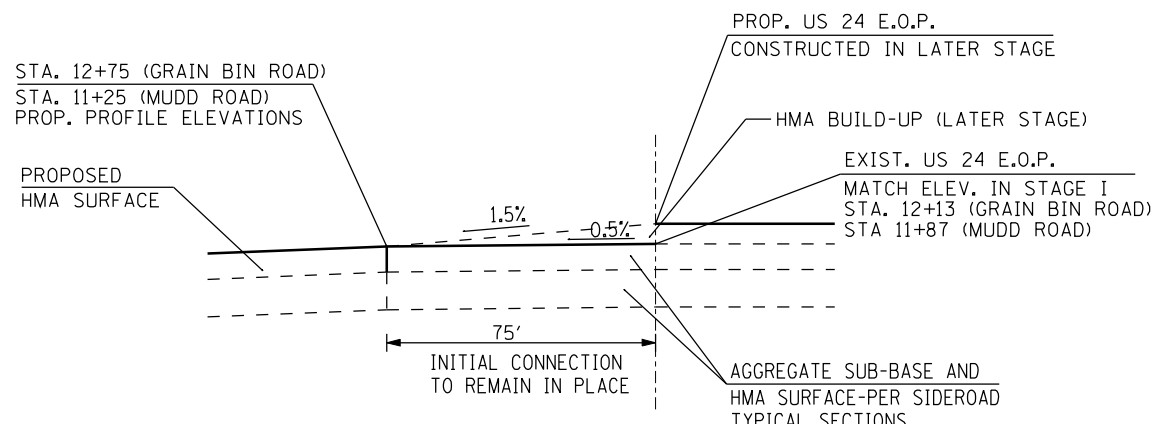
MUDD RD CURVE	GRAIN BIN RD CURVE	NOTT RD CURVE
PI STA. = 10+60.31	PI STA. = 108+26.37	PI STA. = 104+01.37
$\Delta = 26^\circ 08' 30''$ (LT)	$\Delta = 76^\circ 28' 06''$ (LT)	$\Delta = 22^\circ 20' 28''$ (LT)
D = 18° 47' 08"	D = 18° 47' 08"	D = 18° 47' 08"
R = 305.00'	R = 305.00'	R = 305.00'
T = 70.81'	T = 240.31'	T = 60.23'
L = 139.15'	L = 407.06'	L = 118.93'
E = 8.11'	E = 83.29'	E = 5.89'
P.C. STA. = 9+89.50	P.C. STA. = 105+86.07	P.C. STA. = 103+41.14
P.T. STA. = 11+28.65	P.T. STA. = 109+93.13	P.T. STA. = 104+60.07

\* BOOK 451 PAGES 10&11

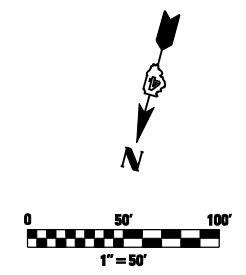
FILE NAME	USER NAME = \$USER\$	DESIGNED - JL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RIGHT OF WAY PLANS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
\$FILE\$		DRAWN - JL	REVISED -		PROJECT	JOB NO.	R-94-001-11	317	(137 BR, BR-1) BR	FULTON	118	26
	PLOT SCALE = \$SCALE\$	CHECKED - OAO	REVISED -		SCALE: 1"=50'	SHEET NO. 3 OF 3 SHEETS	STA. 1445+00 TO STA. 1457+00	<b>CONTRACT NO. 68699</b>				
	PLOT DATE = \$DATE\$	DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



**CONNECTION DETAIL**



CONSTRUCTION ENDS  
STA. 8+50 (MUDD RD)  
PROP. AGGREGATE SURFACE  
STA. 8+50 TO STA. 10+00



STA. 1448+88.47  $\phi$  US 24 =  
STA. 12+00  $\phi$  GRAIN BIN ROAD/  
 $\phi$  MUDD ROAD

STA. 11+25  
MATCH PROP. PROFILE  
ELEV = 461.3±  
SEE DETAIL

STA. 12+75  
MATCH PROP. PROFILE  
ELEV = 461.3±  
SEE DETAIL

STA. 104+50 (NOTT RD)  
PROP. HMA CONSTRUCTION  
STA 104+50 TO STA 110+93.13

STA. 102+50 (NOTT RD)  
PROP. AGGREGATE SURFACE  
STA 102+50 TO STA 104+50

**STAGE I NOTES**

- CLOSE GRAIN BIN ROAD, EXCEPT FOR LOCAL TRAFFIC ON NOTT ROAD, AND CONSTRUCT THE GRAIN BIN ROAD CONNECTOR, GRAIN BIN ROAD, AND NOTT ROAD AT THE FOLLOWING LOCATIONS:
  - GRAIN BIN ROAD CONNECTOR FROM STA. 12+13 TO STA. 13+95.18, INCLUDING THE TEMPORARY AGGREGATE ACCESS ROAD TO THE FARM AT THE END OF NOTT ROAD AND THE CULVERTS AT STA. 12+39 AND STA. 13+60.
  - GRAIN BIN ROAD FROM STA. 105+00 TO STA. 110+93.13 INCLUDING THE REMOVAL AND PLACEMENT OF THE CULVERT AT STA. 108+00.
  - NOTT ROAD FROM STA. 102+50 TO STA. 105+00
  - REMOVE TREE ALONG US 24 AT STA. 1451+00 (RIGHT).
- CONSTRUCT MUDD ROAD FROM STA. 8+50 TO STA. 11+87, INCLUDING THE CULVERT AT STA. 11+48. THE CONTRACTOR MAY CLOSE MUDD ROAD FOR THE PERIOD OF 1 DAY TO REMOVE AND INSTALL THE CULVERT AT STA. 10+15. (SEE "WORKING RESTRICTIONS"). THE GUARDRAIL SPANNING THE PROPOSED MUDD ROAD LOCATION SHALL NOT BE REMOVED UNTIL IMMEDIATELY PRIOR TO CONSTRUCTION BEGINNING AT THIS LOCATION.
- ESTABLISH DITCHES AND PERFORM OTHER DRAINAGE WORK TO THE EXTENT FEASIBLE TO STAGE I CONSTRUCTION. THE DITCHES ON THE DOWNSTREAM END (EAST SIDE) OF THE CULVERTS AT STA. 12+39 (GRAIN BIN ROAD CONNECTOR) AND STA. 11+48 (MUDD ROAD) CANNOT BE ESTABLISHED UNTIL STAGE II. SEED AND MULCH ALL DISTURBED AREAS.
- CONSTRUCT THE INITIAL CONNECTIONS TO EXISTING US 24 (AS PER THE CONNECTION DETAIL). PLACE HMA SURFACE ALONG WITH PAVEMENT MARKINGS. STOP SIGNS SHOULD BE IN PLACE AT MUDD, GRAIN BIN, AND NOTT ROADS ONLY. CLOSE THE FORMER INTERSECTION USING TYPE III BARRICADES AND SHIFT TRAFFIC TO THE NEWLY CONSTRUCTED GRAIN BIN AND MUDD ROADS.

**LEGEND**

- WORK AREA
- AGGREGATE FOR TEMPORARY ACCESS - (10' WIDE)
- TYPE III BARRICADE
- TRAFFIC LANE

USER NAME = #USER#	DESIGNED - JL / RY	REVISED -
DRAWN - JL / RY	CHECKED - JES	REVISED -
PLOT SCALE = #SCALE#	DATE - 12-17-2012	REVISED -
PLOT DATE = #DATE#		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL PLAN - STAGE I**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	27
CONTRACT NO. 68699				

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FILE NAME = SF11E1.s

SCALE: SHEET NO. 1 OF 5 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

NOTE:

PLACE HMA BASE COURSE WIDENING IN PREPARATION FOR STAGE III TRAFFIC AT THE FOLLOWING LOCATIONS:

LT. STA. 1439+89 TO STA. 1445+02 @ BIG SISTER CREEK STRUCTURE

RT. STA. 1421+39 TO STA. 1421+96 AND RT. STA. 1426+97 TO STA. 1428+92 @ LITTLE SISTER CREEK STRUCTURE

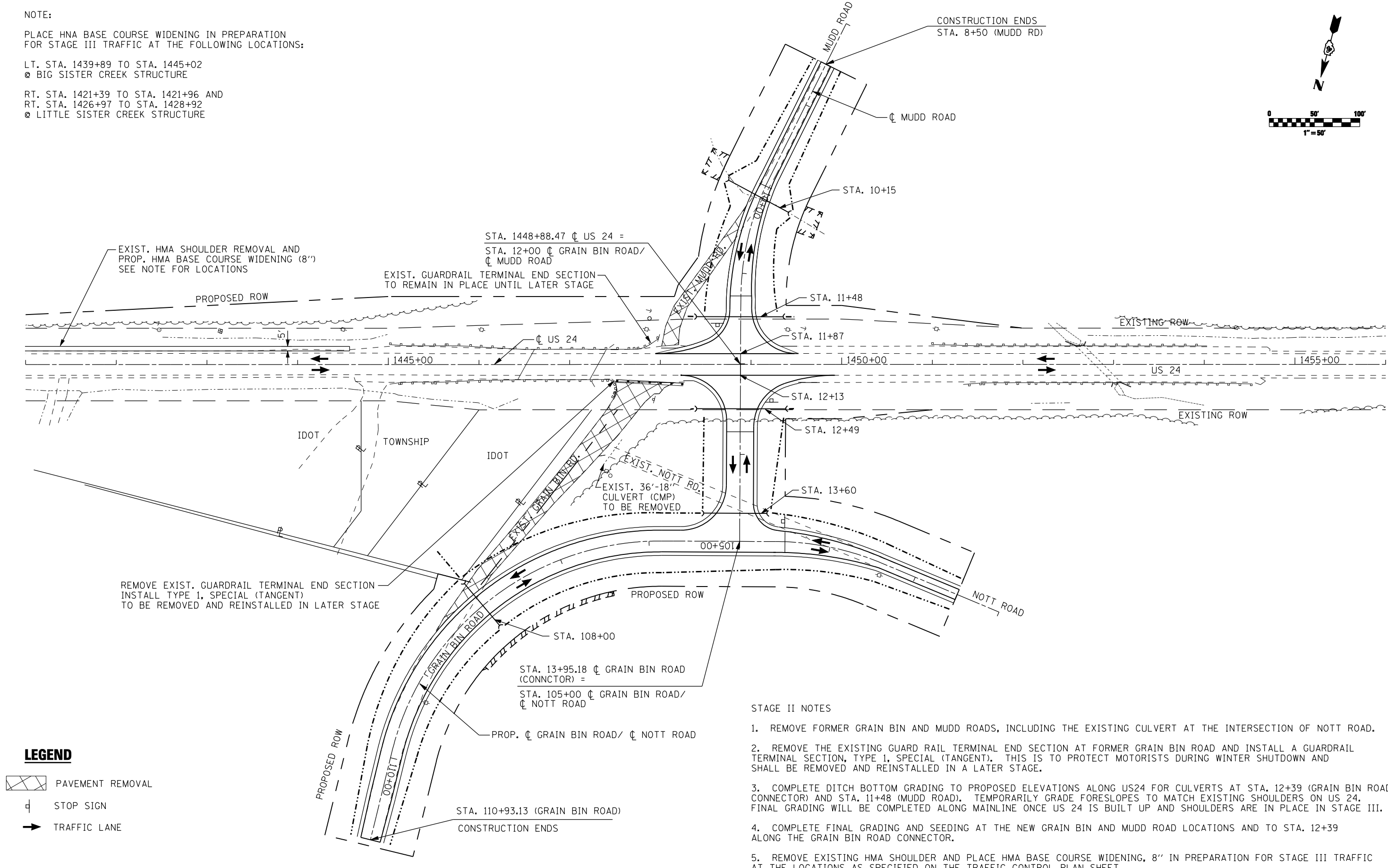
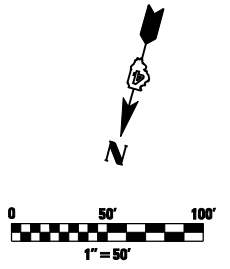
EXIST. HMA SHOULDER REMOVAL AND PROP. HMA BASE COURSE WIDENING (8") SEE NOTE FOR LOCATIONS

EXIST. GUARDRAIL TERMINAL END SECTION TO REMAIN IN PLACE UNTIL LATER STAGE

REMOVE EXIST. GUARDRAIL TERMINAL END SECTION INSTALL TYPE 1, SPECIAL (TANGENT) TO BE REMOVED AND REINSTALLED IN LATER STAGE

STAGE II NOTES

1. REMOVE FORMER GRAIN BIN AND MUDD ROADS, INCLUDING THE EXISTING CULVERT AT THE INTERSECTION OF NOTT ROAD.
2. REMOVE THE EXISTING GUARD RAIL TERMINAL END SECTION AT FORMER GRAIN BIN ROAD AND INSTALL A GUARDRAIL TERMINAL SECTION, TYPE 1, SPECIAL (TANGENT). THIS IS TO PROTECT MOTORISTS DURING WINTER SHUTDOWN AND SHALL BE REMOVED AND REINSTALLED IN A LATER STAGE.
3. COMPLETE DITCH BOTTOM GRADING TO PROPOSED ELEVATIONS ALONG US24 FOR CULVERTS AT STA. 12+39 (GRAIN BIN ROAD CONNECTOR) AND STA. 11+48 (MUDD ROAD). TEMPORARILY GRADE FORESLOPES TO MATCH EXISTING SHOULDERS ON US 24. FINAL GRADING WILL BE COMPLETED ALONG MAINLINE ONCE US 24 IS BUILT UP AND SHOULDERS ARE IN PLACE IN STAGE III.
4. COMPLETE FINAL GRADING AND SEEDING AT THE NEW GRAIN BIN AND MUDD ROAD LOCATIONS AND TO STA. 12+39 ALONG THE GRAIN BIN ROAD CONNECTOR.
5. REMOVE EXISTING HMA SHOULDER AND PLACE HMA BASE COURSE WIDENING, 8" IN PREPARATION FOR STAGE III TRAFFIC AT THE LOCATIONS AS SPECIFIED ON THE TRAFFIC CONTROL PLAN SHEET.



LEGEND

- PAVEMENT REMOVAL
- STOP SIGN
- TRAFFIC LANE

FILE NAME = SFLEL5

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PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN - STAGE II  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK

SCALE: SHEET NO. 2 OF 5 SHEETS STA. TO STA.

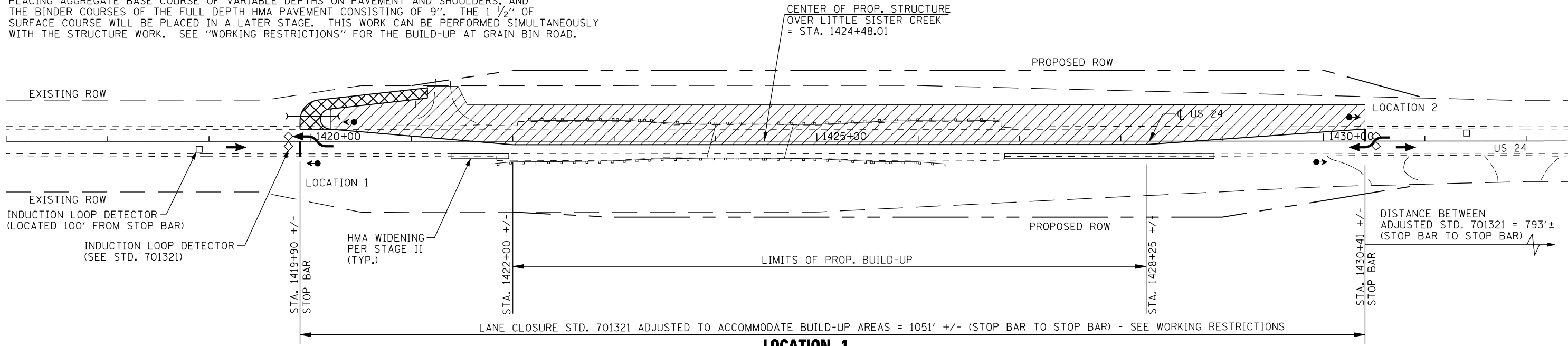
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	28
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



STAGE III NOTES

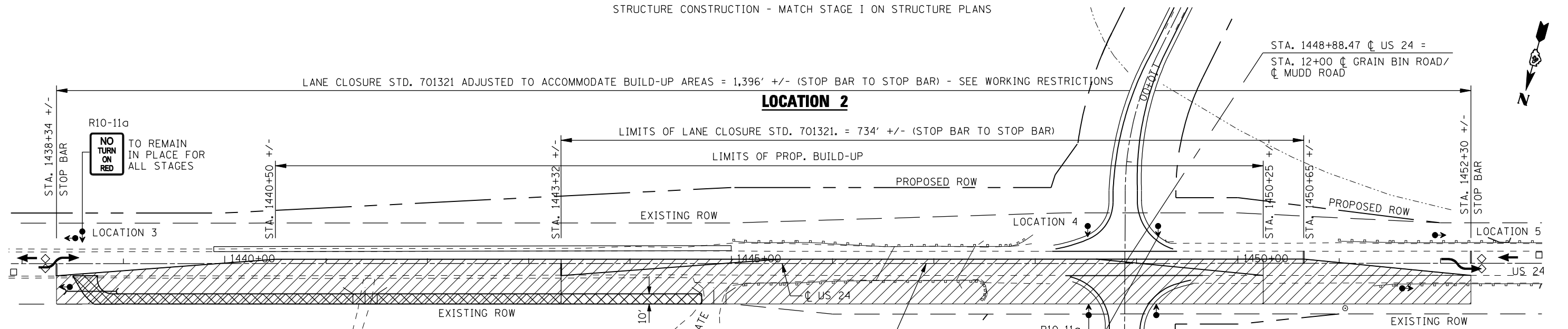
1. INSTALL TEMPORARY CULVERTS AND CONSTRUCT TEMPORARY ACCESS AT LOCATIONS AS SHOWN PRIOR TO SETTING UP STANDARD 701321 LANE CLOSURES AT BIG AND LITTLE SISTER CREEKS.
2. REMOVE NORTH HALF OF EXISTING STRUCTURE AND CONSTRUCT NEW NORTH HALF STRUCTURE OVER BIG SISTER CREEK AND THE SOUTH HALF STRUCTURE OVER LITTLE SISTER CREEK. EMBANKMENT SHOULD BE PLACED AS SOON AS POSSIBLE TO ALLOW FOR SETTLEMENT.
3. CONSTRUCT US 24 PAVEMENT BUILD-UP AREAS WITHIN THE CLOSURES. THIS SHALL CONSIST OF PLACING AGGREGATE BASE COURSE OF VARIABLE DEPTHS ON PAVEMENT AND SHOULDERS, AND THE BINDER COURSES OF THE FULL DEPTH HMA PAVEMENT CONSISTING OF 9". THE 1 1/2" OF SURFACE COURSE WILL BE PLACED IN A LATER STAGE. THIS WORK CAN BE PERFORMED SIMULTANEOUSLY WITH THE STRUCTURE WORK. SEE "WORKING RESTRICTIONS" FOR THE BUILD-UP AT GRAIN BIN ROAD.

4. CONSTRUCT ENTRANCES WITHIN THE CLOSURES AND COMPLETE FINAL GRADING AND SEEDING.
5. CONSTRUCT TEMPORARY RAMPS AT THE APPROACH PAVEMENTS OF EACH STRUCTURE.
6. REMOVE AGGREGATE AND FABRIC USED FOR TEMPORARY ACCESS PRIOR TO SWITCHING TRAFFIC FOR STAGE IV CONSTRUCTION



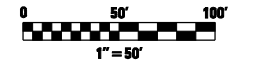
**LOCATION 1**

STRUCTURE CONSTRUCTION - MATCH STAGE I ON STRUCTURE PLANS



**LOCATION 2**

- SYMBOLS**
- WORK AREA
  - AGGREGATE FOR TEMPORARY ACCESS
  - TRAFFIC LANE
  - TRAFFIC SIGNAL (2 HEADS PER APPROACH)
  - INDUCTION LOOP DETECTOR
  - INDUCTION LOOP DETECTOR



FILE NAME = SFILES

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DRAWN - JL / RY	REVISOR -	
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PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -






**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

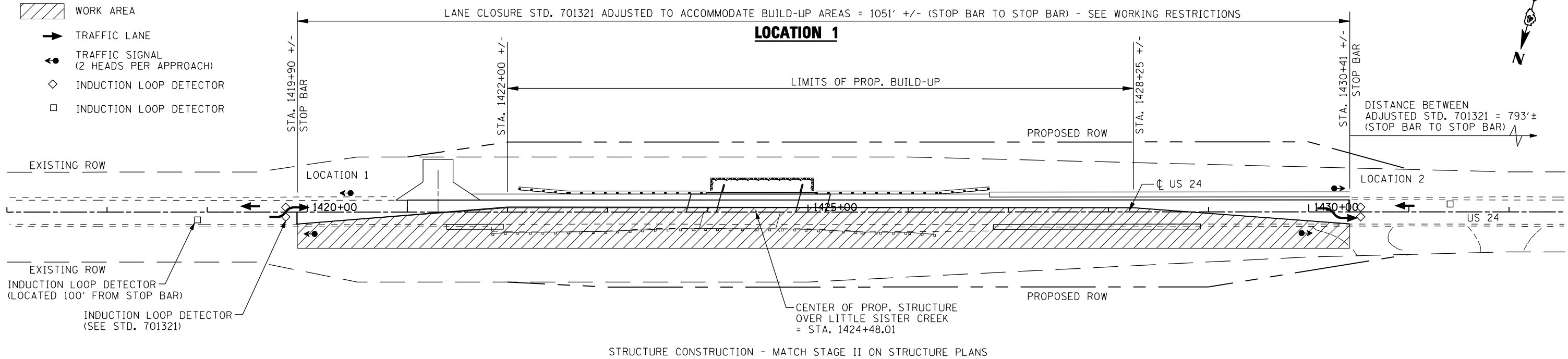
**TRAFFIC CONTROL PLAN - STAGE III**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 29
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

**SYMBOLS**

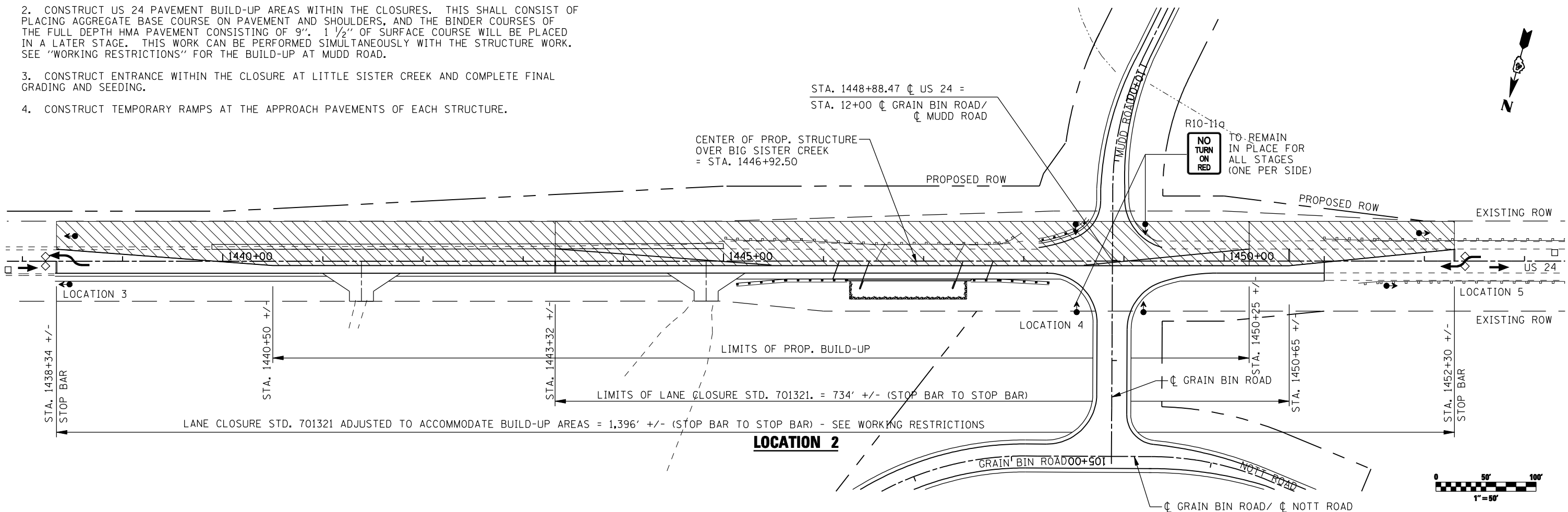
-  WORK AREA
-  TRAFFIC LANE
-  TRAFFIC SIGNAL (2 HEADS PER APPROACH)
-  INDUCTION LOOP DETECTOR
-  INDUCTION LOOP DETECTOR



STRUCTURE CONSTRUCTION - MATCH STAGE II ON STRUCTURE PLANS

STAGE IV NOTES

1. REMOVE SOUTH HALF OF EXISTING STRUCTURE AND CONSTRUCT NEW SOUTH HALF STRUCTURE OVER BIG SISTER CREEK AND THE NORTH HALF STRUCTURE OVER LITTLE SISTER CREEK. EMBANKMENT SHOULD BE PLACED AS SOON AS POSSIBLE TO ALLOW FOR SETTLEMENT.
2. CONSTRUCT US 24 PAVEMENT BUILD-UP AREAS WITHIN THE CLOSURES. THIS SHALL CONSIST OF PLACING AGGREGATE BASE COURSE ON PAVEMENT AND SHOULDERS, AND THE BINDER COURSES OF THE FULL DEPTH HMA PAVEMENT CONSISTING OF 9" 1 1/2" OF SURFACE COURSE WILL BE PLACED IN A LATER STAGE. THIS WORK CAN BE PERFORMED SIMULTANEOUSLY WITH THE STRUCTURE WORK. SEE "WORKING RESTRICTIONS" FOR THE BUILD-UP AT MUDD ROAD.
3. CONSTRUCT ENTRANCE WITHIN THE CLOSURE AT LITTLE SISTER CREEK AND COMPLETE FINAL GRADING AND SEEDING.
4. CONSTRUCT TEMPORARY RAMPS AT THE APPROACH PAVEMENTS OF EACH STRUCTURE.



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DRAWN - JL / RY	REVISED -	
PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

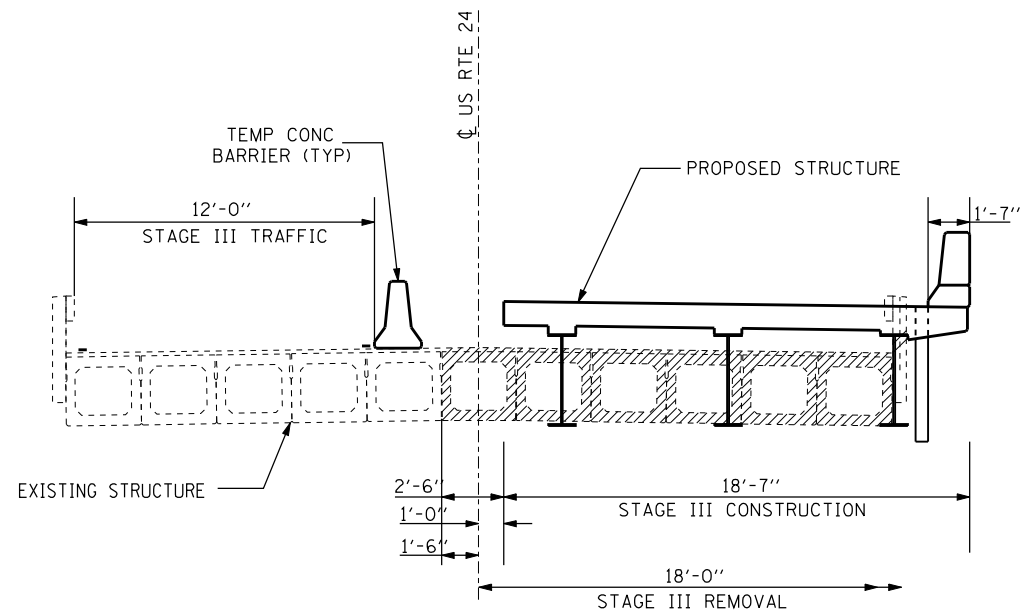
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL PLAN - STAGE IV**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 30
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

FILE NAME = SFLEL5

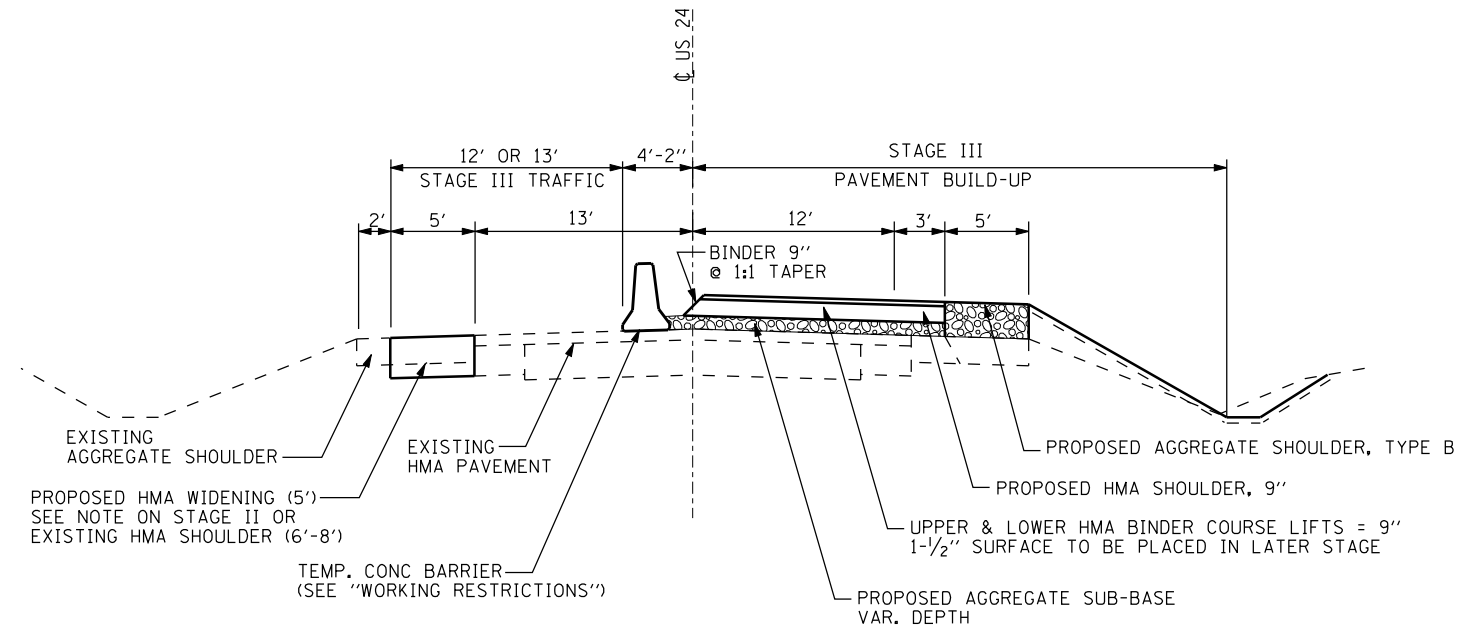
SCALE: SHEET NO. 4 OF 5 SHEETS STA. TO STA.



**STAGE III**

LOOKING WEST  
FROM STA. 1424+08.38 TO STA. 1424+87.63

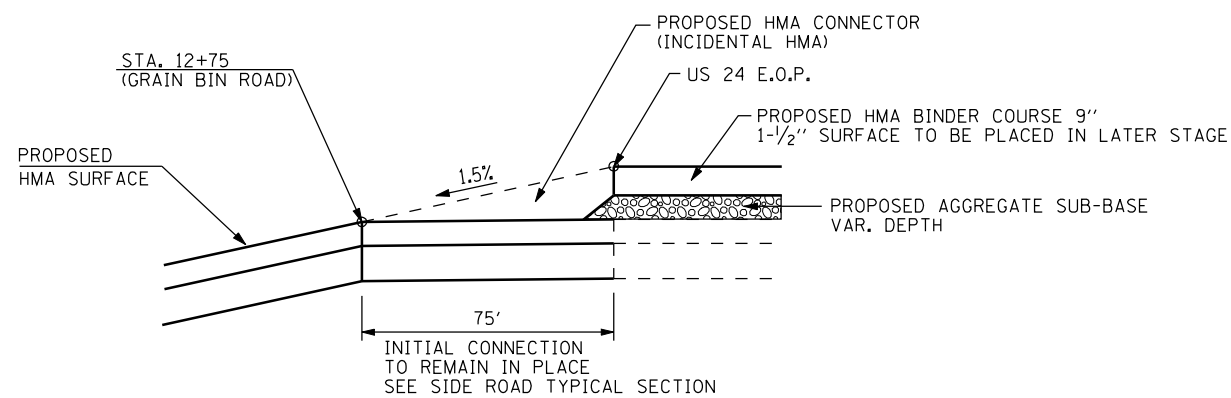
LOOKING EAST  
FROM STA. 1446+45.75 TO STA. 1447+39.25



**STAGE III ROADWAY**

LOOKING WEST  
FROM STA. 1422+01.00 TO STA. 1423+78.38  
FROM STA. 1425+17.65 TO STA. 1428+31

LOOKING EAST  
FROM STA. 1440+60 TO STA. 1446+15.75  
FROM STA. 1447+69.24 TO STA. 1450+08



**CONNECTION DETAIL - STAGE III  
GRAIN BIN ROAD**

STAGE V NOTES ( SEE "WORKING RESTRICTIONS" FOR EXCEPTION TO THIS)

1. MILL MAINLINE PAVEMENT.
2. ADDRESS ANY SETTLEMENT ISSUES IN THE PAVEMENT BUILD-UP AREAS AS DESCRIBED IN THE SPECIAL PROVISION, "SETTLEMENT PLATFORMS".
3. CONSTRUCT IMPROVEMENTS ON SHELBY ROAD AND REMAINING ENTRANCES.
4. PLACE LEVELING BINDER AS PER TYPICAL AND SETTLEMENT DETERMINATIONS.
5. PLACE SURFACE ON ENTIRE PROJECT.
6. PLACE PAVEMENT MARKINGS AND FINISH ANY REMAINING ITEMS.

FILE NAME =  
SFILES



USER NAME = *USER*	DESIGNED - JL / RY	REVISED -
DRAWN - JL / RY	CHECKED - JES	REVISED -
PLOT SCALE = *SCALE*	DATE - 12-17-2012	REVISED -
PLOT DATE = *DATE*		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL PLAN - STAGING DETAILS  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 5 OF 5 SHEETS STA. TO STA.

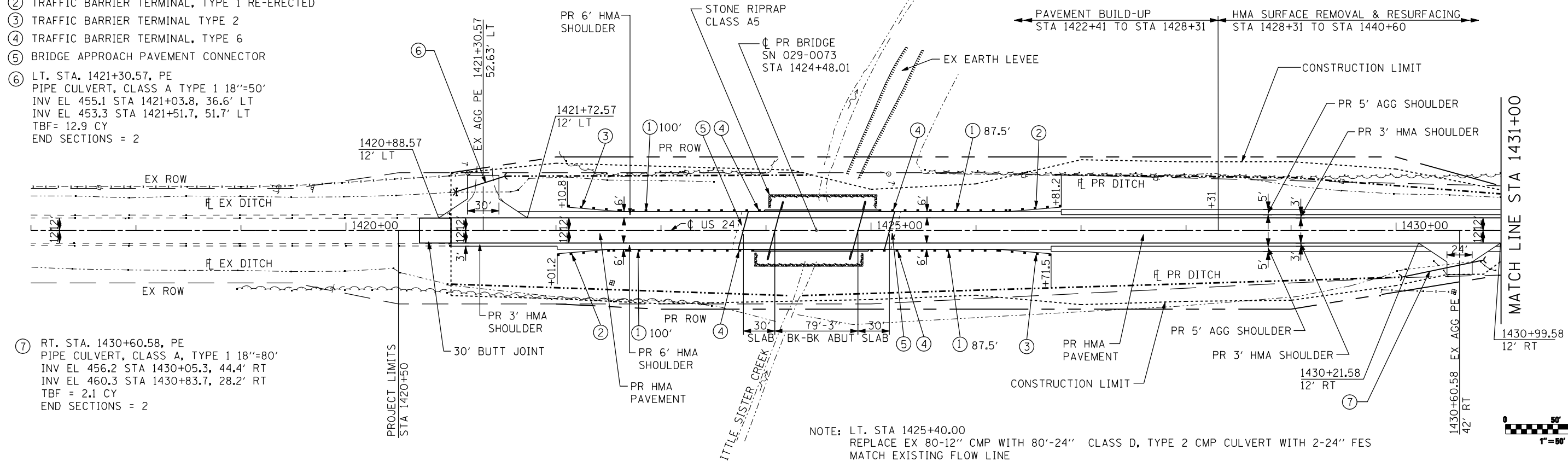
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	31
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

**LEGEND**

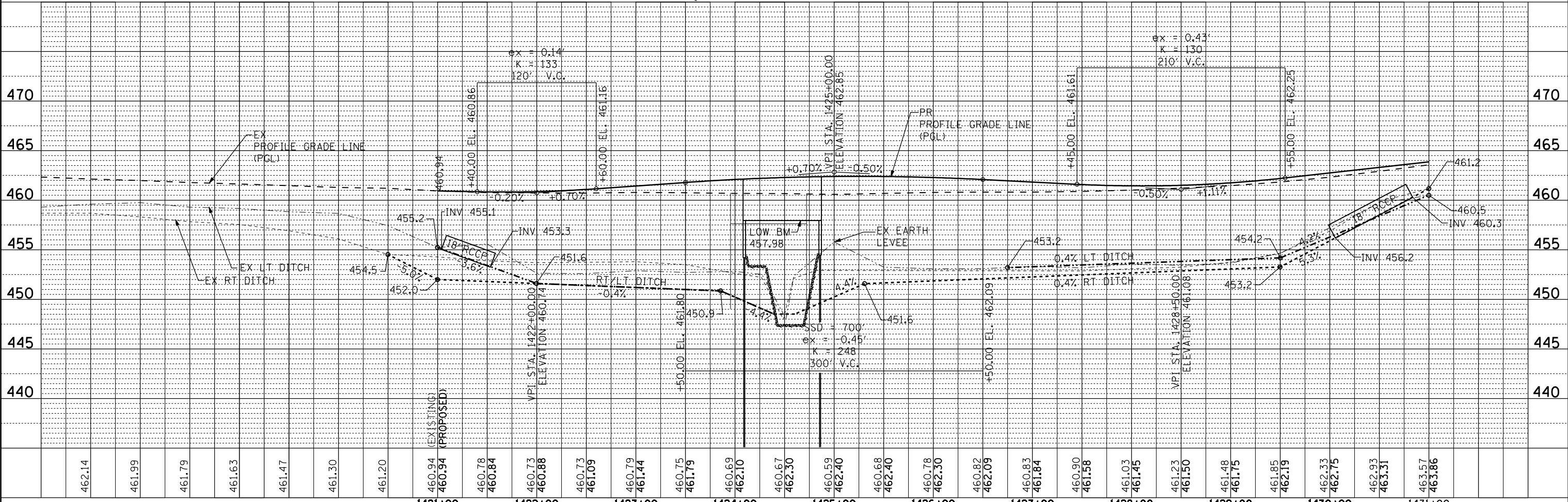
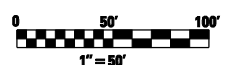
- ① STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS
- ② TRAFFIC BARRIER TERMINAL, TYPE 1 RE-ERECTED
- ③ TRAFFIC BARRIER TERMINAL TYPE 2
- ④ TRAFFIC BARRIER TERMINAL, TYPE 6
- ⑤ BRIDGE APPROACH PAVEMENT CONNECTOR
- ⑥ LT. STA. 1421+30.57, PE  
PIPE CULVERT, CLASS A TYPE 1 18"-50"  
INV EL 455.1 STA 1421+03.8, 36.6' LT  
INV EL 453.3 STA 1421+51.7, 51.7' LT  
TBF= 12.9 CY  
END SECTIONS = 2
- ⑦ RT. STA. 1430+60.58, PE  
PIPE CULVERT, CLASS A, TYPE 1 18"-80"  
INV EL 456.2 STA 1430+05.3, 44.4' RT  
INV EL 460.3 STA 1430+83.7, 28.2' RT  
TBF = 2.1 CY  
END SECTIONS = 2

PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NOTE BOOK NO.	
	CADD FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NOTE BOOK NO.	
	CADD FILE NAME	



NOTE: LT. STA 1425+40.00  
REPLACE EX 80'-12" CMP WITH 80'-24" CLASS D, TYPE 2 CMP CULVERT WITH 2-24" FES  
MATCH EXISTING FLOW LINE



462.14	461.99	461.79	461.63	461.47	461.30	461.20	460.94	460.78	460.84	460.73	460.88	460.73	461.09	460.79	461.44	460.75	461.79	460.69	462.10	460.67	462.30	460.59	462.40	460.68	462.40	460.78	462.30	460.82	462.09	460.83	461.84	460.90	461.58	461.03	461.45	461.23	461.50	461.48	461.75	461.85	462.19	462.33	462.75	462.93	463.31	463.57	463.86									
																									1421+00	1422+00	1423+00	1424+00	1425+00	1426+00	1427+00	1428+00	1429+00	1430+00	1431+00																					
<p><b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b></p> <p><b>PROPOSED IMPROVEMENT PLAN, PROFILE &amp; DRAINAGE</b> <b>US RTE 24 OVER BIG SISTER CREEK &amp; LITTLE SISTER CREEK</b></p> <p>SCALE: 1" = 50'    SHEET NO. 1 OF 4 SHEETS    STA. 1421+00 TO STA. 1431+00</p>																																																								
<table border="1"> <tr> <td>USER NAME = #USER#</td><td>DESIGNED - JL/RJ</td><td>REVISED -</td> <td>F.A.P. RTE.</td><td>SECTION</td><td>COUNTY</td><td>TOTAL SHEETS</td><td>SHEET NO.</td> </tr> <tr> <td>DRAWN - JL/RJ</td><td>REVISIED -</td><td></td> <td>317</td><td>(137 BR, BR-1) BR</td><td>FULTON</td><td>118</td><td>32</td> </tr> <tr> <td>PLOT SCALE = #SCALE#</td><td>CHECKED - JES</td><td>REVISED -</td> <td colspan="5">CONTRACT NO. 68699</td> </tr> <tr> <td>PLOT DATE = #DATE#</td><td>DATE - 12-07-2012</td><td>REVISED -</td> <td colspan="5">ILLINOIS FED. AID PROJECT</td> </tr> </table>																									USER NAME = #USER#	DESIGNED - JL/RJ	REVISED -	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	DRAWN - JL/RJ	REVISIED -		317	(137 BR, BR-1) BR	FULTON	118	32	PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -	CONTRACT NO. 68699					PLOT DATE = #DATE#	DATE - 12-07-2012	REVISED -	ILLINOIS FED. AID PROJECT				
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DRAWN - JL/RJ	REVISIED -		317	(137 BR, BR-1) BR	FULTON	118	32																																																	
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PLOT DATE = #DATE#	DATE - 12-07-2012	REVISED -	ILLINOIS FED. AID PROJECT																																																					



PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
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	WORK	
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PROFILE	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
	AT	
	WORK	
	NO.	
	DATE	

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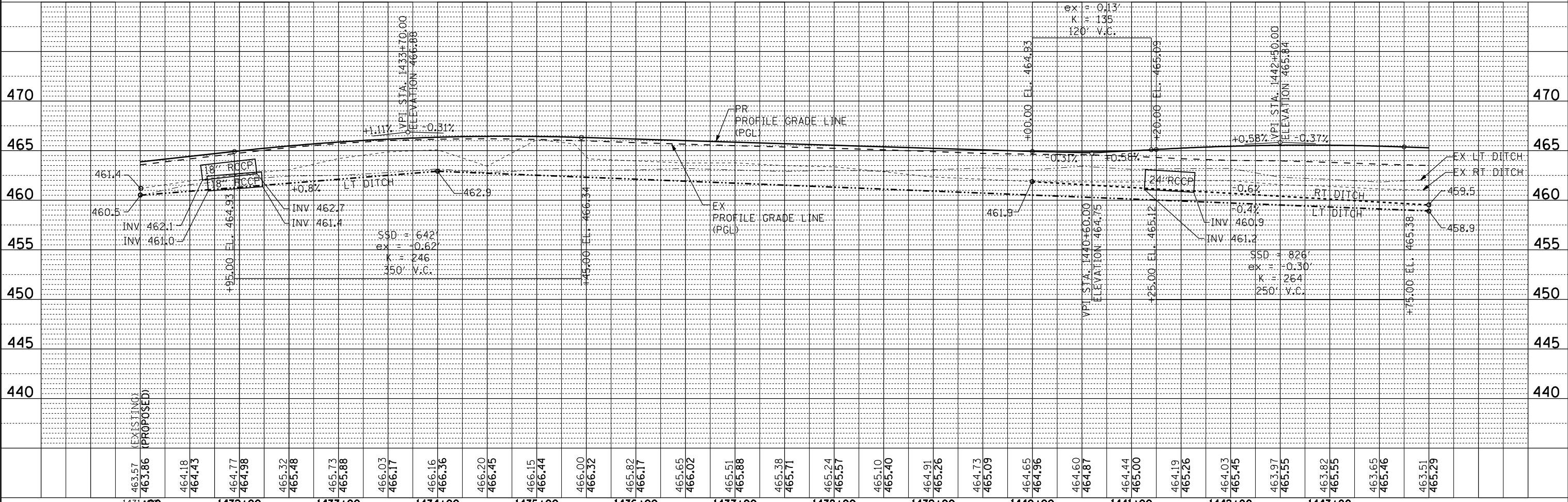
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PROPOSED IMPROVEMENT PLAN, PROFILE & DRAINAGE  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: 1" = 50' SHEET NO. 2 OF 4 SHEETS STA. 1431+00 TO STA. 1444+00

F.A.P. RTE. 317	SECTION (137 BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 33
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



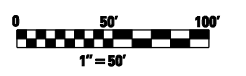
MATCH LINE STA 1431+00

MATCH LINE STA 1444+00

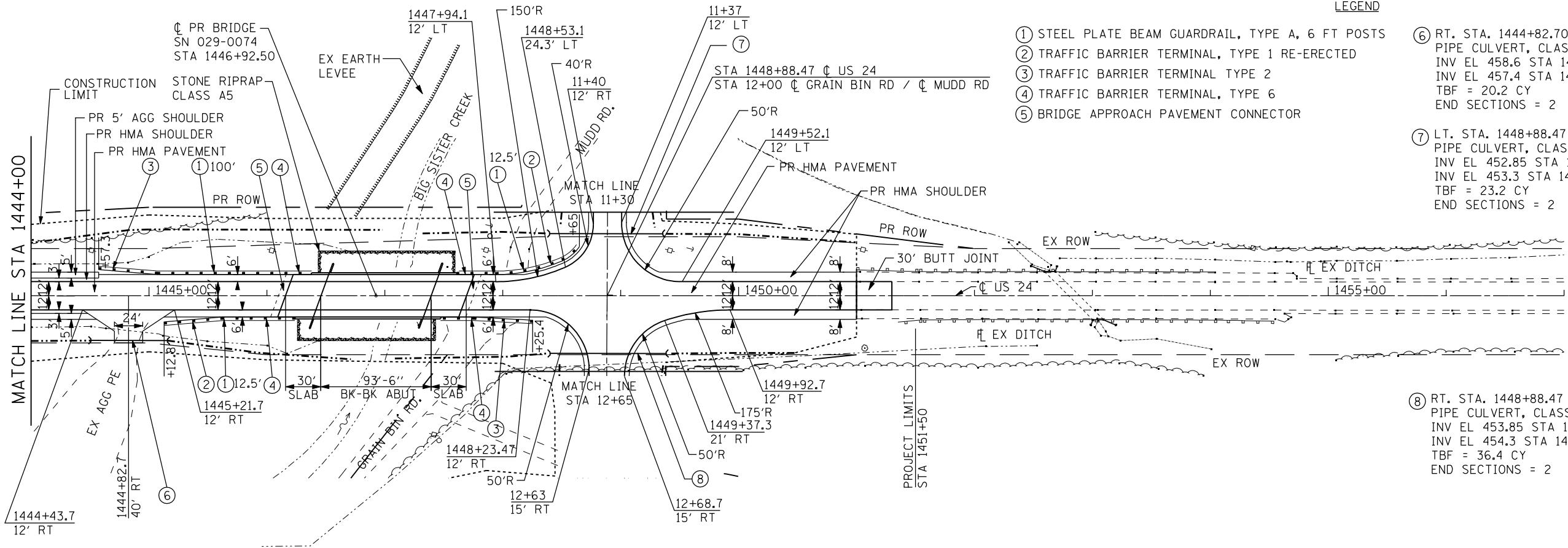
- LEGEND**
- ① LT. STA. 1431+93.55, FE  
PIPE CULVERT, CLASS A, TYPE 1 18"-55'  
INV EL 461.0 STA 1431+67.6, 29.7' LT  
INV EL 461.4 STA 1432+22.6, 29.7' LT  
TBF = 6.7 CY  
END SECTIONS = 2
  - ② RT. STA. 1431+93.55, CE  
PIPE CULVERT, CLASS A, TYPE 1 18"-55'  
INV EL 462.1 STA 1431+62.7, 29' RT  
INV EL 462.7 STA 1432+17.7, 29' RT  
TBF = 3.0 CY  
END SECTIONS = 2
  - ③ RT. STA. 1441+39.00, FE  
PIPE CULVERT, CLASS A, TYPE 1 24"-50'  
INV EL 461.1 STA 1441+13.6, 21.8' RT  
INV EL 460.8 STA 1441+63.6, 21.8' RT  
TBF = 20.2 CY  
END SECTIONS = 2

HMA SURFACE REMOVAL & RESURFACING STA 1428+31 TO STA 1440+60  
PAVEMENT BUILD-UP STA 1440+60 TO STA 1450+08

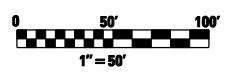
**NOTE:**  
1. ARCHAEOLOGICAL SURVEY INDICATES SENSITIVE MATERIAL MAY BE PRESENT IN THIS AREA. CONTRACTOR SHALL NOT GRADE, EXCAVATE, OR DISTURB THE DITCH BOTTOM OR BACK SLOPE WITHIN THE ROW. STA 1431+00 TO 1440+00



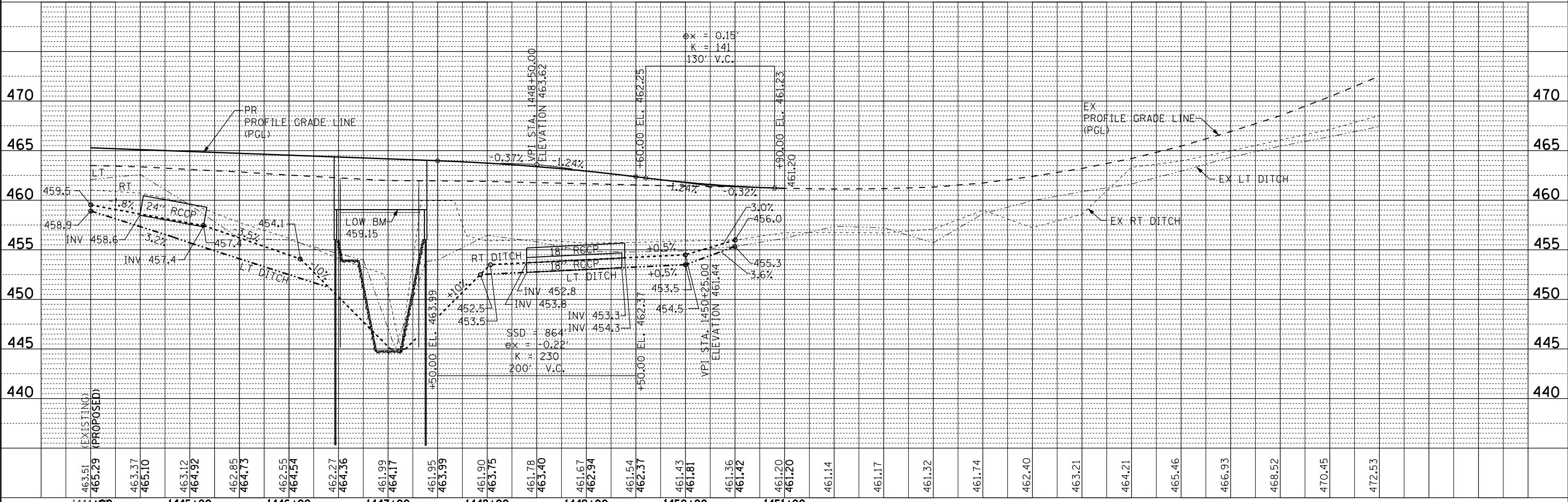
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NOTE BOOK	PLOTTED	BY
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- LEGEND**
- ① STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS
  - ② TRAFFIC BARRIER TERMINAL, TYPE 1 RE-ERECTED
  - ③ TRAFFIC BARRIER TERMINAL TYPE 2
  - ④ TRAFFIC BARRIER TERMINAL, TYPE 6
  - ⑤ BRIDGE APPROACH PAVEMENT CONNECTOR
  - ⑥ RT. STA. 1444+82.70, PE  
PIPE CULVERT, CLASS A, TYPE 2 24"=65'  
INV EL 458.6 STA 1444+51, 37.7' RT  
INV EL 457.4 STA 1445+16, 37.7' RT  
TBF = 20.2 CY  
END SECTIONS = 2
  - ⑦ LT. STA. 1448+88.47  
PIPE CULVERT, CLASS A, TYPE 2 18"=91'  
INV EL 452.85 STA 1448+40, 52.7' LT  
INV EL 453.3 STA 1449+31, 52.7' LT  
TBF = 23.2 CY  
END SECTIONS = 2
  - ⑧ RT. STA. 1448+88.47  
PIPE CULVERT, CLASS A, TYPE 2 18"=93'  
INV EL 453.85 STA 1448+40, 48.8' RT  
INV EL 454.3 STA 1449+33, 48.8' RT  
TBF = 36.4 CY  
END SECTIONS = 2



PROFILE	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
	AT	
	FILE NAME	



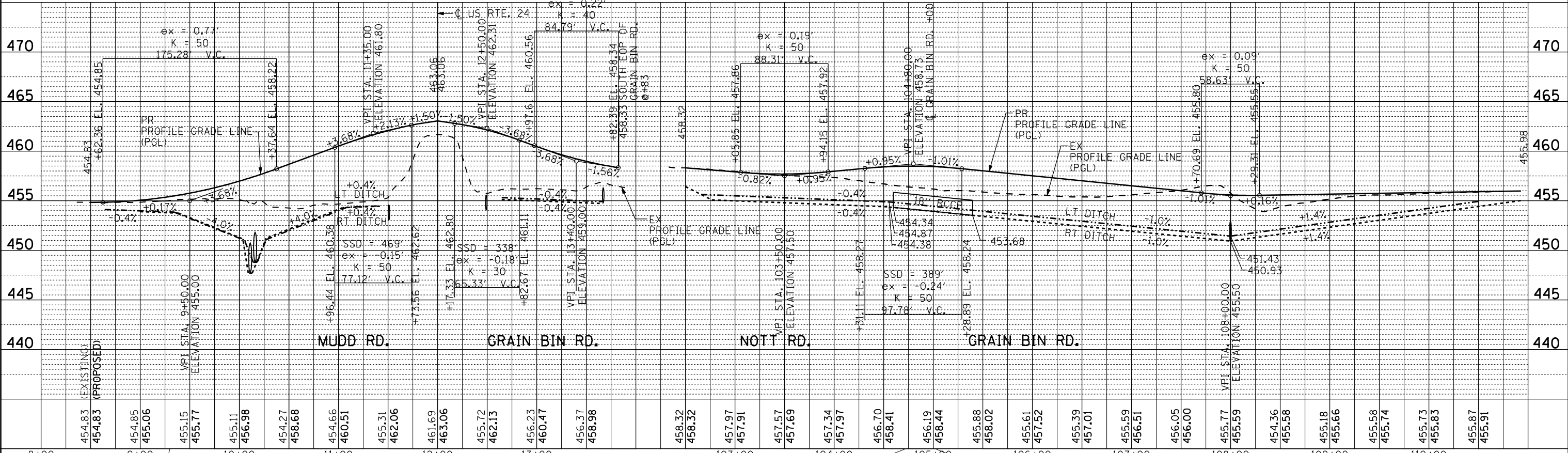
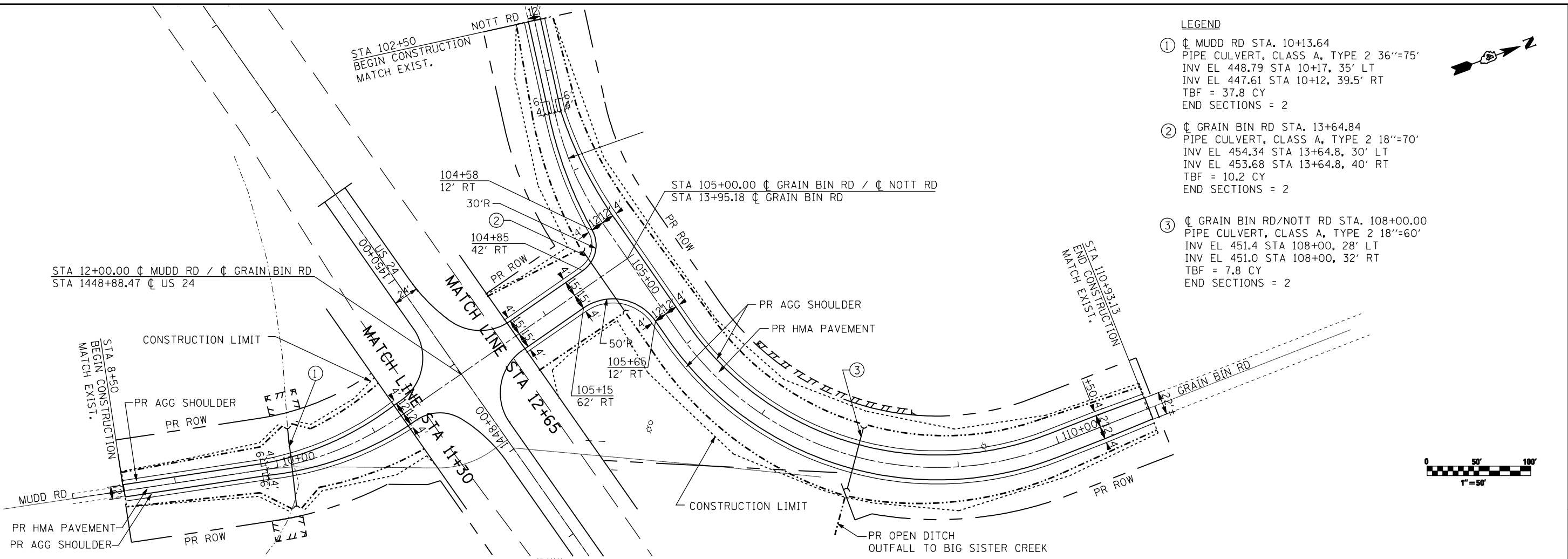
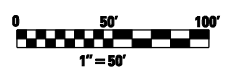
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SCALE: 1" = 50'    SHEET NO. 3 OF 4 SHEETS    STA. 1444+00 TO STA. 1451+00

PLAN	SURVEYED	DATE
	PLOTTED	
	NOTED	
	CHECKED	
	BY	
	NO. BOOK	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	NOTED	
	CHECKED	
	BY	
	NO. BOOK	
	FILE NAME	

- LEGEND**
- ①  $\phi$  MUDD RD STA. 10+13.64  
PIPE CULVERT, CLASS A, TYPE 2 36"-75'  
INV EL 448.79 STA 10+17, 35' LT  
INV EL 447.61 STA 10+12, 39.5' RT  
TBF = 37.8 CY  
END SECTIONS = 2
  - ②  $\phi$  GRAIN BIN RD STA. 13+64.84  
PIPE CULVERT, CLASS A, TYPE 2 18"-70'  
INV EL 454.34 STA 13+64.8, 30' LT  
INV EL 453.68 STA 13+64.8, 40' RT  
TBF = 10.2 CY  
END SECTIONS = 2
  - ③  $\phi$  GRAIN BIN RD/NOTT RD STA. 108+00.00  
PIPE CULVERT, CLASS A, TYPE 2 18"-60'  
INV EL 451.4 STA 108+00, 28' LT  
INV EL 451.0 STA 108+00, 32' RT  
TBF = 7.8 CY  
END SECTIONS = 2



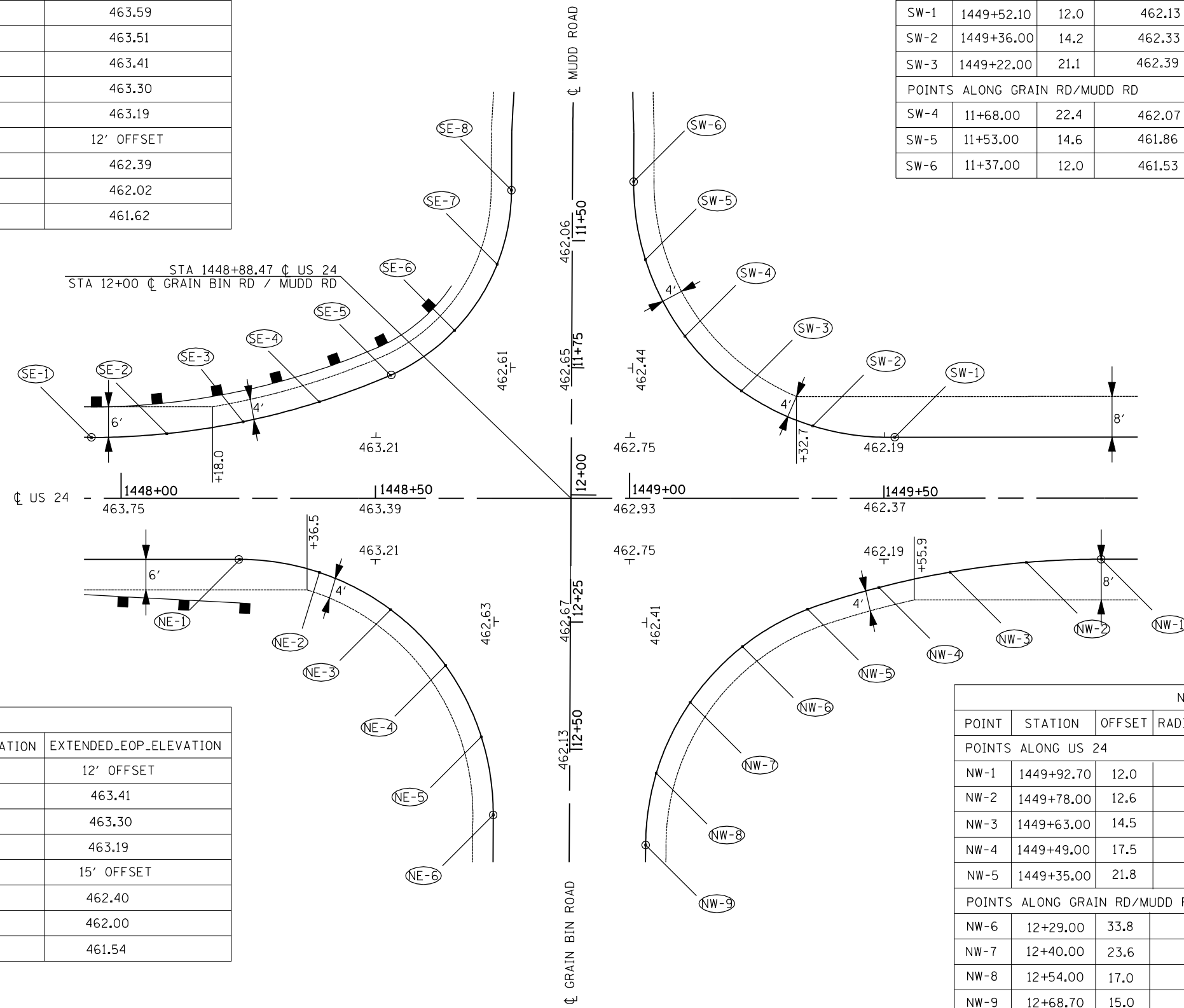
	USER NAME = #USER# DESIGNED - JL/RY DRAWN - JL/RY CHECKED - JES DATE - 12-07-2012	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROPOSED IMPROVEMENT PLAN, PROFILE &amp; DRAINAGE US RTE 24 OVER BIG SISTER CREEK &amp; LITTLE SISTER CREEK</b>	F.A.P. RT. 317 SECTION (137 BR, BR-1) BR COUNTY FULTON TOTAL SHEETS 118 SHEET NO. 35 CONTRACT NO. 68699
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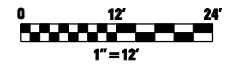
SOUTH EAST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
SE-1	1447+94.10	12.0	463.59	463.59
SE-2	1448+09.00	12.7	463.50	463.51
SE-3	1448+24.00	15.1	463.36	463.41
SE-4	1448+39.00	19.0	463.20	463.30
SE-5	1448+53.00	24.2	463.01	463.19
POINTS ALONG GRAIN RD/MUDD RD				12' OFFSET
SE-6	11+67.00	22.9	462.30	462.39
SE-7	11+54.00	14.5	461.99	462.02
SE-8	11+40.00	12.0	461.62	461.62

SOUTH WEST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
SW-1	1449+52.10	12.0	462.13	462.16
SW-2	1449+36.00	14.2	462.33	462.36
SW-3	1449+22.00	21.1	462.39	462.53
POINTS ALONG GRAIN RD/MUDD RD				12' OFFSET
SW-4	11+68.00	22.4	462.07	462.27
SW-5	11+53.00	14.6	461.86	461.91
SW-6	11+37.00	12.0	461.53	461.53



NORTH EAST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
NE-1	1448+23.47	12.0	463.41	463.41
NE-2	1448+39.00	14.6	463.26	463.30
NE-3	1448+53.00	21.9	463.04	463.19
POINTS ALONG GRAIN RD/MUDD RD				15' OFFSET
NE-4	12+33.00	24.5	462.33	462.40
NE-5	12+47.00	17.4	461.97	462.00
NE-6	12+63.00	15.0	461.54	461.54

NORTH WEST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
NW-1	1449+92.70	12.0	461.70	461.70
NW-2	1449+78.00	12.6	461.84	461.85
NW-3	1449+63.00	14.5	461.98	462.02
NW-4	1449+49.00	17.5	462.12	462.20
NW-5	1449+35.00	21.8	462.22	462.37
POINTS ALONG GRAIN RD/MUDD RD				15' OFFSET
NW-6	12+29.00	33.8	461.97	462.32
NW-7	12+40.00	23.6	461.88	462.06
NW-8	12+54.00	17.0	461.69	461.73
NW-9	12+68.70	15.0	461.39	461.39



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USER NAME = #USER#	DESIGNED - JL / RY	REVISED -
DRAWN - JL / RY	CHECKED - JES	REVISED -
PLOT SCALE = #SCALE#	DATE - 12-17-2012	REVISED -
PLOT DATE = #DATE#		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAILS**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

SCALE: SHEET NO. 1 OF 3 SHEETS STA. TO STA.

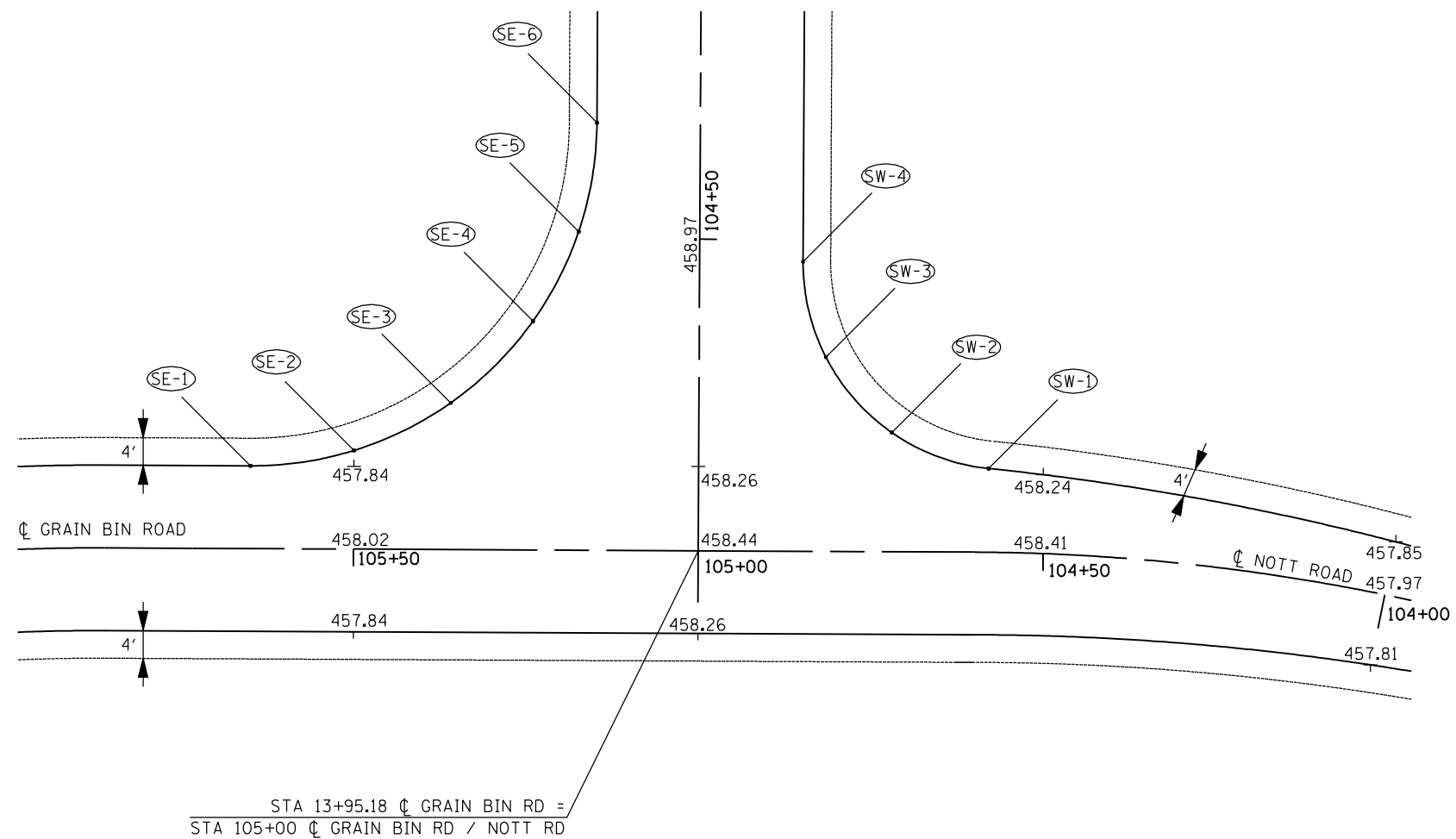
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	36
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				





SOUTH EAST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG GRAIN BIN RD/NOTT RD				12' OFFSET
SE-1	105+65.00	12.0	457.69	457.69
SE-2	105+50.00	14.3	457.81	457.84
SE-3	105+36.00	21.3	457.84	457.98
POINTS ALONG GRAIN BIN RD				15' OFFSET
SE-4	13+62.00	24.1	458.53	458.59
SE-5	13+49.00	17.6	458.83	458.85
SE-6	13+33.84	15.0	459.16	459.16

SOUTH WEST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG GRAIN BIN RD/NOTT RD				12' OFFSET
SW-1	104+58.00	12.0	458.27	458.27
SW-2	104+72.00	17.3	458.22	458.30
POINTS ALONG GRAIN RD				15' OFFSET
SW-3	13+67.00	18.4	458.48	458.50
SW-4	13+53.85	15.0	458.66	458.66



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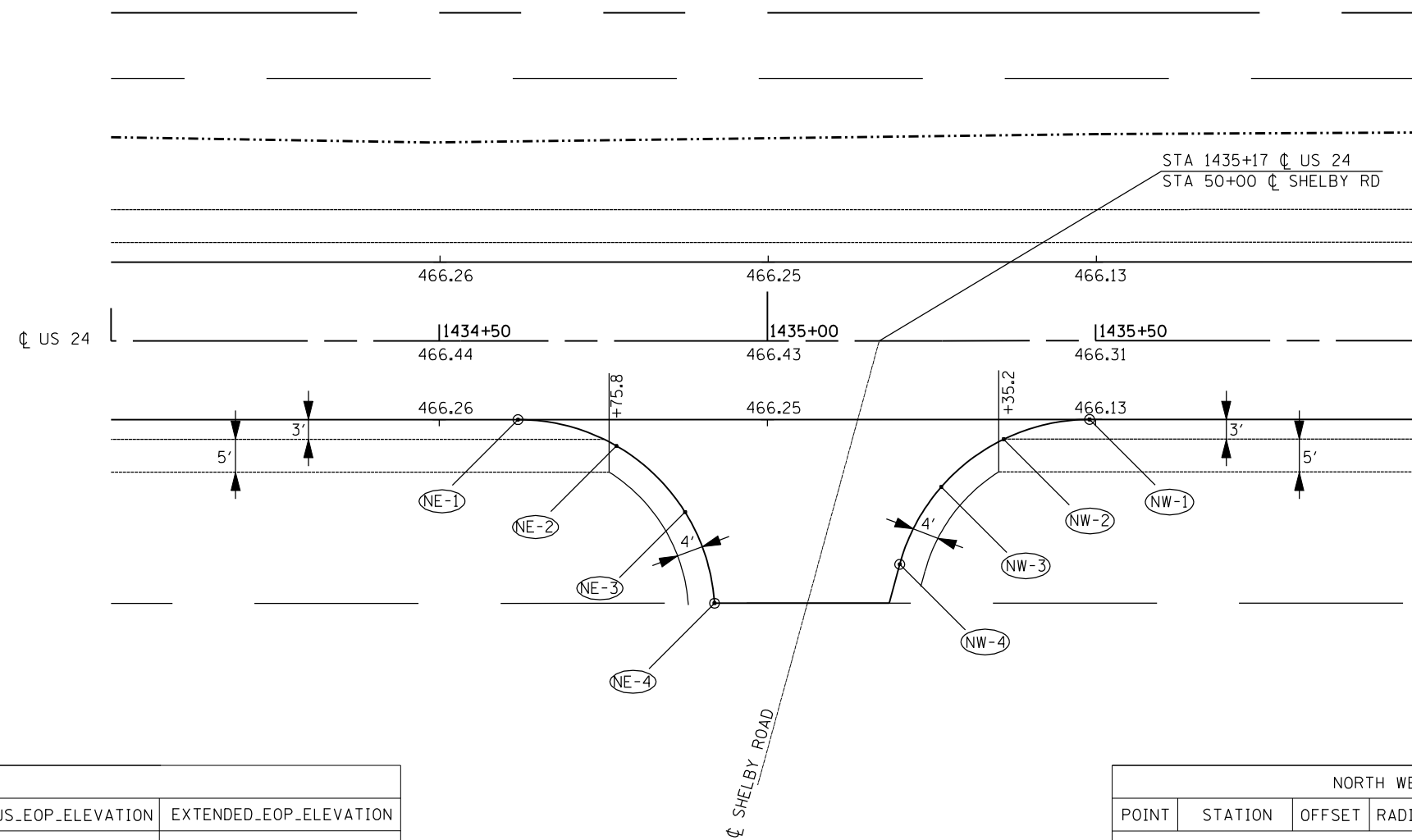
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAILS  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

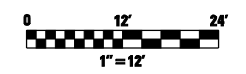
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	37
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



NORTH EAST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
NE-1	1434+62.00	12.0	466.27	466.27
NE-2	1434+77.00	16.0	466.21	466.27
POINTS ALONG SHELBY RD				14' OFFSET
NE-3	50+33.00	21.6	466.20	466.28
NE-4	50+45.00	14.0	466.31	466.31

NORTH WEST				
POINT	STATION	OFFSET	RADIUS_EOP_ELEVATION	EXTENDED_EOP_ELEVATION
POINTS ALONG US 24				12' OFFSET
NW-1	1435+49.00	12.0	466.14	466.14
NW-2	1435+36.00	15.0	466.14	466.18
POINTS ALONG SHELBY RD				12' OFFSET
NW-3	50+19.00	15.0	466.19	466.23
NW-4	50+32.05	12.0	466.25	466.25



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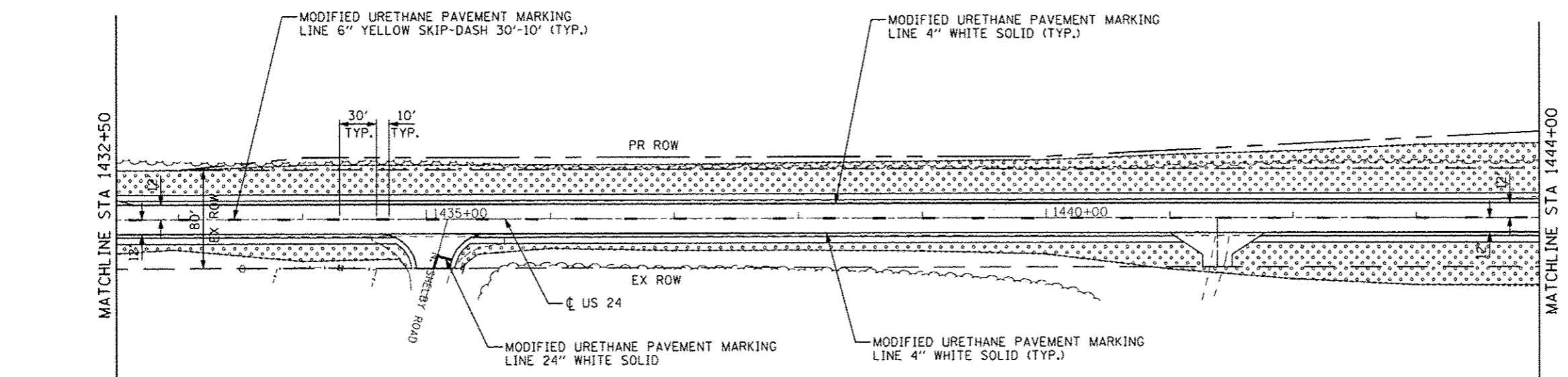
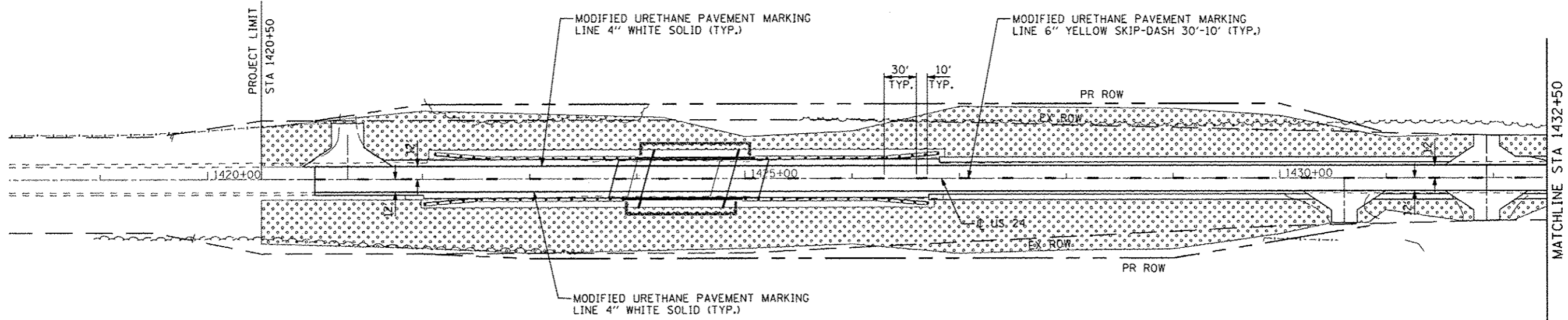
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PLOT DATE = *DATE*		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAILS**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 38
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



**LEGEND**

LANDSCAPING SEEDING, CLASS 2A



FILE NAME :  
#FILES :

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ARCHITECTS & ENGINEERS  
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USER NAME = *USER*	DESIGNED - JL / RY	REVISED -
PLOT SCALE = *SCALE*	DRAWN - JL / RY	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

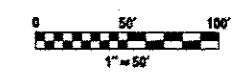
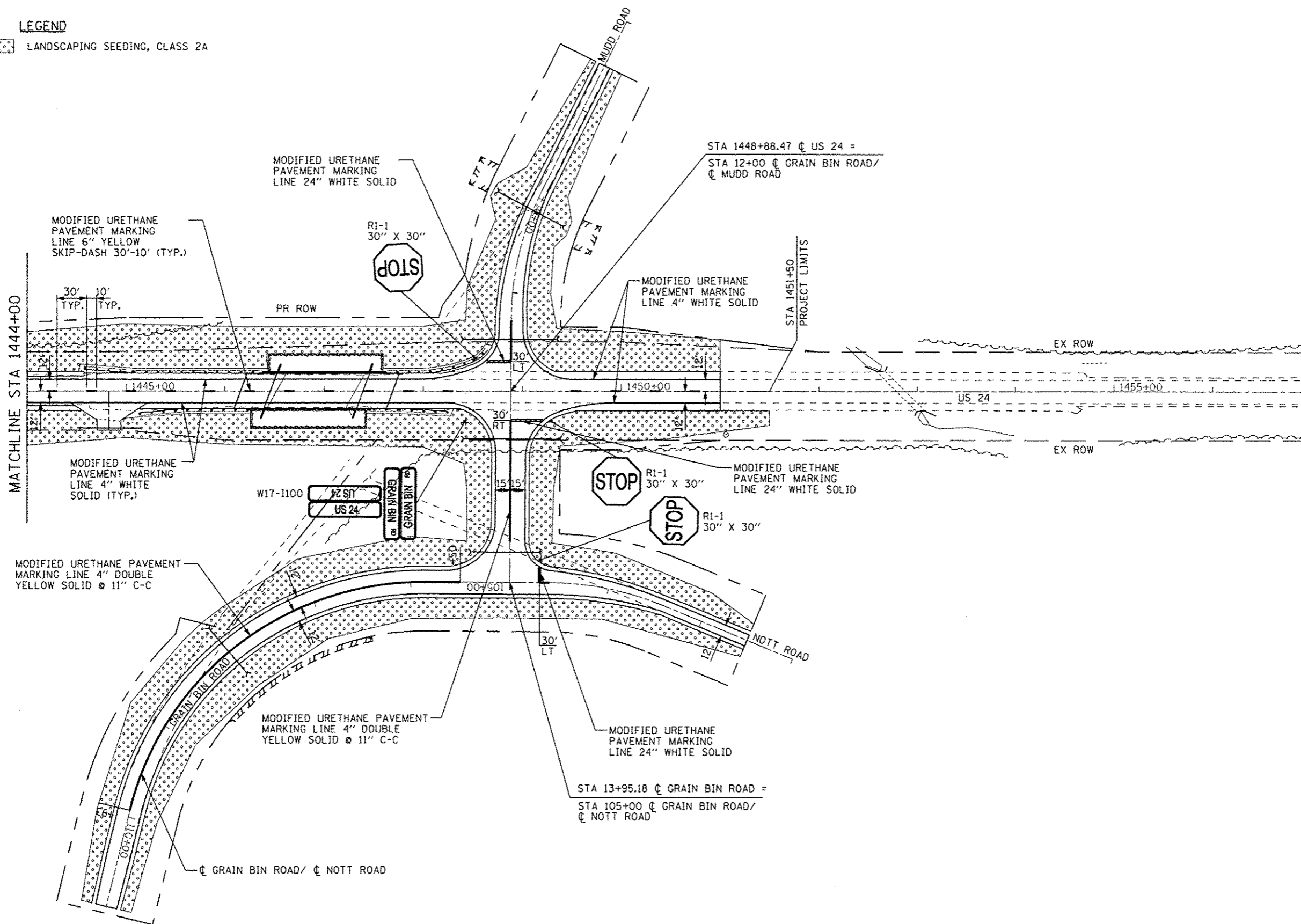
**PAVEMENT MARKING AND LANDSCAPING PLAN**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	39
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

**LEGEND**

 LANDSCAPING SEEDING, CLASS 2A



FILE NAME :  
#FILES#

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USER NAME - #USER#	DESIGNED - JL / RY	REVISED -
PL01 SCALE - #SCALE#	DRAWN - JL / RY	REVISED -
PL01 DATE - #DATE#	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -


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

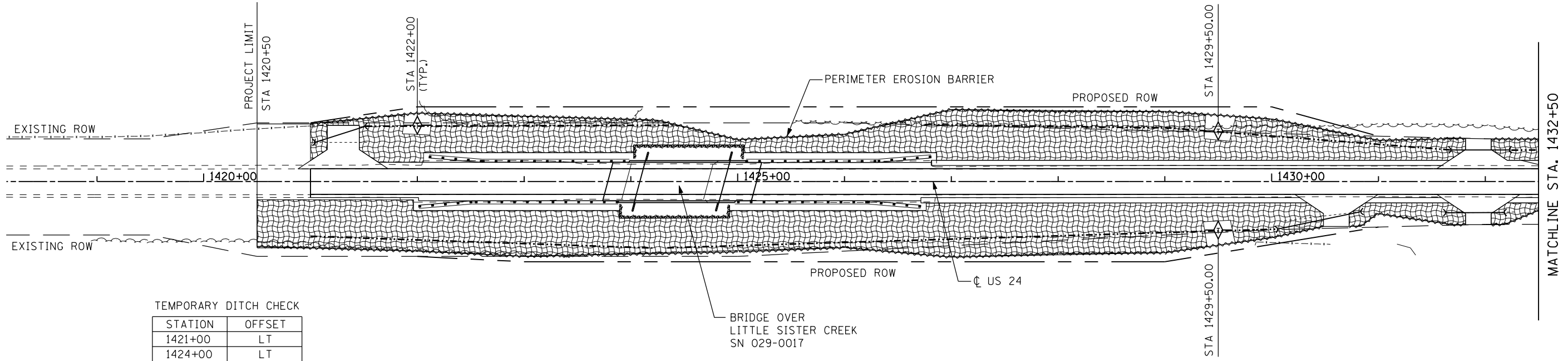
**PAVEMENT MARKING AND LANDSCAPING PLAN**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 40
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

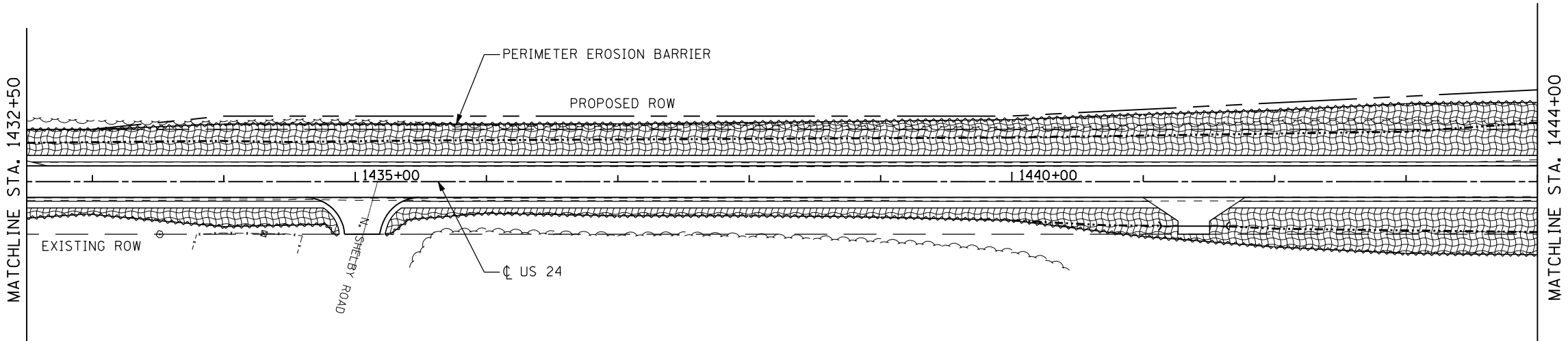
**LEGEND**

-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER (CONTINUOUS ALONG PROJECT LIMITS)
-  TEMPORARY DITCH CHECK (STANDARD 280001-01)



**TEMPORARY DITCH CHECK**

STATION	OFFSET
1421+00	LT
1424+00	LT
1425+00	LT
1429+50	LT
1430+00	LT
1430+50	LT
1420+50	RT
1421+00	RT
1423+80	RT
1425+00	RT
1429+50	RT
1430+00	RT
1430+50	RT



FILE NAME = SFILES



**STRUCTURE DESIGNS, INCORPORATED**  
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PH: (312) 561-9780 www.structuredesignsinc.com

USER NAME = *USER*	DESIGNED - JL / RY	REVISED -
PLOT SCALE = *SCALE*	DRAWN - JL / RY	REVISED -
PLOT DATE = *DATE*	CHECKED - JES	REVISED -
	DATE - 12-17-2012	REVISED -




**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

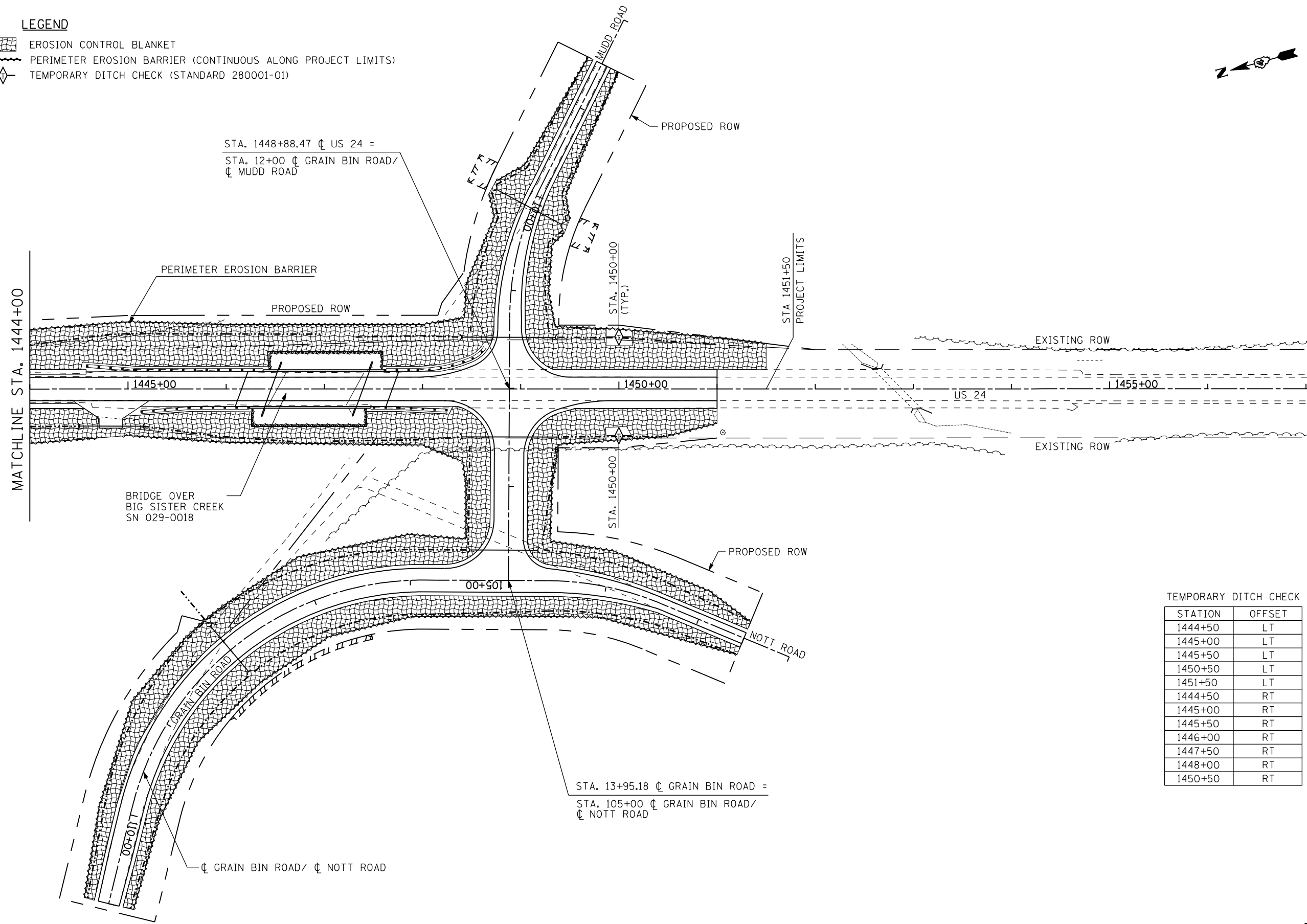
**TEMPORARY EROSION CONTROL  
US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 41
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

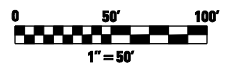
**LEGEND**

-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER (CONTINUOUS ALONG PROJECT LIMITS)
-  TEMPORARY DITCH CHECK (STANDARD 280001-01)



**TEMPORARY DITCH CHECK**

STATION	OFFSET
1444+50	LT
1445+00	LT
1445+50	LT
1450+50	LT
1451+50	LT
1444+50	RT
1445+00	RT
1445+50	RT
1446+00	RT
1447+50	RT
1448+00	RT
1450+50	RT



FILE NAME = SFILES



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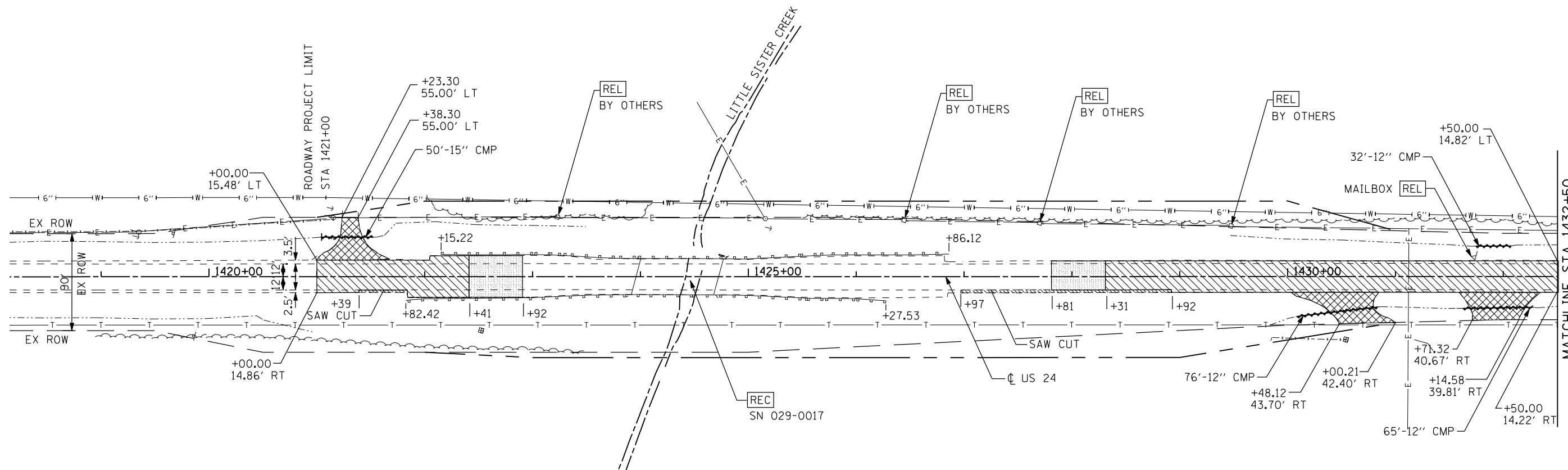
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	DRAWN - JL / RY	REVISED -
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PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY EROSION CONTROL**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

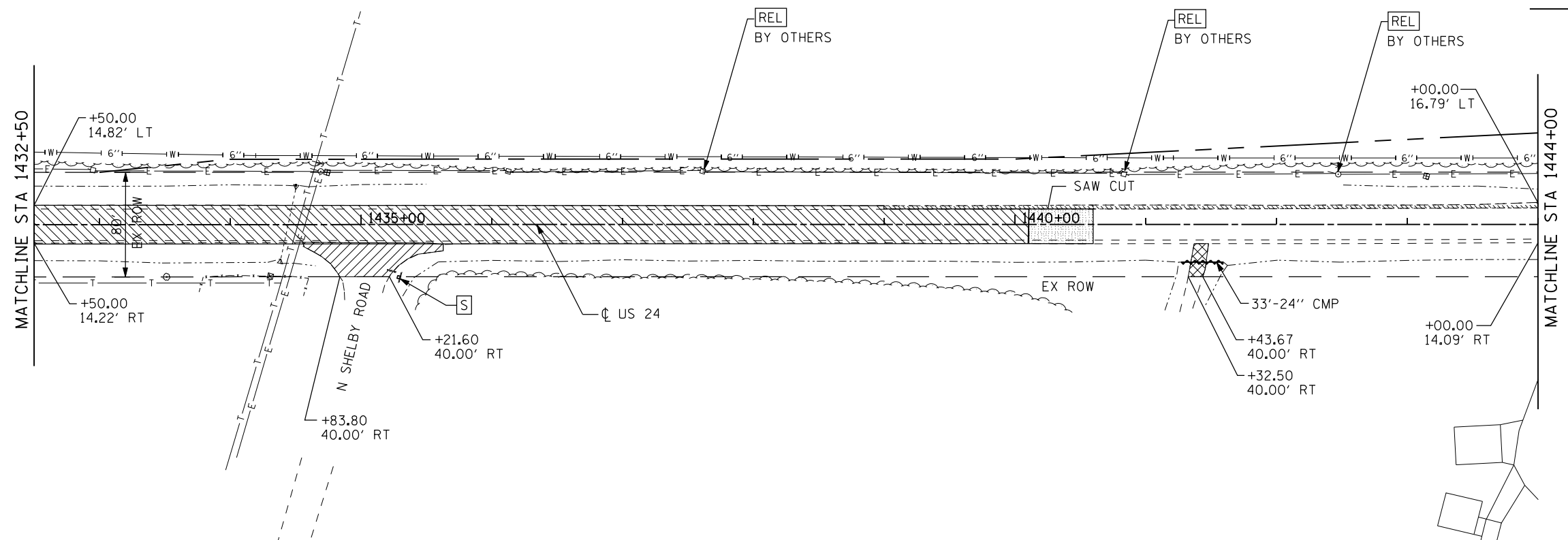
SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	42
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



**LEGEND**

-W- -W-	6"	EXISTING 6" WATER MAIN
-T- -T-		EXISTING BURIED AT&T CABLE
-E- -E-		EXISTING OVERHEAD ELECTRIC SERVICE
- - -		EXISTING RIGHT OF WAY
-□-		EXISTING POWER POLE
- - -		PROPOSED RIGHT OF WAY



**REMOVAL LEGEND**

- - -	GUARDRAIL REMOVAL
- - -	CULVERT REMOVAL
[Hatched Box]	PAVEMENT REMOVAL
[Hatched Box]	HMA SURFACE REMOVAL
[Hatched Box]	SHOULDER REMOVAL
[Cross-hatched Box]	AGGREGATE ENTRANCE REMOVAL
[Stippled Box]	BUTT JOINT
[REC Box]	STRUCTURE TO BE RECONSTRUCTED
[REL Box]	ITEM TO BE RELOCATED
[S Box]	SIGN REMOVAL
[REM Box]	ITEM TO BE REMOVED
[R+R Box]	TO BE REMOVED AND RE-ERECTED



FILE NAME = SFILES

**SDI**  
 STRUCTURE DESIGNS, INCORPORATED  
 ARCHITECTS & ENGINEERS  
 PH: (312) 561-9780 www.structuredesignsinc.com

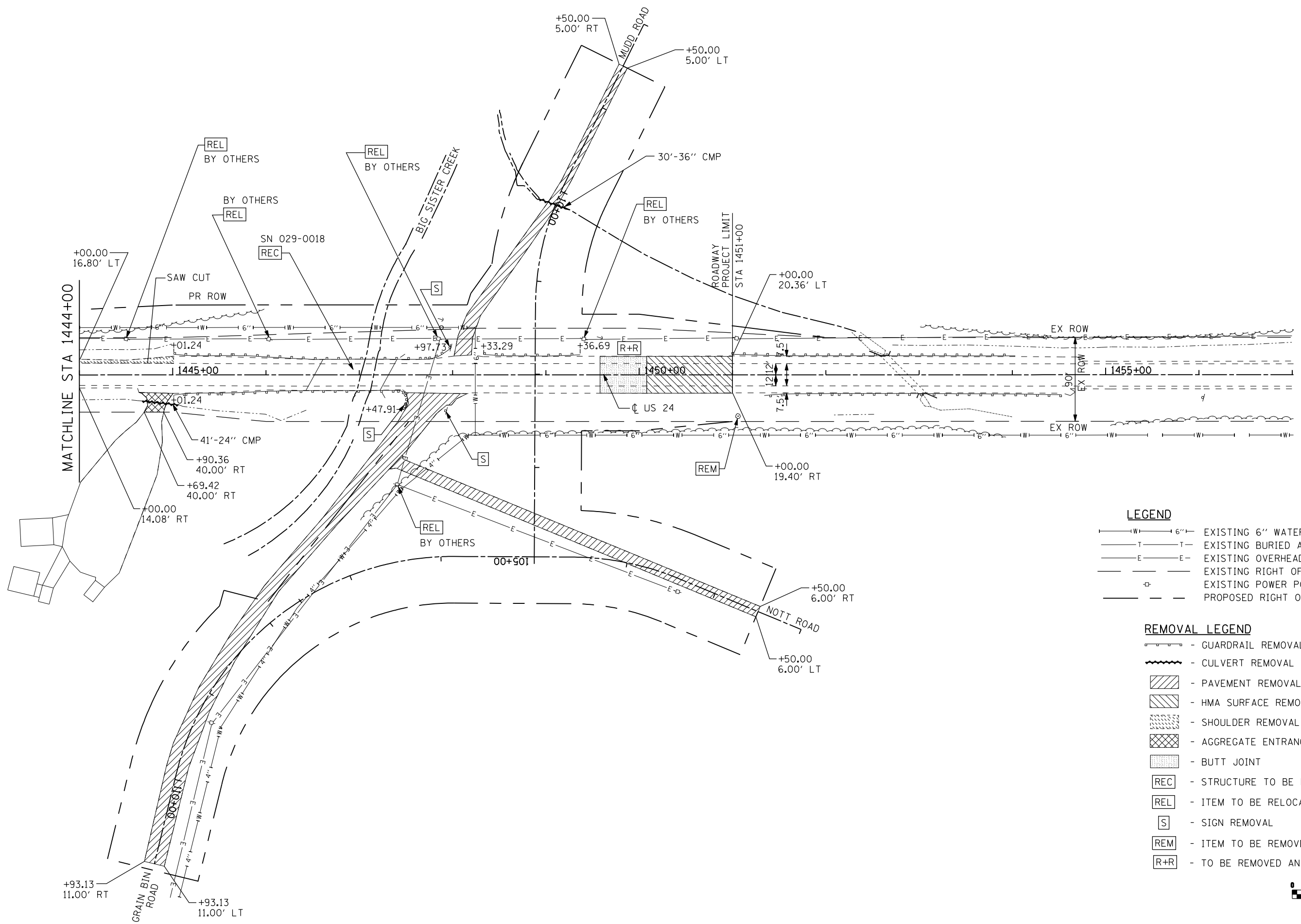
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DRAWN - JL / RY	REVISIONS -	
PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**EXISTING UTILITY AND REMOVAL PLAN**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1) BR	FULTON	118	43
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

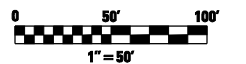


**LEGEND**

- 6" — EXISTING 6" WATER MAIN
- T — EXISTING BURIED AT&T CABLE
- E — EXISTING OVERHEAD ELECTRIC SERVICE
- — EXISTING RIGHT OF WAY
- ⊠ EXISTING POWER POLE
- PROPOSED RIGHT OF WAY

**REMOVAL LEGEND**

- - - GUARDRAIL REMOVAL
- ~ ~ ~ CULVERT REMOVAL
- ▨ PAVEMENT REMOVAL
- ▩ HMA SURFACE REMOVAL
- ▤ SHOULDER REMOVAL
- ⊠ AGGREGATE ENTRANCE REMOVAL
- ▧ BUTT JOINT
- REC - STRUCTURE TO BE RECONSTRUCTED
- REL - ITEM TO BE RELOCATED
- S - SIGN REMOVAL
- REM - ITEM TO BE REMOVED
- R+R - TO BE REMOVED AND RE-ERECTED



FILE NAME = SFILES

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 ARCHITECTS & ENGINEERS  
 PH: (312) 561-9780 www.structuredesignsinc.com

USER NAME = #USER#	DESIGNED - JL / RY	REVISED -
	DRAWN - JL / RY	REVISED -
PLOT SCALE = #SCALE#	CHECKED - JES	REVISED -
PLOT DATE = #DATE#	DATE - 12-17-2012	REVISED -

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

**EXISTING UTILITY AND REMOVAL PLAN**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**

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

F.A.P. RTE. 317	SECTION (137BR, BR-1) BR	COUNTY FULTON	TOTAL SHEETS 118	SHEET NO. 44
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

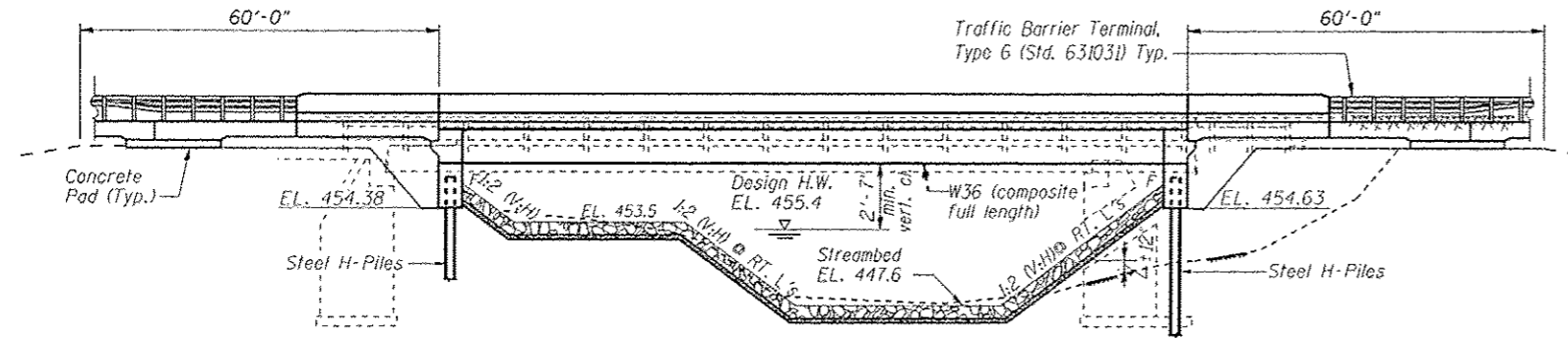


B.M. Nail in Power Pole, Sta. 1421+35, 55' Lt. EL. 460.42

Existing Structure: S.M. 029-0017, originally constructed in 1935. The Existing concrete closed abutments were widened and the deck was replaced with Single span PPC deck beams reconstructed in 1971 as SBI Rt 78, Section 137BR. In 1987 bridge railings were replaced and the top of deck was resurfaced. The bridge measures 78'-6" back to back of abutments and 33' out to out of deck.

The existing bridge is to be removed and replaced. Traffic shall be maintained using stage construction.

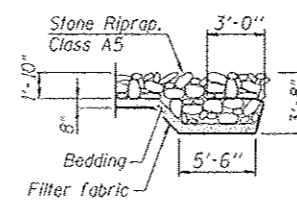
No salvage



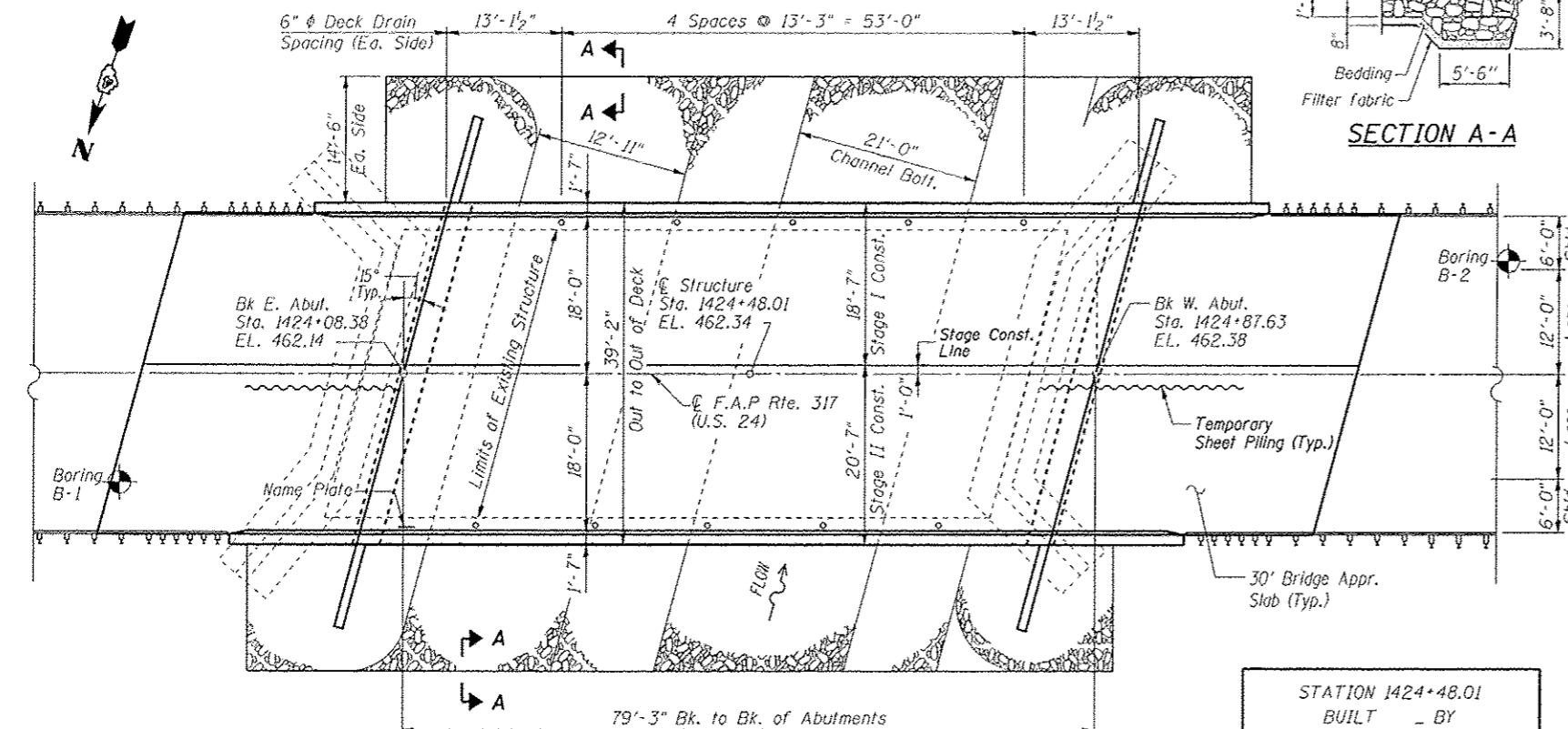
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)	E. Abut.	W. Abut.
	454.38	454.63

ELEVATION



SECTION A-A



PLAN

STATION 1424+48.01  
BUILT BY  
STATE OF ILLINOIS  
FA RTE. 317 SEC. 137-BR  
LOADING HL-93  
STR. NO. 029-0073

NAME PLATE  
See Std. 515001

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

DESIGN STRESSES

Field Units  
f'c = 3,500 p.s.i.  
fy = 60,000 p.s.i. (Reinforcement)  
fy = 50,000 p.s.i. (Structural Steel)  
AASHTO M270 Grade 50W

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 Sec. (S<sub>01</sub>) = 0.09g  
Design Spectral Acceleration at 0.2 Sec. (S<sub>05</sub>) = 0.14g  
Soil Site Class = C

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater EL.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	2,010	214	289	455.0	2.4	2.2	457.4	457.2
Base	100	3,710	250	325	455.5	4.2	3.7	459.7	459.2
Overtop Exist.	300	4,355	270	-	455.8	5.2	-	461.0	-
Overtop Prop.	500	5,000	-	354	455.9	-	5.0	-	460.9

INDEX OF SHEETS

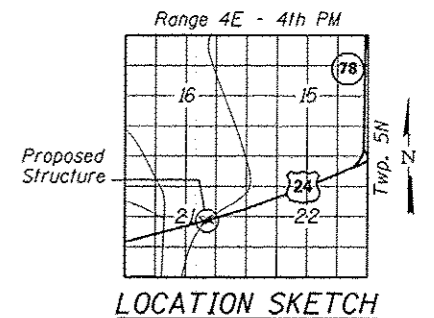
1. General Plan and Elevation
2. Footing Layout, Stage Construction Details
3. Deck Elevations
4. Deck Details
5. Top of East Approach Slab Elevations
6. Top of West Approach Slab Elevations
7. Superstructure
8. Superstructure Details
9. Diaphragm Details
10. Bridge Approach Slab Details
11. Bridge Approach Slab Details
12. Steel Beam Framing Plan and Details
13. Bearing Details
14. East Abutment Details
15. West Abutment Details
16. HP Pile Details
17. Bar Splicer Assembly and Mechanical Splicer Details
18. Temporary Concrete Barrier for Stage Construction
19. Soil Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT'S	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		64	64
Granular Backfill for Structures	Cu. Yd.		130	130
Stone Riprap, Class A5	Sq. Yd.		693	693
Filter Fabric	Sq. Yd.		693	693
Concrete Encasement	Cu. Yd.		6.6	6.6
Concrete Structures	Cu. Yd.		59.0	59.0
Concrete Superstructure	Cu. Yd.	249		249
Bridge Deck Grooving	Sq. Yd.	529		529
Protective Coat	Sq. Yd.	657		657
Furnishing and Erecting Structural Steel	L. Sum	0.5		0.5
Stud Shear Connectors	Each	1,962		1,962
Reinforcement Bars, Epoxy Coated	Pound	51,970	9,770	61,740
Bar Splicers	Each	480	100	580
Furnishing Steel Piles HP14x89	Foot		291	291
Driving Piles	Foot		291	291
Test Pile Steel HP14x89	Each		1	1
Geocomposite Wall Drain	Sq. Yd.		81	81
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		24	24
Floor Drains	Each	10		10
Pipe Underdrains for Structures 4"	Foot		128	128
Temporary Sheet Piling	Sq. Ft.		427	427

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts  $\frac{3}{4}$  in.  $\phi$ , holes  $\frac{5}{16}$  in.  $\phi$ , unless otherwise noted.
2. Calculated weight of Structural Steel = 88,860 Pounds.
3. All structural steel shall be AASHTO M 270 Grade 50W.
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
7. Layout of slope protection system may be varied in the field to suit ground conditions in the field as directed by the Engineer.
8. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
9. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
10. Slipforming of parapets is not allowed
11. Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.



LOCATION SKETCH

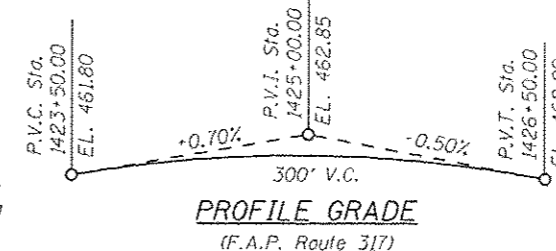


APPROVED

For Structural Adequacy Only

*Dr. Carl Perry*  
Engineer of Bridges & Structures

Signed: *Olufemi A. Oladeinde*  
OLUFEMI A. OLADEINDE, P.E., S.E. Date: 01/30/2013  
LICENSE EXPIRES 11/30/2014



PROFILE GRADE

(F.A.P. Route 317)

GENERAL PLAN & ELEVATION  
U.S. 24 OVER LITTLE SISTER CREEK  
F.A.P. RTE. 317 - SEC. 137-BR  
FULTON COUNTY  
STATION 1424+48.01  
STRUCTURE NO. 029-0073



USER NAME	DESIGNED	REVISIONS
LRT	LRT	-
DAO	DAO	-
TCS	TCS	-
LRT	LRT	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

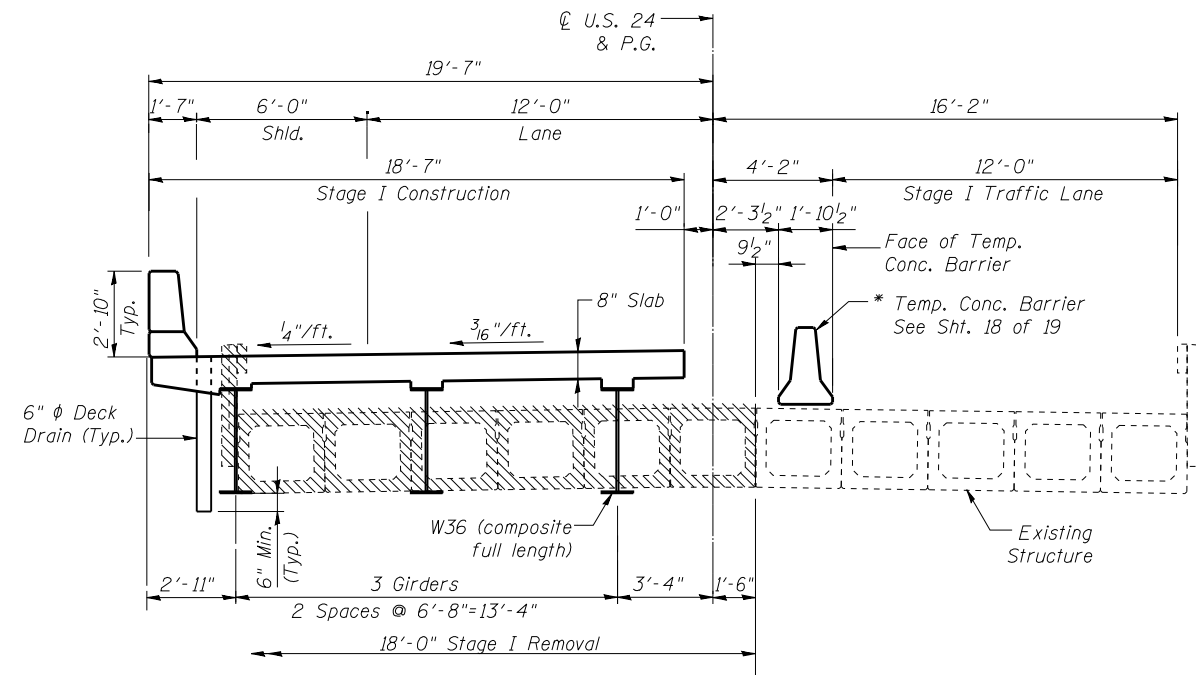
GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 029-0073

SHEET NO. 1 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	45

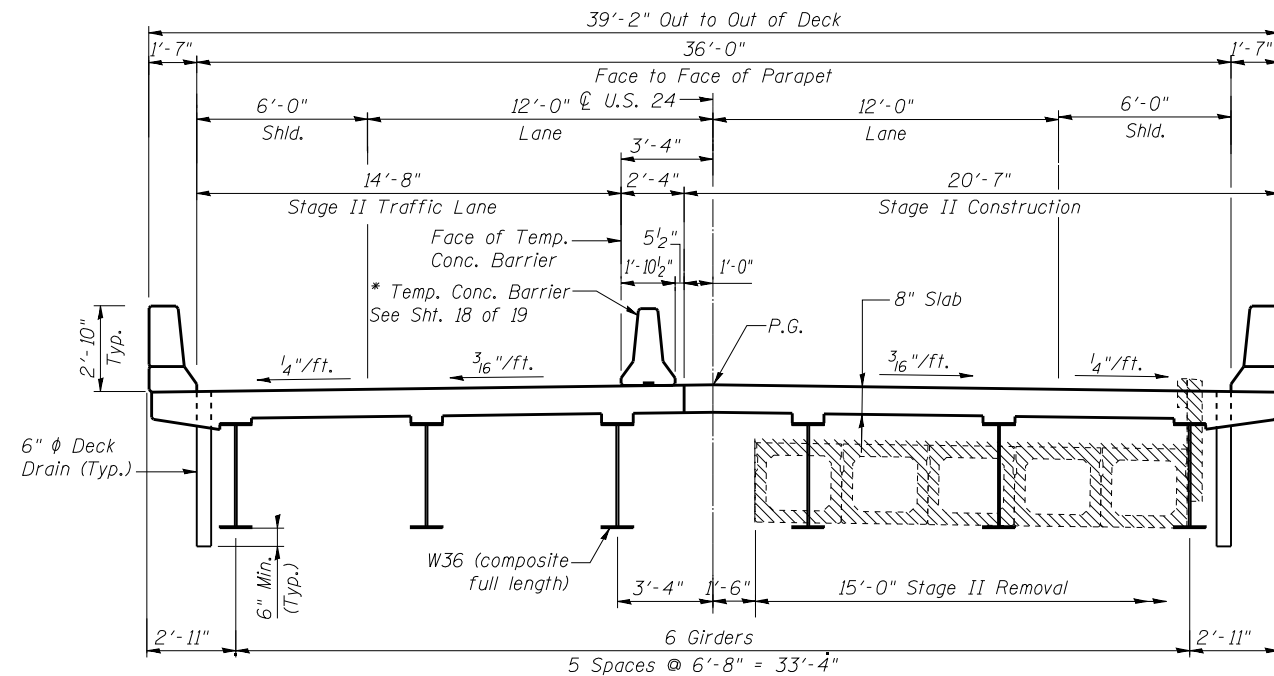
CONTRACT NO. 68699

ILLINOIS FED. AID PROJECT

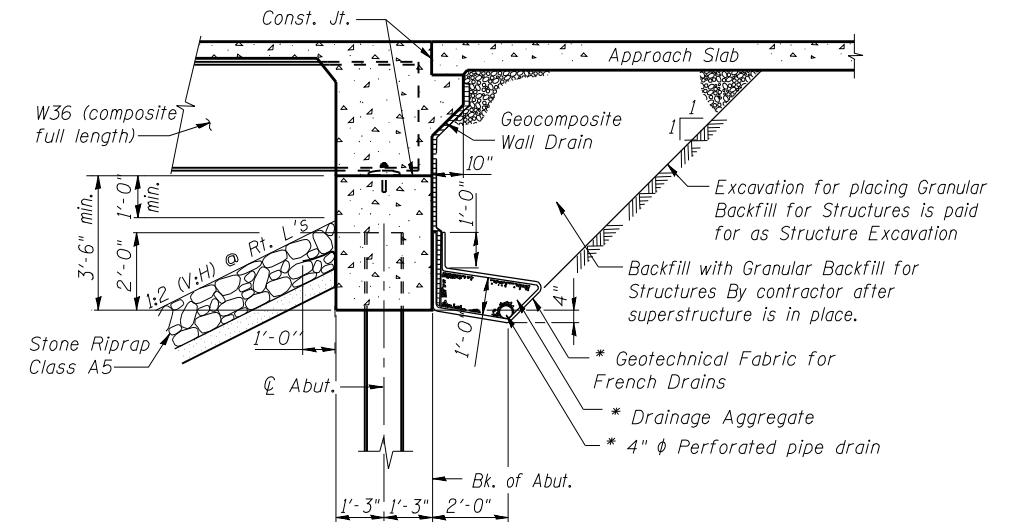


**CROSS SECTION - STAGE I**  
(Looking West)

\* For temporary concrete barrier quantities, see roadway plan



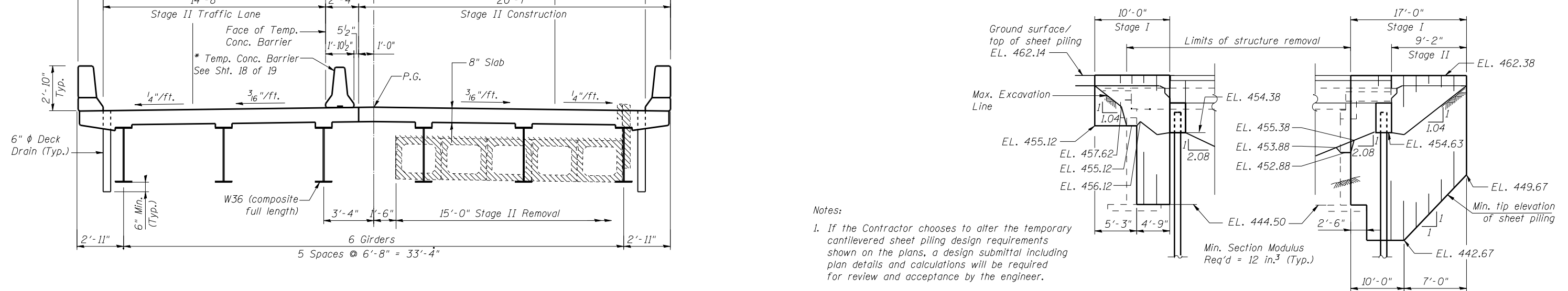
**CROSS SECTION - STAGE II**  
(Looking West)



**SECTION THRU ABUTMENT (TYP.)**  
(Horiz. Dim. @ Rt. L's)

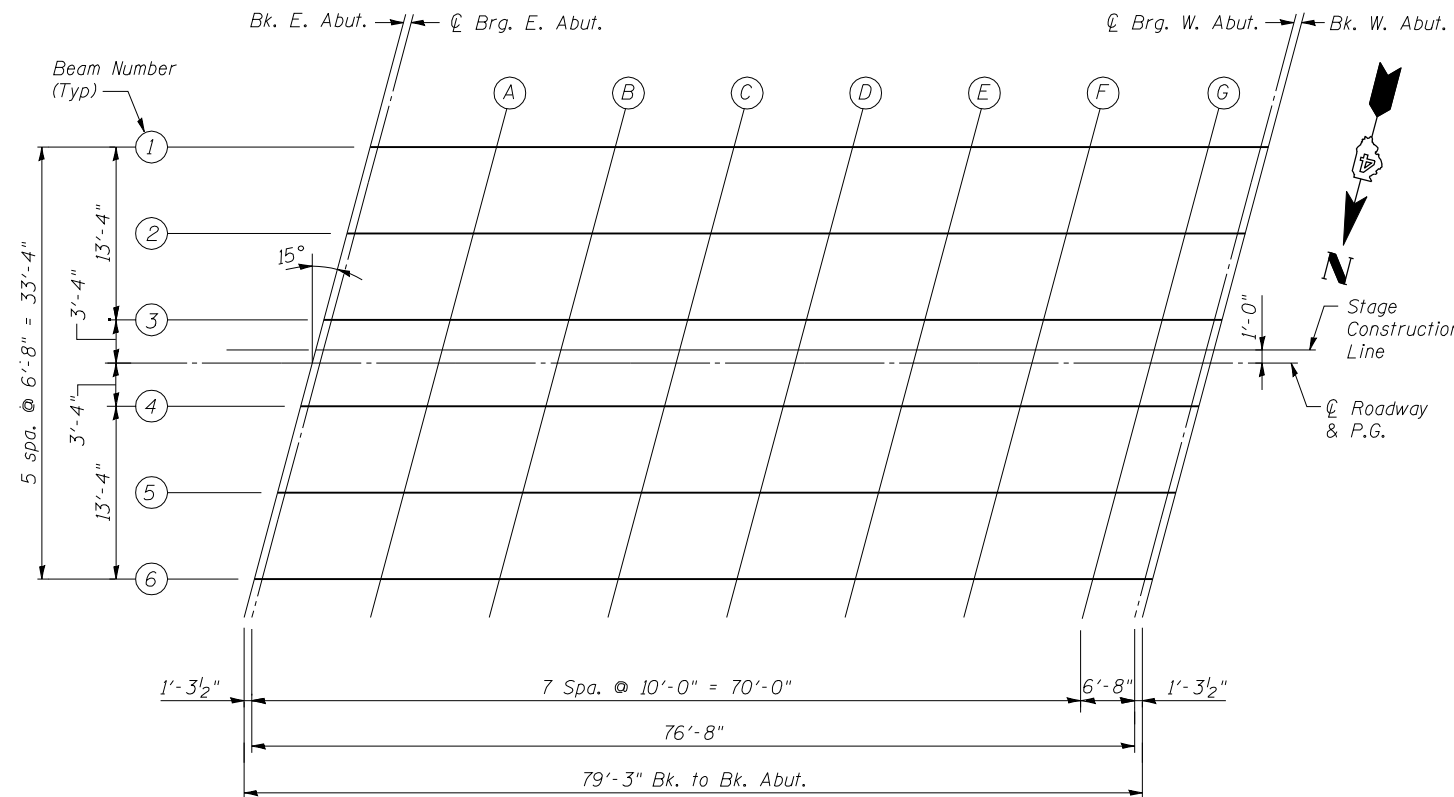
\* Include in the cost of pipe Underdrain for Structures 4"

Notes:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

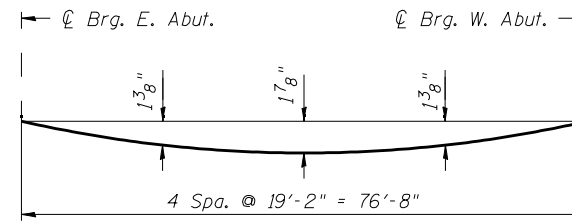


Notes:  
1. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the engineer.  
2. The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

**TEMPORARY SHEET PILING ELEVATION**  
(Looking South)



PLAN

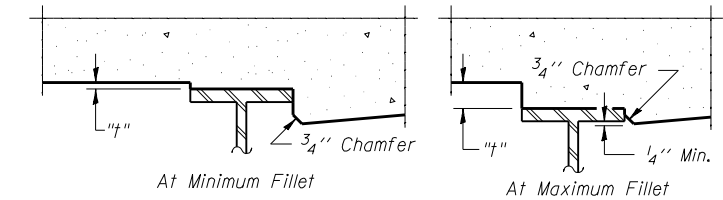


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 4 of 19.



FILLET HEIGHTS

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown in the Plan view. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" shown below and on sheet 4 of 19, minus slab thickness, equals the fillet heights "f" above top flange of beams.

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+12.85	-16.67	461.88	461.88
☉ Brg. E. Abut.	1424+14.14	-16.67	461.88	461.88
A	1424+24.14	-16.67	461.92	461.99
B	1424+34.14	-16.67	461.96	462.08
C	1424+44.14	-16.67	462.00	462.15
D	1424+54.14	-16.67	462.03	462.18
E	1424+64.14	-16.67	462.05	462.19
F	1424+74.14	-16.67	462.08	462.18
G	1424+84.14	-16.67	462.09	462.14
☉ Brg. W. Abut.	1424+90.80	-16.67	462.10	462.10
Bk. W. Abut.	1424+92.10	-16.67	462.11	462.11

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+09.27	-3.33	462.09	462.09
☉ Brg. E. Abut.	1424+10.57	-3.33	462.10	462.10
A	1424+20.57	-3.33	462.14	462.21
B	1424+30.57	-3.33	462.18	462.30
C	1424+40.57	-3.33	462.22	462.37
D	1424+50.57	-3.33	462.25	462.41
E	1424+60.57	-3.33	462.28	462.42
F	1424+70.57	-3.33	462.30	462.41
G	1424+80.57	-3.33	462.32	462.37
☉ Brg. W. Abut.	1424+87.23	-3.33	462.33	462.33
Bk. W. Abut.	1424+88.52	-3.33	462.33	462.33

**☉ ROADWAY & P.G.**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+08.38	0.00	462.14	462.14
☉ Brg. E. Abut.	1424+09.67	0.00	462.15	462.15
A	1424+19.67	0.00	462.19	462.26
B	1424+29.67	0.00	462.23	462.35
C	1424+39.67	0.00	462.27	462.42
D	1424+49.67	0.00	462.30	462.46
E	1424+59.67	0.00	462.33	462.47
F	1424+69.67	0.00	462.35	462.46
G	1424+79.67	0.00	462.37	462.42
☉ Brg. W. Abut.	1424+86.34	0.00	462.38	462.38
Bk. W. Abut.	1424+87.63	0.00	462.38	462.38

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+11.06	-10.00	462.00	462.00
☉ Brg. E. Abut.	1424+12.35	-10.00	462.00	462.00
A	1424+22.35	-10.00	462.05	462.11
B	1424+32.35	-10.00	462.09	462.20
C	1424+42.35	-10.00	462.12	462.27
D	1424+52.35	-10.00	462.15	462.31
E	1424+62.35	-10.00	462.18	462.32
F	1424+72.35	-10.00	462.20	462.30
G	1424+82.35	-10.00	462.22	462.27
☉ Brg. W. Abut.	1424+89.02	-10.00	462.23	462.23
Bk. W. Abut.	1424+90.31	-10.00	462.23	462.23

**STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+08.65	-1.00	462.13	462.12
☉ Brg. E. Abut.	1424+09.94	-1.00	462.13	462.13
A	1424+19.94	-1.00	462.18	462.25
B	1424+29.94	-1.00	462.22	462.34
C	1424+39.94	-1.00	462.25	462.40
D	1424+49.94	-1.00	462.28	462.44
E	1424+59.94	-1.00	462.31	462.45
F	1424+69.94	-1.00	462.34	462.45
G	1424+79.94	-1.00	462.36	462.41
☉ Brg. W. Abut.	1424+86.60	-1.00	462.37	462.37
Bk. W. Abut.	1424+87.90	-1.00	462.37	462.37

**BEAM 4**

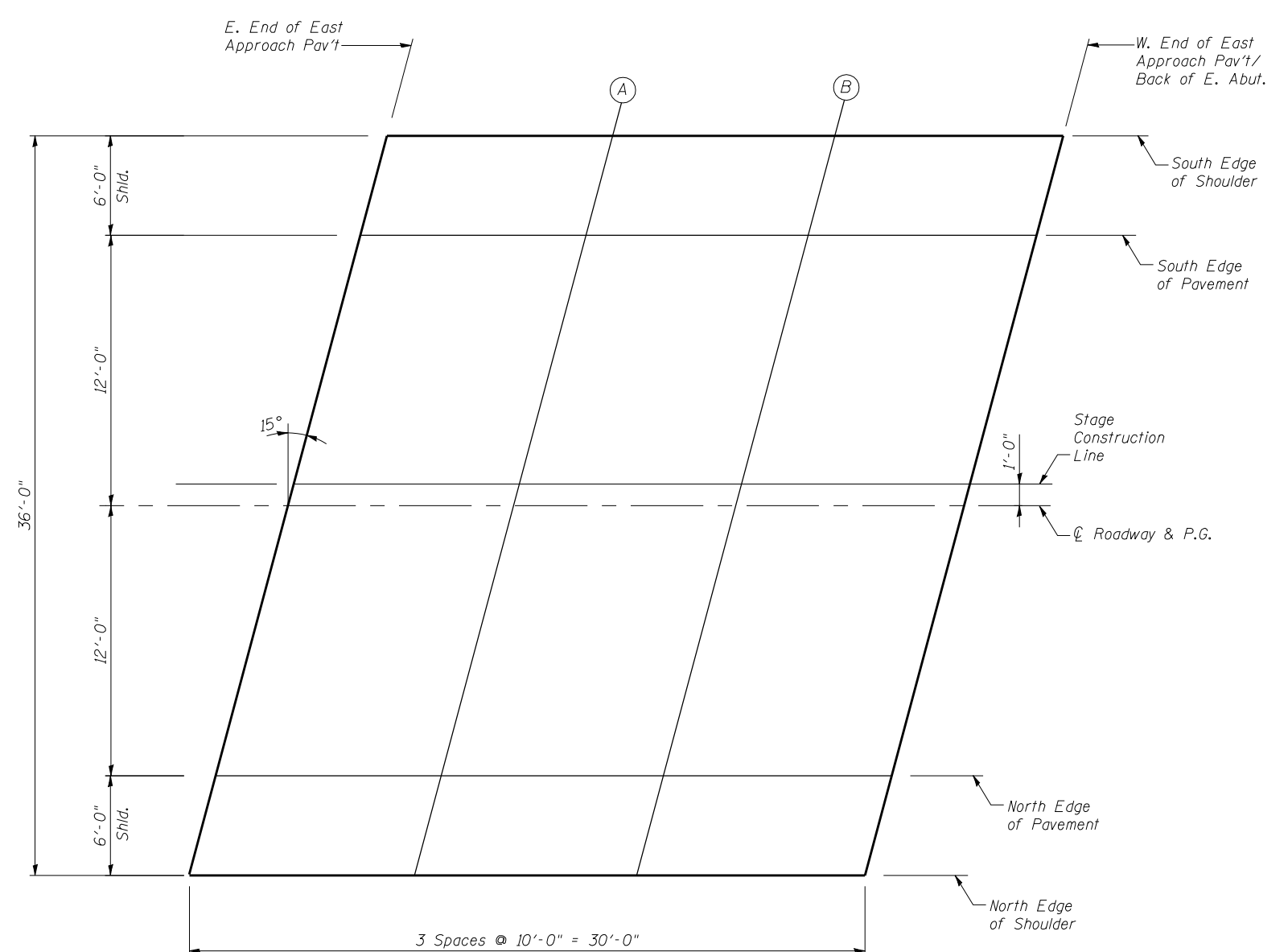
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+07.49	3.33	462.08	462.08
☉ Brg. E. Abut.	1424+08.78	3.33	462.09	462.09
A	1424+18.78	3.33	462.14	462.20
B	1424+28.78	3.33	462.18	462.29
C	1424+38.78	3.33	462.21	462.36
D	1424+48.78	3.33	462.24	462.40
E	1424+58.78	3.33	462.27	462.41
F	1424+68.78	3.33	462.30	462.40
G	1424+78.78	3.33	462.32	462.36
☉ Brg. W. Abut.	1424+85.44	3.33	462.33	462.33
Bk. W. Abut.	1424+86.74	3.33	462.33	462.33

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+05.70	10.00	461.97	461.97
☉ Brg. E. Abut.	1424+06.99	10.00	461.98	461.98
A	1424+16.99	10.00	462.02	462.09
B	1424+26.99	10.00	462.06	462.18
C	1424+36.99	10.00	462.10	462.25
D	1424+46.99	10.00	462.14	462.29
E	1424+56.99	10.00	462.16	462.30
F	1424+66.99	10.00	462.19	462.29
G	1424+76.99	10.00	462.21	462.26
☉ Brg. W. Abut.	1424+83.66	10.00	462.22	462.22
Bk. W. Abut.	1424+84.95	10.00	462.22	462.22

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1424+03.91	16.67	461.83	461.83
☉ Brg. E. Abut.	1424+05.21	16.67	461.84	461.84
A	1424+15.21	16.67	461.89	461.95
B	1424+25.21	16.67	461.93	462.05
C	1424+35.21	16.67	461.97	462.12
D	1424+45.21	16.67	462.00	462.16
E	1424+55.21	16.67	462.03	462.17
F	1424+65.21	16.67	462.06	462.16
G	1424+75.21	16.67	462.08	462.13
☉ Brg. W. Abut.	1424+81.87	16.67	462.09	462.09
Bk. W. Abut.	1424+83.16	16.67	462.09	462.09



**PLAN**

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+83.20	-18.00	461.70
A	1423+93.20	-18.00	461.75
B	1424+03.20	-18.00	461.80
Bk. E. Abut.	1424+13.20	-18.00	461.85

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+81.60	-12.00	461.81
A	1423+91.60	-12.00	461.87
B	1424+01.60	-12.00	461.92
Bk. E. Abut.	1424+11.60	-12.00	461.97

**STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+78.65	-1.00	461.97
A	1423+88.65	-1.00	462.03
B	1423+98.65	-1.00	462.08
Bk. E. Abut.	1424+08.65	-1.00	462.13

**Centerline Roadway & P.G.**

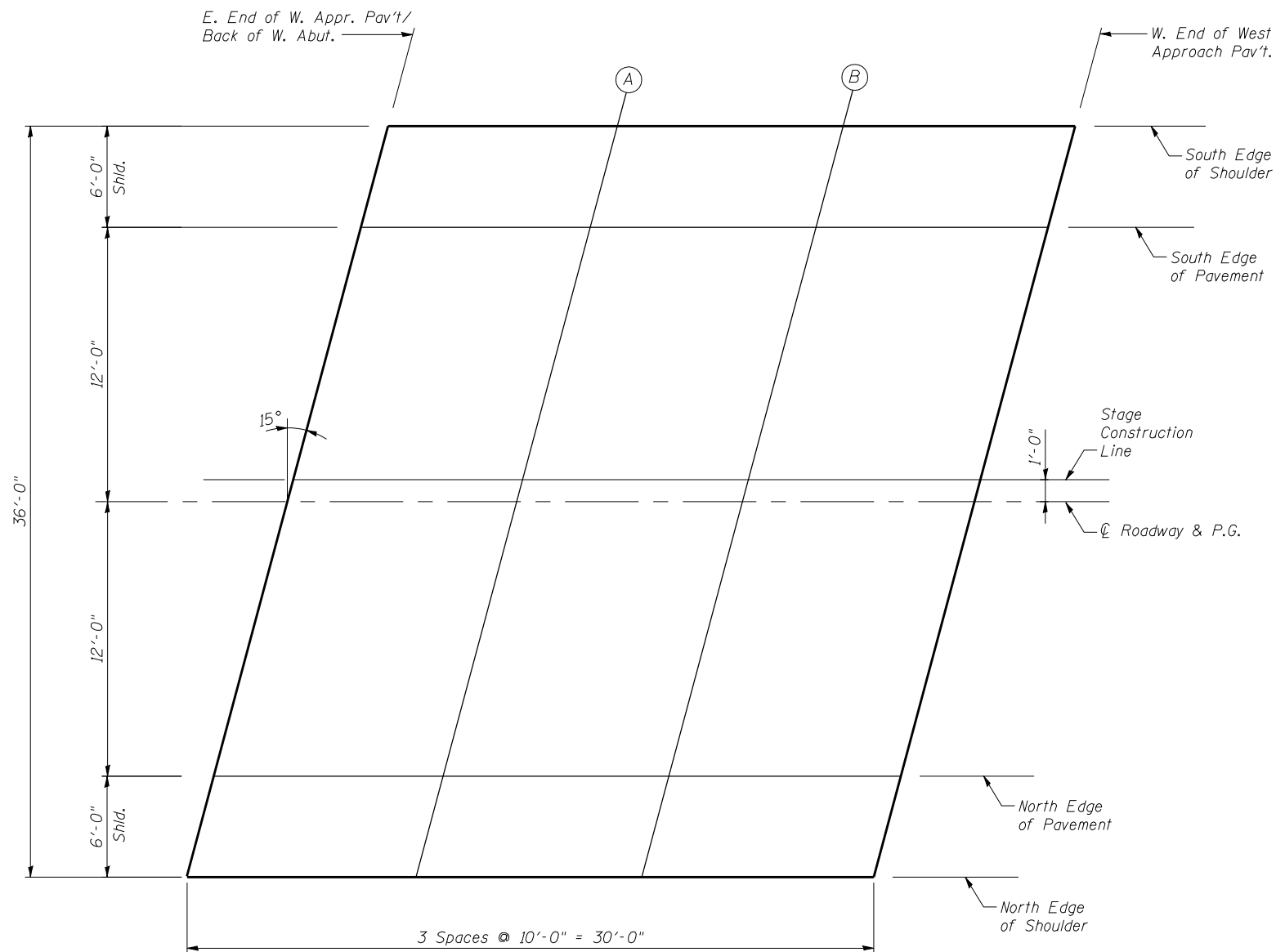
Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+78.38	0.00	461.98
A	1423+88.38	0.00	462.04
B	1423+98.38	0.00	462.09
Bk. E. Abut.	1424+08.38	0.00	462.14

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+75.17	12.00	461.78
A	1423+85.17	12.00	461.83
B	1423+95.17	12.00	461.89
Bk. E. Abut.	1424+05.17	12.00	461.94

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1423+73.56	18.00	461.64
A	1423+83.56	18.00	461.70
B	1423+93.56	18.00	461.75
Bk. E. Abut.	1424+03.56	18.00	461.81



**PLAN**

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+92.45	-18.00	462.08
A	1425+02.45	-18.00	462.09
B	1425+12.45	-18.00	462.10
End W. Appr. Slab	1425+22.45	-18.00	462.10

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+90.85	-12.00	462.20
A	1425+00.85	-12.00	462.21
B	1425+10.85	-12.00	462.22
End W. Appr. Slab	1425+20.85	-12.00	462.23

**STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+87.90	-1.00	462.37
A	1424+97.90	-1.00	462.38
B	1425+07.90	-1.00	462.39
End W. Appr. Slab	1425+17.90	-1.00	462.40

**ROADWAY & P.G.**

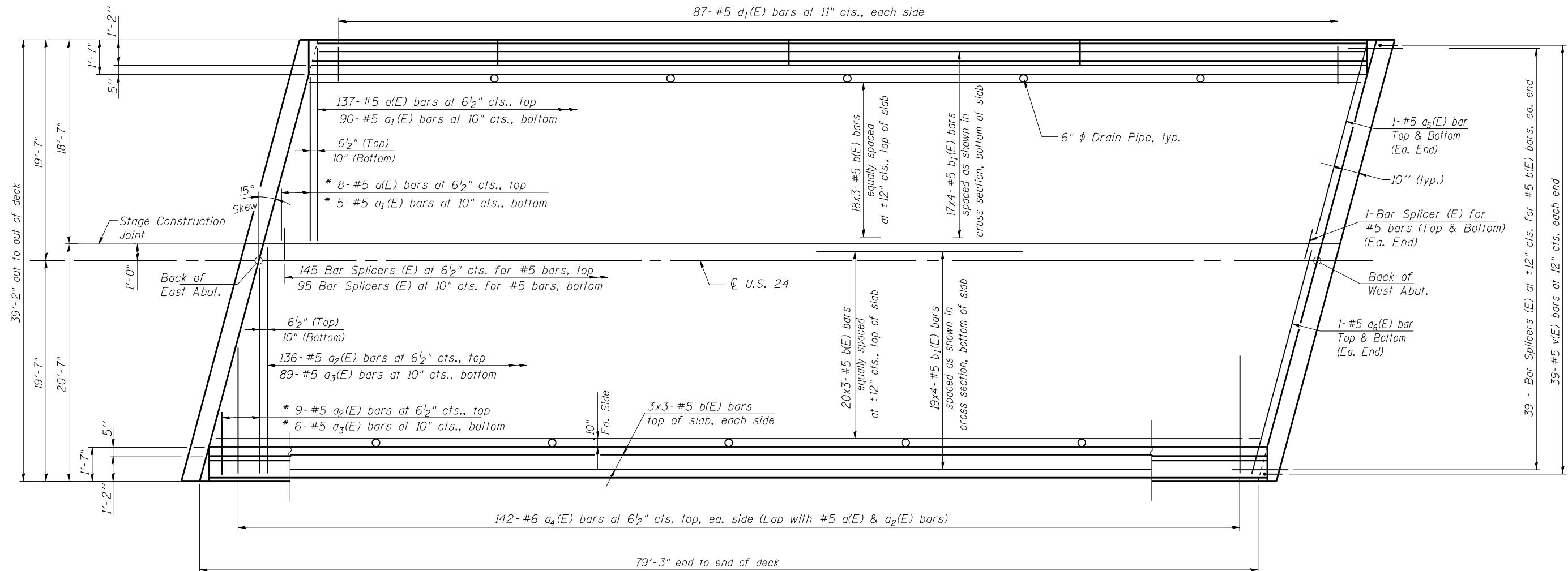
Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+87.63	0.00	462.39
A	1424+97.63	0.00	462.40
B	1425+07.63	0.00	462.41
End W. Appr. Slab	1425+17.63	0.00	462.41

**NORTH EDGE OF PAVEMENT**

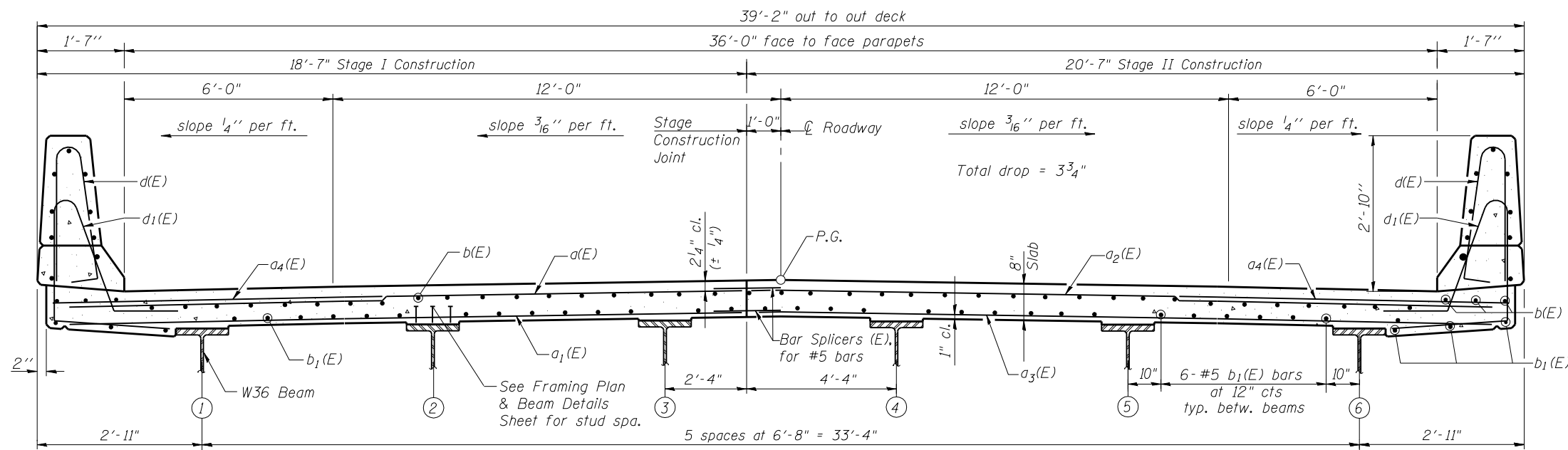
Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+84.42	12.00	462.19
A	1424+94.42	12.00	462.21
B	1425+04.42	12.00	462.22
End W. Appr. Slab	1425+14.42	12.00	462.22

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1424+82.81	18.00	462.06
A	1424+92.81	18.00	462.08
B	1425+02.81	18.00	462.09
End W. Appr. Slab	1425+12.81	18.00	462.10



**PLAN**

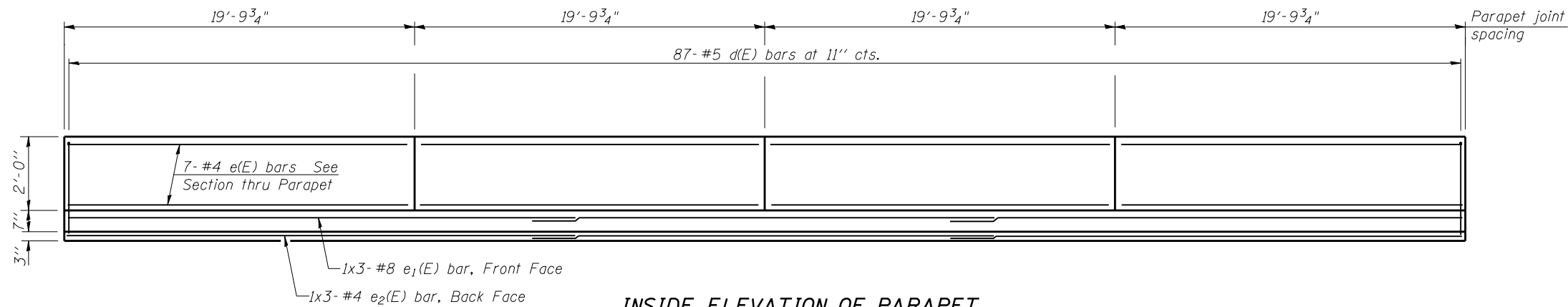


**CROSS SECTION**  
(Looking West)

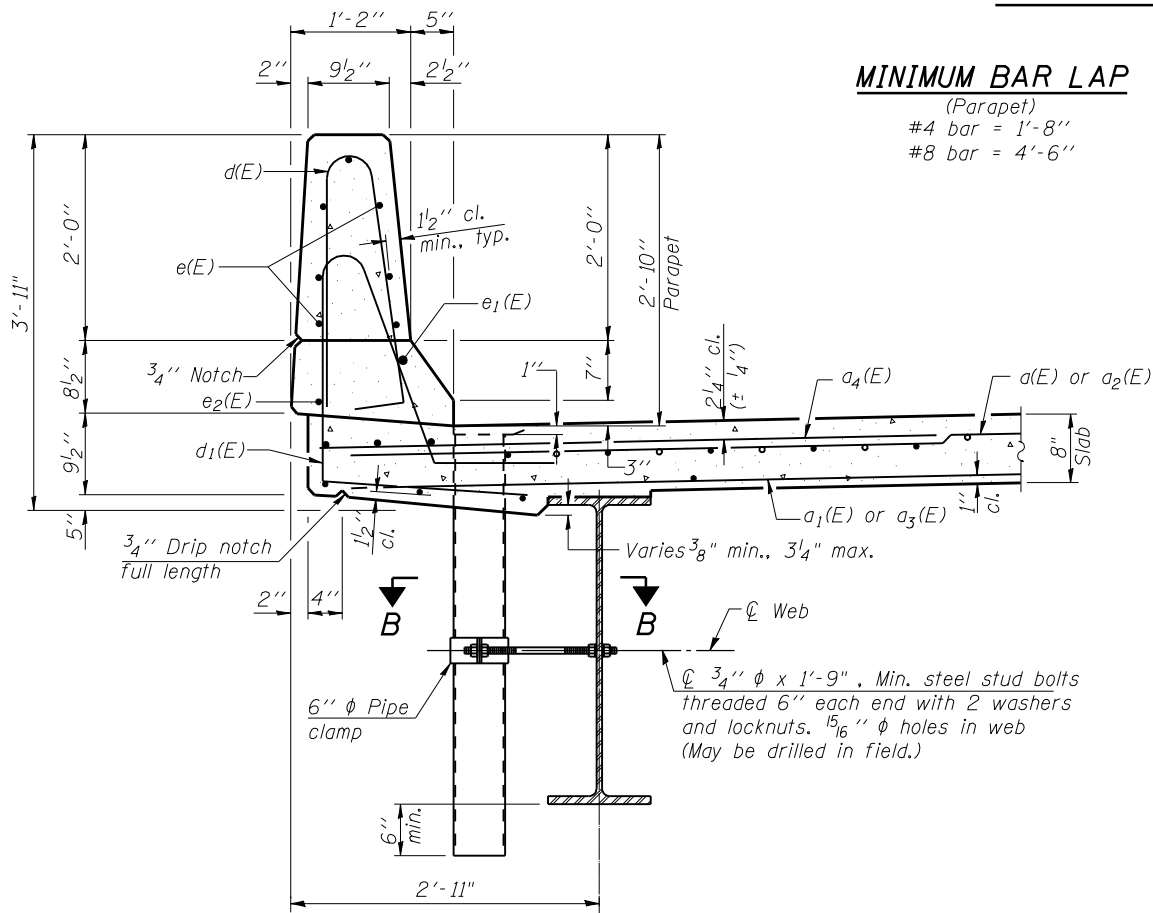
\*Order a(E), a<sub>1</sub>(E), a<sub>2</sub>(E) & a<sub>3</sub>(E) bars full length.  
Cut to fit skew and use remainder of bars @ opposite end.

**Notes:**

See Sheet 8 of 19 for superstructure details and Bill of Material.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet 8 of 19 for parapet reinforcement.



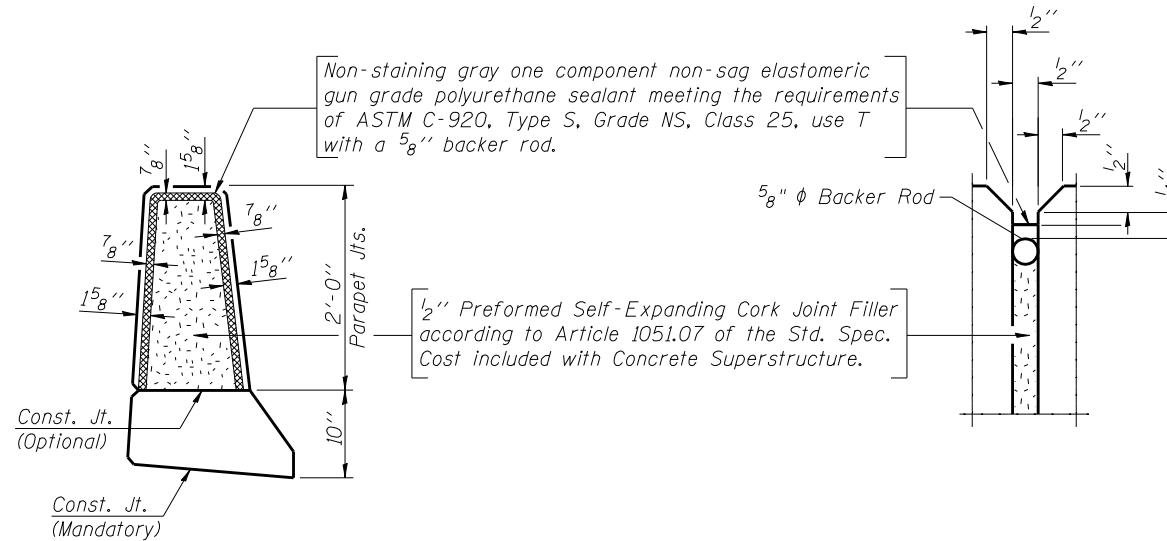
**INSIDE ELEVATION OF PARAPET**



**SECTION THRU PARAPET**

**MINIMUM BAR LAP**

(Parapet)  
 #4 bar = 1'-8"  
 #8 bar = 4'-6"



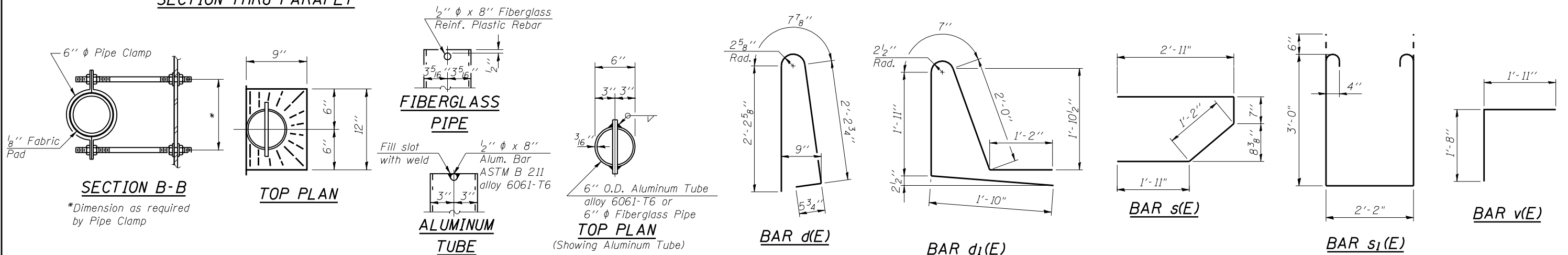
**PARAPET JOINT DETAILS**

Notes:  
 Floor drains need not be painted.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

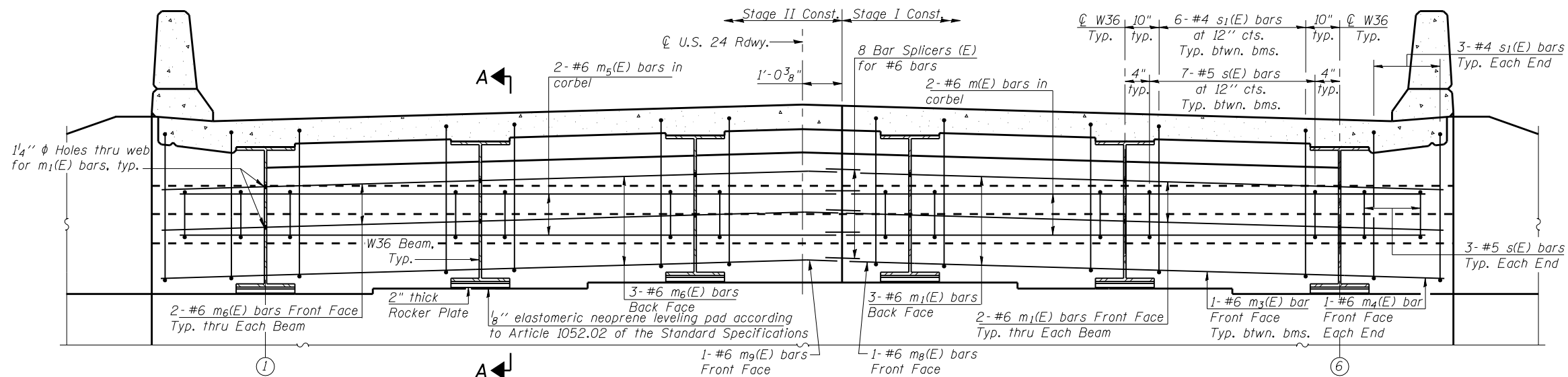
**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	145	#5	17'-9"	—
a1(E)	95	#5	17'-3"	—
a2(E)	145	#5	20'-1"	—
a3(E)	95	#5	19'-7"	—
a4(E)	284	#6	6'-6"	—
a5(E)	2	#5	18'-4"	—
a6(E)	2	#5	20'-10"	—
b(E)	132	#5	28'-7"	—
b1(E)	144	#5	22'-3"	—
d(E)	174	#5	5'-7"	⌋
d1(E)	174	#5	7'-6"	⌋
e(E)	56	#4	19'-6"	—
e1(E)	6	#8	29'-0"	—
e2(E)	6	#4	28'-3"	—
m(E)	4	#6	18'-6"	—
m1(E)	10	#6	18'-7"	—
m3(E)	8	#6	6'-6"	—
m4(E)	4	#6	2'-8"	—
m5(E)	4	#6	21'-0"	—
m6(E)	10	#6	21'-1"	—
m8(E)	2	#6	1'-9"	—
m9(E)	2	#6	4'-2"	—
s(E)	82	#5	6'-7"	⌋
s1(E)	72	#4	9'-2"	⌋
v(E)	74	#5	3'-7"	⌋
Bar Splicers		Each	338	
Reinforcement Bars, Epoxy Coated		Pound	25,410	
Concrete Superstructure		Cu. Yd.	130.0	

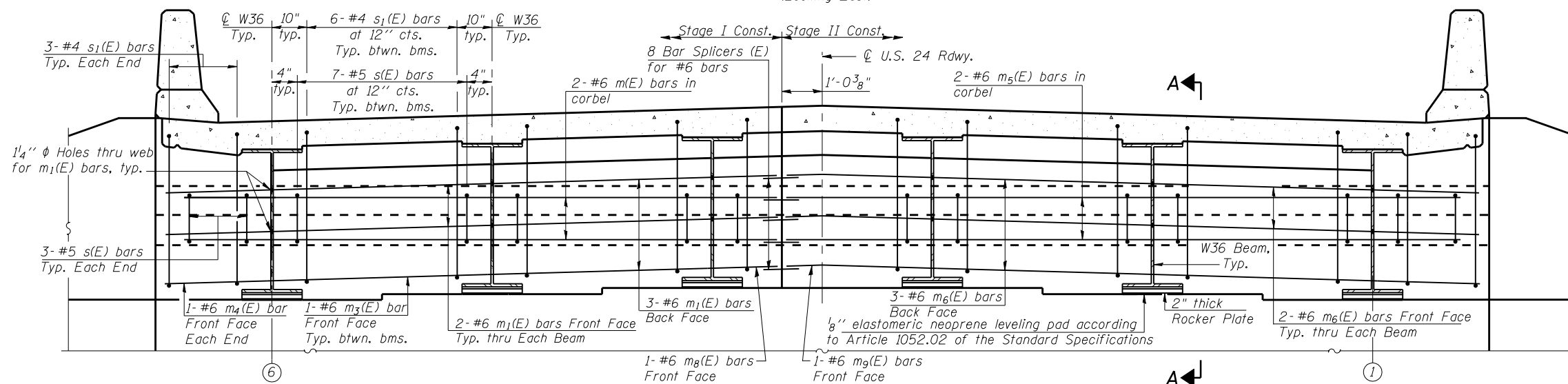
Bars indicated thus 1x3-#5 etc. indicates 1 line of bars with 3 lengths per line.



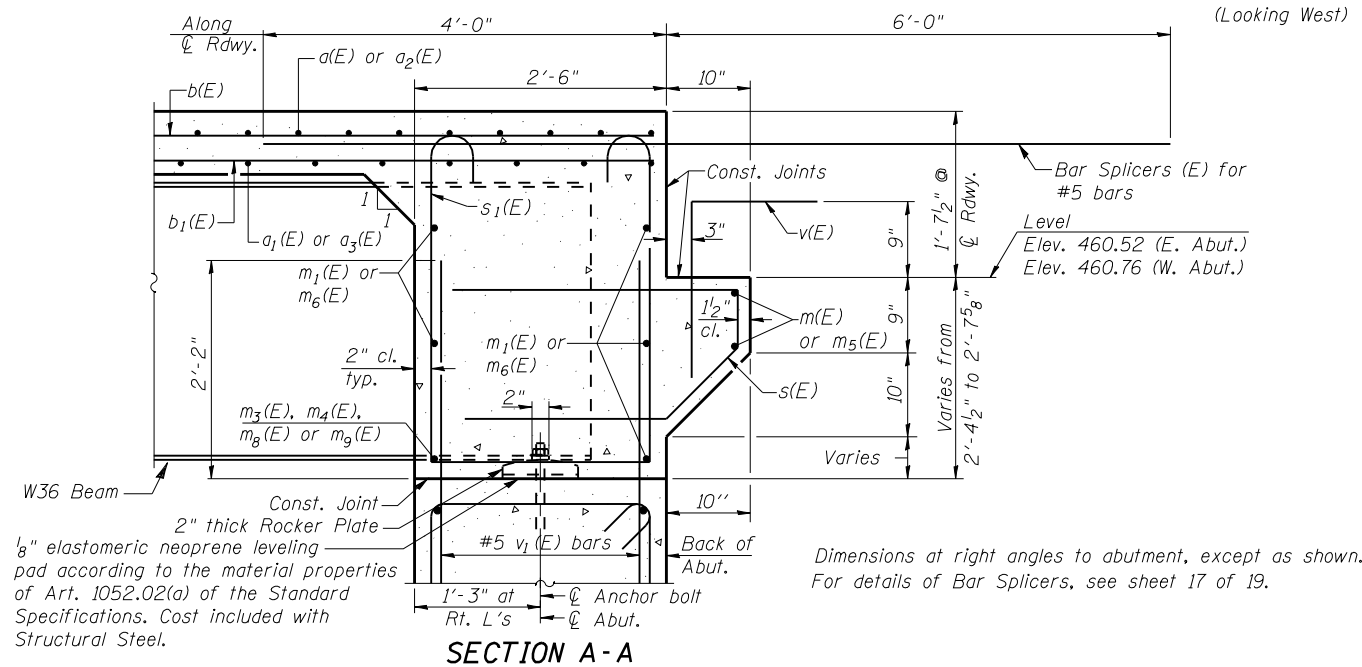




**DIAPHRAGM ELEVATION AT EAST ABUTMENT**  
(Looking East)



**DIAPHRAGM ELEVATION AT WEST ABUTMENT**  
(Looking West)



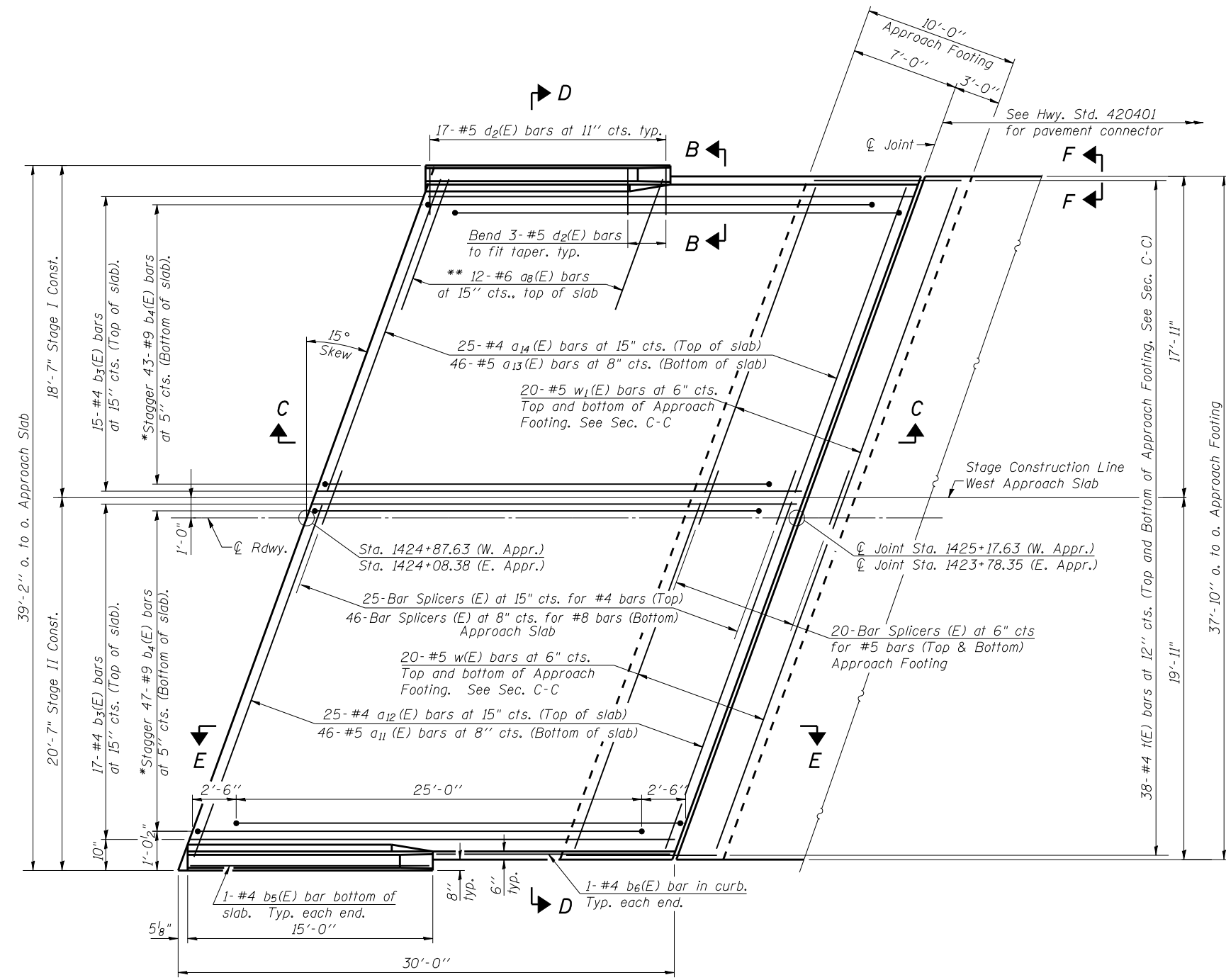
**SECTION A-A**

**Notes:**

Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 19.  
Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 19.  
For details of bars s(E) & s<sub>1</sub>(E) see sheet 8 of 19.  
The s(E) and s<sub>1</sub>(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

**MIN. BAR LAP**  
#6 bar = 3'-4"

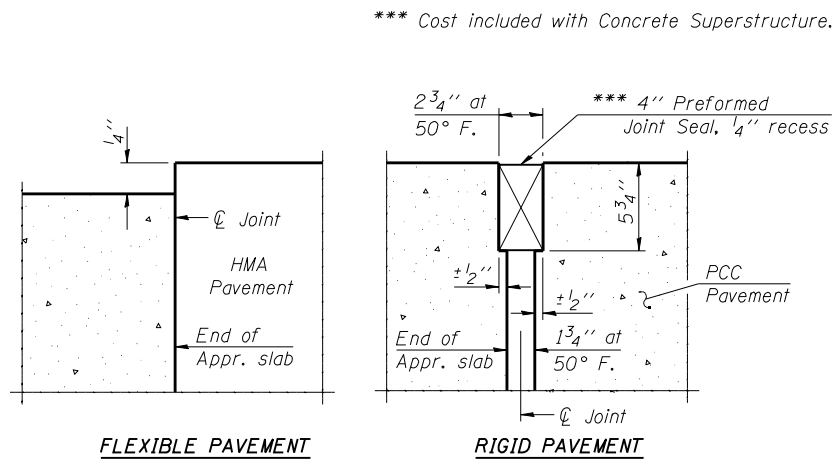
Notes:  
 See sheet 11 of 19 for Sections C-C & D-D and View E-E.  
 $a_{11}(E)$ ,  $a_{12}(E)$ ,  $a_{13}(E)$  &  $a_{14}(E)$  bar spacings measured along  $\text{C.Rdwy.}$



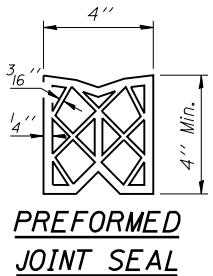
**PLAN**

Opposite hand for East Approach Slab

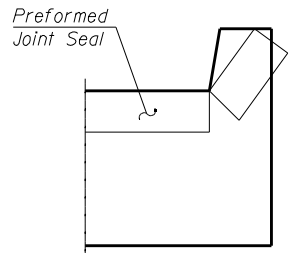
\*Tilt #9  $b_4(E)$  bars as required to maintain clearance.  
 \*\*Space between  $a_{12}(E)$  bars or  $a_{14}(E)$  bars at each parapet.



**DETAIL A**

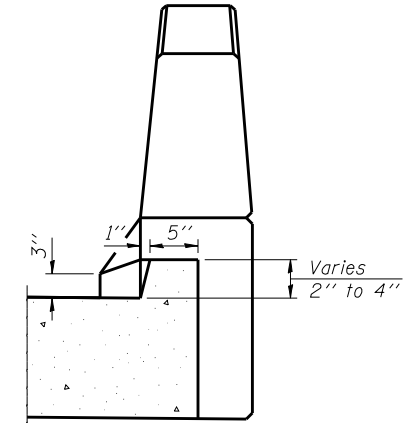


**PREFORMED JOINT SEAL**



**VIEW F-F**

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



**VIEW B-B**

(Sheet 1 of 2)



USER NAME =	DESIGNED - LRT	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS	REVISED -
	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
 STRUCTURE NO. 029-0073**

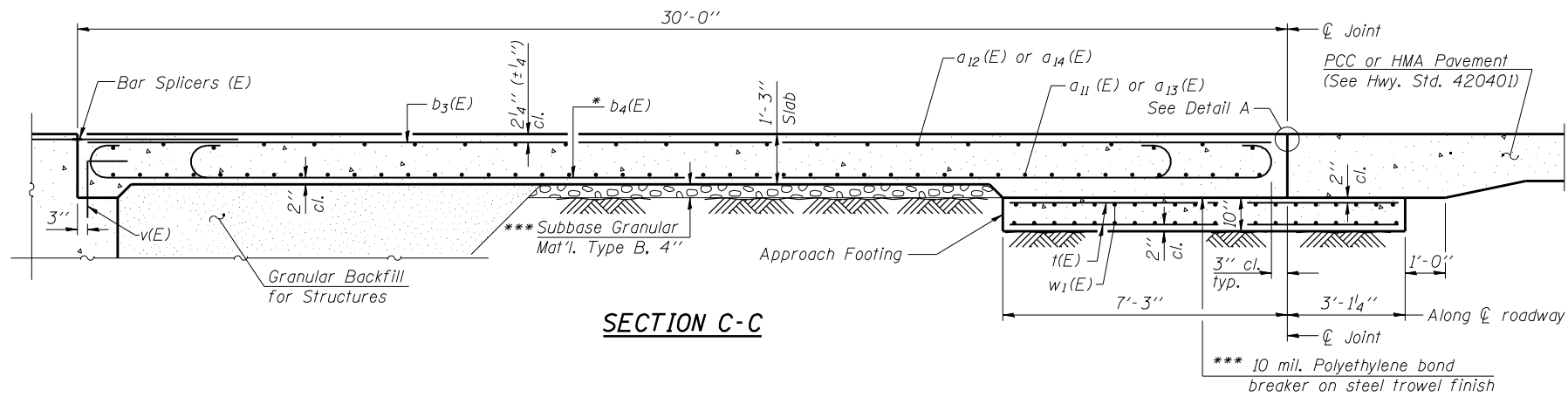
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	54
CONTRACT NO. 68699				

SHEET NO. 10 OF 19 SHEETS

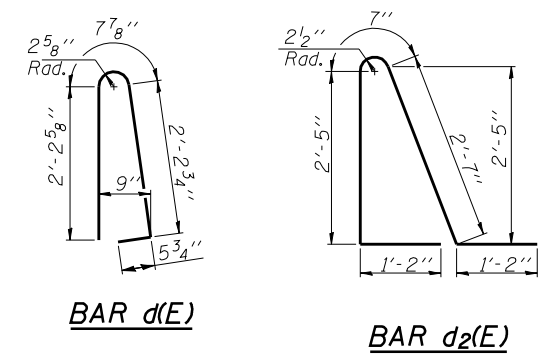
ILLINOIS FED. AID PROJECT

**TWO APPROACHES  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>8</sub> (E)	48	#6	6'-6"	—
a <sub>11</sub> (E)	92	#5	20'-7"	—
a <sub>12</sub> (E)	50	#4	20'-9"	—
a <sub>13</sub> (E)	92	#5	18'-11"	—
a <sub>14</sub> (E)	50	#4	18'-8"	—
b <sub>3</sub> (E)	64	#4	29'-8"	—
b <sub>4</sub> (E)	180	#9	29'-9"	—
b <sub>5</sub> (E)	4	#4	14'-10"	—
b <sub>6</sub> (E)	4	#4	14'-7"	—
d(E)	68	#5	5'-7"	—
d <sub>2</sub> (E)	68	#5	7'-11"	—
e <sub>3</sub> (E)	32	#4	14'-8"	—
e <sub>4</sub> (E)	4	#8	14'-8"	—
t(E)	152	#4	10'-0"	—
w(E)	80	#5	20'-3"	—
w <sub>1</sub> (E)	80	#5	17'-10"	—
Bar Splicers	Each		222	
Concrete Superstructure			Cu. Yd.	119
Concrete Structures			Cu. Yd.	24.2
Reinforcement Bars, Epoxy Coated			Pound	30,750

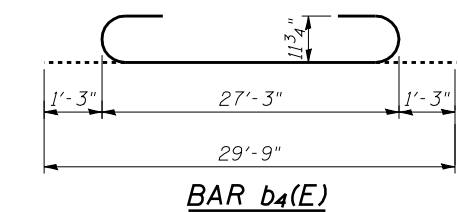


**SECTION C-C**

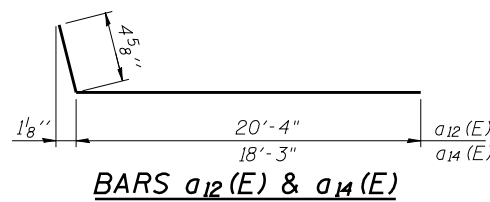


**BAR d(E)**

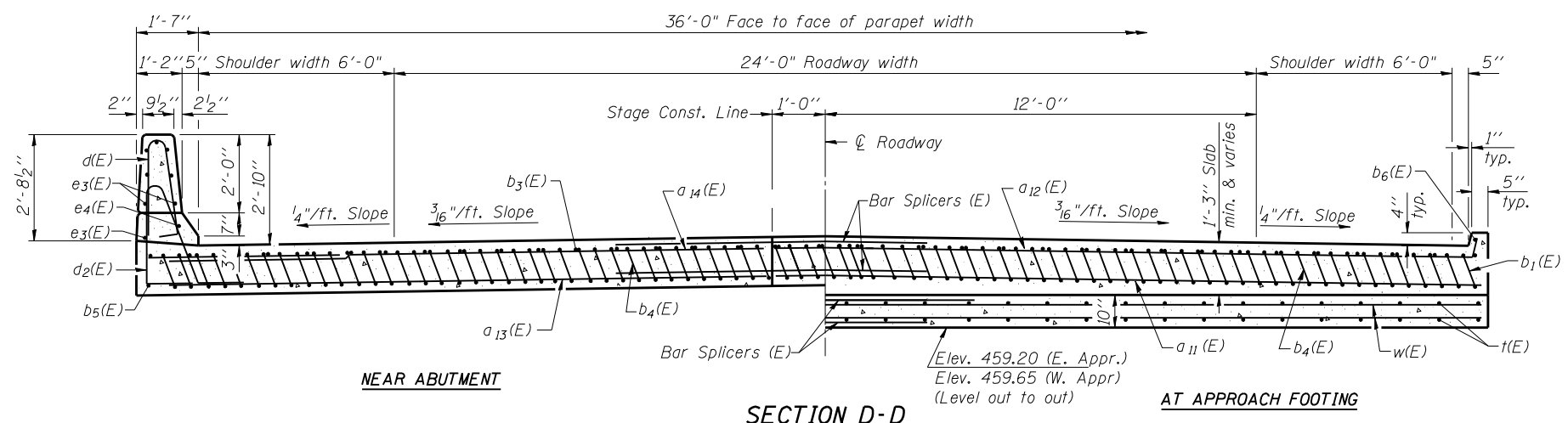
**BAR d2(E)**



**BAR b4(E)**



**BARS a12(E) & a14(E)**

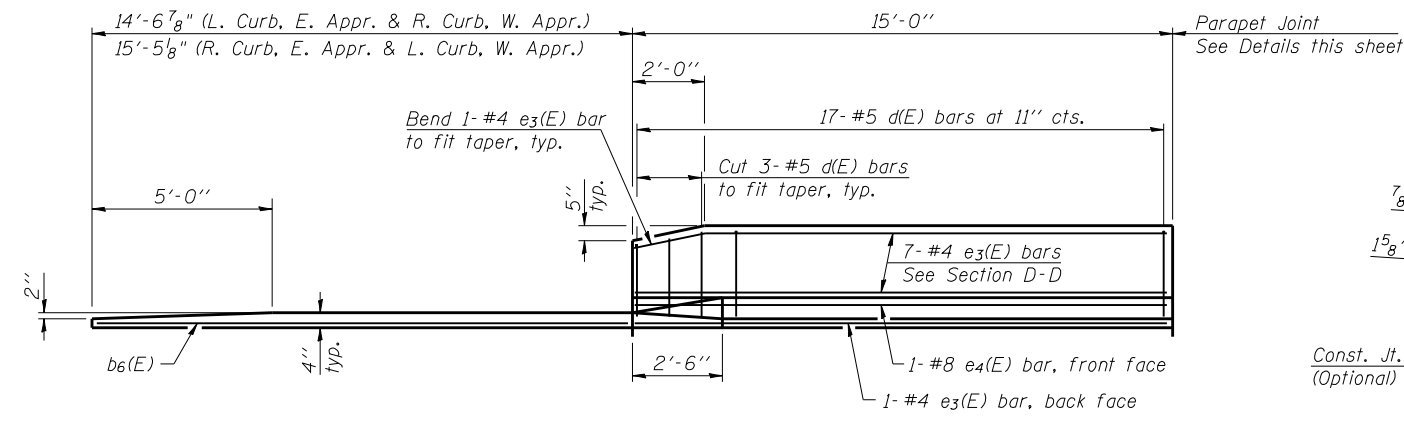


**SECTION D-D**

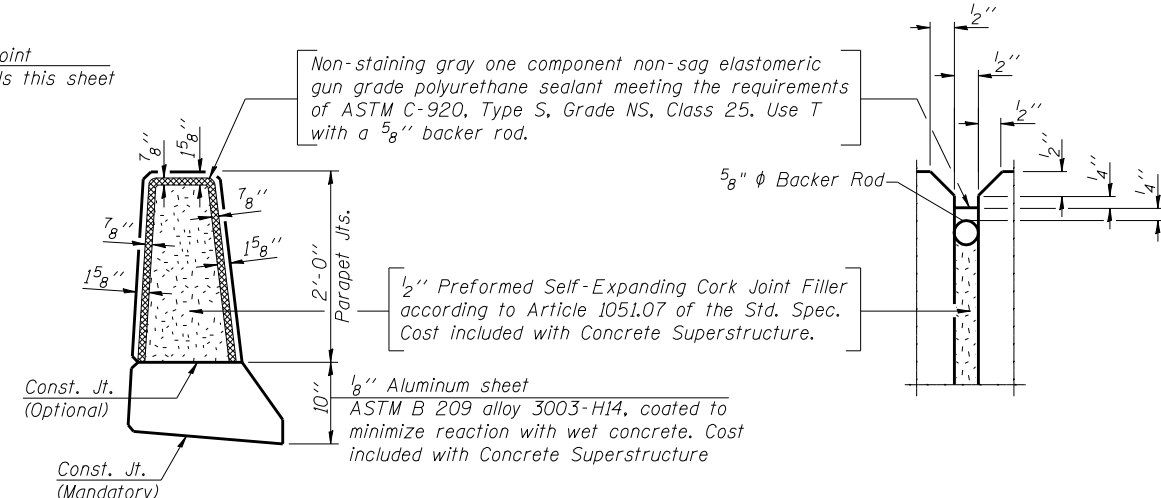
**NEAR ABUTMENT**

**AT APPROACH FOOTING**

(See Plan for dimensions not shown)



**VIEW E-E**

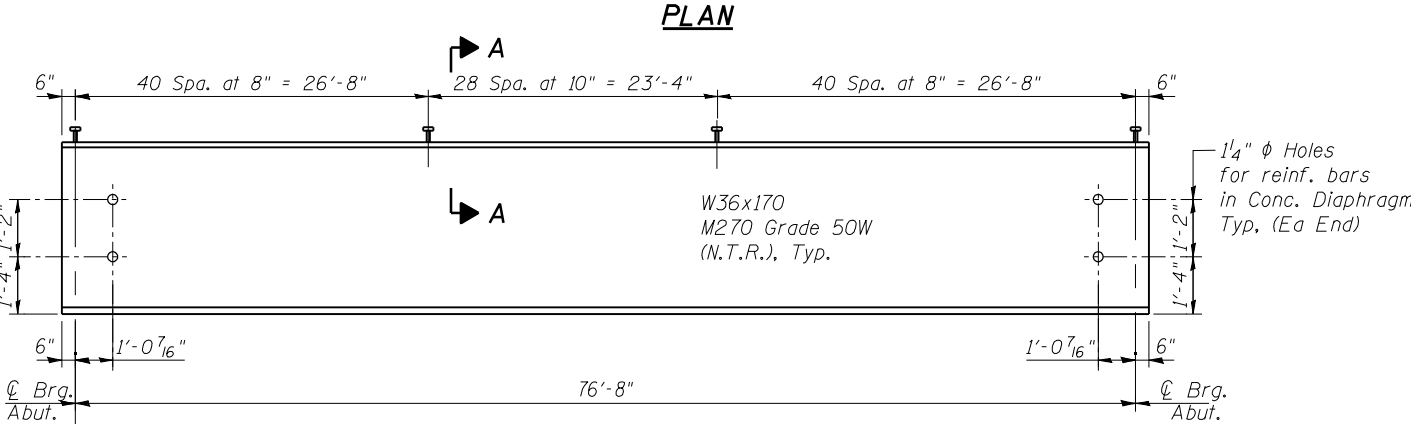
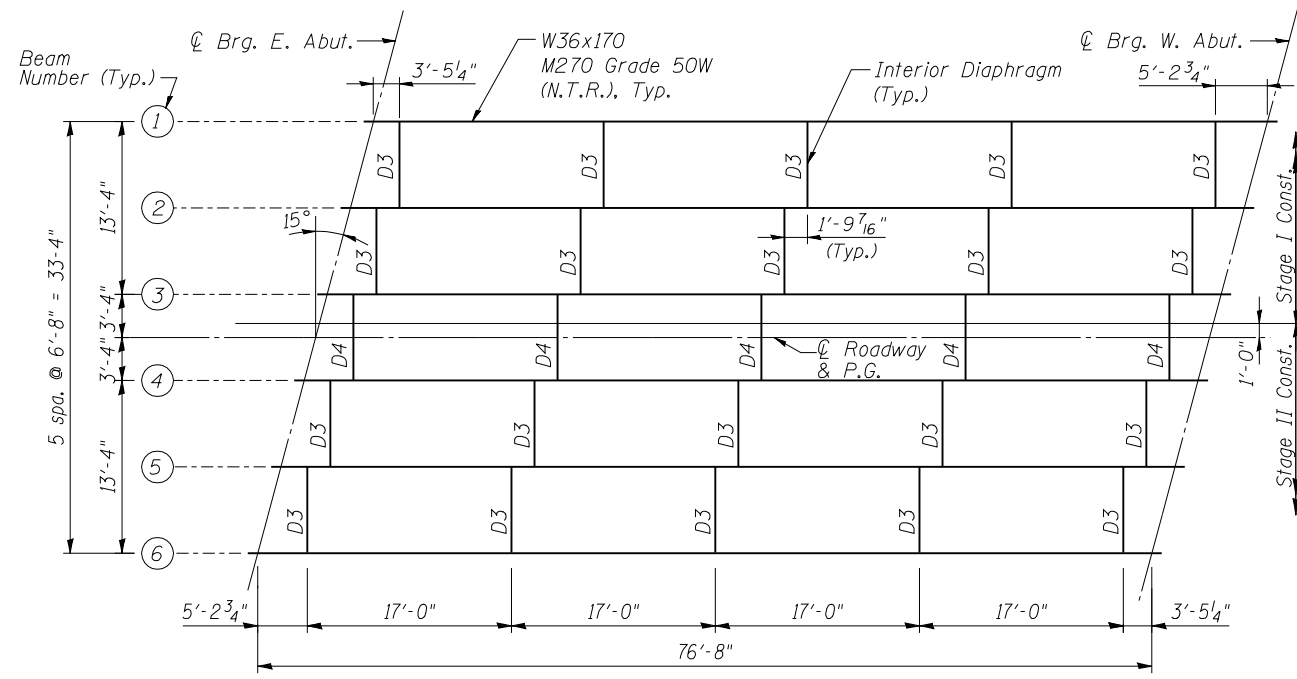


**PARAPET JOINT DETAIL**

**Note**

See sheet 10 of 19 for Detail A and View B-B.  
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v(E) bar details, see sheet 8 of 19.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 For bar splicer details, see sheet 17 of 19.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 19.  
 For additional parapet details, see sheet 8 of 19.

(Sheet 2 of 2)



**\* TOP OF BEAM ELEVATIONS**

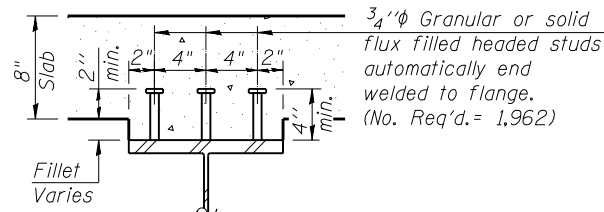
Beam Number	☐ Brg. E. Abut.	☐ Brg. W. Abut.
1	461.12	461.35
2	461.24	461.48
3	461.34	461.58
4	461.33	461.58
5	461.22	461.47
6	461.08	461.34

\* For Fabrication only

**BEAM ELEVATION**

**General Notes:**

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. All diaphragms and connecting plates shall be AASHTO M270 Grade 50W.
3. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



**SECTION A-A**

		0.5 Sp.
$I_s$	(in <sup>4</sup> )	10,500
$I_c(n)$	(in <sup>4</sup> )	26,306
$I_c(3n)$	(in <sup>4</sup> )	19,033
$S_s$	(in <sup>3</sup> )	572.9
$S_c(n)$	(in <sup>3</sup> )	830.1
$S_c(3n)$	(in <sup>3</sup> )	744.8
DC1	(k/ft)	0.898
MDC1	(k)	659.8
DC2	(k/ft)	0.15
MDC2	(k)	110.2
DW	(k/ft)	0.3
MDW	(k)	220.6
$M_L + IM$	(k)	1,123.0
$M_u$ (Strength I)	(k)	3,258.6
$\phi_f M_n$	(k)	4,161.1
$f_s$ DC1	(ksi)	13.8
$f_s$ DC2	(ksi)	1.78
$f_s$ DW	(ksi)	3.55
$f_s$ ( $L + IM$ )	(ksi)	16.2
$f_s$ (Service II)	(ksi)	40.2
$0.95R_h F_y f$	(ksi)	47.5
$V_f$	(k)	24.7

	Abut.
RDC1	(k) 34.4
RDC2	(k) 5.75
RDW	(k) 11.5
$R_L + IM$	(k) 78.0
RTotal	(k) 129.6

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_L + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

$M_u$  (Strength I): Factored design moment (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

$\phi_f M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

$M_{DC1} / S_{nc}$

$f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_c(3n)$  or  $M_{DC2} / S_c(cr)$  as applicable.

$f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_c(3n)$  or  $M_{DW} / S_c(cr)$  as applicable.

$f_s$  ( $L + IM$ ): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).

$M_L + IM / S_c(n)$  or  $M_L + IM / S_c(cr)$  as applicable.

$f_s$  (Service II): Sum of stresses as computed below (ksi).

$f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM)$

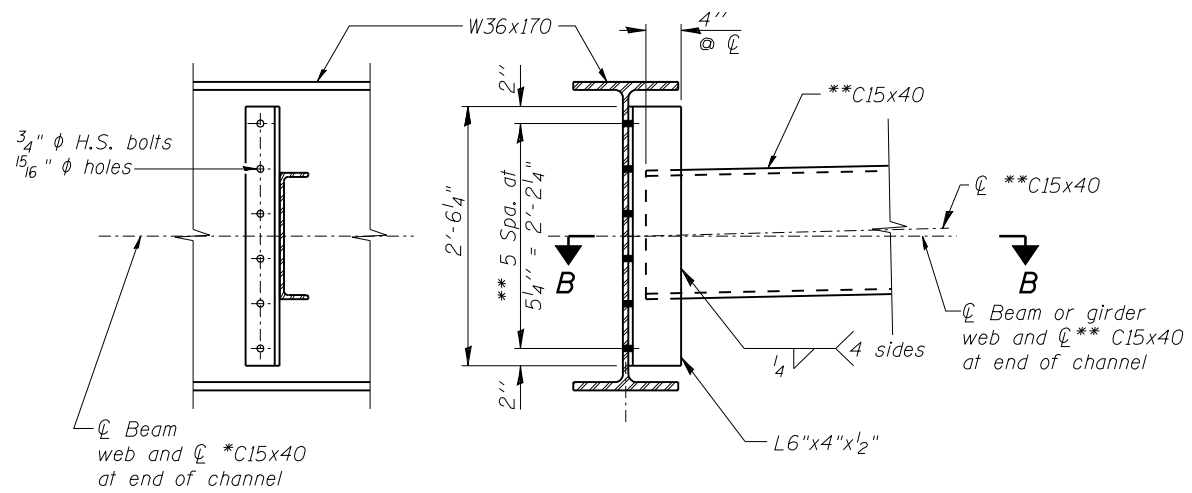
$0.95R_h F_y f$ : Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

$V_f$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

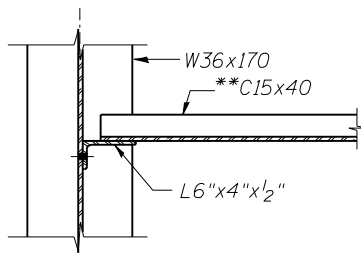
**Note**

Two hardened washers required for each set of oversized holes.

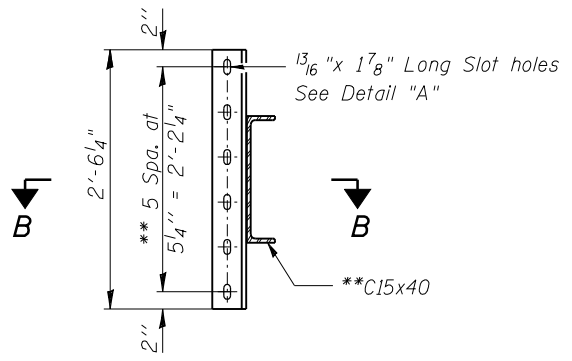
\*\* C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no extra cost to the department.



**INTERIOR DIAPHRAGM D3**



**SECTION B-B**

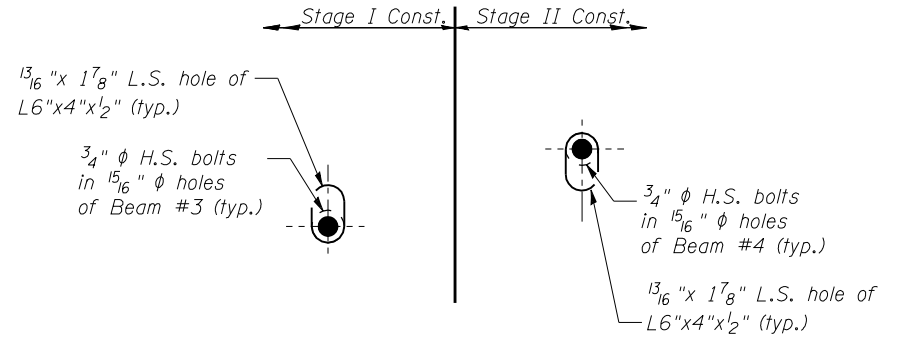


**INTERIOR DIAPHRAGM D4  
L6"x4"x1/2"**

Details of Diaphragm D4 similar to D3 (Except as noted here)

**Note**  
Two hardened washers required for each set of oversized holes.  
  
\*\* C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no extra cost to the department.

All Diaphragms & Connecting Plates shall be AASHTO M270 Grade 50W.

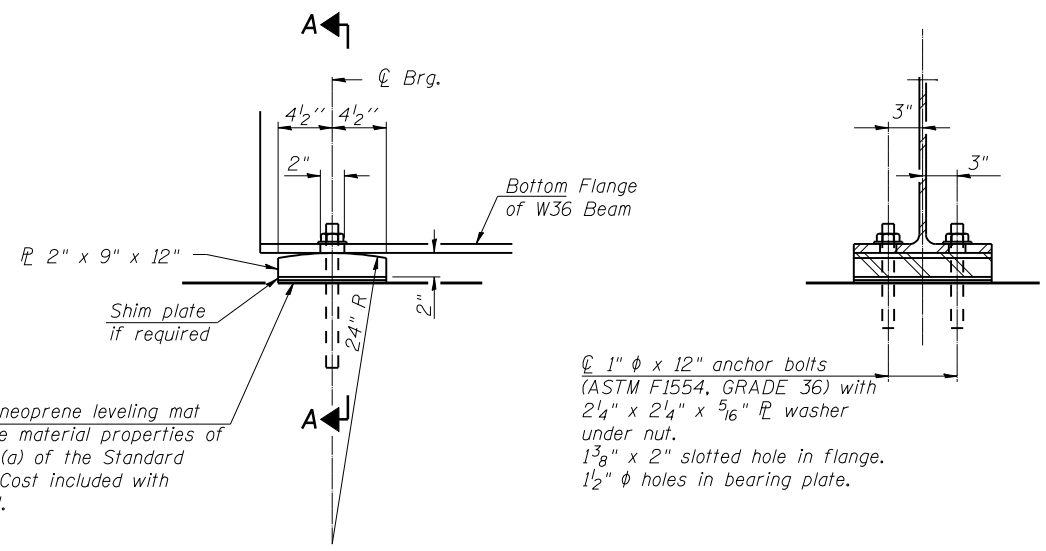


**DETAIL "A"**

Location of bolt relative to long slot holes in L6"x4"x1/2"

**Note**  
Bolts shall be finger tight until Stage II Concrete pour is complete. Two hardened washers required for each set of long slot holes.

Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load.



**ELEVATION AT ABUTMENT**

**SECTION A-A**

**FIXED BEARING**

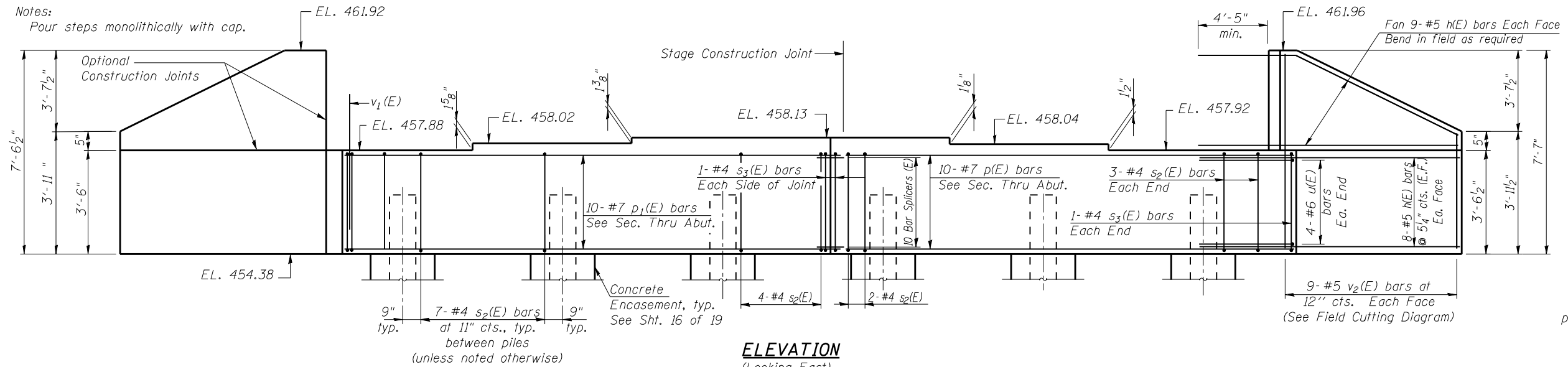
**Notes:**  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	57
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

**Notes:**

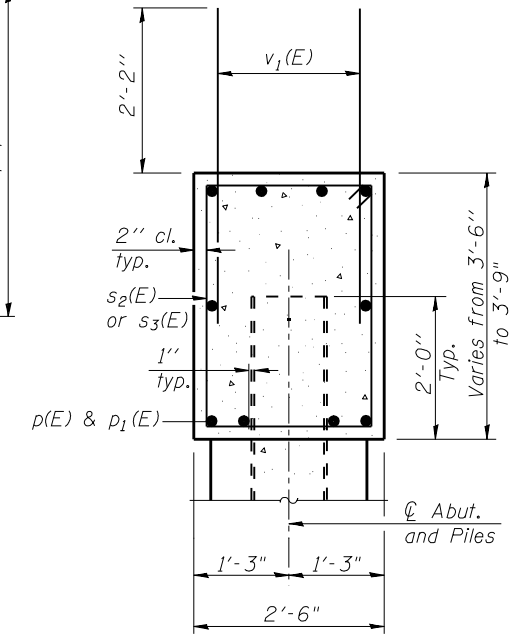
Pour steps monolithically with cap.



**ELEVATION**

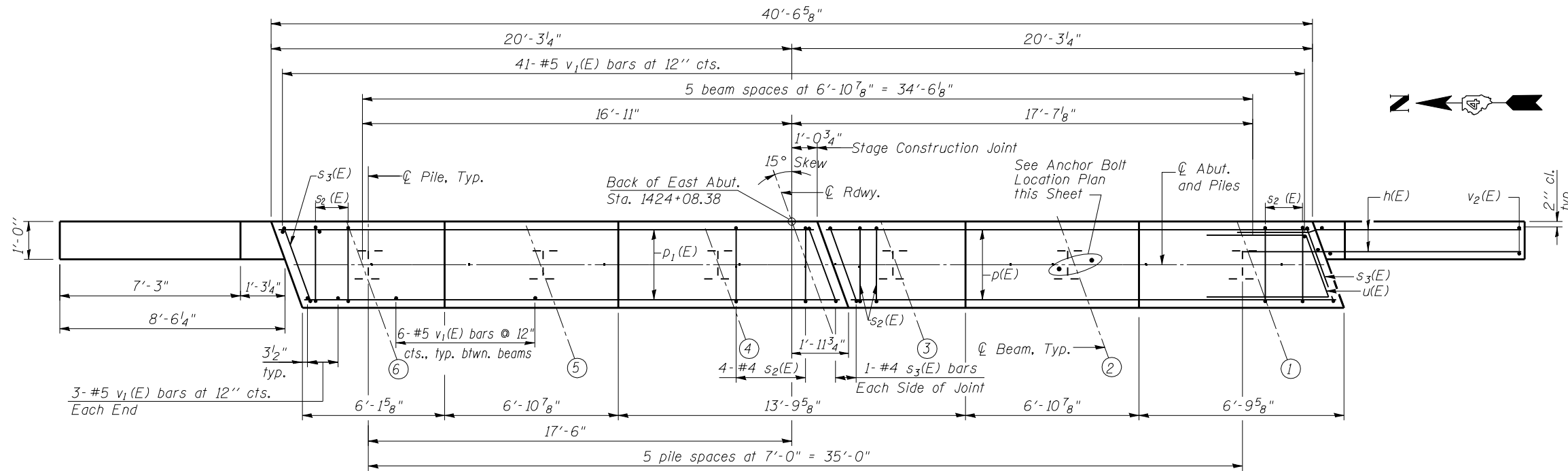
(Looking East)

Note:  
For details of piles, see sheet 16 of 19.



**SECTION THRU ABUTMENT**

See sheet 2 of 19 for Abutment Backfill details

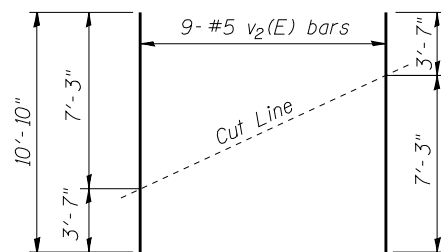


**PLAN**

**PILE DATA**

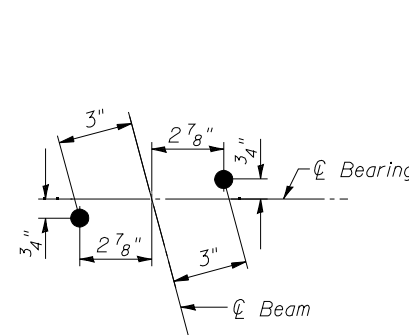
Type: Steel HP14x89  
Nominal Required Bearing: 506 K  
Factored Resistance Available: 278 K  
Est. Length: 26 ft.  
No. Production Piles: 6

Note:  
Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.

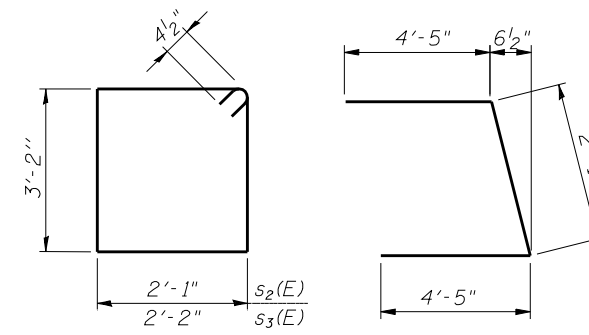


**FIELD CUTTING DIAGRAM**

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



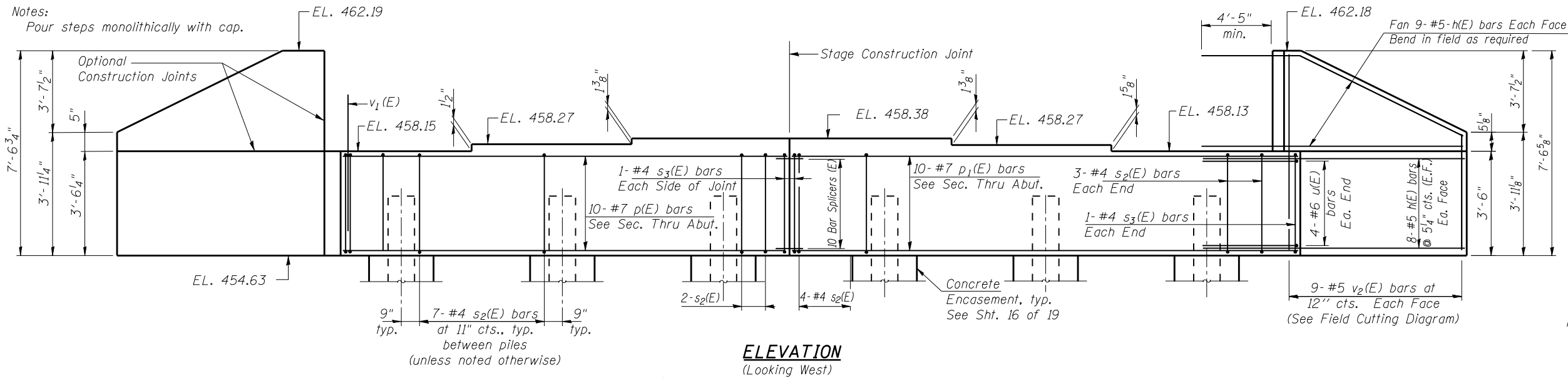
**ANCHOR BOLT LOCATION PLAN**



**BARS s2(E) & s3(E) BAR u(E)**

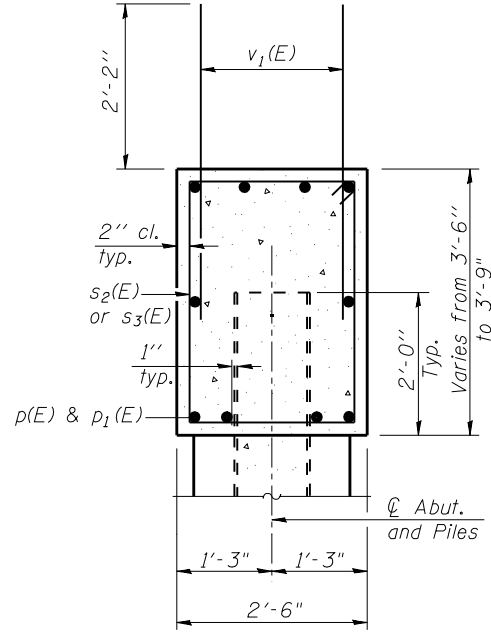
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	68	#5	13'-8"	—
p(E)	10	#7	18'-6"	—
p1(E)	10	#7	21'-0"	—
s2(E)	40	#4	11'-3"	□
s3(E)	4	#4	11'-5"	□
u(E)	8	#6	10'-11"	⌒
v1(E)	77	#5	4'-4"	—
v2(E)	18	#5	10'-10"	—
Bar Splicers		Each	10	
Structure Excavation		Cu. Yd.	32.0	
Concrete Structures		Cu. Yd.	17.4	
Reinforcement Bars, Epoxy Coated		Pound	2,790	
Furnishing Steel Piles HP14x89		Foot	156	
Driving Piles		Foot	156	
Concrete Encasement		Cu. Yd.	3.3	



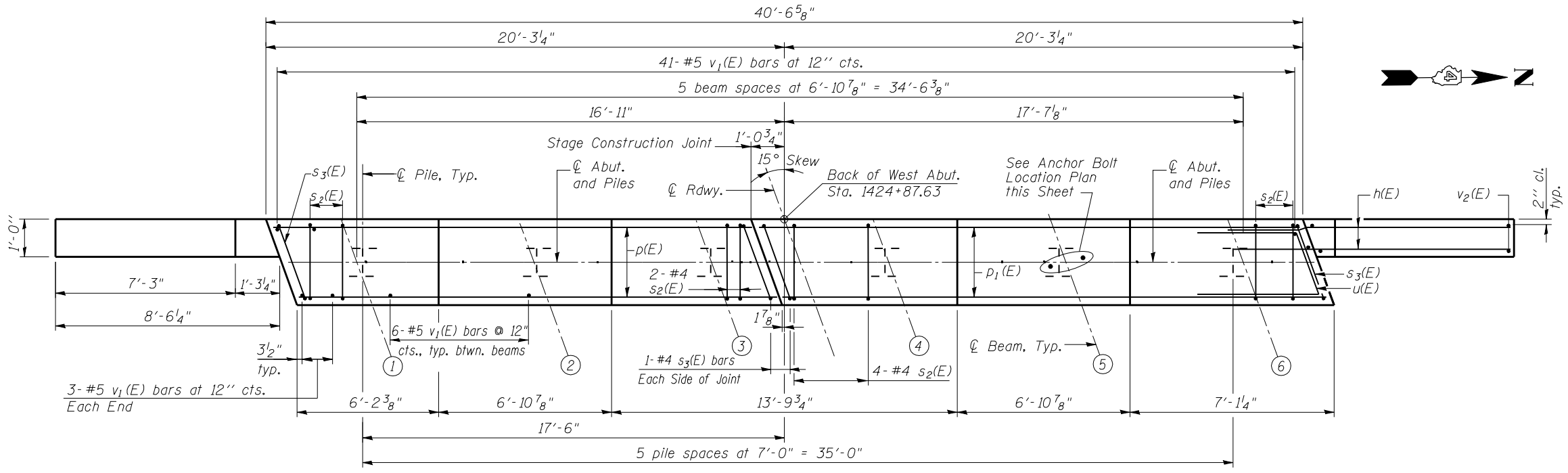
**ELEVATION**  
(Looking West)

Note:  
For details of piles, see sheet 16 of 19.



**SEC. THRU ABUT.**

See sheet 2 of 19 for Abutment Backfill details

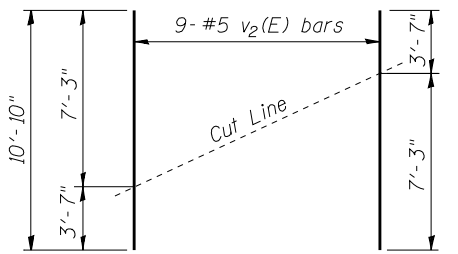


**PLAN**

**PILE DATA**

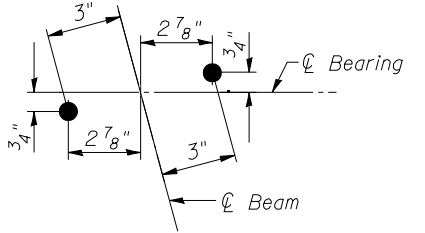
Type: Steel HP14x89  
Nominal Required Bearing: 579 K  
Factored Resistance Available: 318 K  
Est. Length: 27 ft.  
No. Production Piles: 5  
No. Test Piles: 1

Note:  
Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.

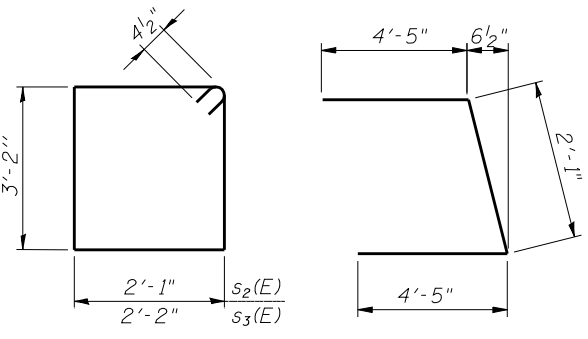


**FIELD CUTTING DIAGRAM**

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



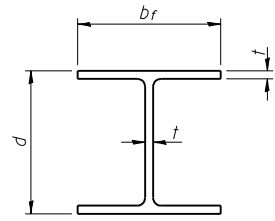
**ANCHOR BOLT LOCATION PLAN**



**BARS s2(E) & s3(E) BAR u(E)**

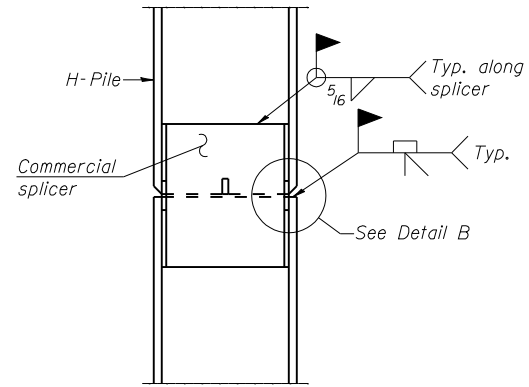
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	68	#5	13'-8"	—
p(E)	10	#7	18'-6"	—
p1(E)	10	#7	21'-0"	—
s2(E)	40	#4	11'-3"	□
s3(E)	4	#4	11'-5"	□
u(E)	8	#6	10'-11"	⌒
v1(E)	77	#5	4'-4"	—
v2(E)	18	#5	10'-10"	—
Bar Splicers		Each	10	
Structure Excavation		Cu. Yd.	32.0	
Concrete Structures		Cu. Yd.	17.4	
Reinforcement Bars, Epoxy Coated		Pound	2,790	
Furnishing Steel Piles HP14x89		Foot	135	
Driving Piles		Foot	135	
Test Pile Steel HP14x89		Each	1	
Concrete Encasement		Cu. Yd.	3.3	

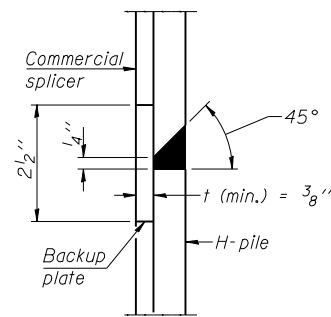


**STEEL PILE TABLE**

Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 <sup>1</sup> / <sub>4</sub> "	14 <sup>7</sup> / <sub>8</sub> "	1 <sup>5</sup> / <sub>16</sub> "	30"
x102	14"	14 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>16</sub> "	30"
x89	13 <sup>7</sup> / <sub>8</sub> "	14 <sup>3</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	30"
x73	13 <sup>5</sup> / <sub>8</sub> "	14 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	30"
HP 12x84	12 <sup>1</sup> / <sub>4</sub> "	12 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>16</sub> "	24"
x74	12 <sup>1</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	24"
x63	12"	12 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	24"
x53	11 <sup>3</sup> / <sub>4</sub> "	12"	7 <sup>1</sup> / <sub>16</sub> "	24"
HP 10x57	10"	10 <sup>1</sup> / <sub>4</sub> "	9 <sup>9</sup> / <sub>16</sub> "	24"
x42	9 <sup>3</sup> / <sub>4</sub> "	10 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>16</sub> "	24"
HP 8x36	8"	8 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>16</sub> "	18"

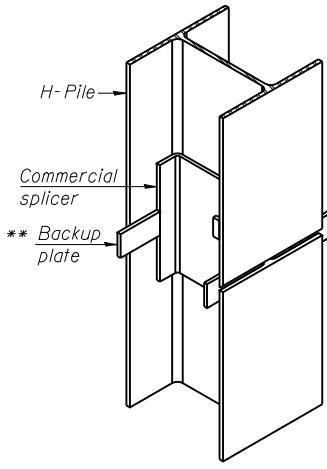


**ELEVATION**

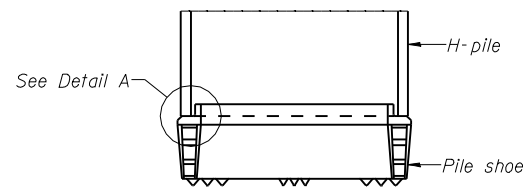


**DETAIL "B"**

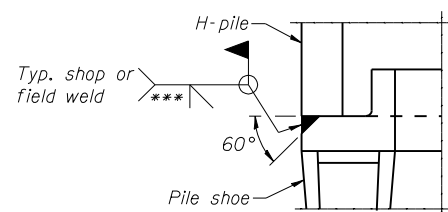
**WELDED COMMERCIAL SPLICE**



**ISOMETRIC VIEW**

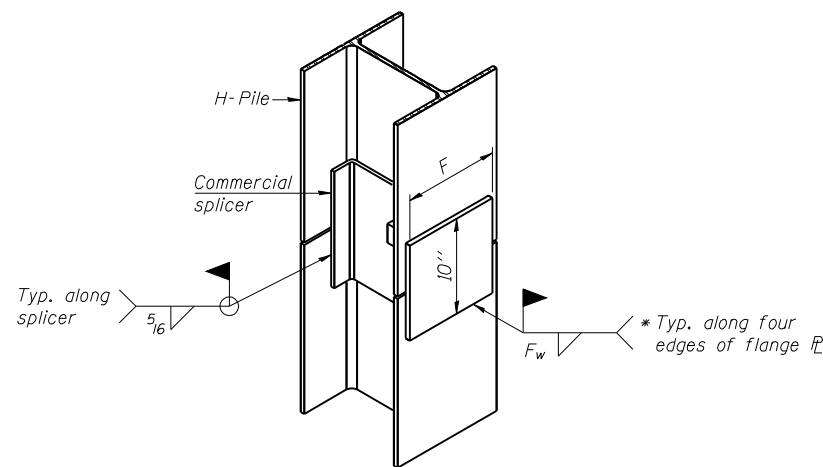


**ELEVATION**



**DETAIL A**

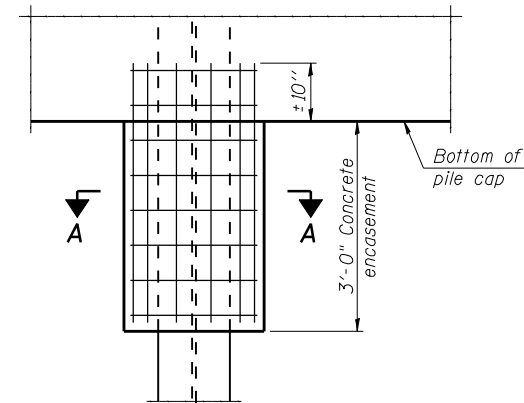
**H-PILE SHOE ATTACHMENT**



**ISOMETRIC VIEW**

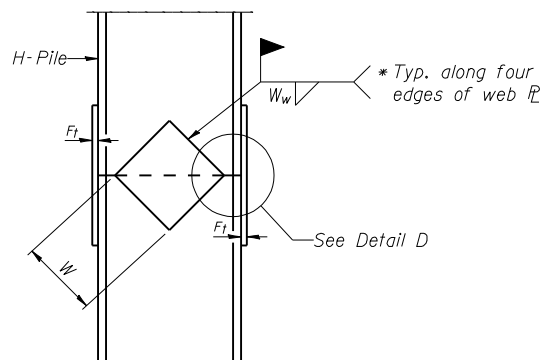
**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).



**ELEVATION**

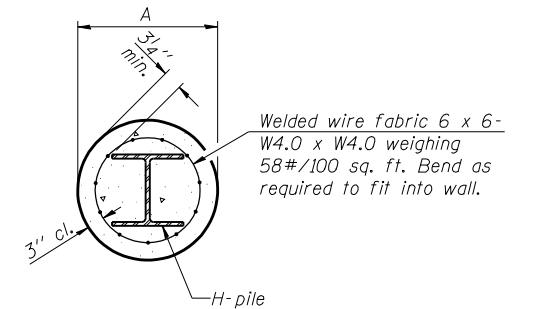
**PILE ENCASEMENT**



**ELEVATION**

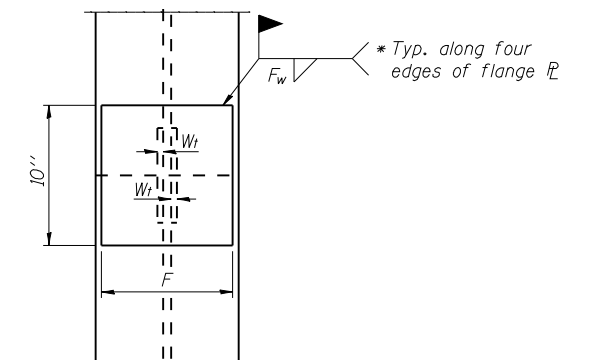
**DETAIL D**

**WELDED PLATE FIELD SPLICE**



**SECTION A-A**

Note:  
Forms for encasement may be omitted when soil conditions permit.



**END VIEW**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 <sup>1</sup> / <sub>2</sub> "	1"	7 <sup>7</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
x102	12 <sup>1</sup> / <sub>2</sub> "	7 <sup>7</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "	7 <sup>3</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
x89	12 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>16</sub> "	7 <sup>3</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
x73	12 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	9 <sup>9</sup> / <sub>16</sub> "	7 <sup>3</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
HP 12x84	10"	7 <sup>7</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>16</sub> "	6 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
x74	10"	7 <sup>7</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>16</sub> "	6 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "
x63	10"	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	6 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "
x53	10"	5 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	6 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "
HP 10x57	8"	3 <sup>3</sup> / <sub>4</sub> "	9 <sup>9</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "
x42	8"	5 <sup>5</sup> / <sub>8</sub> "	9 <sup>9</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "
HP 8x36	7"	5 <sup>5</sup> / <sub>8</sub> "	7 <sup>7</sup> / <sub>16</sub> "	4 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

1-27-12



USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

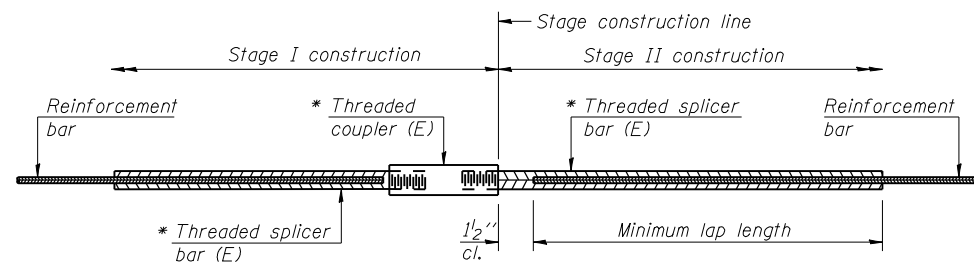
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS  
STRUCTURE NO. 029-0073**

SHEET NO. 16 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	60
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				





**STANDARD BAR SPLICER ASSEMBLY**

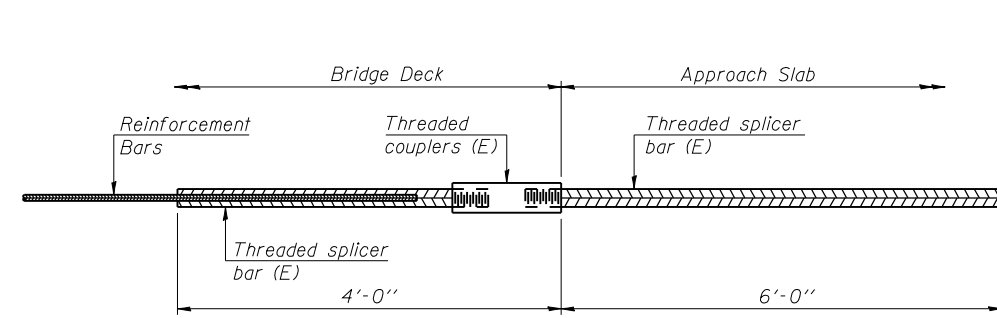
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

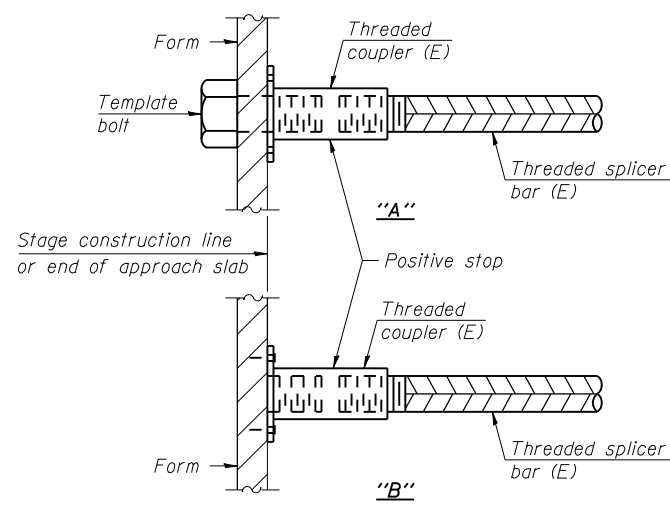
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Bridge Slab	#5	244	5
Diaphragms	#6	16	6
Top of Approach Slabs	#5	50	5
Bottom of Approach Slabs	#8	92	5
Abutments	#7	20	6
Approach Slab Footing	#5	80	5



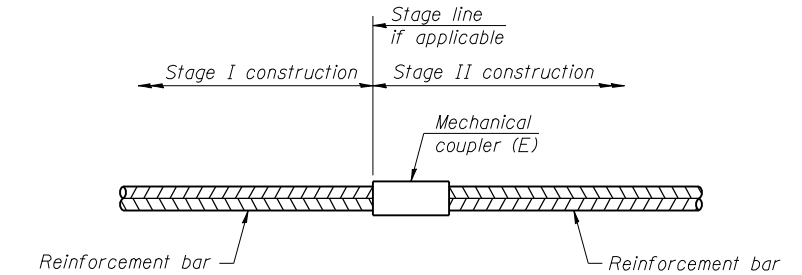
**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required = 78

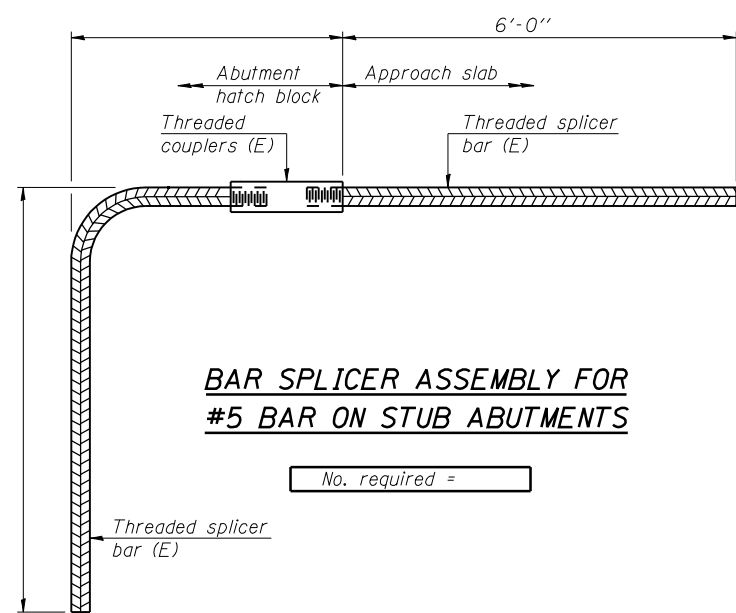


**INSTALLATION AND SETTING METHODS**

"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**



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

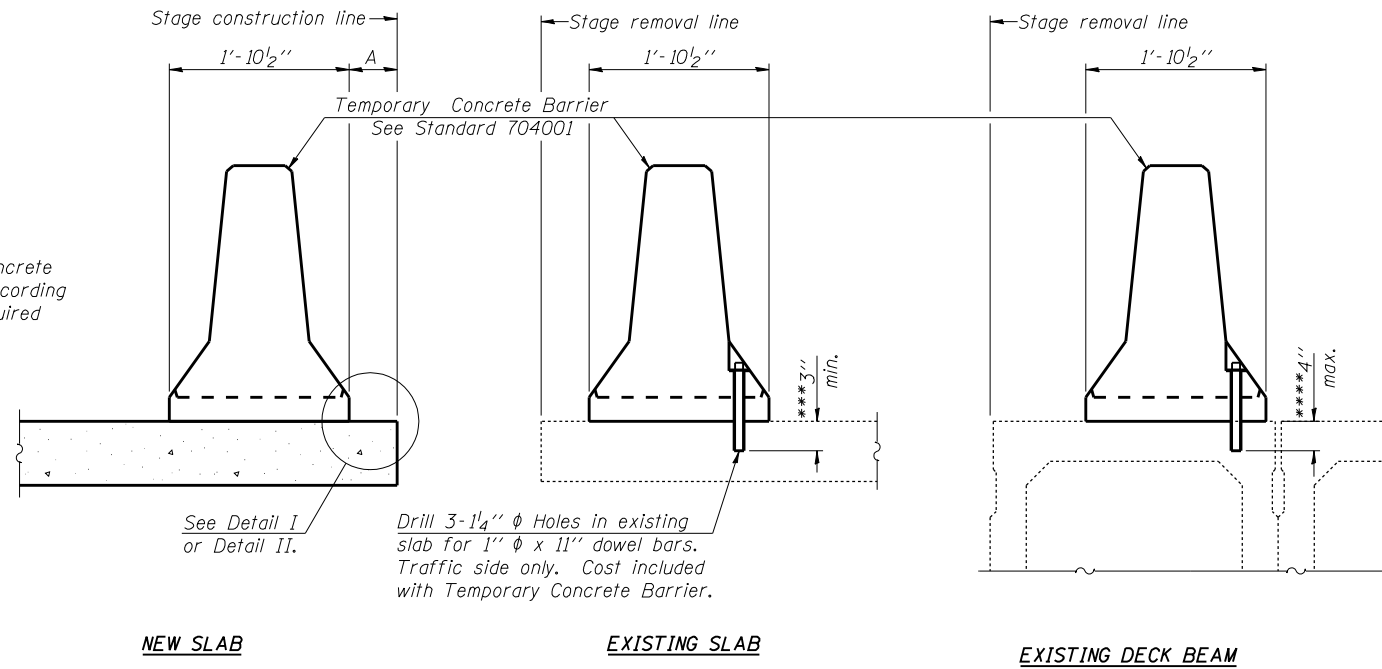
**NOTES**

- 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

1-27-12

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

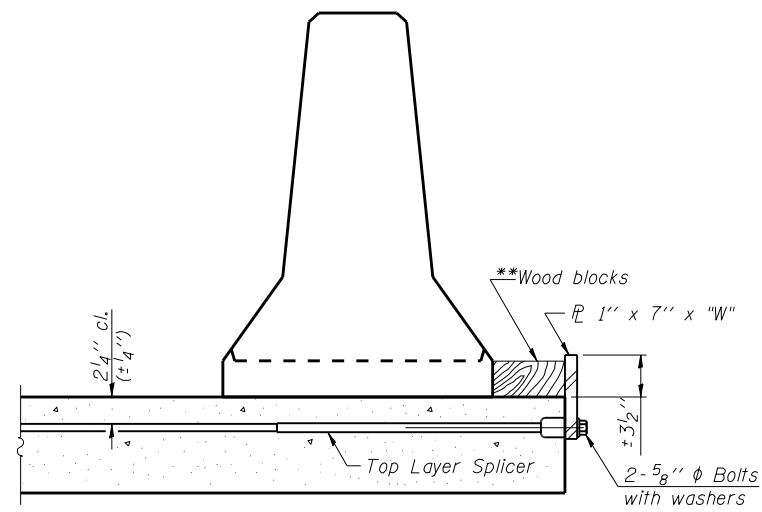
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

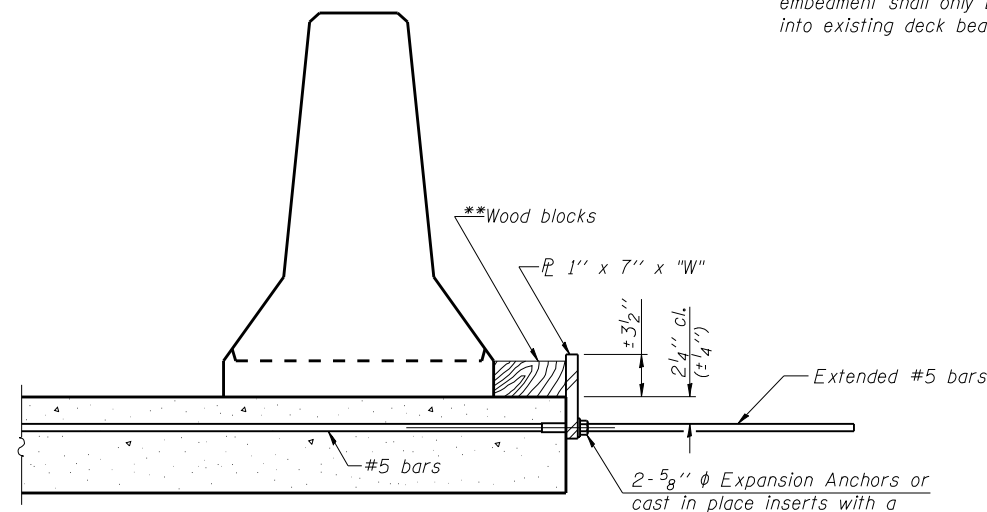
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



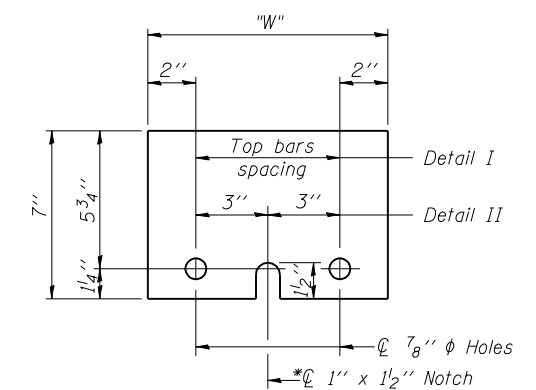
**DETAIL I**



**DETAIL II**

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



**STEEL RETAINER  $\bar{P}$  1" x 7" x "W"**

\* Required only with Detail II

USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	62
CONTRACT NO. 68699				

BORING LOG

JOB NO: BM3-1265 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION BORING NO: B-1  
 PROJECT: Proposed Bridge Replacement - US24 over Little Sister Creek STATION: 1423+76  
 LOCATION: US 24 over Little Sister Creek OFFSET: 12.5' RT  
 BORING RIG & METHOD: CME 75 Truck Mounted/Hollow Stem Augers SURF ELEV: 460.6

DEPTH	SAMPLE FROM - TO	ELEV.	SOIL DESCRIPTION	REC.	BLOWS/6"	q <sub>u</sub>	STRAIN %	WATER CONTENT %
	0.0-1.0	459.7	5" Asphalt over 5" Sand and Gravel Base		Auger 1			5.1
	1.0-2.5		FILL: Br/Gr Clay Loom A-4, little Gravel	11	2-2	0.5	15	21.0
	3.5-5.0	455.9		10	3 1-3	0.6	15	22.9
	6.0-7.5	452.8	Soft Black Sandy Clay A-7-6, little Organics (small Roots)	14	1 1-2	0.3	15	25.3
10	8.5-10.0			15	2 2-2	0.3	15	29.3
	11.0-12.5		Soft to Medium Stiff Dark Gr Clay Loom A-4 (1), trace Gravel	16	WH	0.5	15	22.8
	13.5-15.0			18	WH	0.3	15	24.6
	16.0-17.5	444.1	Very Loose Dark Gr Sand A-1-b, trace Gravel	14	0 0-2			20.1
20	18.5-20.0	441.6	Very loose to Loose Br Sand A-1-b, trace Gravel	12	1 1-1			6.9
	21.0-22.5	437.8		9	1 3-2			23.6
	23.5-25.0	436.3	Medium Dense Br Sand A-3, some Gravel	16	8 10-27			16.2
	26.0-27.5	435.1	Black COAL	14	10 15-23			17.0
30	28.5-30.0		Gray Silty SHALE, trace Coal	11	47 45-7/1in			10.5
	31.0-32.5		Note: Coarse Gravel noted at 26.5'	18	11 30-65			15.2
	33.0-34.3	426.3		5	112/ 5 in			16.5

Boring Terminated @ 34.3 feet

REMARKS Automatic Hammer Used; Stream elevation during drilling = 449.84 ( ) Denotes Calibrated Penetrometer Estimate

WATER	18 FT. ELEV.	442.6 DURING DRILLING	☒ CORE SIZE	IN. DATE:	Mar 21, 11
WATER	11 FT. ELEV.	449.6 AT COMPLETION	☒ CASING LENGTH	FT. DRILLER:	Groff (Tim/John)
WATER	FT. ELEV.	AFTER HRS.	☒ CASING DIAMETER	IN. INSPECTOR:	B. Alsalami

EON: BM3-1265 LITTLE SISTER BRIDGE.GPJ 1/27/12

BORING LOG

JOB NO: BM3-1265 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION BORING NO: B-2  
 PROJECT: Proposed Bridge Replacement - US24 over Little Sister Creek STATION: 1425+35  
 LOCATION: US 24 over Little Sister Creek OFFSET: 13' LT  
 BORING RIG & METHOD: CME 75 Truck Mounted/Hollow Stem Augers SURF ELEV: 460.6

DEPTH	SAMPLE FROM - TO	ELEV.	SOIL DESCRIPTION	REC.	BLOWS/6"	q <sub>u</sub>	STRAIN %	WATER CONTENT %
	0.0-1.0	459.3	6" Asphalt over 10" Gravel Base		Auger 1			3.2
	1.0-2.5		FILL: Br/Gr Clay Loom A-6	9	2-3	(2.0)		27.2
	3.5-5.0	454.9		12	3 3-5	0.8	15	22.8
	6.0-7.5		Stiff Gr Silt A-4	17	3 4-3	1.9	15	21.4
10	8.5-10.0	450.4		18	2 4-6	1.7	15	25.3
	11.0-12.5		Stiff Dark Gr Clay Loom A-4	17	2 2-4	(1.0)		27.3
	13.5-15.0	445.3		18	1 3-3	1.2	15	22.4
	16.0-17.5	443.7	Very Soft Dark Gr Clay Loom A-4	14	0 0-1			22.7
20	18.5-20.0		Very loose to loose Black and Gray Sand A-1-b, some Gravel	14	1 3-2			28.5
	21.0-22.5			17	1 1-3			19.9
	23.5-25.0	434.8		18	4 4-5			11.4
	26.0-27.5			7	68 35/1"			10.3
30	28.5-30.0		Gray Silty SHALE	1	100/1"			16.6
	31.0-32.5	428.1		18	27 46-58			8.3

Boring Terminated @ 32.5 feet

REMARKS Automatic Hammer Used; Stream elevation during drilling = 449.84 ( ) Denotes Calibrated Penetrometer Estimate

WATER	16 FT. ELEV.	444.6 DURING DRILLING	☒ CORE SIZE	IN. DATE:	Mar 21, 11
WATER	10.5 FT. ELEV.	450.1 AT COMPLETION	☒ CASING LENGTH	FT. DRILLER:	Groff (Tim/John)
WATER	FT. ELEV.	AFTER HRS.	☒ CASING DIAMETER	IN. INSPECTOR:	B. Alsalami

EON: BM3-1265 LITTLE SISTER BRIDGE.GPJ 1/27/12

B.M. Nail in Power Pole, Sta. 1449+35, 38' Lt. Elev = 459.17

Existing Structure: S.N. 029-0018, originally constructed in 1935. In 1971, the bridge was constructed as SBI 78, Section 137-BR-1 with the existing closed abutments widened and the deck replaced with single span PPC deck beams. In 1987 the bridge deck was resurfaced with a Waterproofing Membrane System (WMS) and a 1 3/4" class 1 wearing surface. Bridge railings were replaced, deck beams were repaired and riprap was placed at the north-west wingwall that same year. In February 2008, five deck beams were replaced (two at the north and three at the south edges of the bridge) and the bridge deck was resurfaced. The bridge measures 79'-4 3/4" back to back of abutments and 33' out to out of deck.

The existing bridge is to be removed and replaced. Traffic shall be maintained using stage construction

No salvage

**DESIGN SPECIFICATIONS**

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

**DESIGN STRESSES**

Field Units  
 f'c = 3,500 p.s.i.  
 fy = 60,000 p.s.i. (Reinforcement)  
 fy = 50,000 p.s.i. (Structural Steel)  
 AASHTO M270 Grade 50W

**LOADING HL-93**

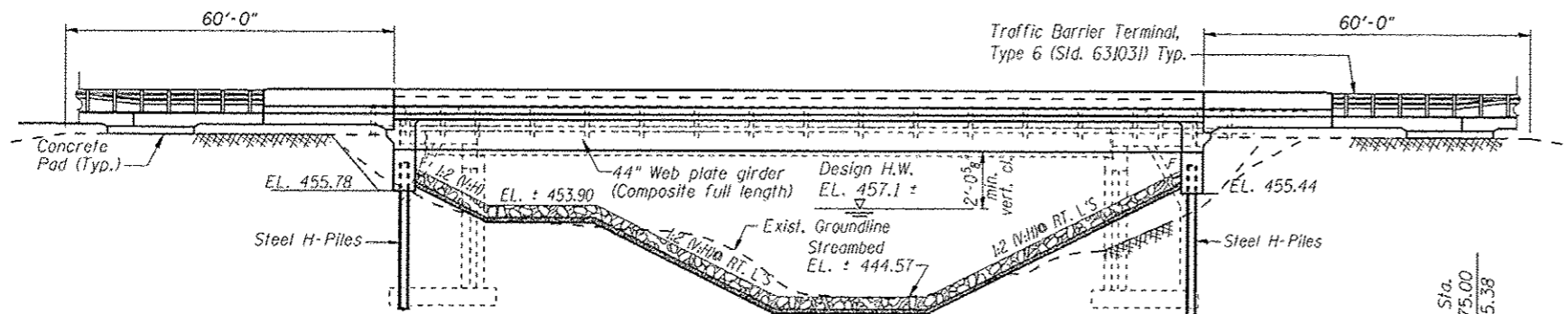
Allow 50#/sq. ft. for future wearing surface.

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 Sec. (SD1) = 0.09g  
 Design Spectral Acceleration at 0.2 Sec. (S02) = 0.14g  
 Soil Site Class = C

**INDEX OF SHEETS**

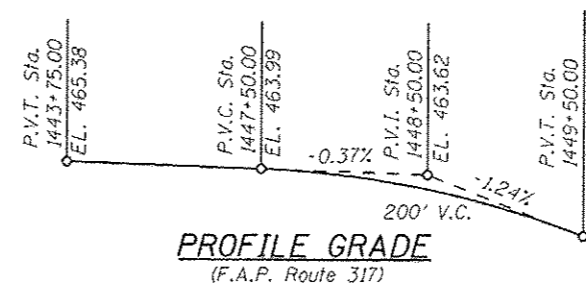
1. General Plan and Elevation
2. General Data
3. Footing Layout, Stage Construction Details
4. Top of Deck Elevations
5. Top of Deck Elevations
6. Top of East Approach Slab Elevations
7. Top of West Approach Slab Elevations
8. Superstructure
9. Superstructure Details
10. Diaphragm Details
11. Bridge Approach Slab Details
12. Bridge Approach Slab Details
13. Steel Beam Framing Plan and Details
14. Interior Steel Diaphragms and Bearing Details
15. East Abutment Details
16. West Abutment Details
17. HP Pile Details
18. Bar Splicer Assembly and Mechanical Splicer Details
19. Temporary Concrete Barrier for Stage Construction
20. Soil Boring Logs
21. Soil Boring Logs



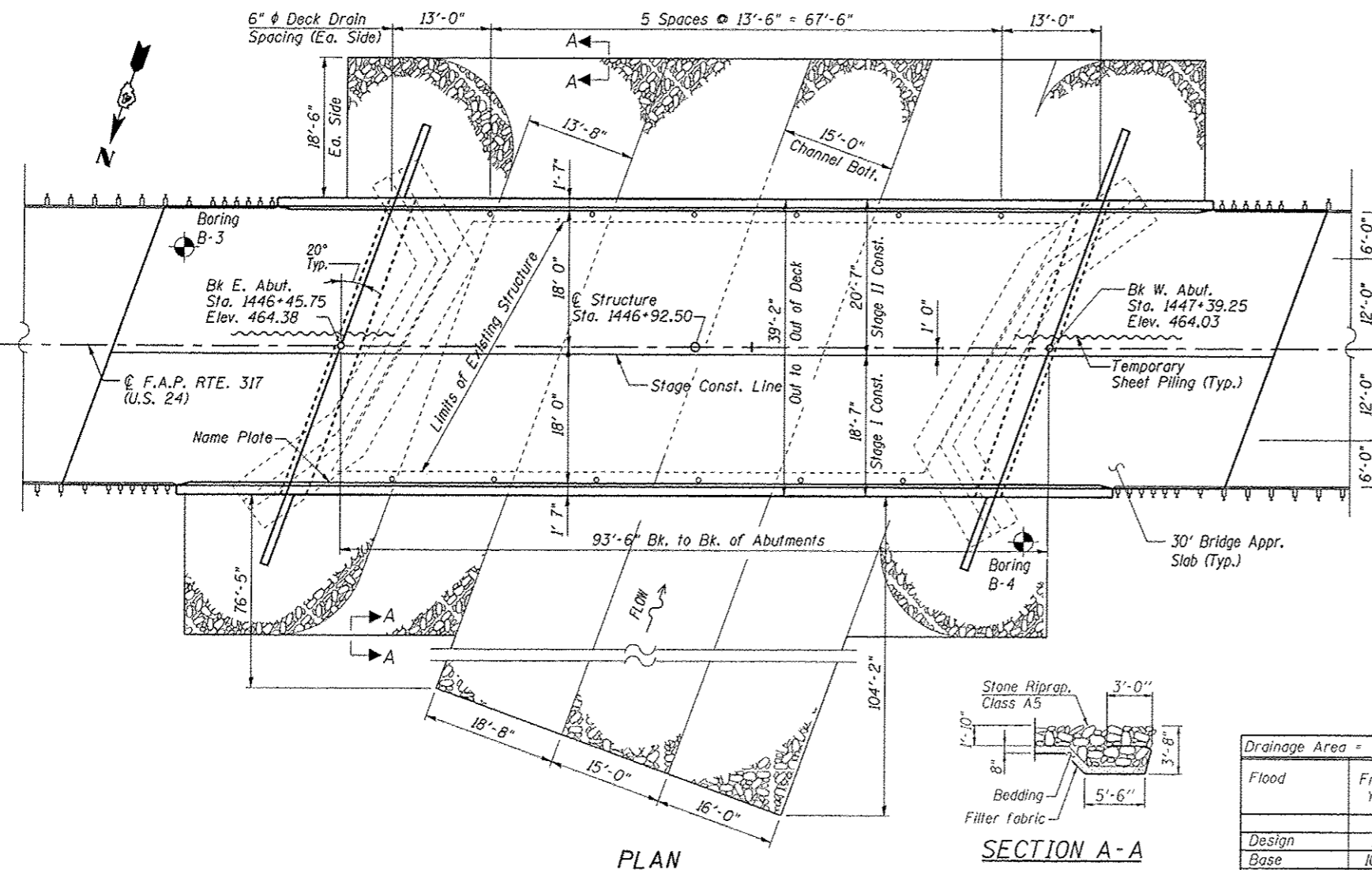
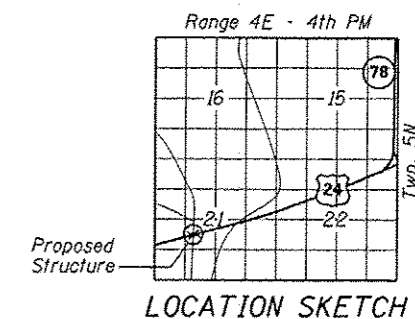
**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevations (ft.)	E. Abut.	W. Abut.
	455.78	455.44

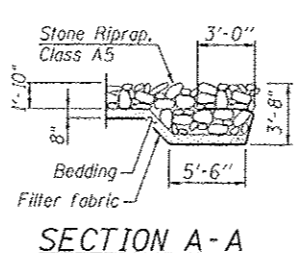
**ELEVATION**



**PROFILE GRADE**  
(F.A.P. Route 317)

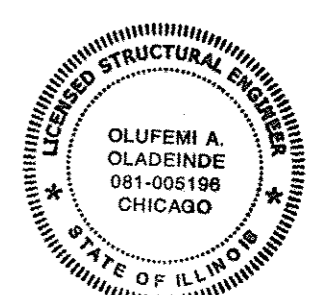


**PLAN**



**SECTION A-A**

**APPROVED**  
 For Structural Adequacy Only  
*D. Carl Loney, J.F.S.*  
 Engineer of Bridges & Structures



Signed: *Olufemi A. Oladeinde*  
 OLUFEMI A. OLADEINDE, P.E., S.E. Date 12/11/2012  
 LICENSE EXPIRES 11-30-2014

**WATERWAY INFORMATION**

Drainage Area = 15.7 sq. miles Low Grade EL. 463.78 ft. @ Sta. 1448+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater EL.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	4,430	472	558	457.1	1.0	0.9	456.6	455.7
Base	100	5,210	485	583	457.4	1.4	1.3	458.8	458.7
Max. Calc.	500	7,100	522	635	458.0	3.1	2.4	461.1	460.4

**GENERAL PLAN & ELEVATION**  
**U.S. 24 OVER BIG SISTER CREEK**  
**F.A.P. RTE. 317 - SEC. 137-BR-1**  
**FULTON COUNTY**  
**STATION 1446+92.50**  
**STRUCTURE NO. 029-0074**



USER NAME	DESIGNED - LRT	REVISED -
PROJECT SCALE	CHECKED - OAO	REVISED -
PLOT DATE	DRAWN - TCS	REVISED -
	CHECKED - LRT	REVISED -

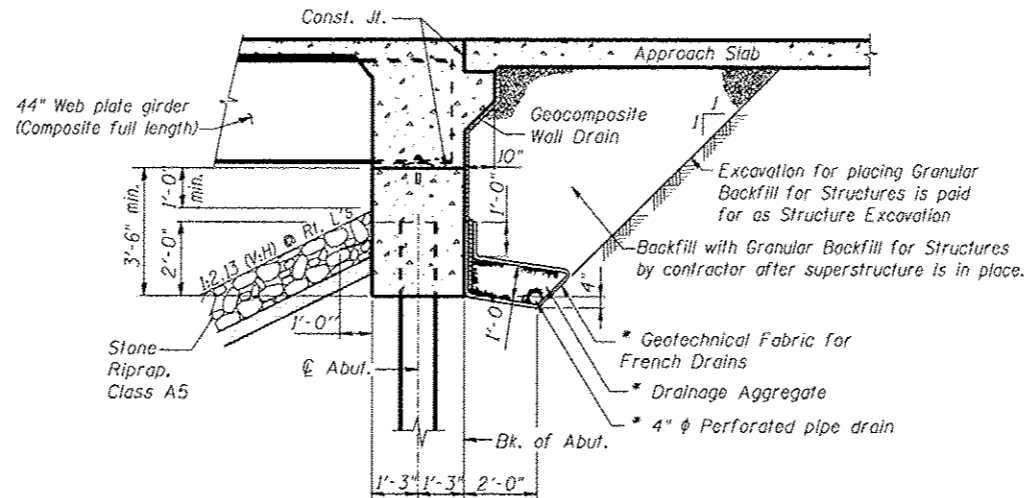
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
 STRUCTURE NO. 029-0074  
 SHEET NO. 1 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR. BR-1) BR	FULTON	118	64
			CONTRACT NO. 68699	
ILLINOIS FED. AID PROJECT				

**GENERAL NOTES**

- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 3/4 in. φ, holes 15/16 in. φ, unless otherwise noted.
- Calculated weight of Structural Steel = 115,000 Pounds.
- All structural steel shall be AASHTO M 270 Grade SOW.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
- Layout of slope protection system may be varied in the field to suit ground conditions in the field as directed by the Engineer.
- The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 removal to ensure the remaining portion will not be prematurely damaged.
- Slipforming of the parapets is not allowed
- Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.



**SECTION THRU ABUTMENT (TYP.)**  
(Horiz. Dim. @ Rt. L's)

\* Include in the cost of Pipe Underdrain for Structures 4"

**Notes:**

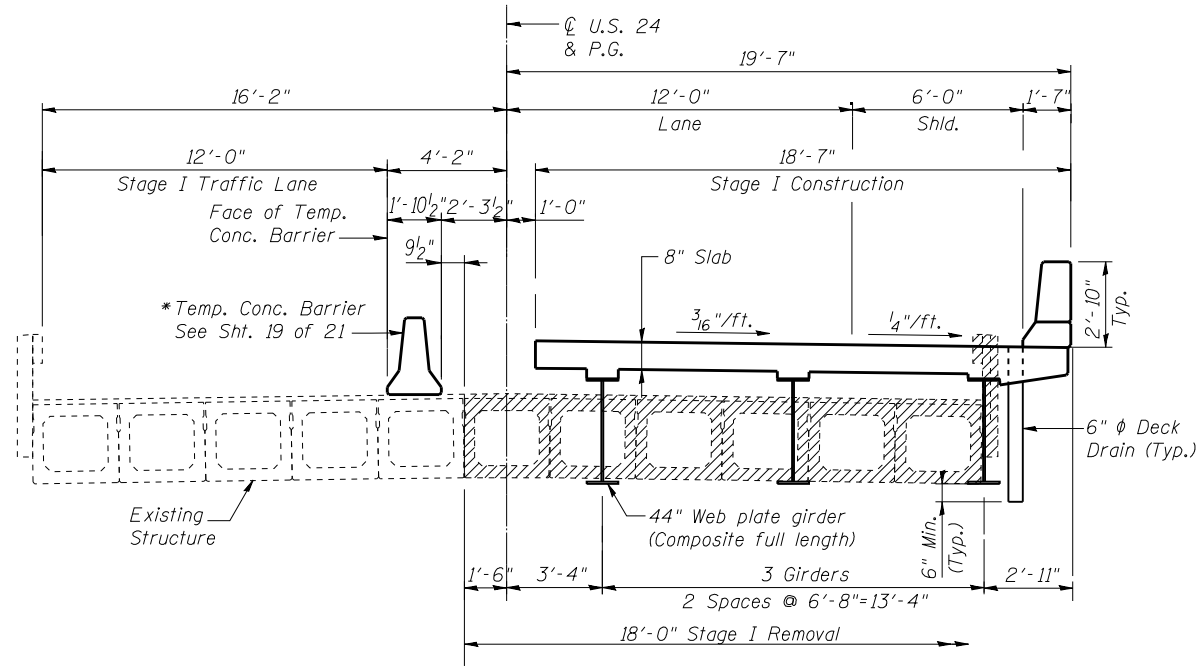
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

**TOTAL BILL OF MATERIAL**

ITEM	UNITS	SUPER.	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		75	75
Granular Backfill for Structures	Cu. Yd.		125	125
Stone Riprap, Class A5	Sq. Yd.		1,370	1,370
Filter Fabric	Sq. Yd.		827	827
Concrete Encasement	Cu. Yd.		8.8	8.8
Concrete Structures	Cu. Yd.		62.6	62.6
Concrete Superstructure	Cu. Yd.	269		269
Bridge Deck Grooving	Sq. Yd.	583		583
Protective Coat	Sq. Yd.	726		726
Furnishing and Erecting Structural Steel	L. Sum	0.5		0.5
Stud Shear Connectors	Each	1620		1620
Reinforcement Bars, Epoxy Coated	Pound	56,330	10,460	66,790
Bar Splicers	Each	522	100	622
Furnishing Steel Piles HP14x89	Foot		434	434
Driving Piles	Foot		434	434
Test Pile Steel HP14x89	Each		1	1
Geocomposite Wall Drain	Sq. Yd.		103	103
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		24	24
Floor Drains	Each	12		12
Pipe Underdrains for Structures 4"	Foot		132	132
Temporary Sheet Piling	Sq. Ft.		705	705

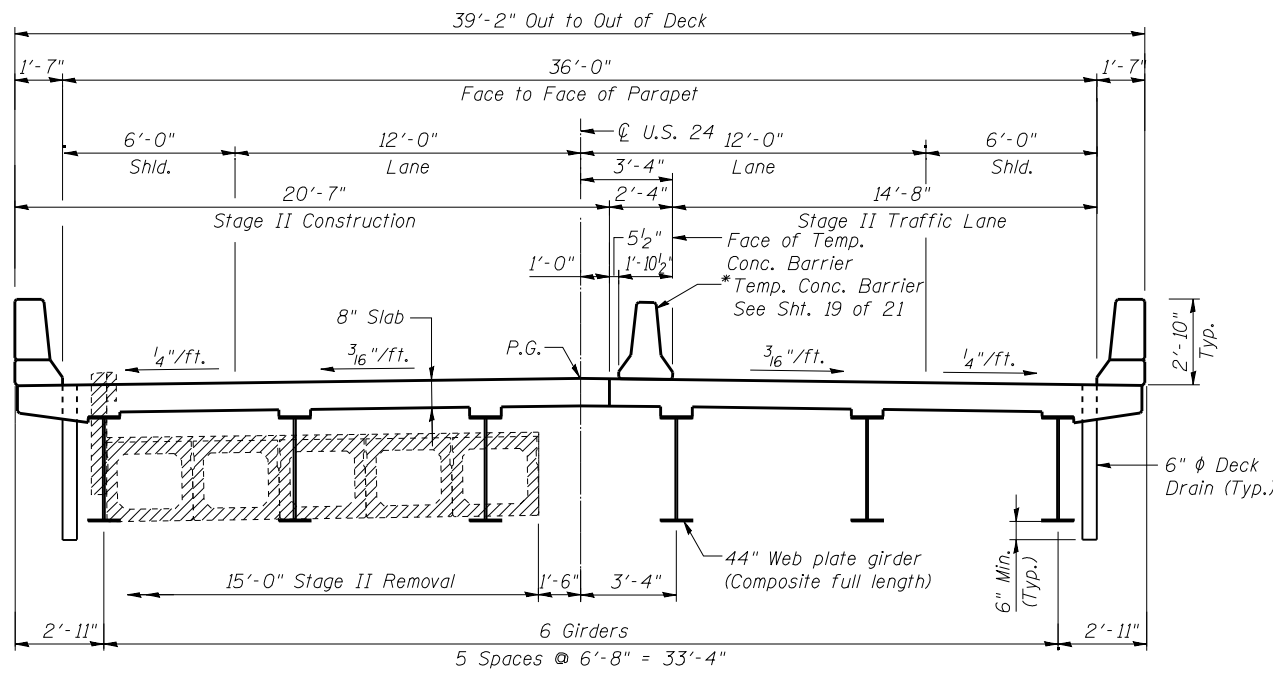
STATION 1446+92.50  
BUILT BY  
STATE OF ILLINOIS  
FA RTE. 317 SEC. 137-BR-1  
LOADING HL-93  
STR. NO. 029-0074

**NAME PLATE**  
See Std. 515001

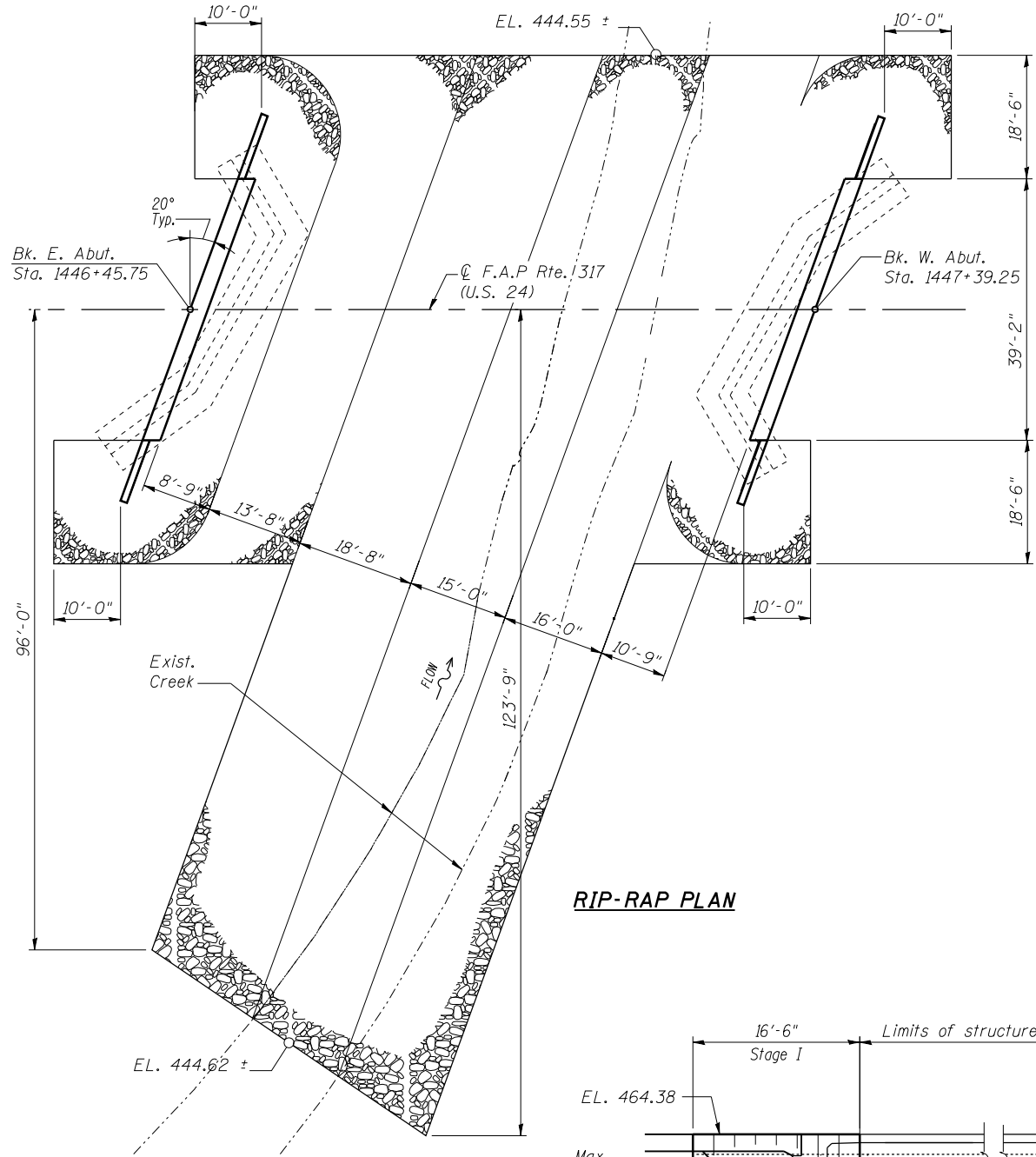


**CROSS SECTION - STAGE I**  
(Looking West)

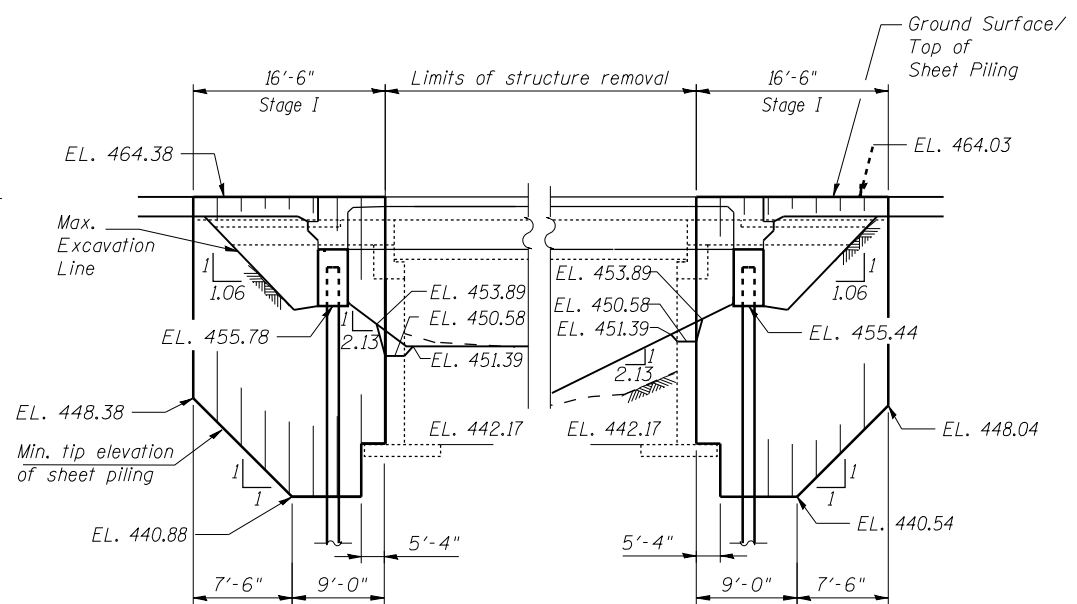
\* For temporary concrete barrier quantities, see roadway plan



**CROSS SECTION - STAGE II**  
(Looking West)

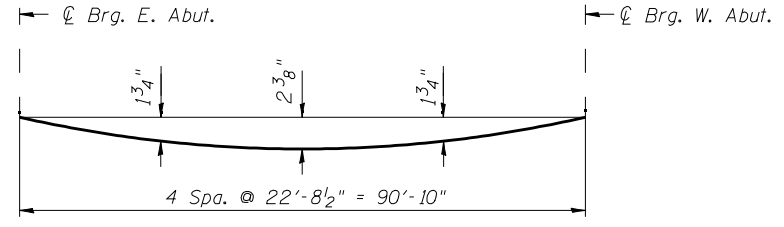
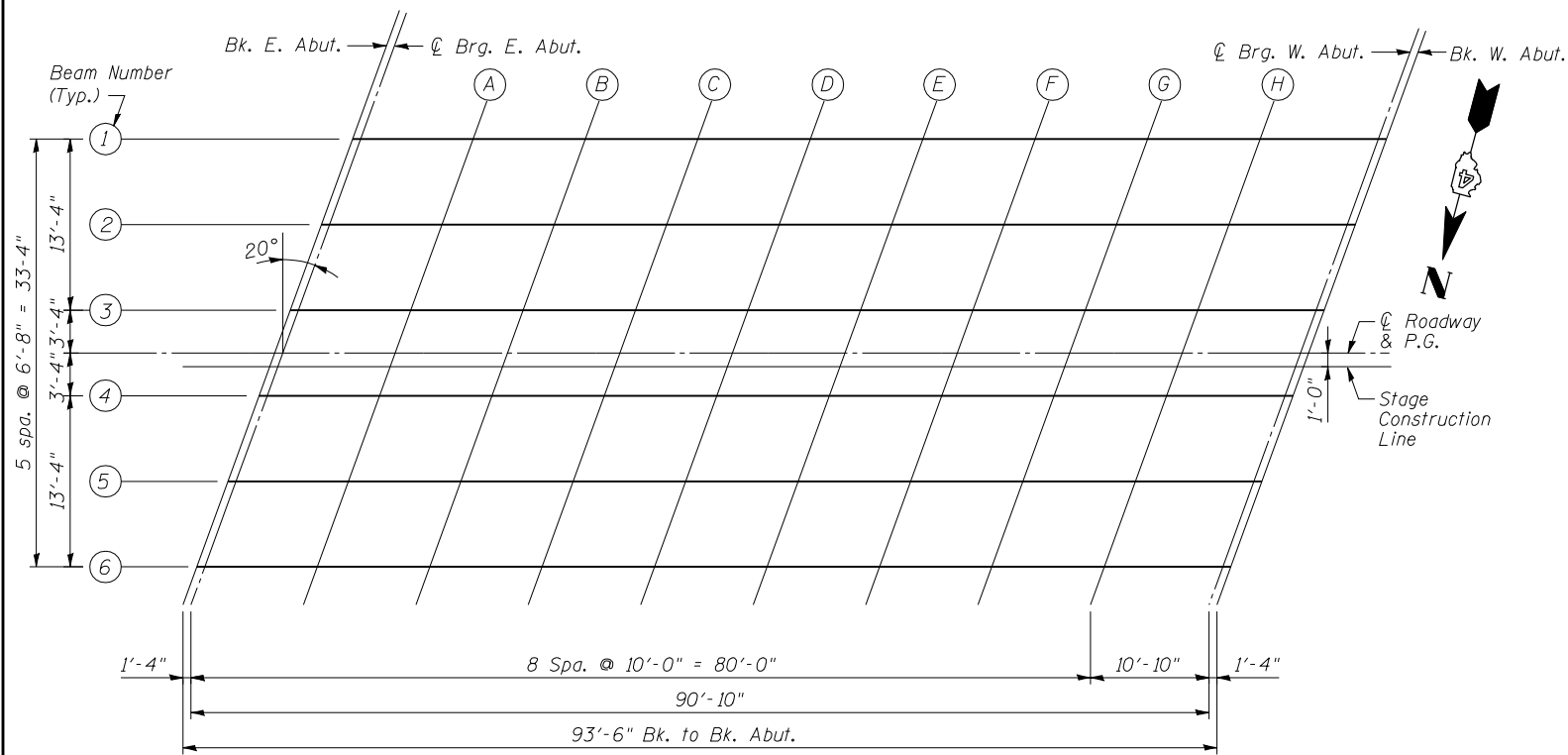


**RIP-RAP PLAN**



**TEMPORARY SHEET PILING ELEVATION**  
(Looking South)

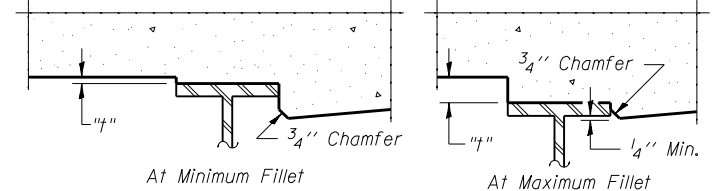
- Notes:**
1. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the engineer.
  2. The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 5 of 21.



**FILLET HEIGHTS**

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown in the plan view. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 5 of 21, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**PLAN**

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+51.82	-16.67	464.07	464.07
☉ Brg. E. Abut.	1446+53.15	-16.67	464.06	464.06
A	1446+63.15	-16.67	464.03	464.10
B	1446+73.15	-16.67	463.99	464.12
C	1446+83.15	-16.67	463.95	464.13
D	1446+93.15	-16.67	463.92	464.11
E	1447+03.15	-16.67	463.88	464.07
F	1447+13.15	-16.67	463.84	464.02
G	1447+23.15	-16.67	463.81	463.94
H	1447+33.15	-16.67	463.77	463.85
☉ Brg. W. Abut.	1447+43.99	-16.67	463.73	463.73
Bk. W. Abut.	1447+45.32	-16.67	463.72	463.72

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+46.96	-3.33	464.32	464.32
☉ Brg. E. Abut.	1446+48.29	-3.33	464.31	464.31
A	1446+58.29	-3.33	464.28	464.35
B	1446+68.29	-3.33	464.24	464.37
C	1446+78.29	-3.33	464.20	464.38
D	1446+88.29	-3.33	464.17	464.36
E	1446+98.29	-3.33	464.13	464.33
F	1447+08.29	-3.33	464.09	464.27
G	1447+18.29	-3.33	464.06	464.19
H	1447+28.29	-3.33	464.02	464.10
☉ Brg. W. Abut.	1447+39.13	-3.33	463.98	463.98
Bk. W. Abut.	1447+40.46	-3.33	463.97	463.97

**STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+45.39	1.00	464.36	464.36
☉ Brg. E. Abut.	1446+46.72	1.00	464.36	464.36
A	1446+56.72	1.00	464.32	464.39
B	1446+66.72	1.00	464.28	464.42
C	1446+76.72	1.00	464.25	464.42
D	1446+86.72	1.00	464.21	464.40
E	1446+96.72	1.00	464.17	464.37
F	1447+06.72	1.00	464.14	464.31
G	1447+16.72	1.00	464.10	464.24
H	1447+26.72	1.00	464.06	464.14
☉ Brg. W. Abut.	1447+37.56	1.00	464.02	464.02
Bk. W. Abut.	1447+38.89	1.00	464.02	464.02

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+49.39	-10.00	464.21	464.21
☉ Brg. E. Abut.	1446+50.72	-10.00	464.20	464.20
A	1446+60.72	-10.00	464.16	464.24
B	1446+70.72	-10.00	464.13	464.26
C	1446+80.72	-10.00	464.09	464.26
D	1446+90.72	-10.00	464.05	464.25
E	1447+00.72	-10.00	464.02	464.21
F	1447+10.72	-10.00	463.98	464.16
G	1447+20.72	-10.00	463.94	464.08
H	1447+30.72	-10.00	463.91	463.99
☉ Brg. W. Abut.	1447+41.56	-10.00	463.87	463.87
Bk. W. Abut.	1447+42.89	-10.00	463.86	463.86

**☉ ROADWAY & P.G.**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+45.75	0.00	464.38	464.38
☉ Brg. E. Abut.	1446+47.08	0.00	464.37	464.37
A	1446+57.08	0.00	464.33	464.41
B	1446+67.08	0.00	464.30	464.43
C	1446+77.08	0.00	464.26	464.43
D	1446+87.08	0.00	464.22	464.42
E	1446+97.08	0.00	464.19	464.38
F	1447+07.08	0.00	464.15	464.33
G	1447+17.08	0.00	464.11	464.25
H	1447+27.08	0.00	464.07	464.16
☉ Brg. W. Abut.	1447+37.92	0.00	464.03	464.03
Bk. W. Abut.	1447+39.25	0.00	464.03	464.03

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+44.54	3.33	464.33	464.33
☉ Brg. E. Abut.	1446+45.87	3.33	464.32	464.32
A	1446+55.87	3.33	464.29	464.36
B	1446+65.87	3.33	464.25	464.38
C	1446+75.87	3.33	464.21	464.39
D	1446+85.87	3.33	464.18	464.37
E	1446+95.87	3.33	464.14	464.33
F	1447+05.87	3.33	464.10	464.28
G	1447+15.87	3.33	464.06	464.20
H	1447+25.87	3.33	464.03	464.11
☉ Brg. W. Abut.	1447+36.71	3.33	463.99	463.99
Bk. W. Abut.	1447+38.04	3.33	463.98	463.98

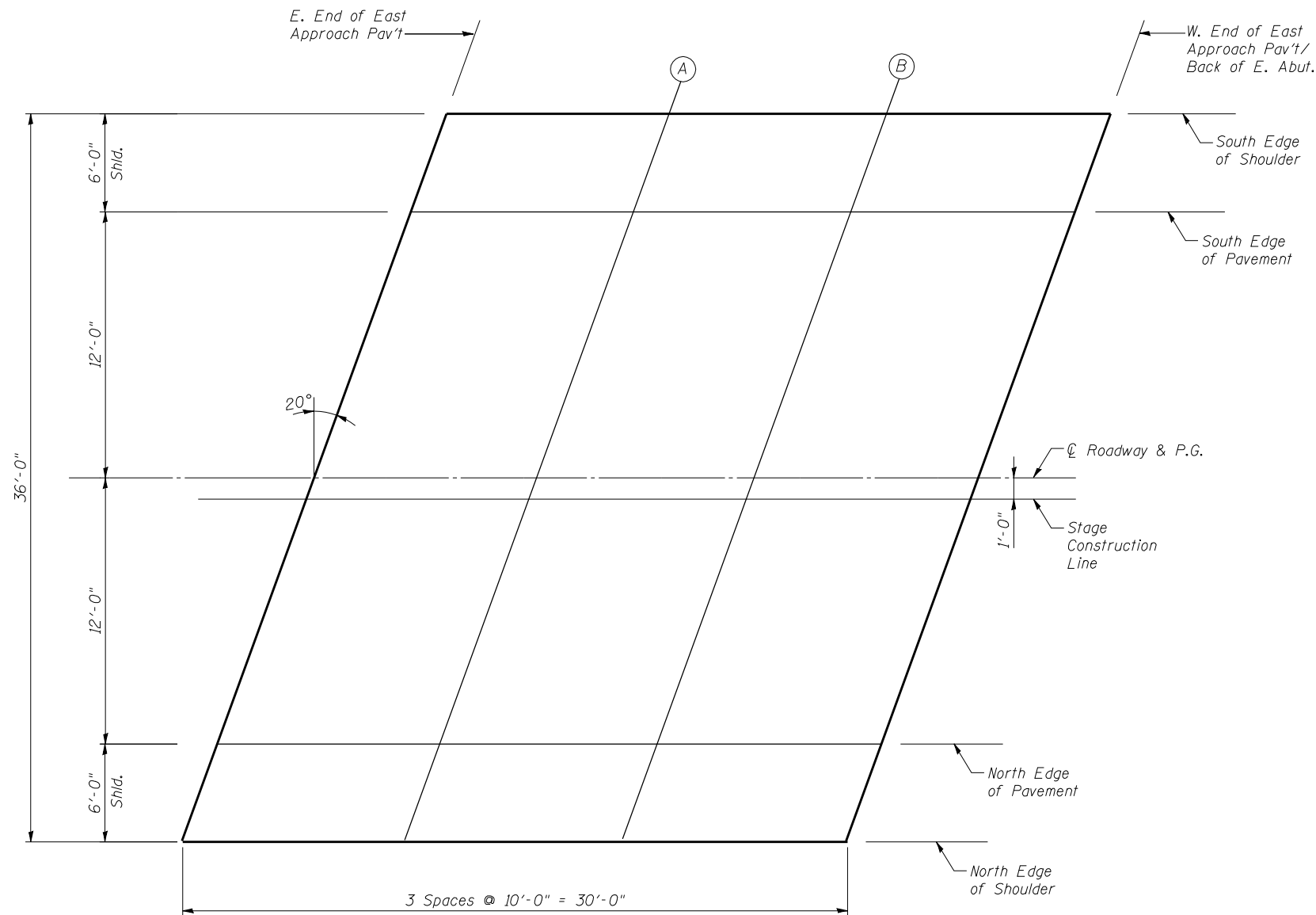
**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+42.11	10.00	464.23	464.23
☉ Brg. E. Abut.	1446+43.44	10.00	464.23	464.23
A	1446+53.44	10.00	464.19	464.27
B	1446+63.44	10.00	464.15	464.29
C	1446+73.44	10.00	464.12	464.29
D	1446+83.44	10.00	464.08	464.28
E	1446+93.44	10.00	464.04	464.24
F	1447+03.44	10.00	464.01	464.18
G	1447+13.44	10.00	463.97	464.11
H	1447+23.44	10.00	463.93	464.01
☉ Brg. W. Abut.	1447+34.28	10.00	463.89	463.89
Bk. W. Abut.	1447+35.61	10.00	463.89	463.89

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	1446+39.68	16.67	464.11	464.11
☉ Brg. E. Abut.	1446+41.01	16.67	464.11	464.11
A	1446+51.01	16.67	464.07	464.15
B	1446+61.01	16.67	464.04	464.17
C	1446+71.01	16.67	464.00	464.17
D	1446+81.01	16.67	463.96	464.16
E	1446+91.01	16.67	463.92	464.12
F	1447+01.01	16.67	463.89	464.06
G	1447+11.01	16.67	463.85	463.99
H	1447+21.01	16.67	463.81	463.89
☉ Brg. W. Abut.	1447+31.85	16.67	463.77	463.77
Bk. W. Abut.	1447+33.18	16.67	463.77	463.77





**PLAN**

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+22.30	-18.00	464.15
A	1446+32.30	-18.00	464.11
B	1446+42.30	-18.00	464.08
Bk. E. Abut.	1446+52.30	-18.00	464.04

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+20.12	-12.00	464.28
A	1446+30.12	-12.00	464.25
B	1446+40.12	-12.00	464.21
Bk. E. Abut.	1446+50.12	-12.00	464.17

**CL ROADWAY & P.G.**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+15.75	0.00	464.49
A	1446+25.75	0.00	464.45
B	1446+35.75	0.00	464.41
Bk. E. Abut.	1446+45.75	0.00	464.38

**STAGE CONSTRUCTION LINE**

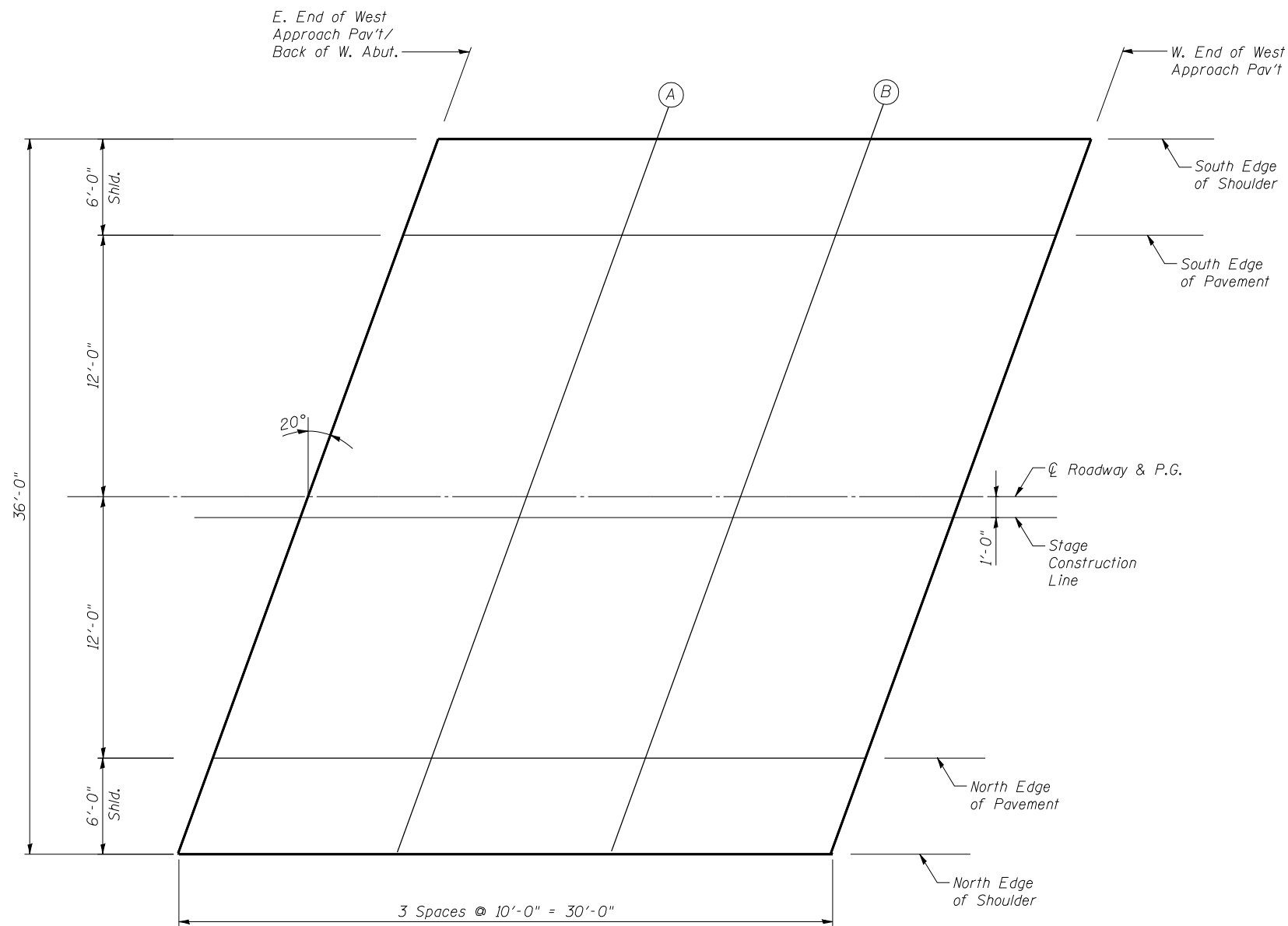
Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+15.39	1.00	464.47
A	1446+25.39	1.00	464.44
B	1446+35.39	1.00	464.40
Bk. E. Abut.	1446+45.39	1.00	464.36

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+11.38	12.00	464.32
A	1446+21.38	12.00	464.28
B	1446+31.38	12.00	464.24
Bk. E. Abut.	1446+41.38	12.00	464.20

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Slab	1446+09.20	18.00	464.20
A	1446+19.20	18.00	464.16
B	1446+29.20	18.00	464.12
Bk. E. Abut.	1446+39.20	18.00	464.09



**PLAN**

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+45.80	-18.00	463.69
A	1447+55.80	-18.00	463.66
B	1447+65.80	-18.00	463.61
End W. Appr. Slab	1447+75.80	-18.00	463.57

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+43.62	-12.00	463.83
A	1447+53.62	-12.00	463.79
B	1447+63.62	-12.00	463.75
End W. Appr. Slab	1447+73.62	-12.00	463.70

**CL ROADWAY & P.G.**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+39.25	0.00	464.03
A	1447+49.25	0.00	463.99
B	1447+59.25	0.00	463.95
End W. Appr. Slab	1447+69.25	0.00	463.91

**STAGE CONSTRUCTION LINE**

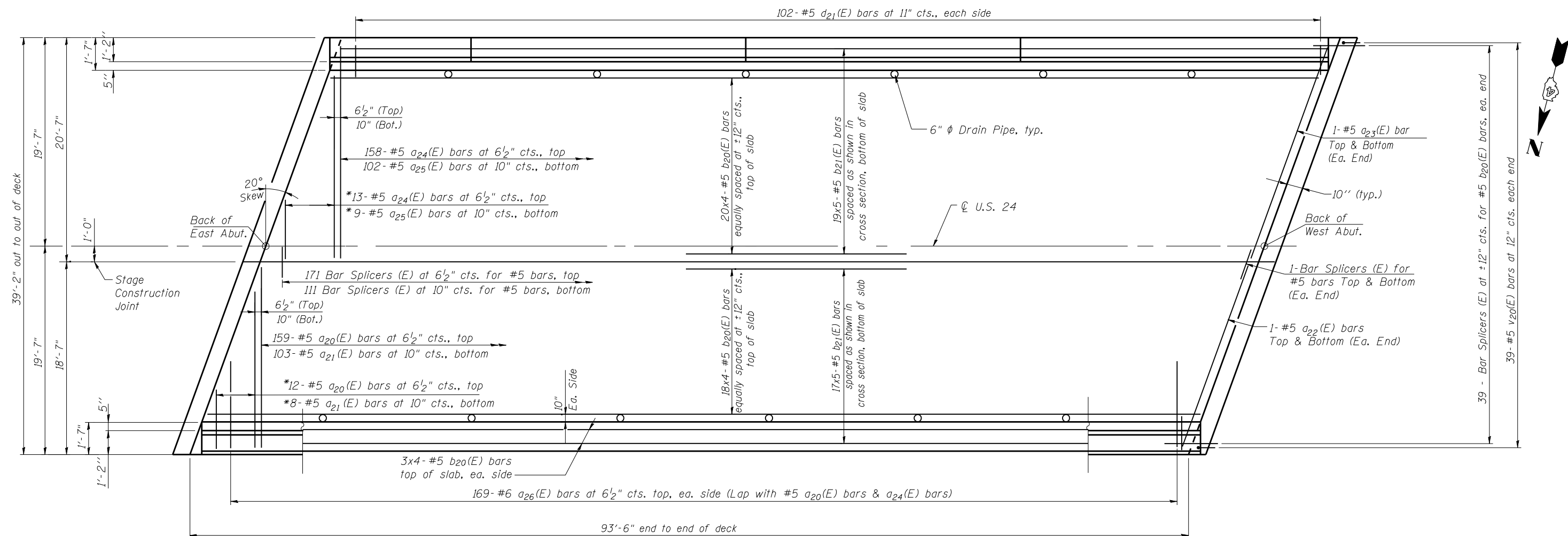
Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+38.89	1.00	464.02
A	1447+48.89	1.00	463.98
B	1447+58.89	1.00	463.94
End W. Appr. Slab	1447+68.89	1.00	463.90

**NORTH EDGE OF PAVEMENT**

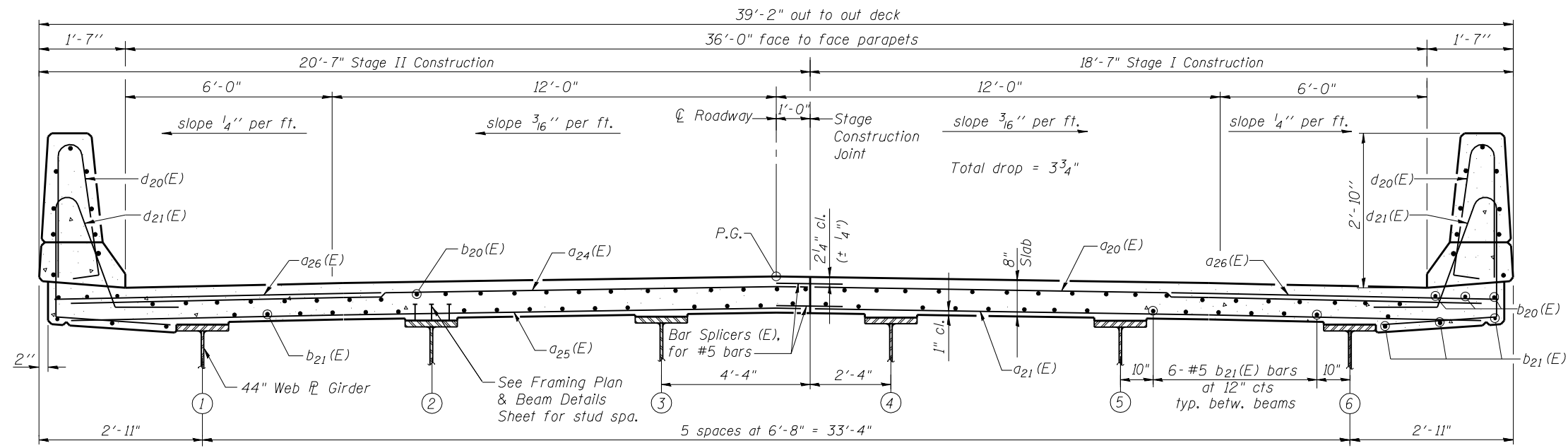
Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+34.88	12.00	463.86
A	1447+44.88	12.00	463.82
B	1447+54.88	12.00	463.78
End W. Appr. Slab	1447+64.88	12.00	463.74

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Bk. W. Abut.	1447+32.70	18.00	463.74
A	1447+42.70	18.00	463.71
B	1447+52.70	18.00	463.67
End W. Appr. Slab	1447+62.70	18.00	463.63



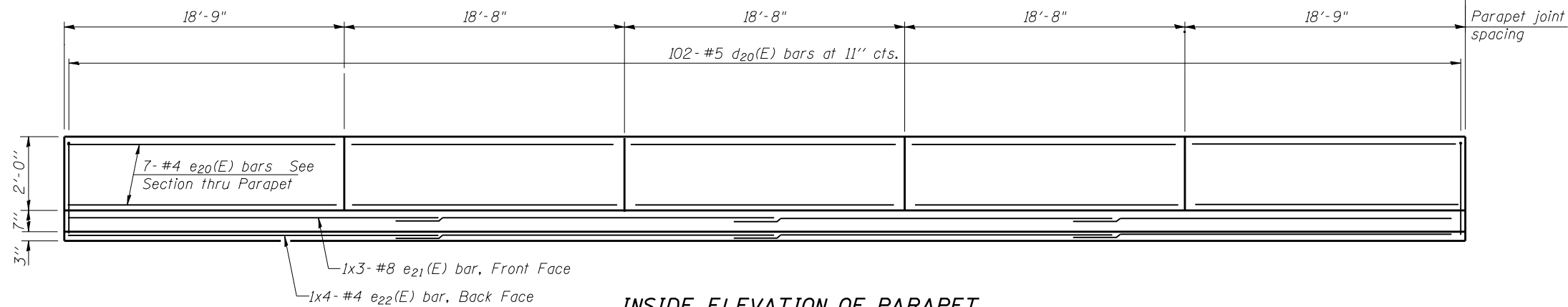
**PLAN**



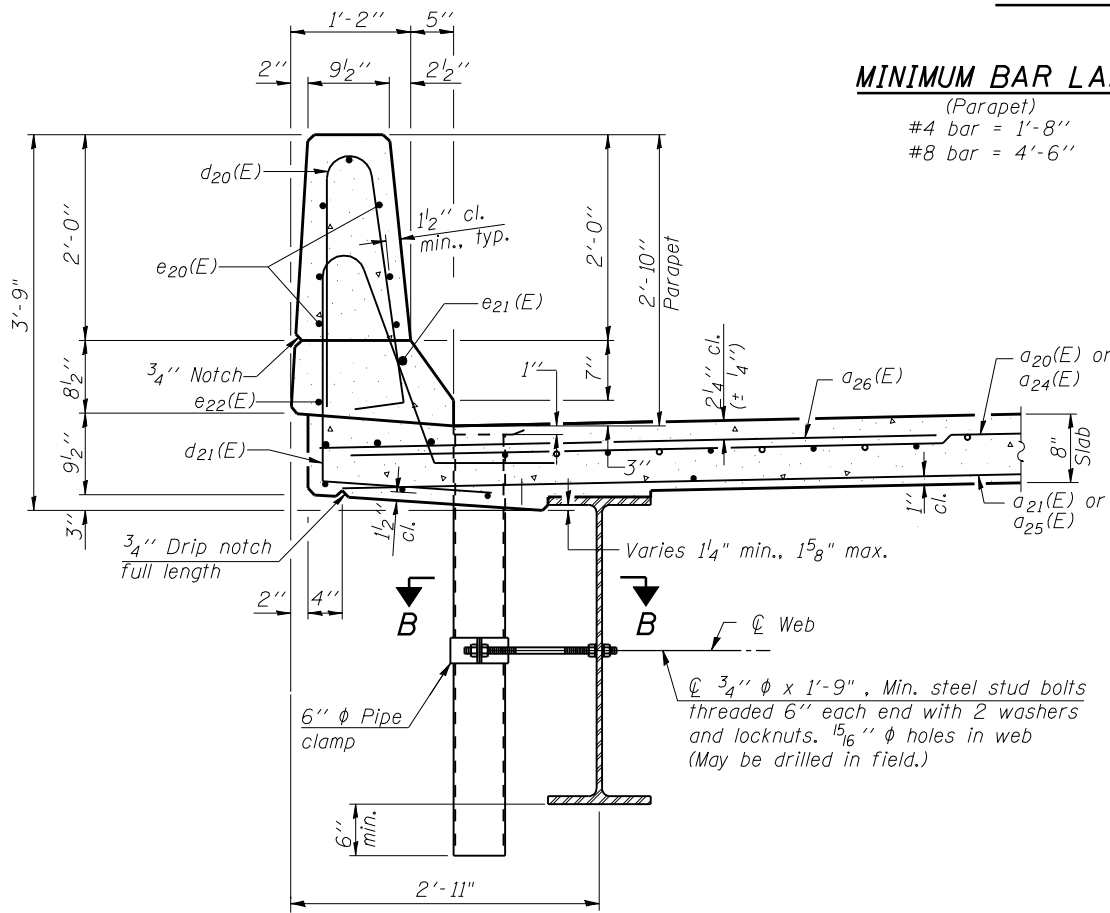
**CROSS SECTION**  
(Looking West)

\*Order  $a_{20}(E)$ ,  $a_{21}(E)$ ,  $a_{24}(E)$  &  $a_{25}(E)$  bars full length. Cut to fit skew and use remainder of bars @ opposite end.

Notes:  
See Sheet 9 of 21 for superstructure details and Bill of Material.  
Bars indicated thus 20 x 3- #5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet 9 of 21 for parapet reinforcement.



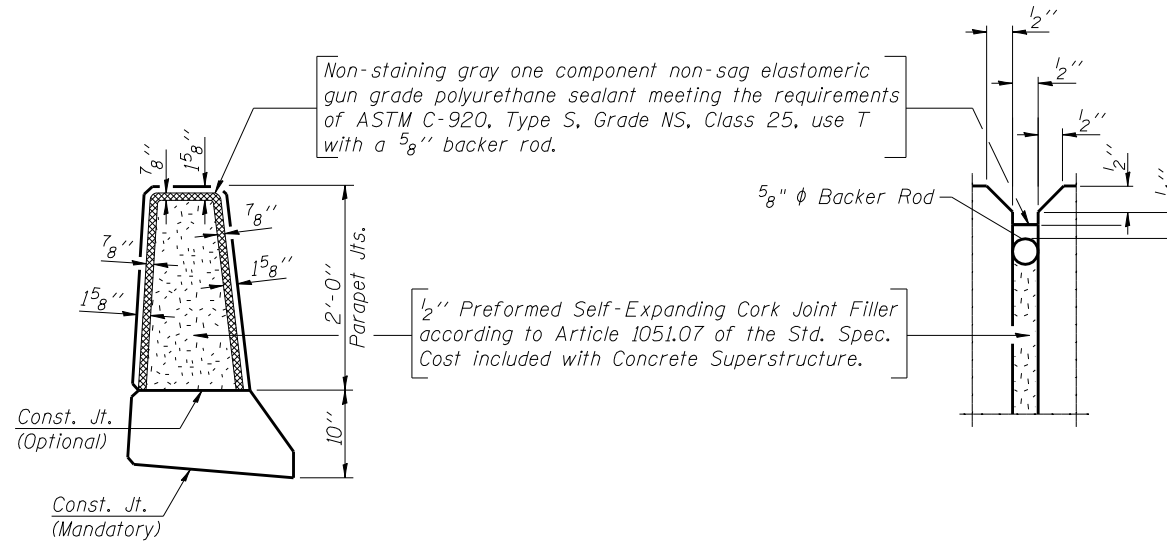
**INSIDE ELEVATION OF PARAPET**



**SECTION THRU PARAPET**

**MINIMUM BAR LAP**

(Parapet)  
 #4 bar = 1'-8"  
 #8 bar = 4'-6"



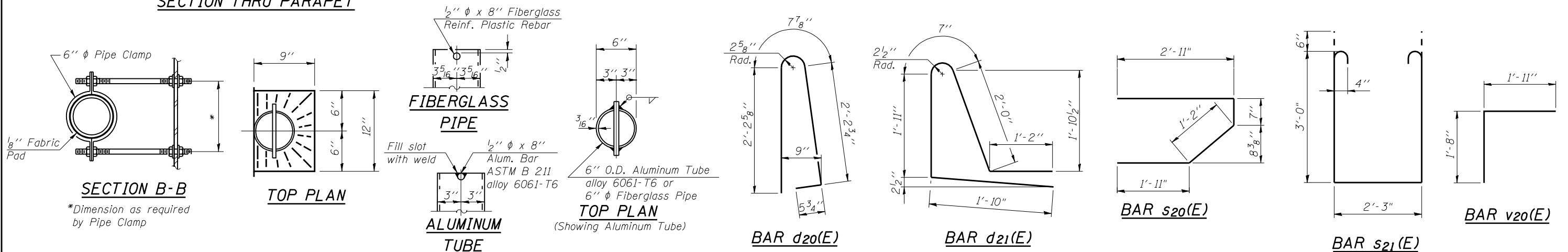
**PARAPET JOINT DETAILS**

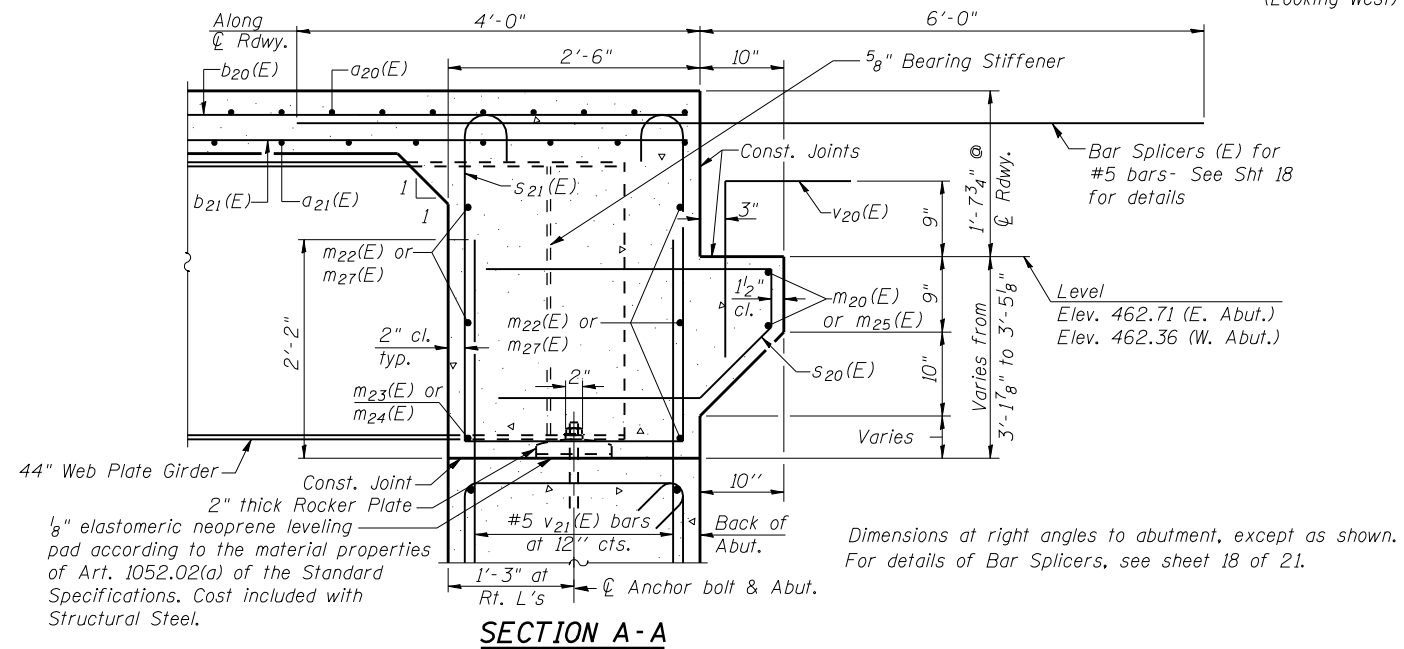
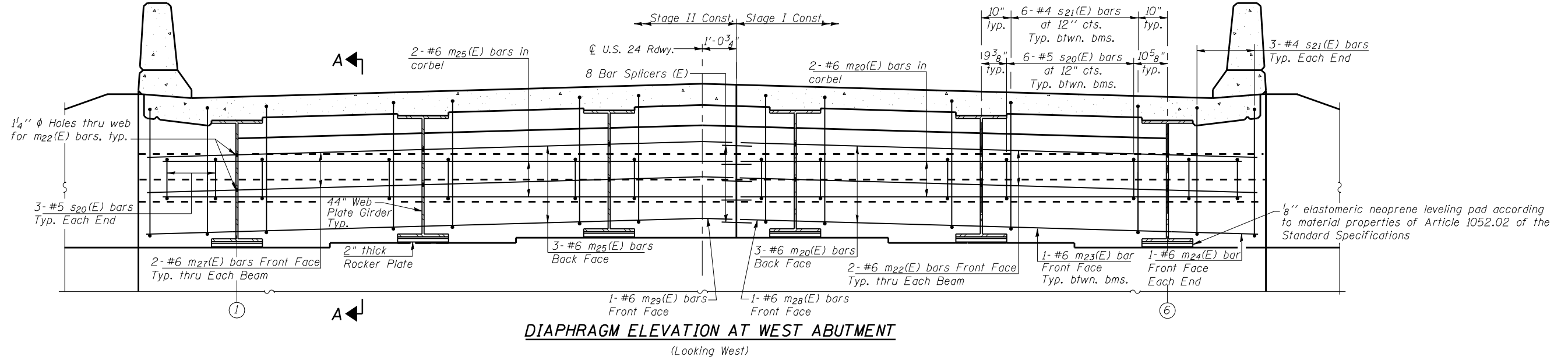
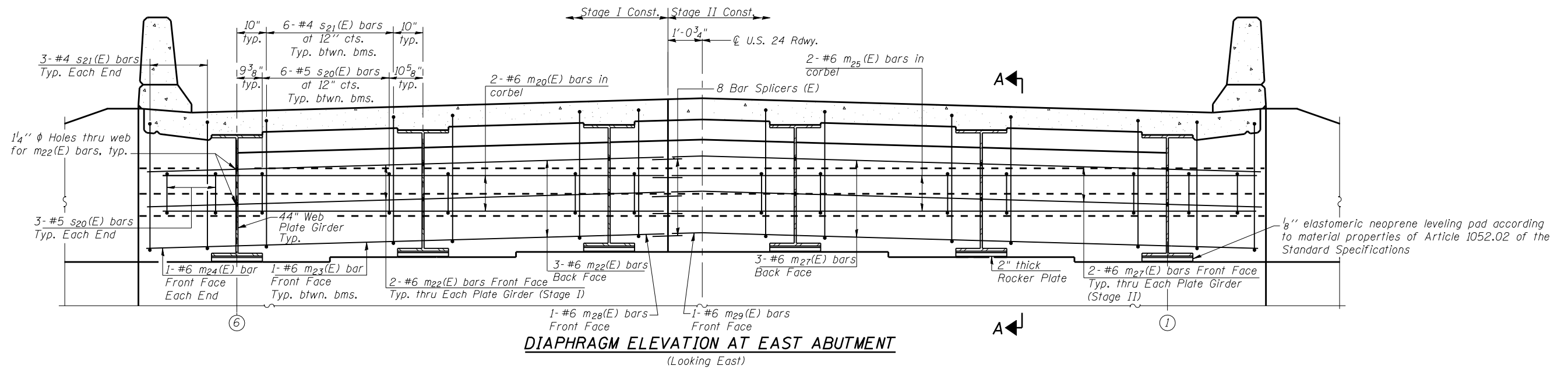
Notes:  
 Floor drains need not be painted.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

**SUPERSTRUCTURE  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a20(E)	171	#5	17'-9"	—
a21(E)	111	#5	17'-3"	—
a22(E)	4	#5	18'-4"	—
a23(E)	4	#5	21'-0"	—
a24(E)	171	#5	20'-3"	—
a25(E)	111	#5	19'-9"	—
a26(E)	338	#6	6'-6"	—
b20(E)	176	#5	25'-9"	—
b21(E)	180	#5	21'-3"	—
d20(E)	204	#5	5'-7"	⌋
d21(E)	204	#5	7'-6"	⌋
e20(E)	70	#4	18'-5"	—
e21(E)	6	#8	35'-7"	—
e22(E)	8	#4	25'-3"	—
m20(E)	4	#6	19'-0"	—
m22(E)	10	#6	19'-1"	—
m23(E)	8	#6	6'-10"	—
m24(E)	4	#6	2'-9"	—
m25(E)	4	#6	21'-7"	—
m27(E)	10	#6	21'-8"	—
m28(E)	2	#6	1'-9"	—
m29(E)	2	#6	4'-4"	—
s20(E)	72	#5	6'-7"	⌋
s21(E)	72	#4	9'-3"	⌋
v20(E)	78	#5	3'-7"	⌋
Bar Splicers	Each		380	
Reinforcement Bars, Epoxy Coated Concrete Superstructure	Pound		29,790	
	Cu. Yd.		150.0	

Bars indicated thus 1x3-#5 etc. indicates 1 line of bars with 3 lengths per line.

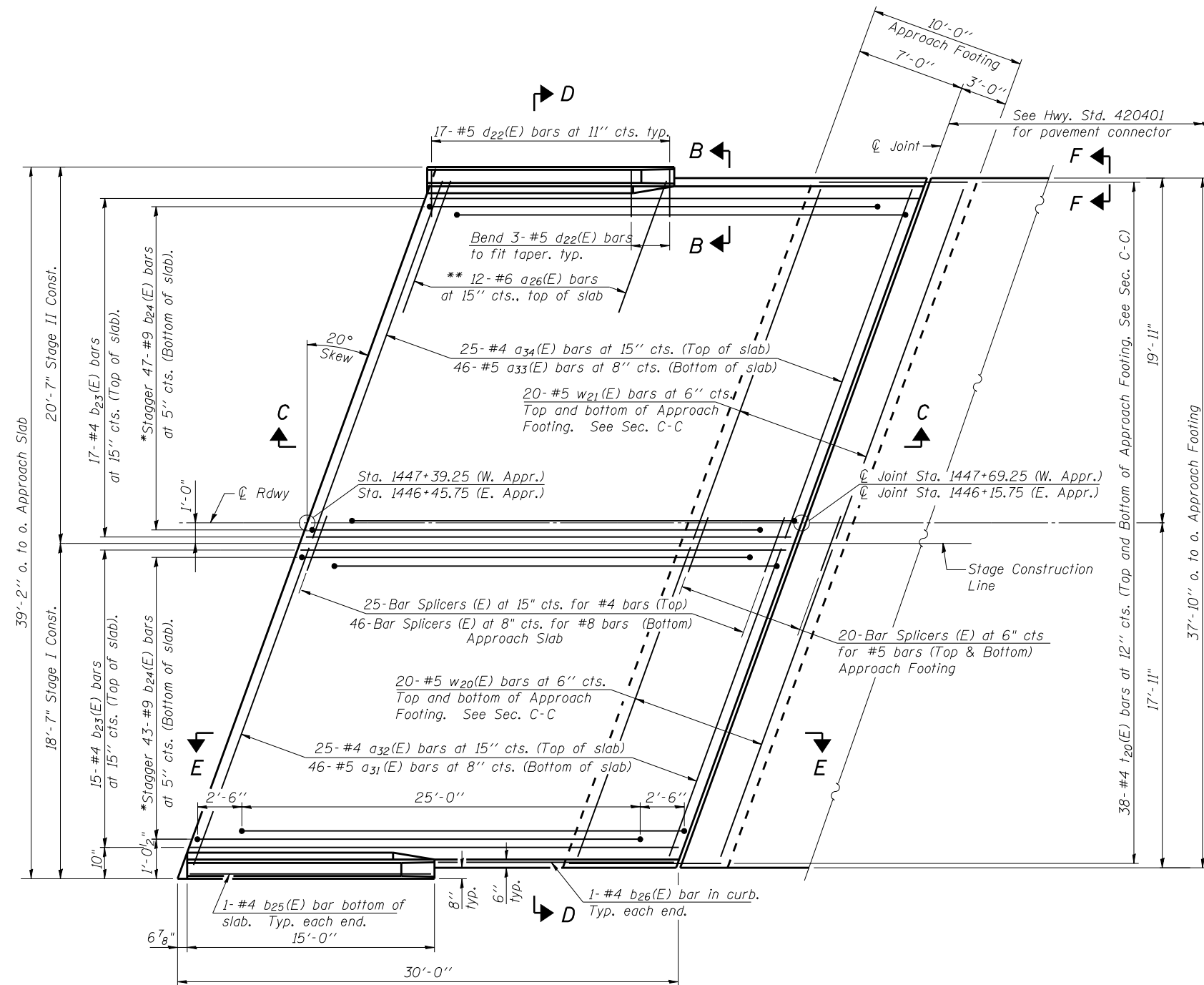




Notes:  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 21.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 21.  
 For details of bars s<sub>20</sub>(E) & s<sub>21</sub>(E) see sheet 9 of 21.  
 The s<sub>20</sub>(E) and s<sub>21</sub>(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

**MIN. BAR LAP**  
 #6 bar = 3'-4"

Notes:  
 See sheet 12 of 21 for Sections C-C & D-D and View E-E.  
 $a_{31}(E)$ ,  $a_{32}(E)$ ,  $a_{33}(E)$  &  $a_{34}(E)$  bar spacings measured along  $\text{C.Rdwy.}$

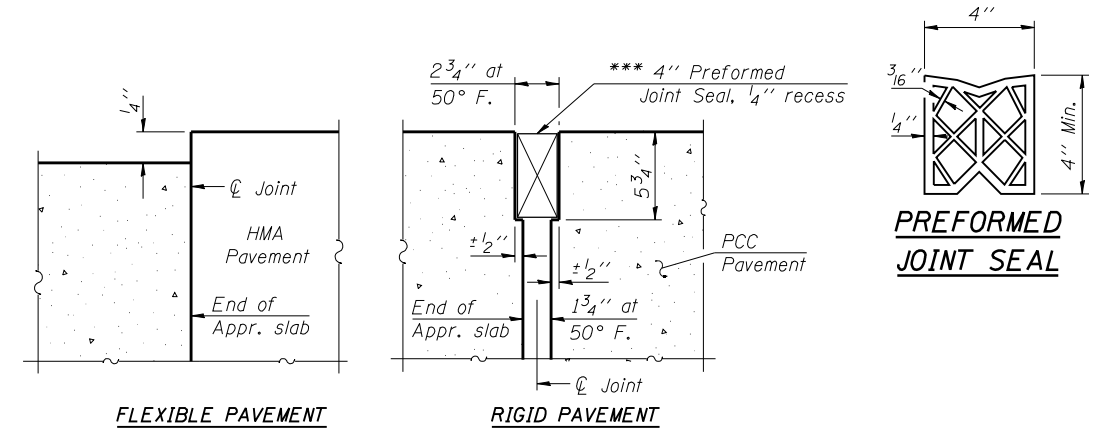


**PLAN**

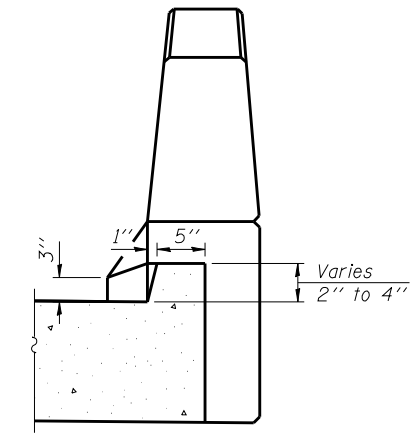
Opposite hand for East Approach Slab

- \*Tilt #9  $b_{24}(E)$  bars as required to maintain clearance.
- \*\*Space between  $a_{32}(E)$  bars or  $a_{34}(E)$  bars at each parapet.

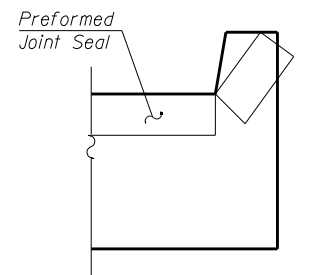
\*\*\* Cost included with Concrete Superstructure.



**DETAIL A**



**VIEW B-B**



**VIEW F-F**

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

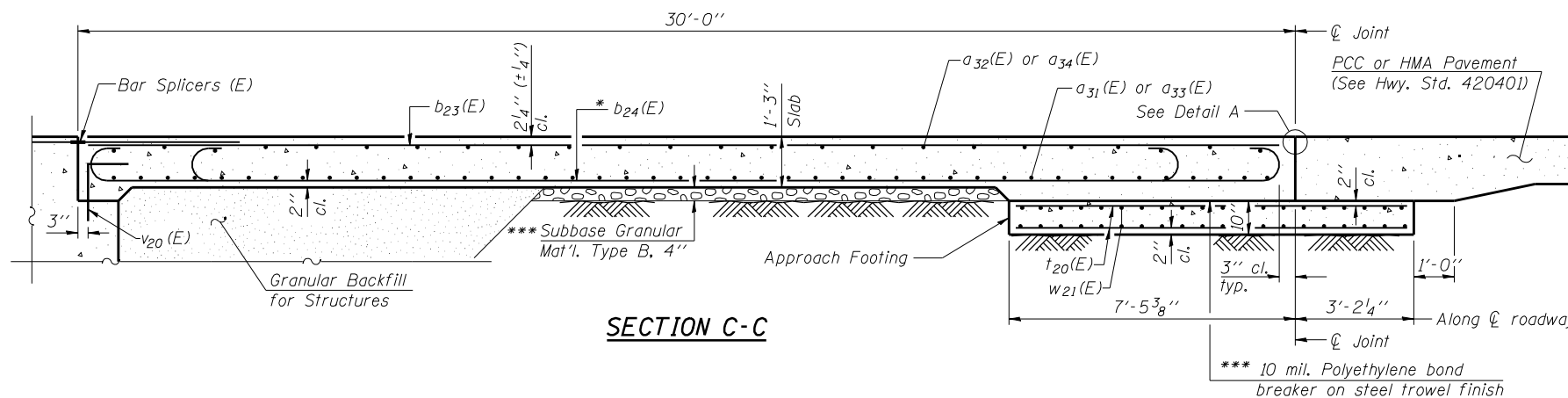
(Sheet 1 of 2)

USER NAME =	DESIGNED - LRT	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS	REVISED -
	CHECKED - LRT	REVISED -

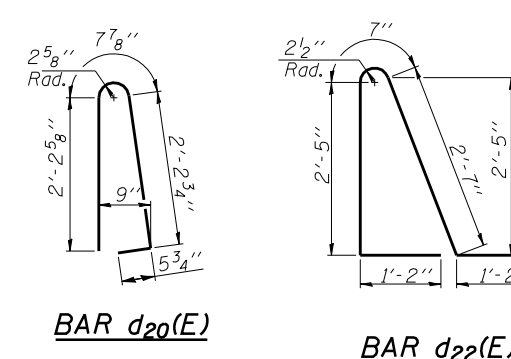
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	74
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

**TWO APPROACHES  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>26</sub> (E)	48	#6	6'-6"	—
a <sub>31</sub> (E)	92	#5	18'-4"	—
a <sub>32</sub> (E)	50	#4	18'-4"	—
a <sub>33</sub> (E)	92	#5	21'-0"	—
a <sub>34</sub> (E)	50	#4	21'-0"	—
b <sub>23</sub> (E)	64	#4	29'-8"	—
b <sub>24</sub> (E)	180	#9	29'-9"	—
b <sub>25</sub> (E)	4	#4	14'-10"	—
b <sub>26</sub> (E)	4	#4	14'-7"	—
d <sub>20</sub> (E)	68	#5	5'-7"	—
d <sub>22</sub> (E)	68	#5	7'-11"	—
e <sub>23</sub> (E)	32	#4	14'-8"	—
e <sub>24</sub> (E)	4	#8	14'-8"	—
t <sub>20</sub> (E)	152	#4	10'-3"	—
w <sub>20</sub> (E)	80	#5	18'-3"	—
w <sub>21</sub> (E)	80	#5	20'-10"	—
Bar Splicers	Each		222	
Concrete Superstructure			Cu. Yd.	119
Concrete Structures			Cu. Yd.	24.9
Reinforcement Bars, Epoxy Coated			Pound	30,840

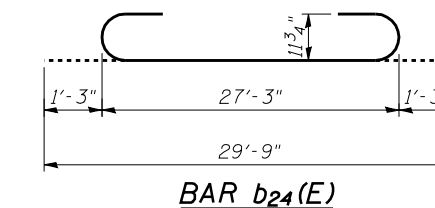


**SECTION C-C**

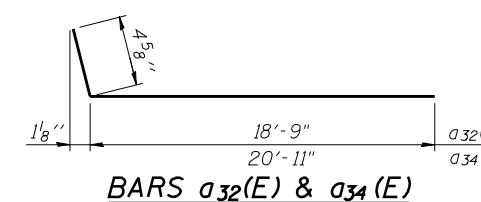


**BAR d<sub>20</sub>(E)**

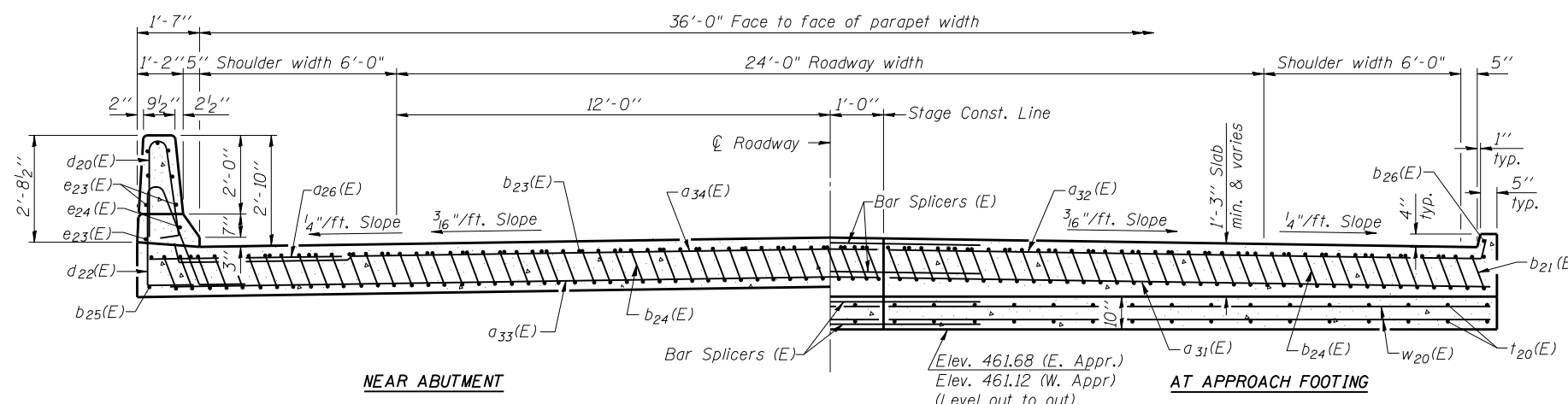
**BAR d<sub>22</sub>(E)**



**BAR b<sub>24</sub>(E)**



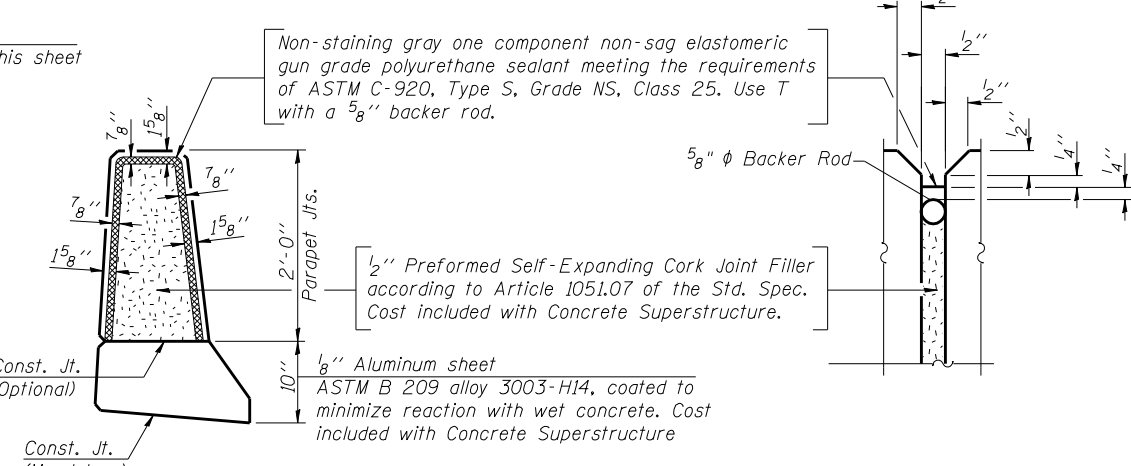
**BARS a<sub>32</sub>(E) & a<sub>34</sub>(E)**



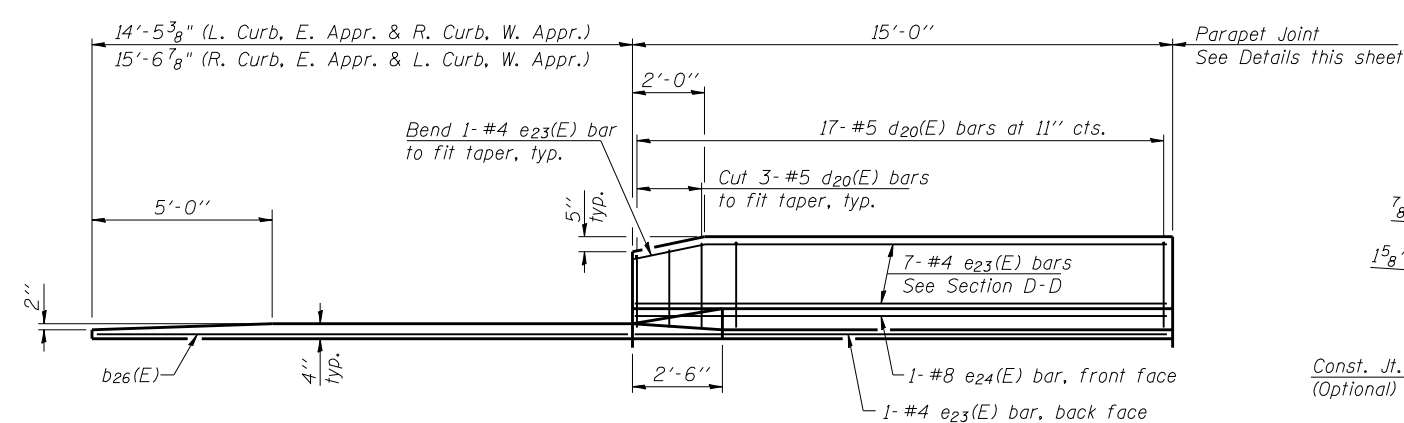
**NEAR ABUTMENT**

**SECTION D-D**

(See Plan for dimensions not shown)



**PARAPET JOINT DETAIL**

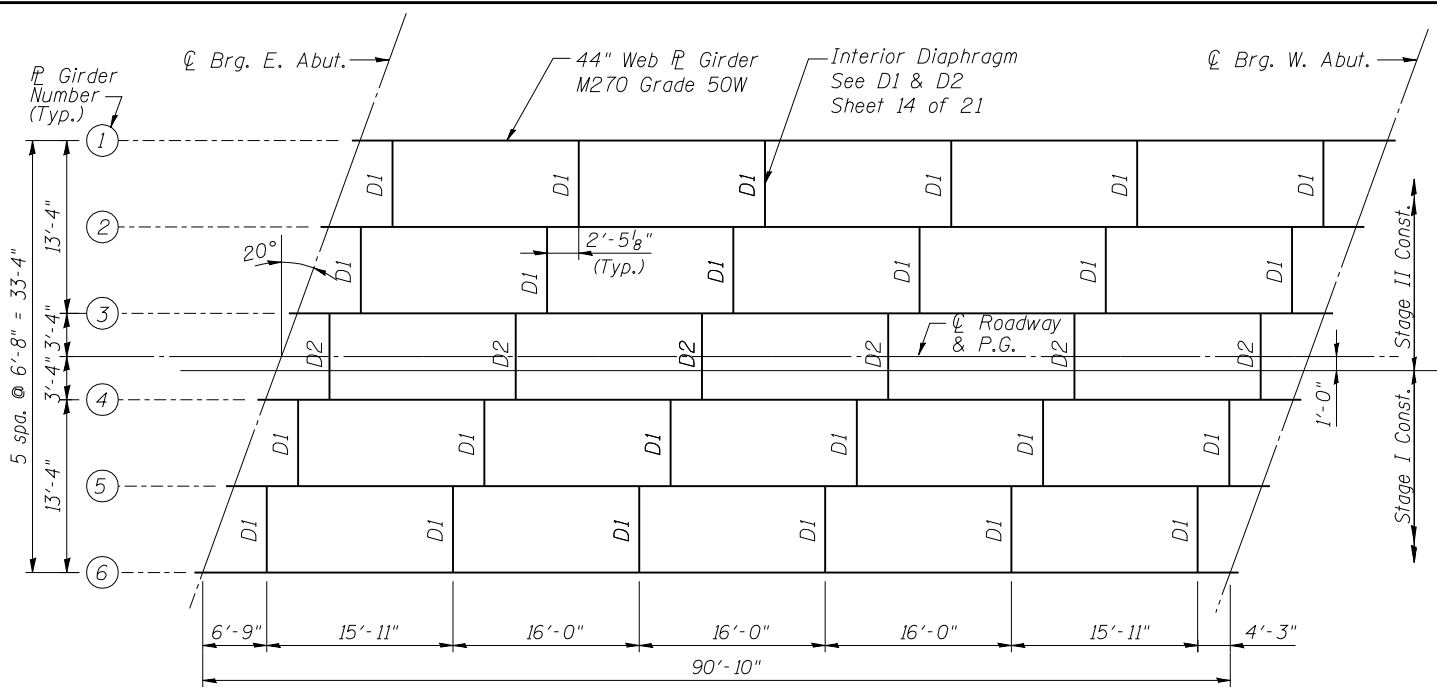


**VIEW E-E**

\* Tilt #9 b<sub>24</sub>(E) bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

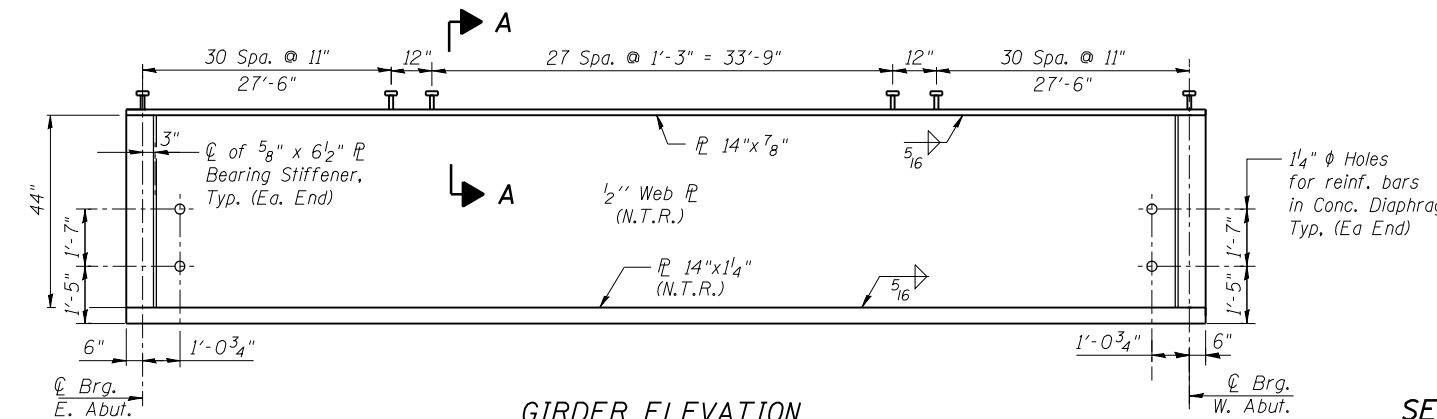
**Note**  
See sheet 11 of 21 for Detail A and View B-B.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v<sub>20</sub>(E) bar details, see sheet 9 of 21.  
The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.  
For bar splicer details, see sheet 18 of 21.  
Cost of excavation for approach footing included with Concrete Structures.  
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 21.  
For additional parapet details, see sheet 9 of 21.

(Sheet 2 of 2)



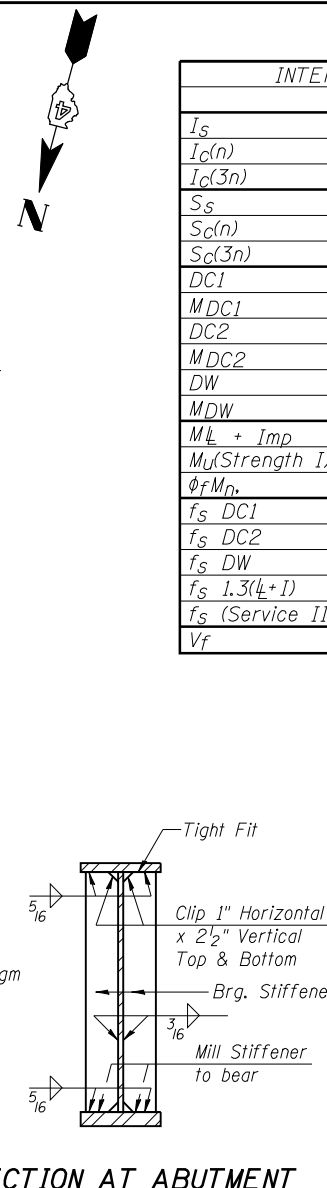
**PLAN**

See Sheet 14 of 21 For Interior Diaphragm details.



**GIRDER ELEVATION**

"N.T.R." denotes plates to which notch toughness requirements are applicable. All plate Girders including Webs, Top and Bottom flanges and stiffeners are to be AASHTO M270 Grade 50W.



**SECTION AT ABUTMENT**

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp.
$I_s$	(in <sup>4</sup> )	16,289.70
$I_c(n)$	(in <sup>4</sup> )	42,398.69
$I_c(3n)$	(in <sup>4</sup> )	30,702.0
$S_s$	(in <sup>3</sup> )	773.3
$S_c(n)$	(in <sup>3</sup> )	1084.8
$S_c(3n)$	(in <sup>3</sup> )	988.14
DC1	(k/')	0.879
MDC1	(k)	906.4
DC2	(k/')	0.15
MDC2	(k)	154.5
DW	(k/')	0.3
MDW	(k)	309.0
$M_L + Imp$	(k)	1,388.7
$M_u$ (Strength I)	(k)	4,220.8
$\phi_r M_n$	(k)	5,457
$f_s$ DC1	(ksi)	13.96
$f_s$ DC2	(ksi)	1.88
$f_s$ DW	(ksi)	3.76
$f_s$ 1.3( $\zeta + I$ )	(ksi)	19.97
$f_s$ (Service II)	(ksi)	39.7
$V_f$	(k)	25.9

INTERIOR GIRDER REACTION TABLE		Abut.
HL93 Loading		
RDC1	(k)	39.9
RDC2	(k)	6.81
RDW	(k)	13.62
$R_L + Imp$	(k)	82.7
$R_{Total}$	(k)	143.03

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_L + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

$M_u$  (Strength I): Factored design moment (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

$\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

$M_{DC1} / S_c$

$f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_c(3n)$  or  $M_{DC2} / S_c(cr)$  as applicable.

$f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_c(3n)$  or  $M_{DW} / S_c(cr)$  as applicable.

$f_s$  ( $\zeta + IM$ ): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).

$M_L + IM / S_c(n)$  or  $M_L + IM / S_c(cr)$  as applicable.

$f_s$  (Service II): Sum of stresses as computed below (ksi).

$f_{SDC1} + f_{SDC2} + f_{SDW} + 1.3 f_s (\zeta + IM)$

$0.95 R_n F_y f$ : Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

$f_s$  (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

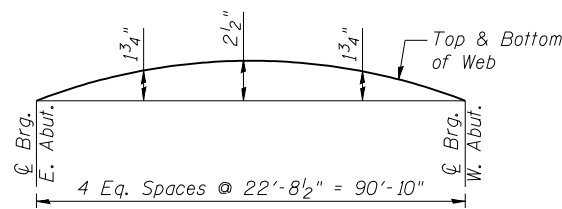
$1.25 (f_{SDC1} + f_{SDC2}) + 1.5 f_{SDW} + 1.75 f_s (\zeta + IM)$

$V_f$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

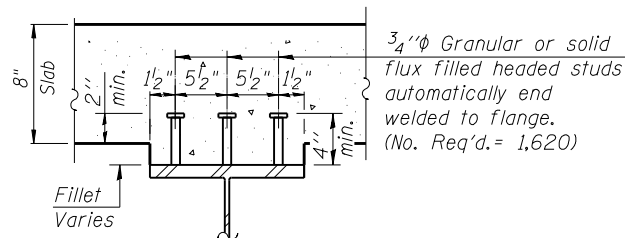
**\* TOP OF WEB ELEVATIONS**

Beam Number	℄ Brg. E. Abut.	℄ Brg. W. Abut.
1	463.24	462.89
2	463.38	463.03
3	463.49	463.15
4	463.50	463.15
5	463.41	463.06
6	463.29	462.94

\* For Fabrication only



**CAMBER DIAGRAM**

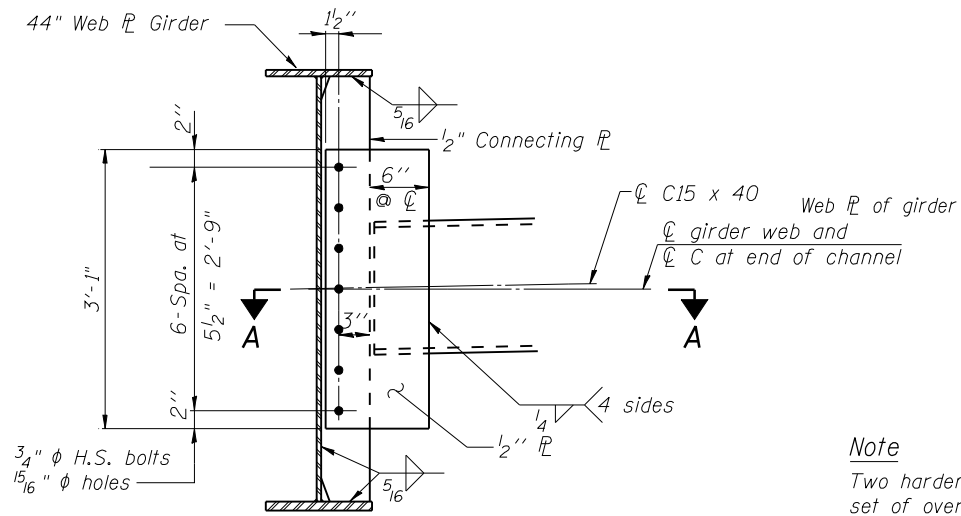


**SECTION A-A**

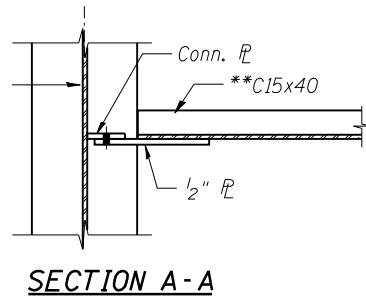
**General Notes**

- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.





**INTERIOR DIAPHRAGM D1**

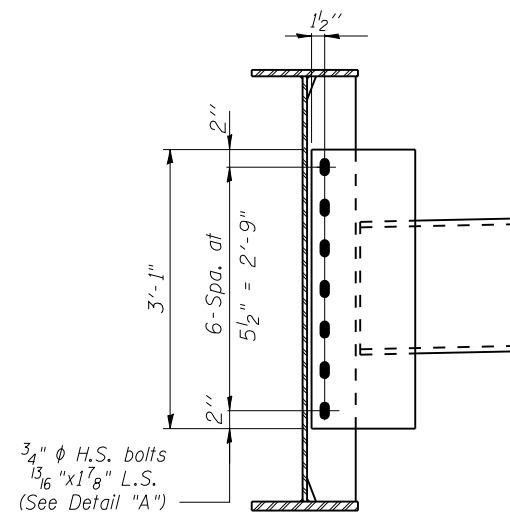


**SECTION A-A**

**Note**  
Two hardened washers required for each set of oversized holes.

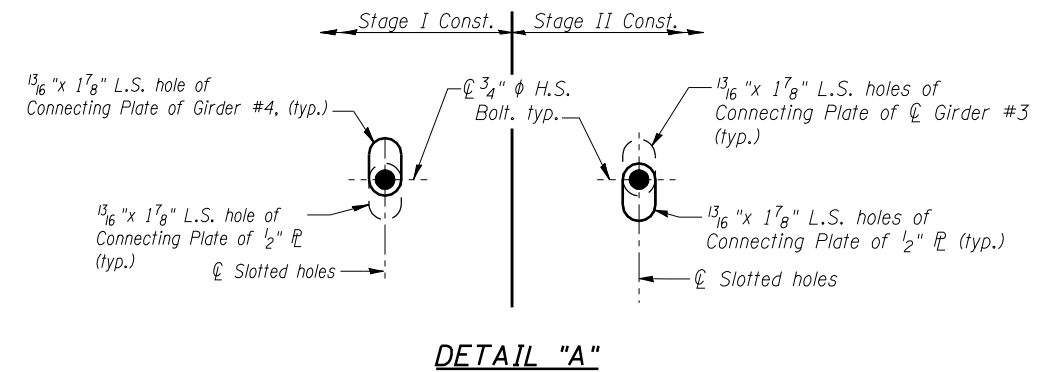
\*\* C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no extra cost to the department.

All Diaphragms & Connecting Plates shall be AASHTO M270 Grade 50W.



**INTERIOR DIAPHRAGM D2**

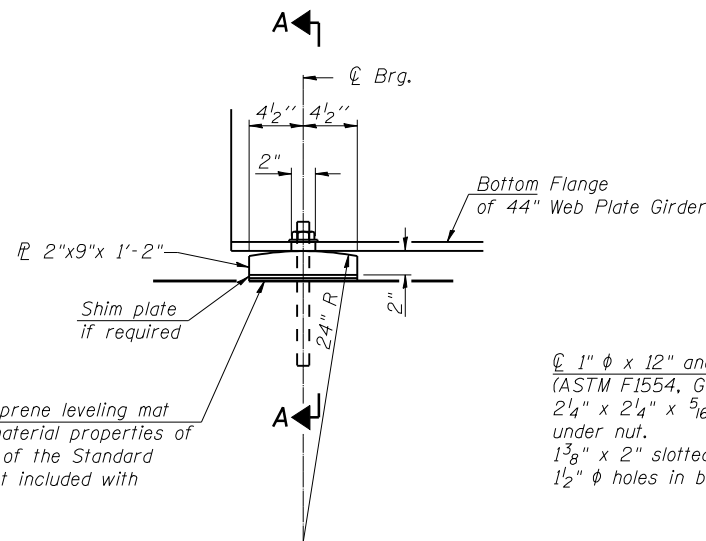
Details similar to D1, (Except as noted here)



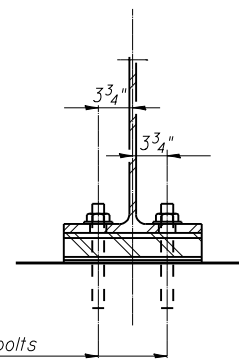
**DETAIL "A"**

**Note**  
Bolts shall be finger tight until Stage II Concrete pour is complete. Two hardened washers required for each set of long slot holes.

Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load.



**ELEVATION AT ABUTMENT**



**SECTION A-A**

1"  $\phi$  x 12" anchor bolts (ASTM F1554, GRADE 36) with 2 1/4" x 2 1/4" x 5/16"  $\bar{P}$  washer under nut.  
1 3/8" x 2" slotted hole in flange.  
1/2"  $\phi$  holes in bearing plate.

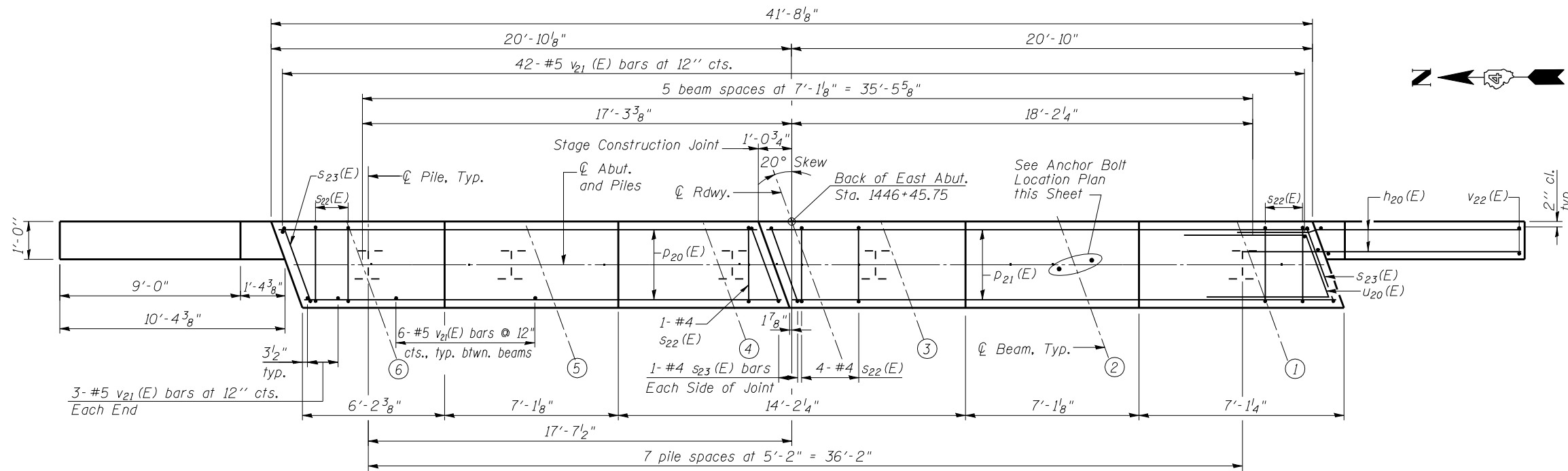
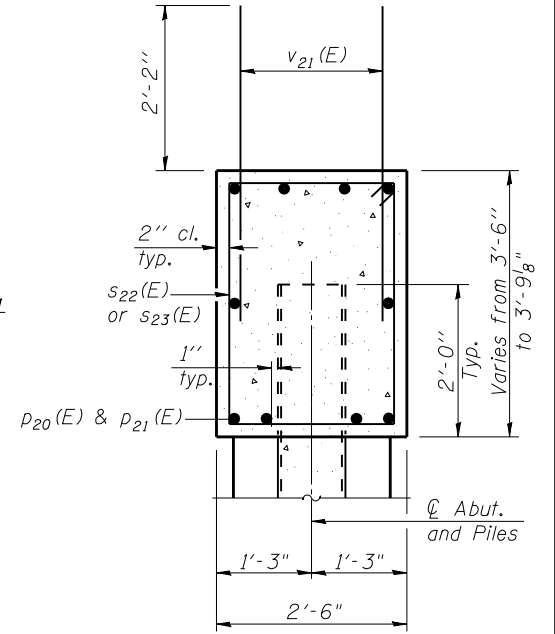
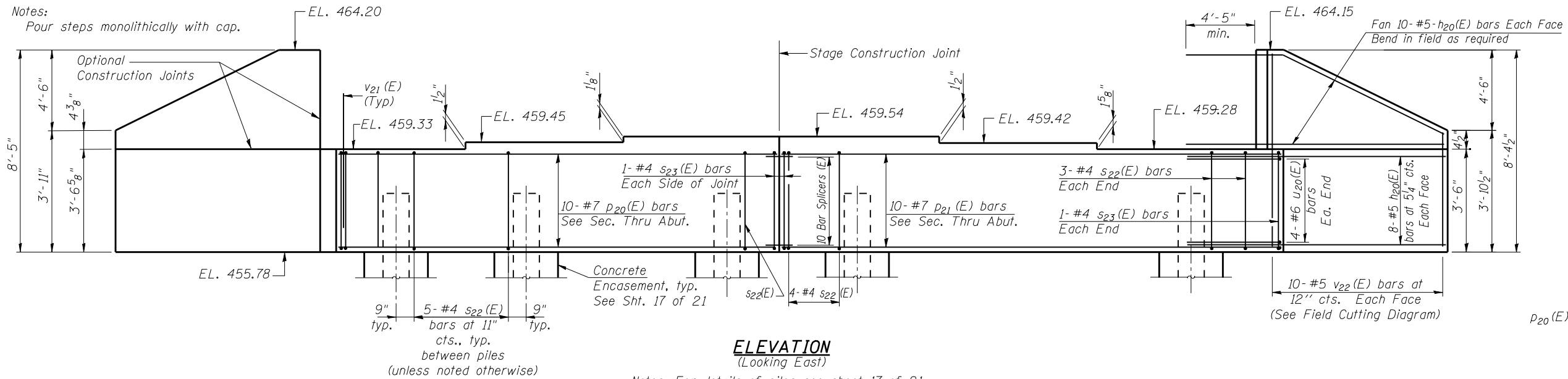
1/8" elastomeric neoprene leveling mat according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

**FIXED BEARING**

**Note**  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	77
CONTRACT NO. 68699				



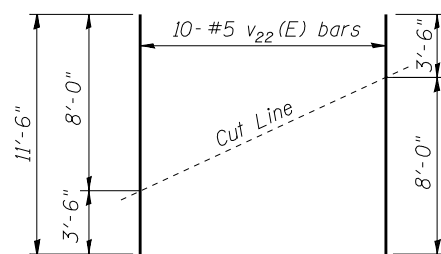
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_{20}(E)$	72	#5	16'-0"	—
$p_{20}(E)$	10	#7	19'-7"	—
$p_{21}(E)$	10	#7	21'-8"	—
$s_{22}(E)$	41	#4	11'-1"	□
$s_{23}(E)$	4	#4	11'-5"	□
$u_{20}(E)$	8	#6	10'-11"	⌒
$v_{21}(E)$	72	#5	4'-4"	—
$v_{22}(E)$	20	#5	11'-6"	—
Bar Splicers	Each	10		
Structure Excavation	Cu. Yd.	37.5		
Concrete Structures	Cu. Yd.	18.8		
Reinforcement Bars, Epoxy Coated	Pound	3,080		
Furnishing Steel Piles HP14x89	Foot	210		
Driving Piles	Foot	210		
Test Pile Steel HP14x89	Each	1		
Concrete Encasement	Cu. Yd.	4.4		

**PILE DATA**

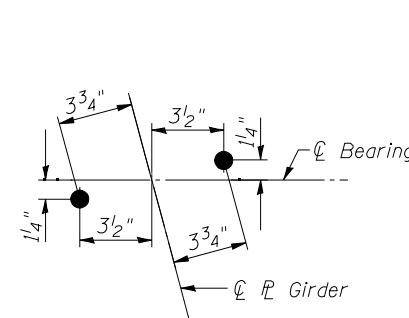
Type: Steel HP14x89  
Nominal Required Bearing: 705 K  
Factored Resistance Available: 362 K  
Est. Length: 30 ft.  
No. Production Piles: 7  
No. Test Piles: 1

Note:  
Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.

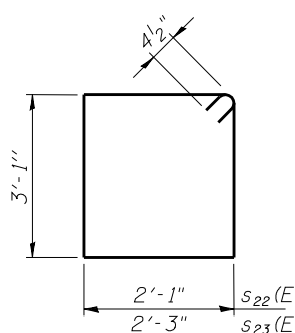


Order  $v_{22}(E)$  full length. Cut as shown and use remainder of bars in opposite face.

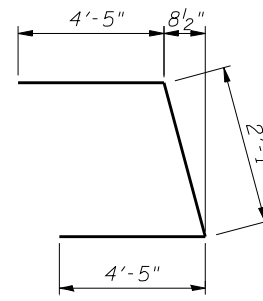
**ANCHOR BOLT LOCATION PLAN**



**BARS  $s_{22}(E)$  &  $s_{23}(E)$**

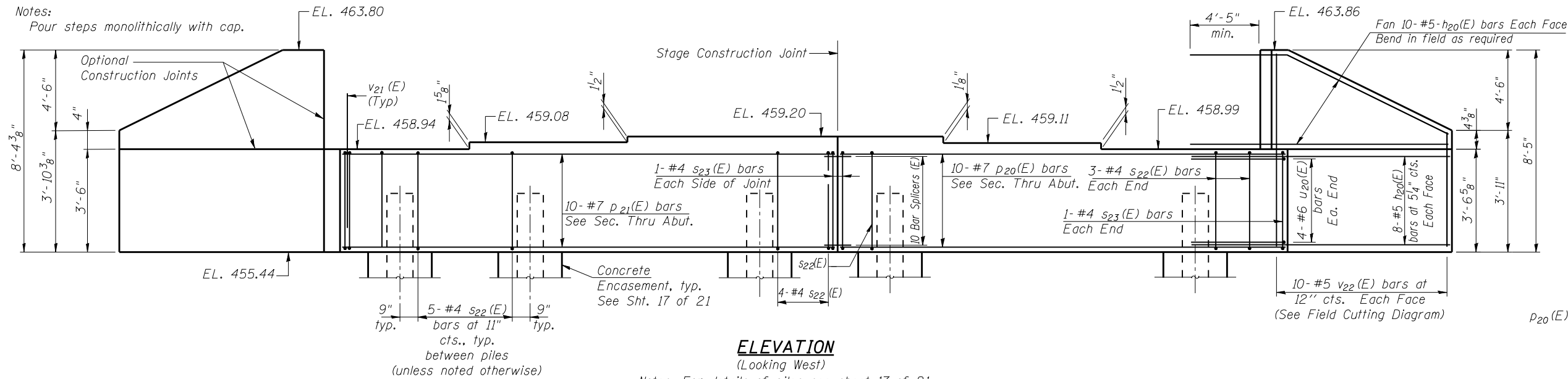


**BAR  $u_{20}(E)$**



**Notes:**

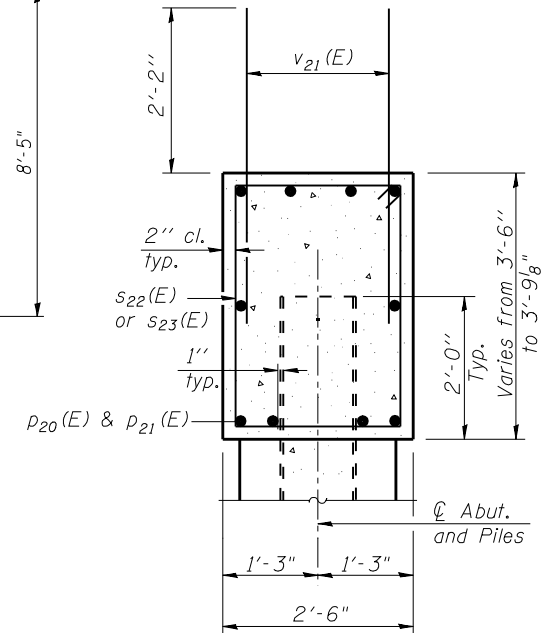
Pour steps monolithically with cap.



**ELEVATION**

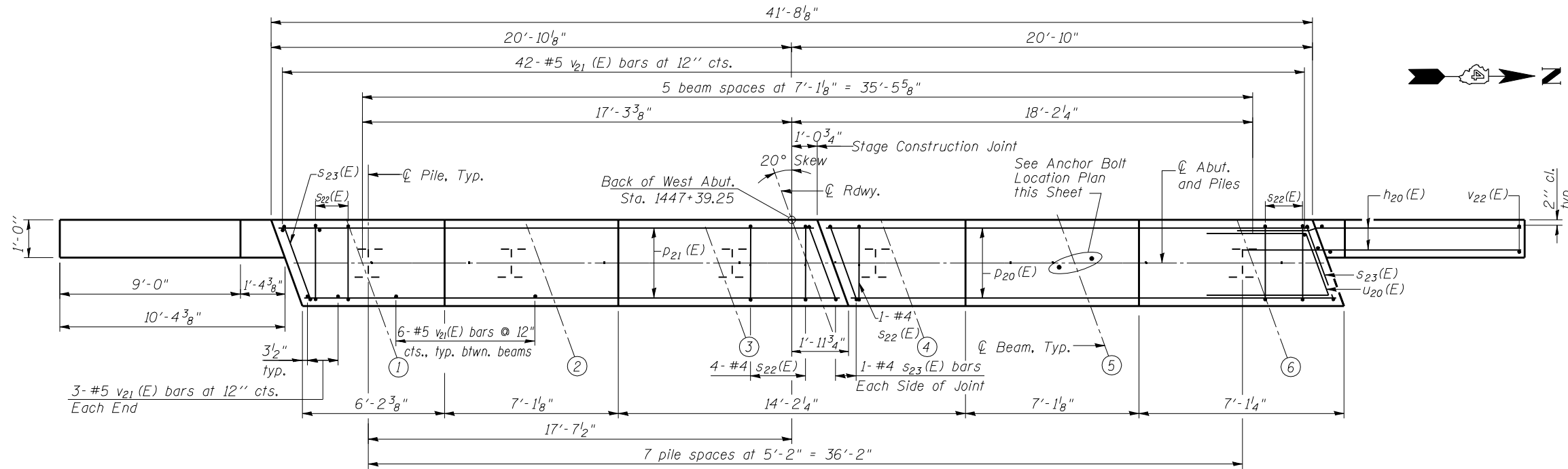
(Looking West)

Notes: For details of piles see sheet 17 of 21



**SECTION THRU ABUTMENT**

See sheet 2 of 21 for Abutment Backfill details

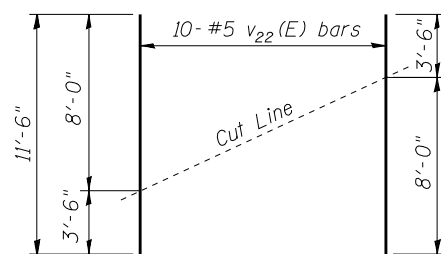


**PLAN**

**PILE DATA**

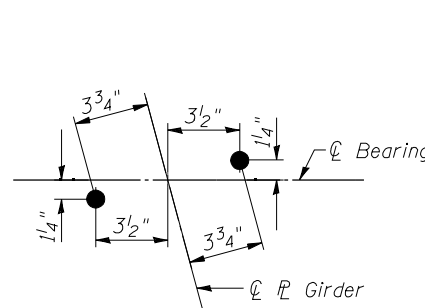
Type: Steel HP14x89  
 Nominal Required Bearing: 705 K  
 Factored Resistance Available: 356 K  
 Est. Length: 28 ft.  
 No. Production Piles: 8

Note:  
 Piles shall be driven through 21 in. diameter precored holes extending through existing concrete footing at Elevation 431.99. Cost included in Driving Piles.

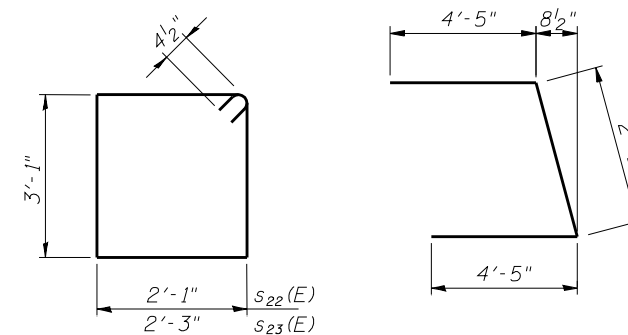


**FIELD CUTTING DIAGRAM**

Order v22(E) full length. Cut as shown and use remainder of bars in opposite face.



**ANCHOR BOLT LOCATION PLAN**

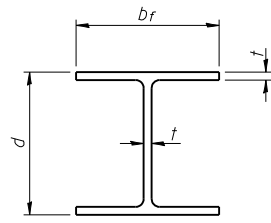


**BARS s22(E) & s23(E)**

**BAR u20(E)**

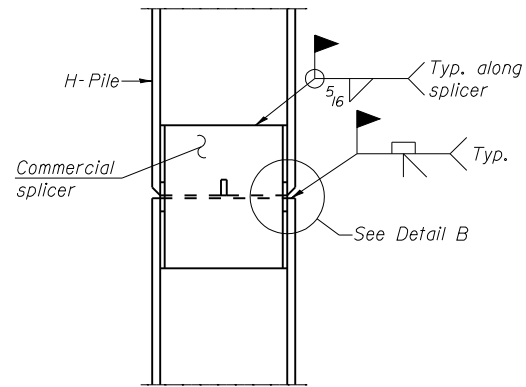
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
h20(E)	72	#5	16'-0"	—	
p20(E)	10	#7	19'-7"	—	
p21(E)	10	#7	21'-8"	—	
s22(E)	41	#4	11'-1"	□	
s23(E)	4	#4	11'-5"	□	
u20(E)	8	#6	10'-11"	⌒	
v21(E)	72	#5	4'-4"	—	
v22(E)	20	#5	11'-6"	—	
Bar Splicers				Each	10
Structure Excavation				Cu. Yd.	37.5
Concrete Structures				Cu. Yd.	18.9
Reinforcement Bars, Epoxy Coated				Pound	3,080
Furnishing Steel Piles HP14x89				Foot	224
Driving Piles				Foot	224
Concrete Encasement				Cu. Yd.	4.4

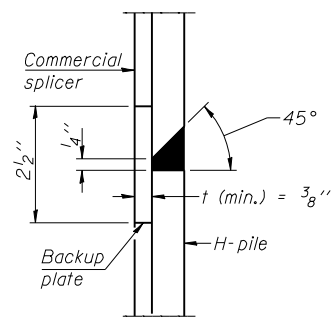


**STEEL PILE TABLE**

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

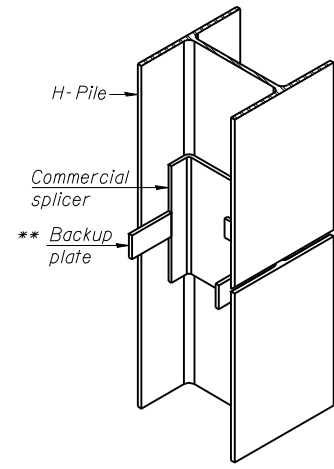


**ELEVATION**

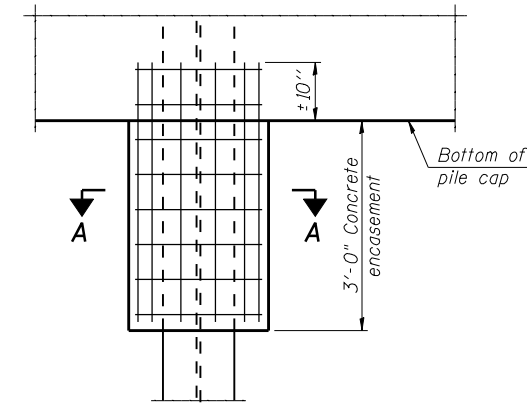


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**

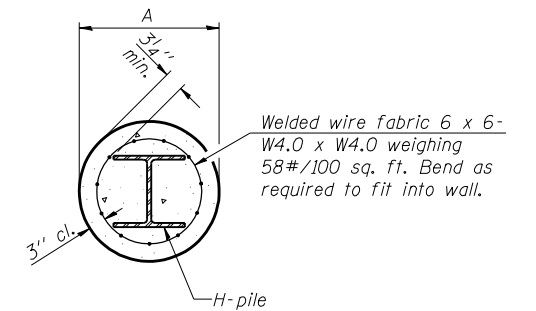


**ISOMETRIC VIEW**



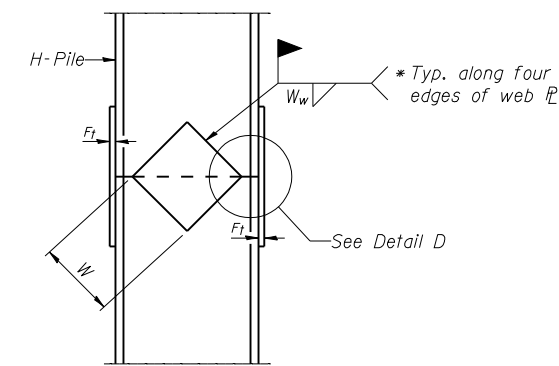
**ELEVATION**

**PILE ENCASEMENT**

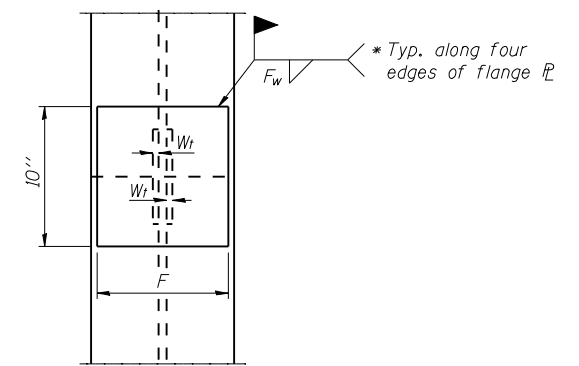


**SECTION A-A**

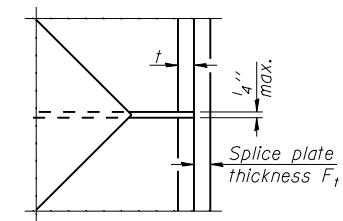
Note:  
Forms for encasement may be omitted when soil conditions permit.



**ELEVATION**



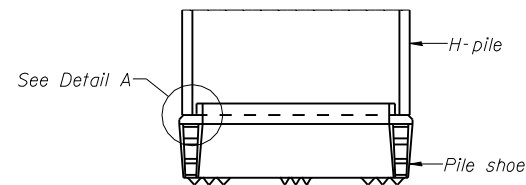
**END VIEW**



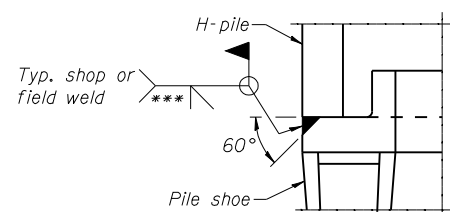
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

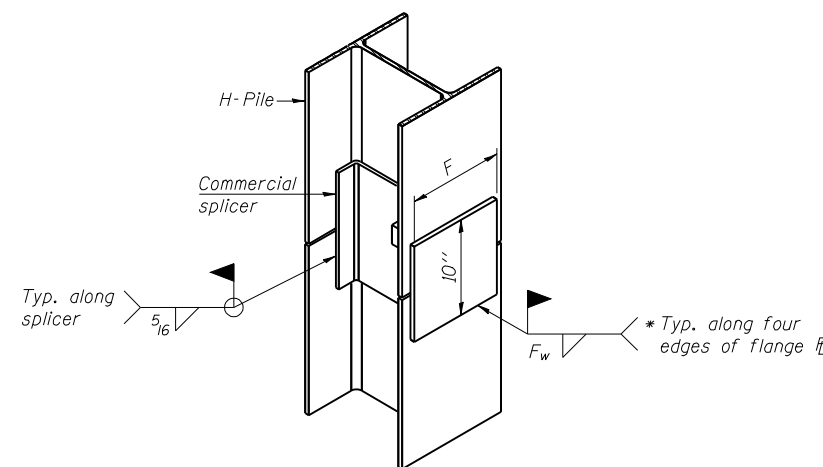


**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**ISOMETRIC VIEW**

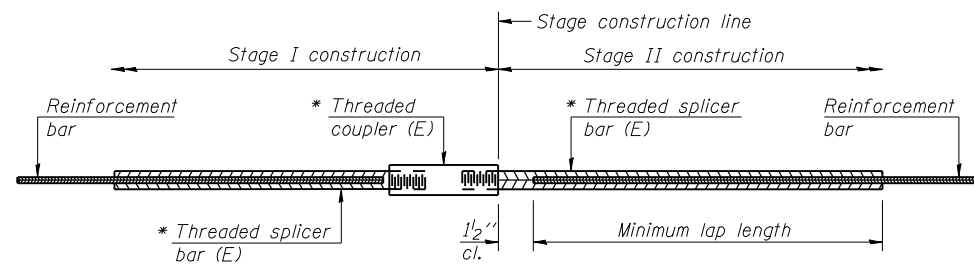
**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

1-27-12



**STANDARD BAR SPLICER ASSEMBLY**

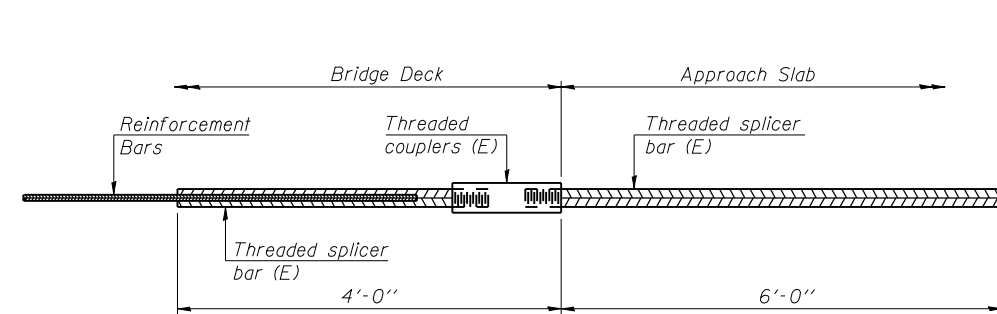
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

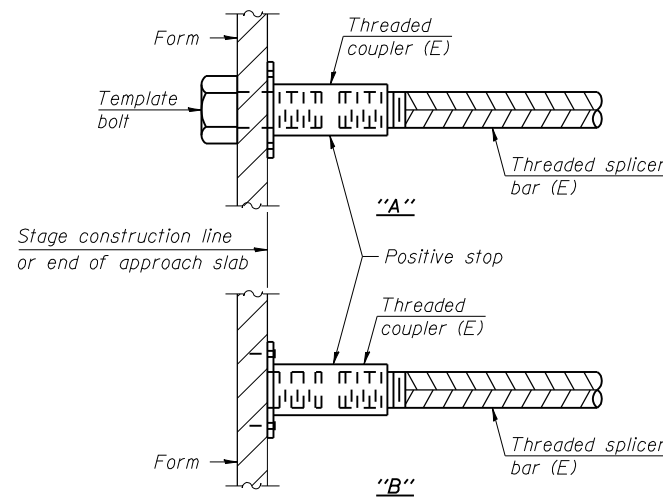
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Bridge Slab	#5	286	5
Diaphragms	#6	16	6
Top of Approach Slabs	#5	50	5
Bottom of Approach Slabs	#8	92	5
Abutments	#7	20	6
Approach Slab Footing	#5	80	5



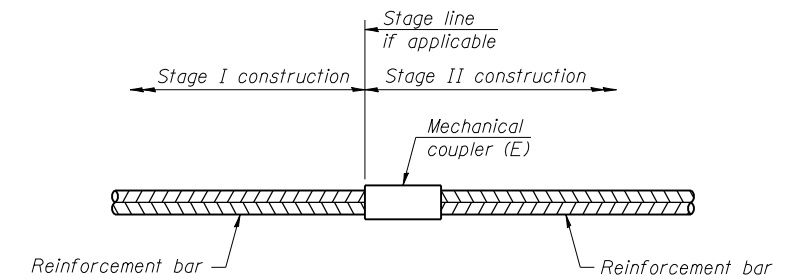
**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required = 78

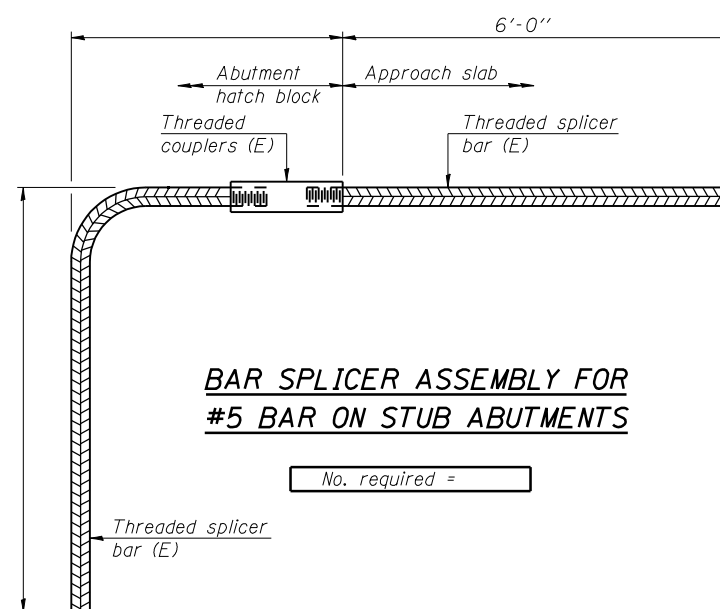


**INSTALLATION AND SETTING METHODS**

"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**



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

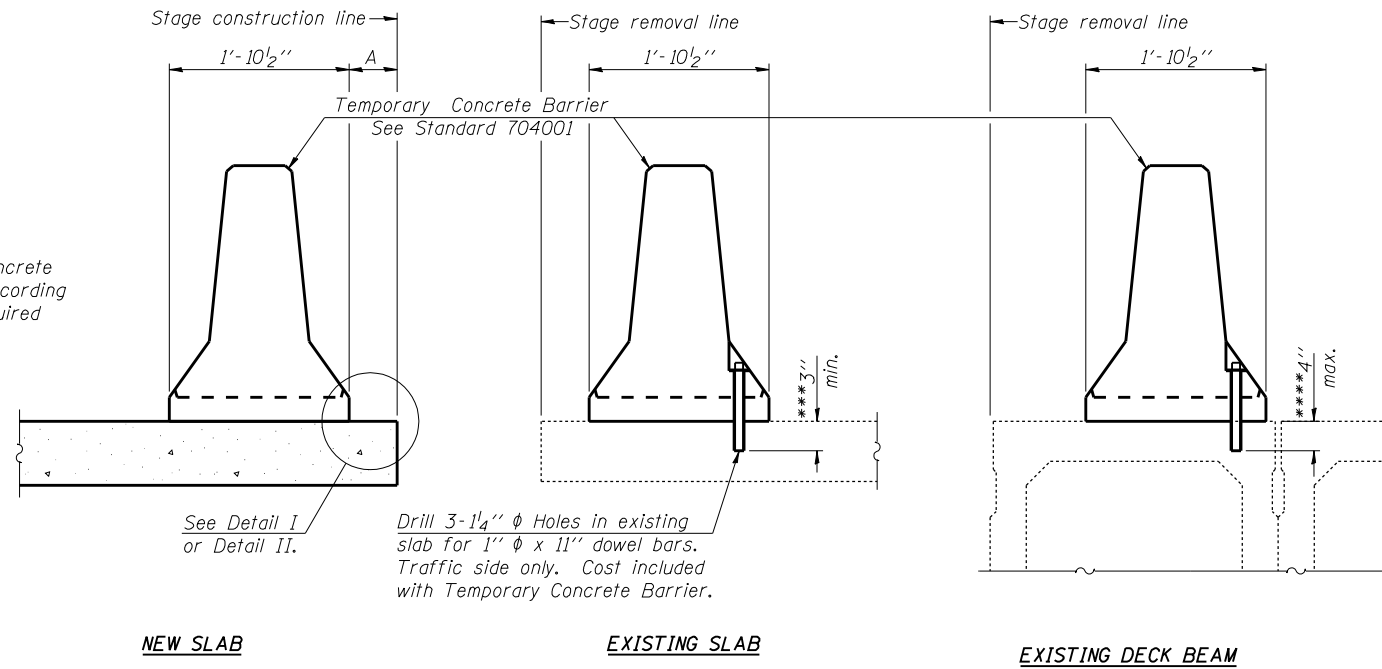
**NOTES**

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

1-27-12

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

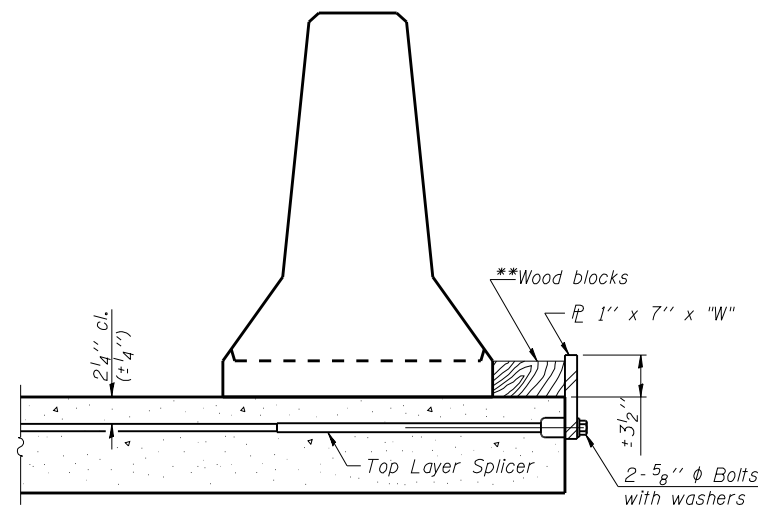
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{R}$  to the top layer of couplers with 2- $\frac{5}{8}$ "  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{R}$  to the concrete slab or concrete wearing surface with 2- $\frac{5}{8}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

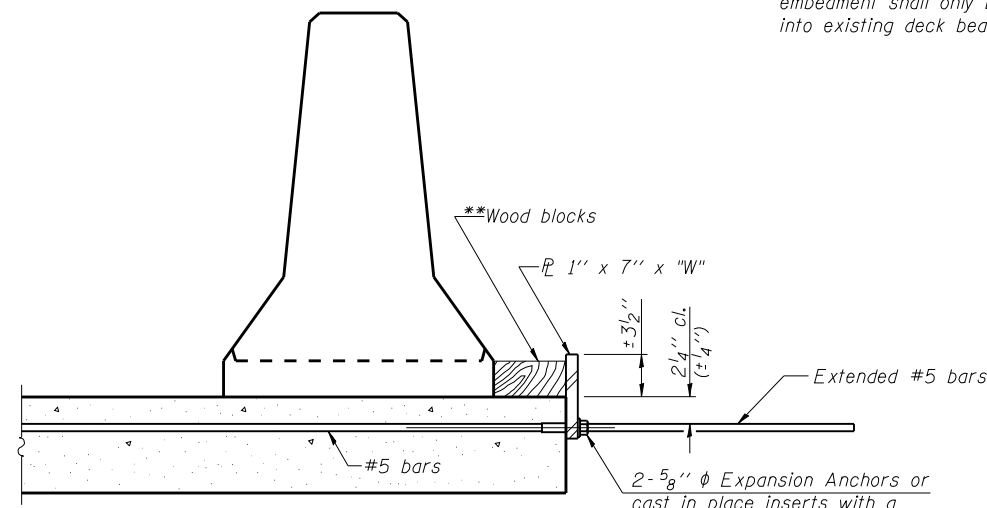
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

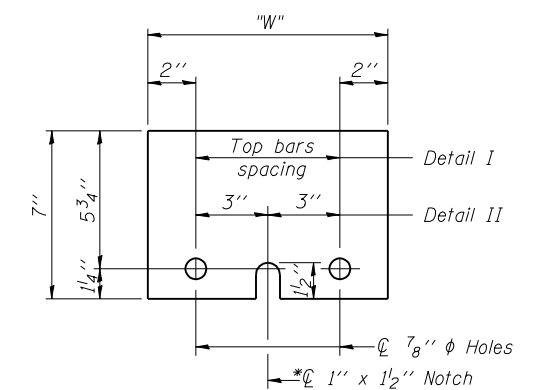
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{R}$  1" x 7" x "W"**

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	82
CONTRACT NO. 68699				

BLOOM COMPANIES, LLC.		BORING LOG		CHICAGO, ILLINOIS				
JOB NO:	BM3-1265	CLIENT:	ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO:	B-3			
PROJECT:	Proposed Bridge Replacement - US24 over Big Sister Creek	STATION:	1446+25	OFFSET:	13' LT			
LOCATION:	US 24 over Big Sister Creek	SURF ELEV:	462.3					
BORING RIG & METHOD:	CME 75 Truck Mounted/Hollow Stem Augers							
DEPTH	SAMPLE FROM - TO	ELEV.	SOIL DESCRIPTION	REC.	BLOWS/6"	q <sub>u</sub>	STRAIN %	WATER CONTENT %
	0.0-1.0	461.4	5.5" Asphalt over 6" Sand and Gravel Base		Auger 1			6.5
	1.0-2.5	459.7	FILL: Br/Gr Silty Clay A-6, little Gravel	6	2-2			18.9
	3.5-5.0	456.6	FILL: Black/Dark Gr Silty Clay A-6, trace Gravel and Organics	12	2 3-5	1.2	15	27.8
	6.0-7.5	454.0	Loose Black Sandy Loam A-2-7, trace Organics	16	3 2-3			22.4
10	8.5-10.0	452.1	Hard Dark Gr Silty Loam A-4	17	4 4-5	(4.5)		21.5
	11.0-12.5	449.3	Very Soft Dark Gr Clay A-4(4)	18	2 2-3	0.2	15	23.1
	13.5-15.0			18	2 2-2	0.5	15	29.7
	16.0-17.5		▼ Soft to Medium Stiff Br/Gr Clay A-4(4) Note: Organics at 18.5 to 20 feet in depth	18	WH	0.4	15	22.5
20	18.5-20.0	441.6		18	WH	0.5	15	27.8
	21.0-22.5			15	2 2-2			15.9
	23.5-25.0		Loose Br/Gr Sand A-1-b, some Gravel	15	1 3-4			23.5
	28.5-30.0	435.1		16	17 18-24			9.5
30	33.5-35.0		Gray Silty SHALE Note: Trace Gravel at 28.5 to 29.8 feet in depth	10	49 68/4"			4.0
40	38.5-40.0			7	70 30/1"			11.7
REMARKS Automatic Hammer Used; Stream elevation during drilling = 446.22				( ) Denotes Calibrated Penetrometer Estimate				
WATER	21 FT. ELEV.	441.3 DURING DRILLING	☒ CORE SIZE	IN.	DATE:	Mar 21, 11		
WATER	16 FT. ELEV.	446.3 AT COMPLETION	▼ CASING LENGTH	FT.	DRILLER:	Groff (Tim/John)		
WATER	FT. ELEV.	AFTER HRS.	▼ CASING DIAMETER	IN.	INSPECTOR:	B. Alsalami		

BLOOM COMPANIES, LLC.		BORING LOG		CHICAGO, ILLINOIS				
JOB NO:	BM3-1265	CLIENT:	ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO:	B-3 (cont.)			
PROJECT:	Proposed Bridge Replacement - US24 over Big Sister Creek	STATION:	1446+25	OFFSET:	13' LT			
LOCATION:	US 24 over Big Sister Creek	SURF ELEV:	462.3					
BORING RIG & METHOD:	CME 75 Truck Mounted/Hollow Stem Augers							
DEPTH	SAMPLE FROM - TO	ELEV.	SOIL DESCRIPTION	REC.	BLOWS/6"	q <sub>u</sub>	STRAIN %	WATER CONTENT %
	43.5-43.8	418.5	Gray Silty SHALE Note: Trace Gravel at 28.5 to 29.8 feet in depth	4	100/4"			12.9
			Boring Terminated @ 43.8 feet					
REMARKS Automatic Hammer Used; Stream elevation during drilling = 446.22				( ) Denotes Calibrated Penetrometer Estimate				
WATER	21 FT. ELEV.	441.3 DURING DRILLING	☒ CORE SIZE	IN.	DATE:	Mar 21, 11		
WATER	16 FT. ELEV.	446.3 AT COMPLETION	▼ CASING LENGTH	FT.	DRILLER:	Groff (Tim/John)		
WATER	FT. ELEV.	AFTER HRS.	▼ CASING DIAMETER	IN.	INSPECTOR:	B. Alsalami		

BORING LOG

JOB NO: BM3-1265	CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO: B-4
PROJECT: Proposed Bridge Replacement - US24 over Big Sister Creek		STATION: 1447+45
LOCATION: US 24 over Big Sister Creek		OFFSET: 34.5' RT
BORING RIG & METHOD: CME 75 Truck Mounted/Hollow Stem Augers		SURF ELEV: 460.1

DEPTH	SAMPLE FROM - TO	ELEV.	SOIL DESCRIPTION	REC.	BLOWS/6"	q <sub>u</sub>	STRAIN %	WATER CONTENT %
	0.0-1.0	459.8	4" Br Topsoil		Auger 1			21.2
	1.0-2.5		FILL: Br Silty Clay A-6, little Gravel, roots	7	3-4	(0.5)		27.2
	3.5-5.0	454.5		10	1-2			25.0
	6.0-7.5		Stiff Dark Gr Silty Clay Loom A-4, trace Gravel	8	4-3	1.0	15	25.4
	8.5-10.0	451.1		18	2-3	(0.25)		25.7
	11.0-12.5		Note: Organics at 9 to 10 feet in depth	18	2-2	0.4	15	29.3
	13.5-15.0	446.9		18	3-3	0.8	15	20.1
	16.0-17.5		Medium Stiff to Soft Dark Gr Clay A-4, trace Gravel	18	1-2	0.7	15	27.1
	18.5-20.0	439.5	Note: Organics at 13.5 to 15 feet in depth	18	0-1	0.4	15	36.2
	21.0-22.5	436.7		8	2-3			19.1
	23.5-25.0		Loose Br Sand A-1-b, little Gravel	17	29-37			9.3
	26.0-27.5		Gray Silty SHALE	18	38-71			11.1
	28.5-29.8		Note: Trace Coal at 28.5 to 29.8 and some Coal at 31.0 to 31.3 feet in depth	10	76			13.4
	31.0-31.3	428.8		3	100/3"			10.6

Boring Terminated @ 31.3 feet

REMARKS Automatic Hammer Used; Stream elevation during drilling = 446.22 ( ) Denotes Calibrated Penetrometer Estimate

WATER	20FT. ELEV.	440.1 DURING DRILLING	☒ CORE SIZE	IN. DATE:	Mar 22, 11
WATER	14FT. ELEV.	446.1 AT COMPLETION	☒ CASING LENGTH	FT. DRILLER:	Groff (Tim/John)
WATER	FT. ELEV.	AFTER HRS.	☒ CASING DIAMETER	IN. INSPECTOR:	B. Alsalami

EDN, BM3-1265, BIG SISTER BRIDGE, CP3, 1/27/12



USER NAME =	DESIGNED - LRT	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS  
STRUCTURE NO. 029-0074**

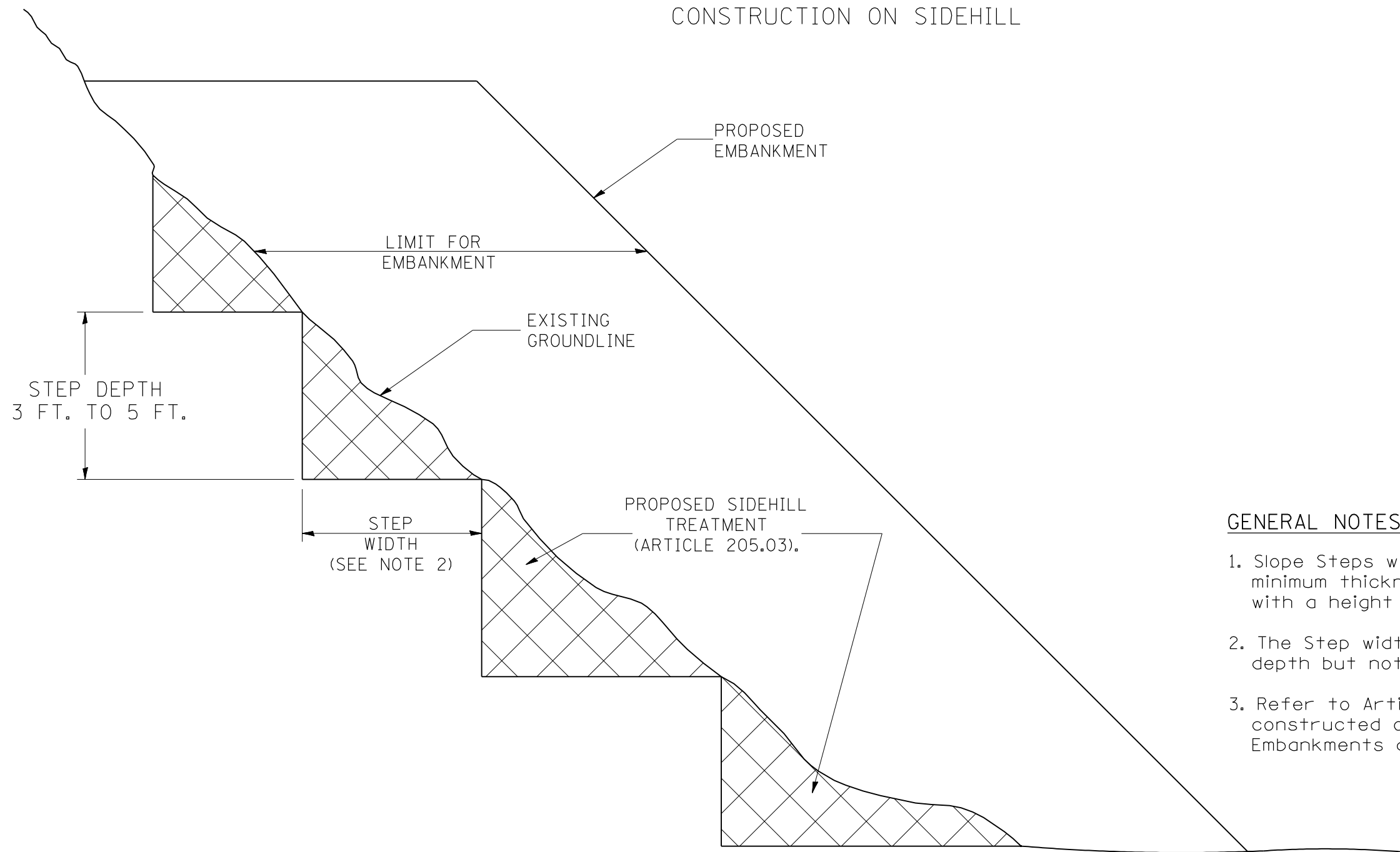
SHEET NO. 21 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137 BR, BR-1) BR	FULTON	118	84
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



# SLOPE STEPS DETAIL

## TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



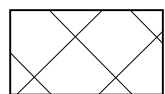
### GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

**DESIGNER NOTE:**

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

**REPLACEMENT MATERIAL:**



STANDARD EMBANKMENT  
(IN ACCORDANCE WITH  
205 OF THE STANDARD SPECIFICATION).

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

1-1-97	RENUM. L-5.03. NEW REVISION BOX. REVISED TITLE.	-I.P.-			
	BOX. REVISED GENERAL NOTES.				
10-16-06	REVISED TO 2007 SPEC.	-M.A.-			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

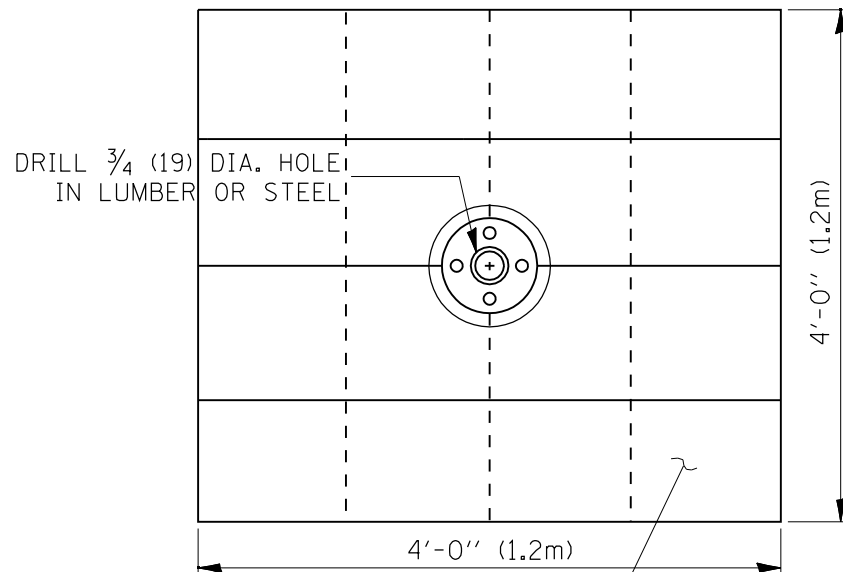
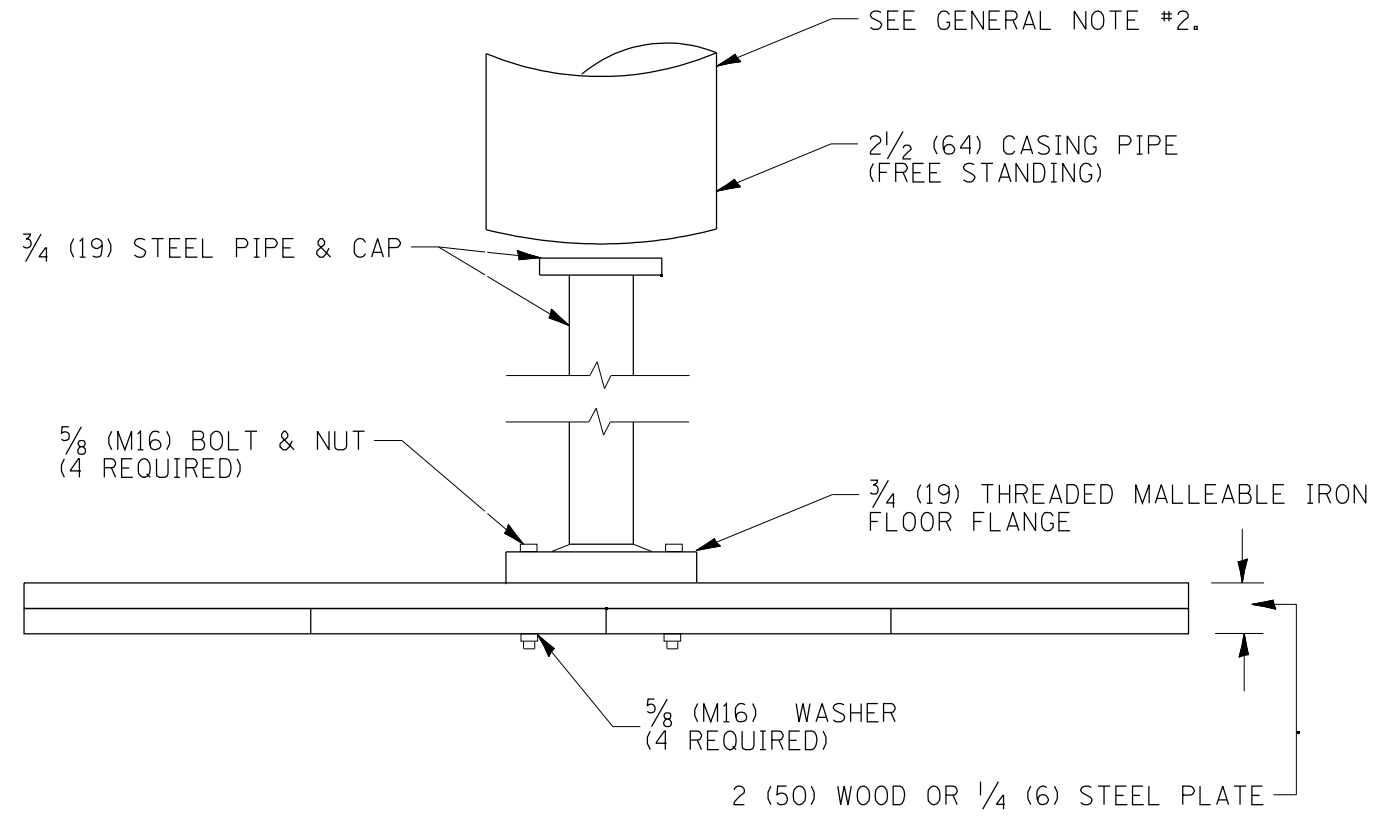
**SLOPE STEPS DETAIL**

NOT TO SCALE

---CADD STD. 205001-04---

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	85
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO.	

DESIGNER NOTES:  
 1. SEE SOILS REPORT AND BUREAU OF MATERIALS FOR USAGE, LOCATIONS, AND SETTLEMENT RATES.  
 2. CONSIDER USE ON BRIDGE EMBANKMENT AND OTHER SETTLEMENT SENSITIVE FILLS.  
 3. THIS DRAWING ALLOWS FOR WOODBASE PLATE OPTION.



SOUND LUMBER - 1(25) x 12(300) NAILED TOGETHER OR 1/4(6) THICK BY 4(1.2m) SQUARE STEEL PLATE

**GENERAL NOTES:**

1. Settlement Platform shall be in accordance with the applicable portions of Article 204.06 of the Standard Specifications.
2. Do Not install casing pipe until after one section of 3/4"(19 mm) has been covered with earth. The casing pipe should not rest on platform.

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

1-1-97	REVISION BOX	REVISION NOTES	DATE	BY	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4-14-99	ADDED "CASING PIPE" REQUIREMENT		10-16-06		SETTLEMENT PLATFORM			118	86
5-19-99	COBBERCTIONS TO CASING PIPE				NOT TO SCALE				

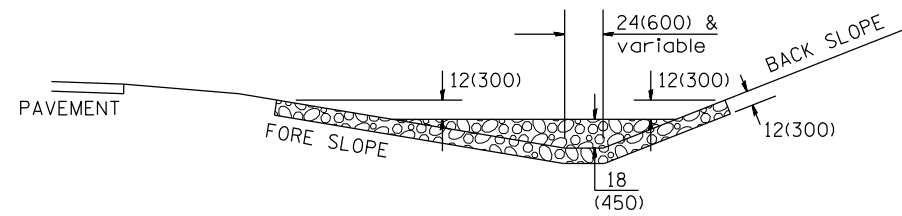
CADD: SD 205101-04

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

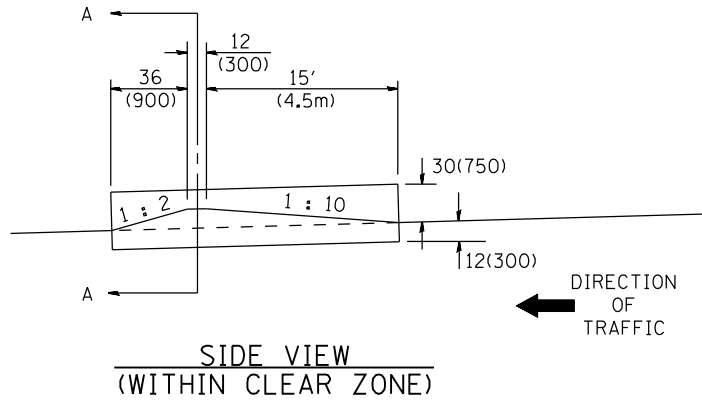
# THIS SHEET INTENTIONALLY BLANK

FILE NAME \$FILEL\$	USER NAME = \$USER\$	DESIGNED - JL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - JL	REVISED -		317	(137 BR, BR-1) BR	FULTON	118	87				
	PLOT SCALE = \$SCALE\$	CHECKED - OAO	REVISED -		SCALE: 1"=50'	PROJECT	JOB NO.	<b>CONTRACT NO. 68699</b>					
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SHEET NO. OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

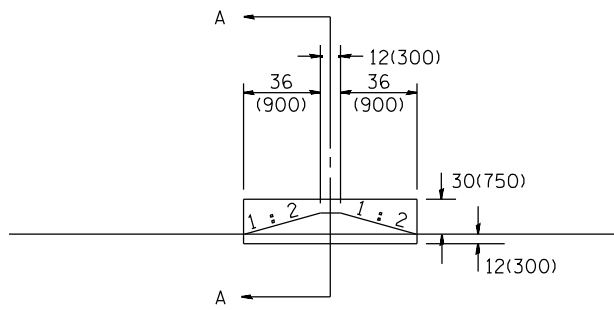
DESIGNER NOTES:  
 1. Designer to modify this detail Special Detail Sheet, as needed, for inclusion in plans.  
 2. Determine the required clear zone in order to select the berm slopes.  
 3. Include State Standard 280001.



**SECTION A - A**

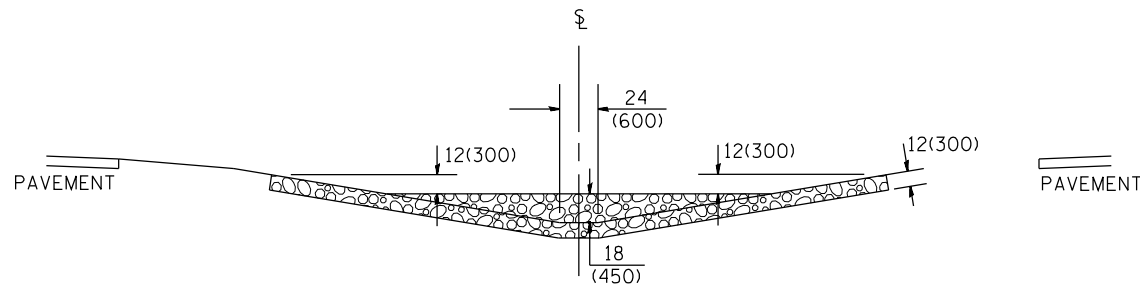


**SIDE VIEW  
(WITHIN CLEAR ZONE)**

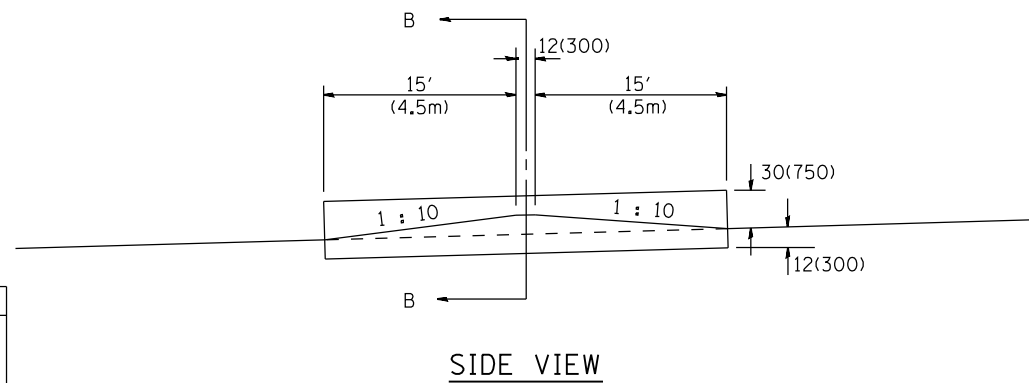


**SIDE VIEW  
(OUTSIDE OF CLEAR ZONE)**

**SIDE DITCH AGGREGATE DITCH CHECK**



**SECTION B - B**



**SIDE VIEW**

**MEDIAN AGGREGATE DITCH CHECK**

**NOTES:**

- FOR DITCH BOTTOM PROTECTED BY EROSION CONTROL BLANKET, USE 400'(120m) SPACING. FOR SEEDED DITCH BOTTOM, USE 200'(60m) SPACING.
- THIS WORK CONSISTS OF THE COMPLETE INSTALLTION OF EROSION CONTROL DITCH CHECK AT LOCATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. THE AGGREGATE GRADATION SHALL BE RR3 WITH A MINIMUM QUALITY OF CLASS B.

STATION	LOCATION		NUMBER OF DITCH CHECKS	FORE SLOPE	DITCH BOTTOM WIDTH	BACK SLOPE	BERM SLOPE
	MEDIAN	SIDE DITCH LEFT / RIGHT					

**ESTIMATE QUANTITIES**

	FORE SLOPE	DITCH BOTTOM	BACK SLOPE	BERM SLOPE	AGGREGATE DITCH CHECK EROSION CONTROL TON (METRIC TON)
MEDIAN DITCH	1 : 6	24(600)	—	1 : 10	95(86)
SIDE DITCH	1 : 6	24(600)	1 : 4	1 : 10 & 1 : 2	50(45)
SIDE DITCH	1 : 6	24(600)	1 : 4	1 : 2 & 1 : 2	19(17)
SIDE DITCH	1 : 4	24(600)	1 : 3	1 : 10 & 1 : 2	18(16)
SIDE DITCH	1 : 4	24(600)	1 : 3	1 : 2 & 1 : 2	14(13)

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).  
 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

1-1-97	RENUM. A-12.04. NEW REVISION BOX, REVISED TITLE	-I.P.-	03-15-12	CHANGED NOTE 1	R.D.
9-15-05	BOX, ADDED QUANTITY CALCULATION BOX	-M.A.-			
10-16-06	REVISED DESIGNER NOTE	-M.A.-			
	REVISED RR3 QUALITY & IO 2007 SPEC.	-M.A.-			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL AGGREGATE DITCH CHECK**

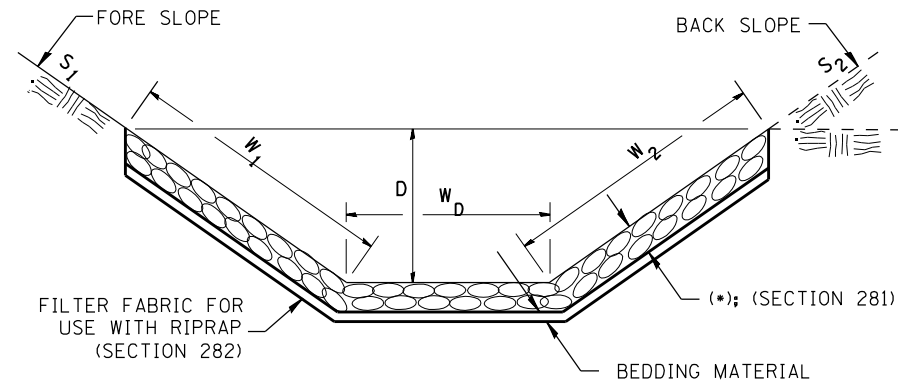
NOT TO SCALE

--- CADD STD. 280101-04

F.A. RTE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	88
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

Designer NOTES:  
 1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.  
 2. (\*) Designer to specify pay item including material, quality, and gradation.  
 3. Include District Special Provision if needed.

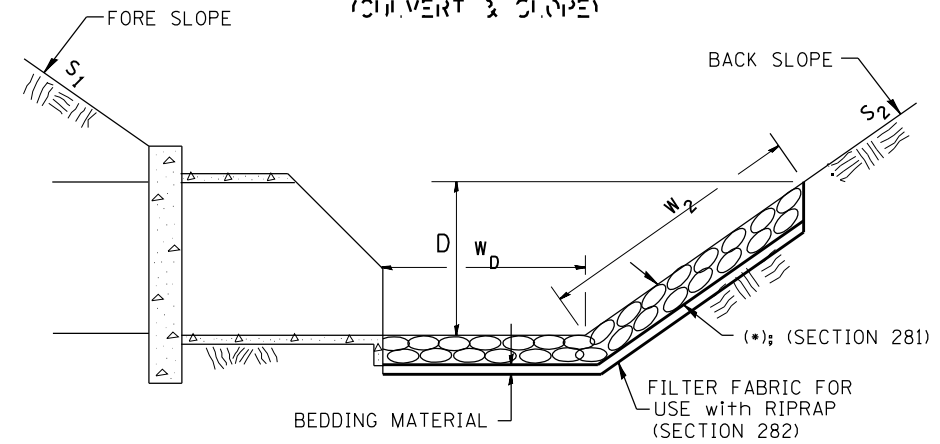
**CASE 1**  
(DITCH)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $v_1 + v_2 + v_D$

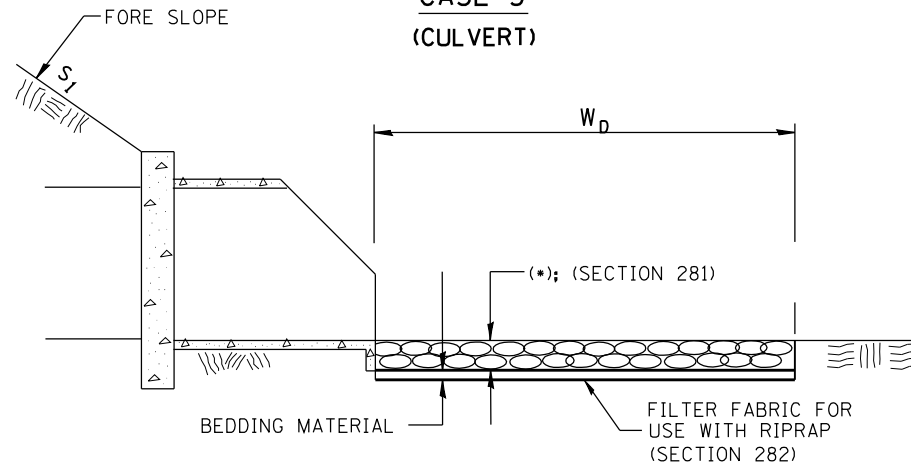
**CASE 2**  
(CULVERT & SLOPE)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $v_2 + v_D$

**CASE 3**  
(CULVERT)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $W_D$

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

1-1-97	BENUM..A-12.02..NEW_REVISION_BOX	I.P.		
12-1-97	COBRECT_FILTER_FABRIC_LEADER_ARROW	J.A.		
10-16-06	REVISED_IQ_2007_SPEC	M.A.		
9-6-12	REMOVED_A_DESIGNER_NOTE_AND_MADE_MINOR_CHANGES	R.D.		

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

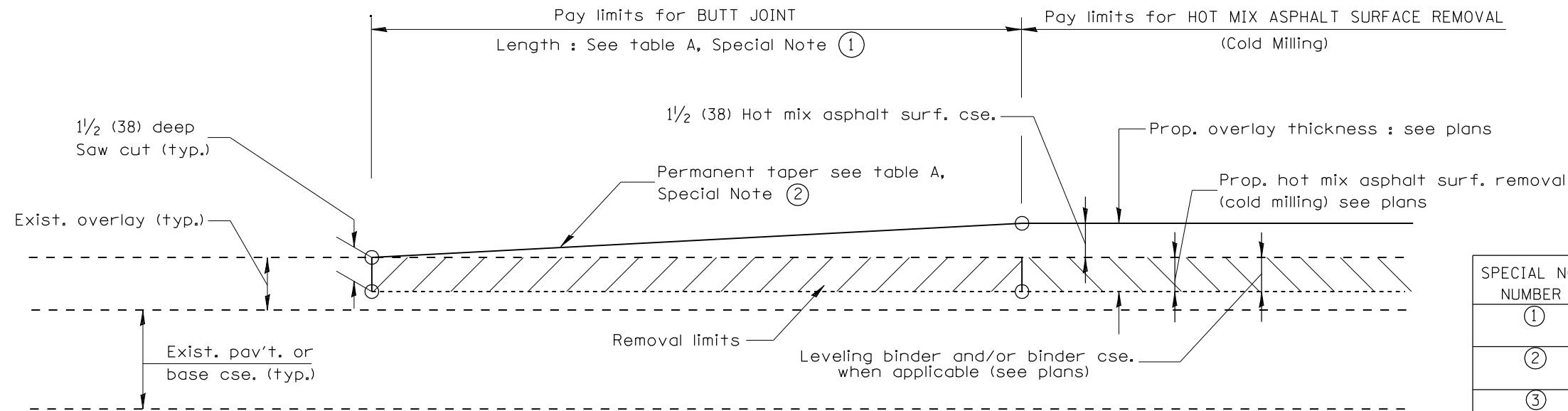
**RIPRAP DITCH FOR EROSION PROTECTION**

NOT TO SCALE

---CADD\_S10\_281001-04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	89
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:  
 1. Include District Special Provision for Butt Joints & for Hot Mix Asphalt Removal (Cold Milling).  
 2. The butt joints pay item includes the saw cut & temporary ramp. Payment for the Butt Joint applies whether or not the project features Hot Mix Asphalt Removal (Cold Milling).



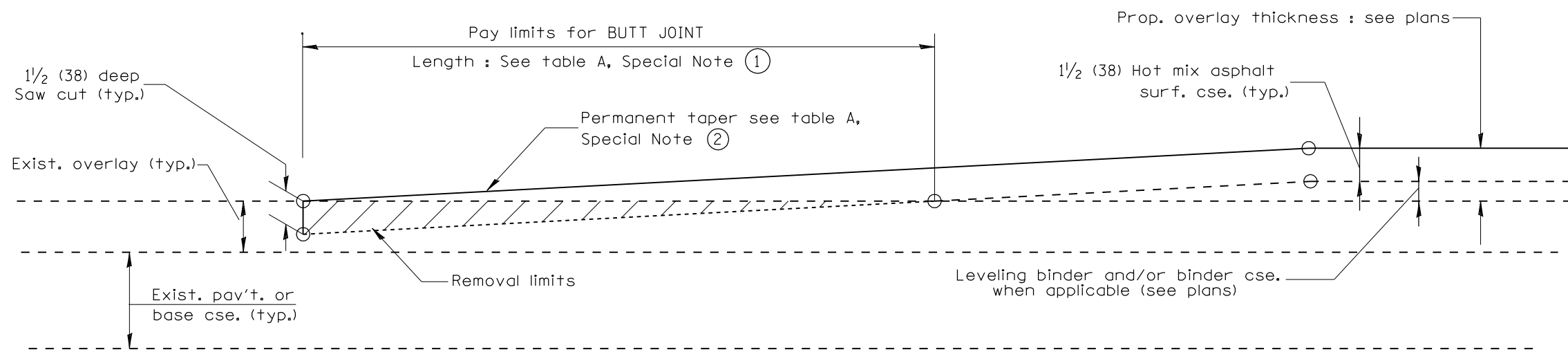
**CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**

**TABLE A**  
(LENGTHS AND TAPER RATES)

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
⑤	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

**GENERAL NOTES**

- The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
- The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
- The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



**CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**

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

01-01-97	BENUM..C-23.01..NEW_REVISION_BOX	-I.P.-	
04-01-97	COBRECION_IO_DEPTH	-J.A.-	
09-15-05	REVISED_DESIGNER_NOTE	-M.M.A.-	
10-16-06	REVISED_IO_2007_SPEC.	-M.A.-	

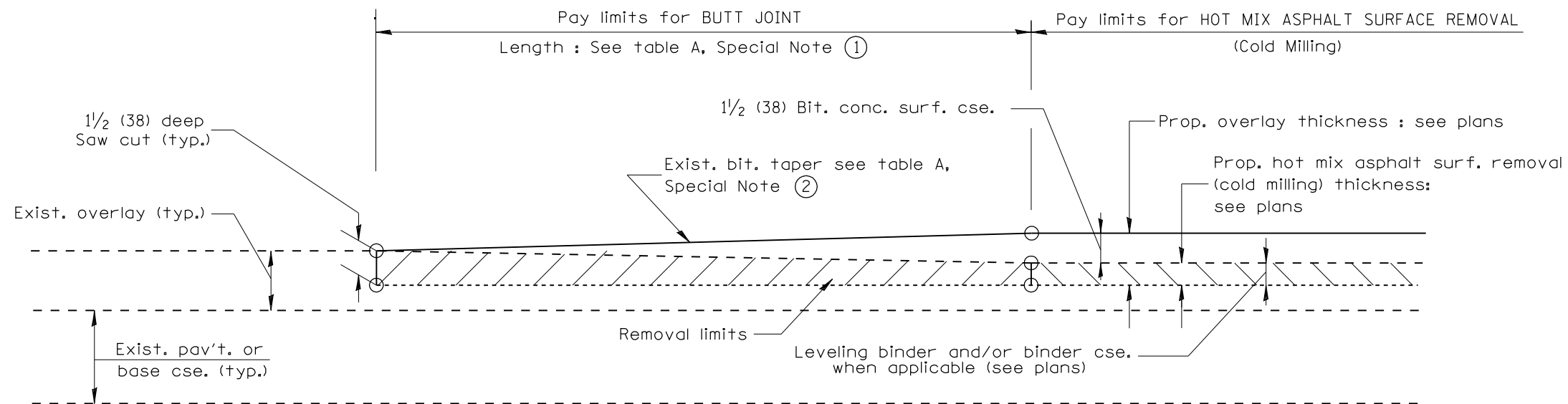
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BUTT JOINTS**

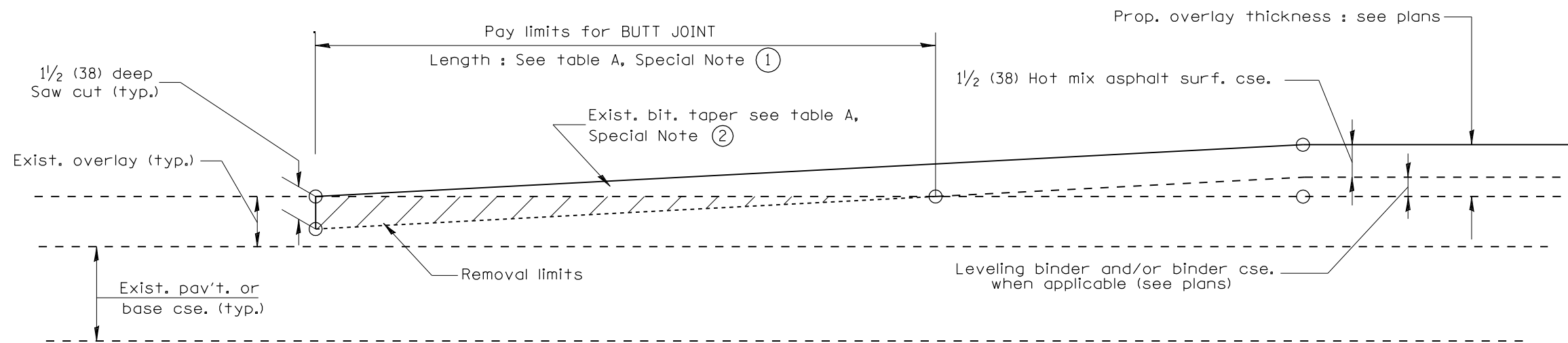
NOT TO SCALE

SHI..1 OF 3  
CADD\_SID..406101:04

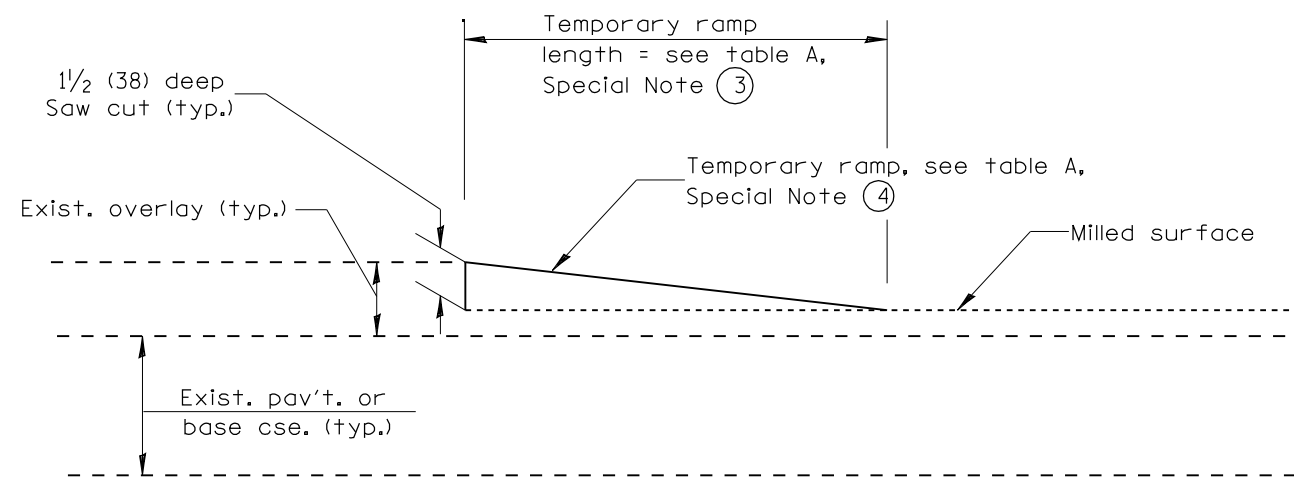
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	90
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO.	



**CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**  
**TIE-IN TO EXISTING BITUMINOUS TAPER**



**CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**  
**TIE-IN TO EXISTING BITUMINOUS TAPER**



**DETAIL TEMPORARY RAMP**

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

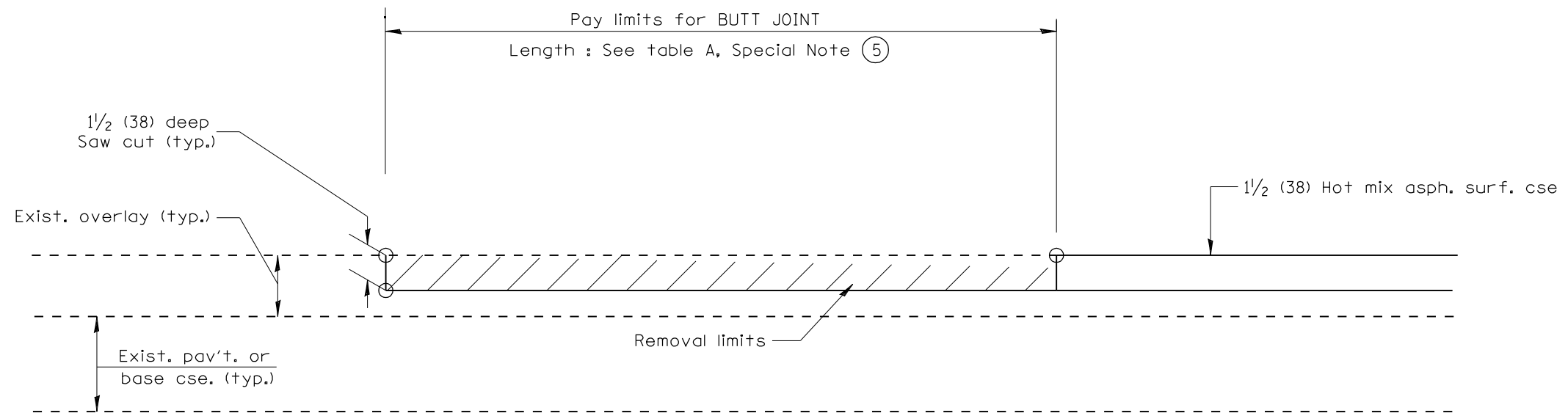

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

**BUTT JOINTS**

SHI\_2\_OF\_3  
 CADD SID\_406101-04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	91
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO.	

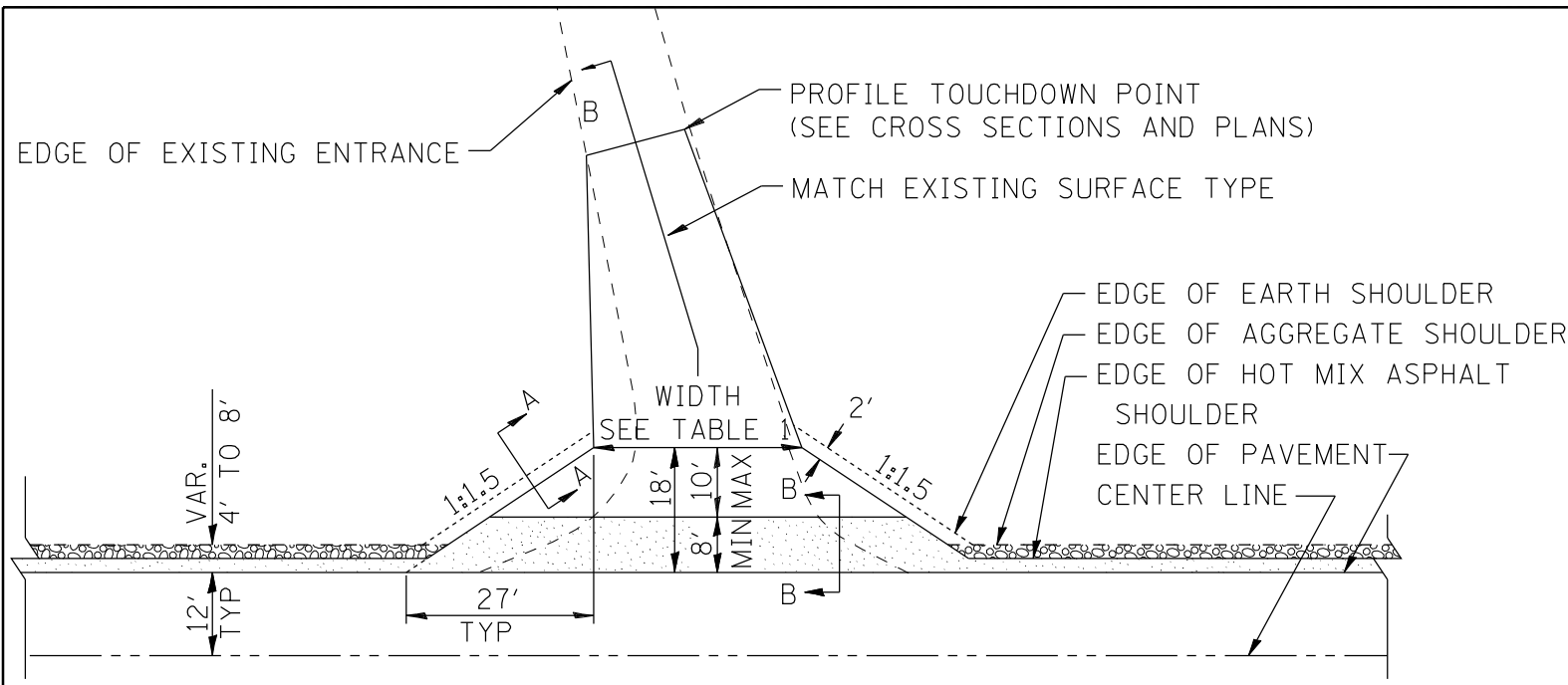


CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)  
TIE-IN TO EXISTING BITUMINOUS TAPER

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

				<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>		<b>BUTT JOINTS</b>		SHI_3_OF_3 ---CADD_SID_406101:04	
				NOT TO SCALE				CONTRACT NO. _____	
								TOTAL SHEETS 118 SHEET NO. 92	
								FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



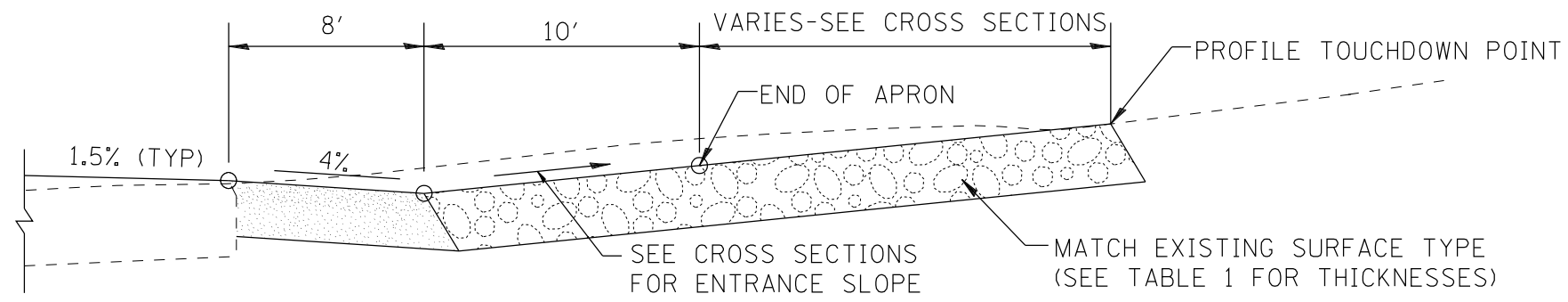


HOT MIX ASPHALT SHOULDER, 8"  
 AGGREGATE SHOULDER, TYPE B, 6"

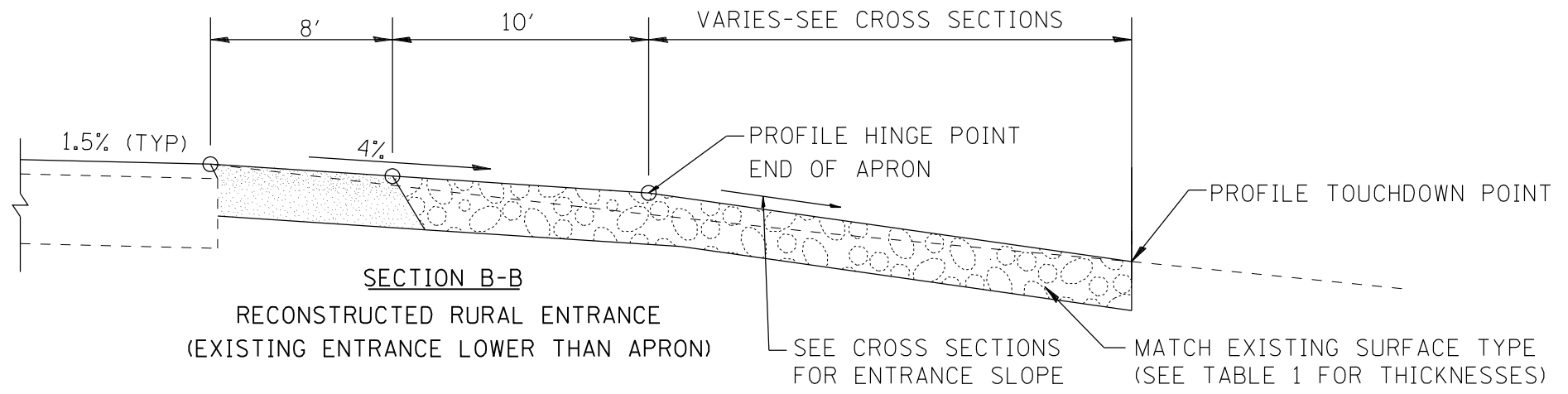
**PLAN**  
 COMMERCIAL / FARM-RELATED ENTRANCE

TABLE 1				
RURAL ENTRANCE DESIGN				
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT	COMMERCIAL
	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.
FLARE	1:1.5			
MAX. GRADE (G)	12%		10%	

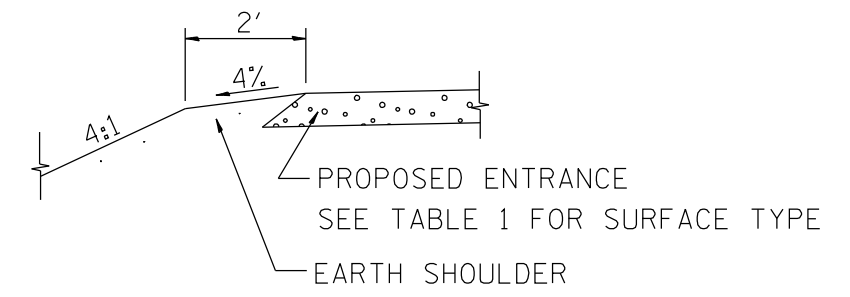
SURFACE TYPE	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT	COMMERCIAL
	1-WAY OPERATION	2-WAY OPERATION	1-WAY OPERATION	2-WAY OPERATION
INCIDENTAL HOT MIX ASPHALT SURFACING	6"	8"	8"	8"
AGGREGATE SURFACE COURSE	6"	8"	8"	8"
PCC DRIVEWAY PAVEMENT	6"	8"	8"	7"



**SECTION B-B**  
 RECONSTRUCTED RURAL ENTRANCE  
 (EXISTING ENTRANCE HIGHER THAN APRON)



**SECTION B-B**  
 RECONSTRUCTED RURAL ENTRANCE  
 (EXISTING ENTRANCE LOWER THAN APRON)

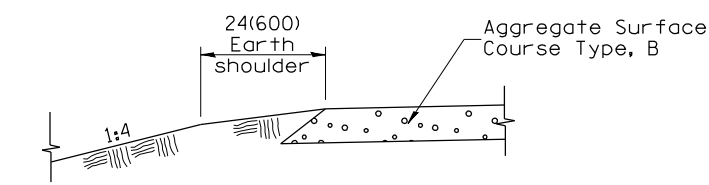


**SECTION A-A**  
 SHOULDER TREATMENT FOR RURAL ENTRANCES

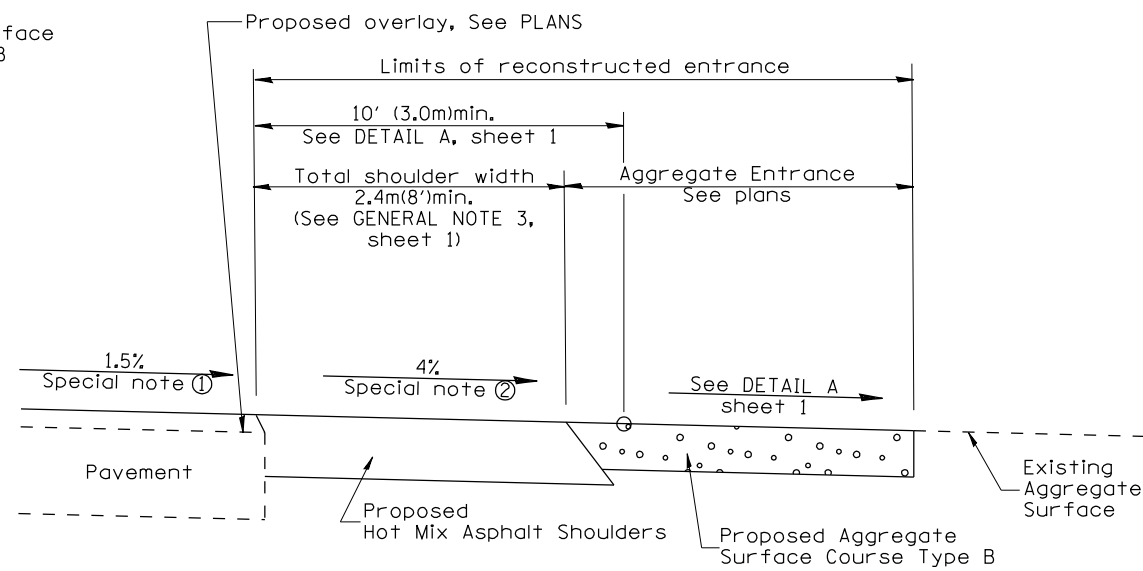
**GENERAL NOTES**

- ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.
- A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.
- A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

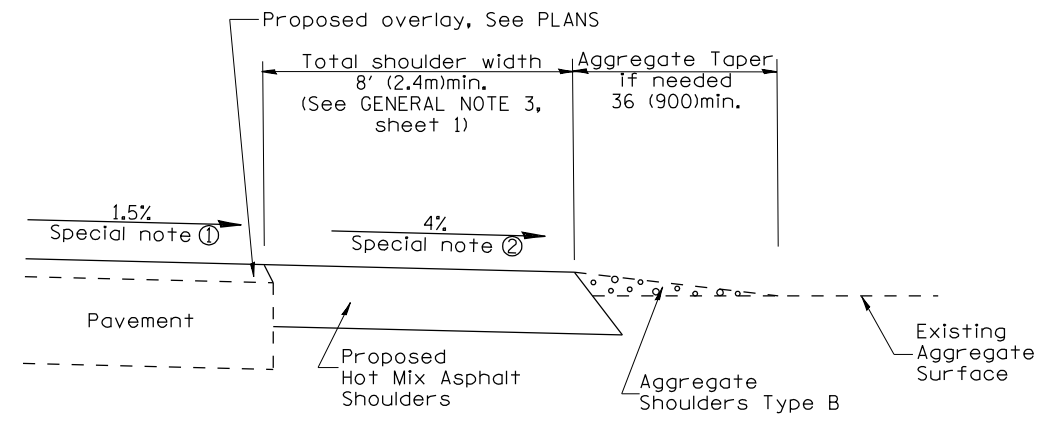
All dimensions are in inches (millimeters) unless otherwise noted.



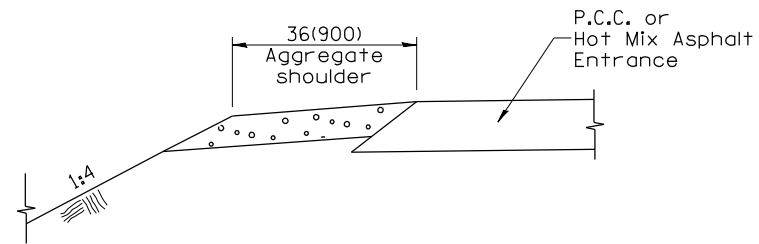
**SECTION A-A**  
SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



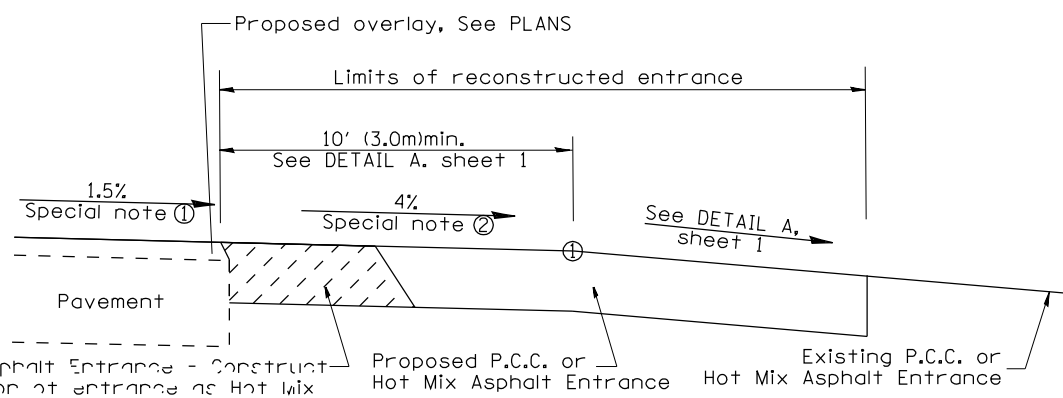
**SECTION B-B**  
RECONSTRUCTED AGGREGATE ENTRANCE



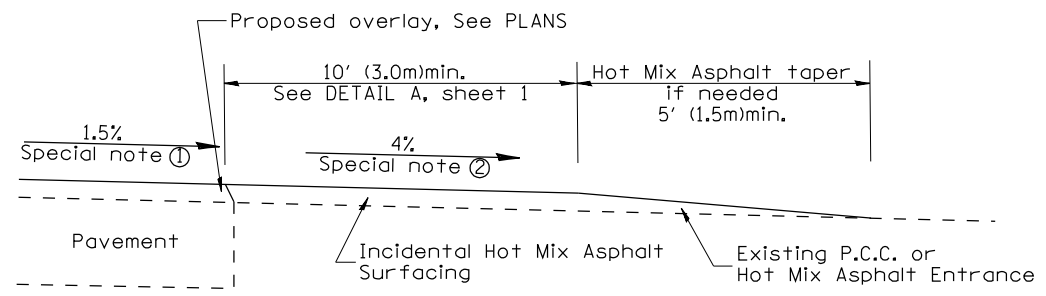
**SECTION B-B**  
EXISTING AGGREGATE ENTRANCE



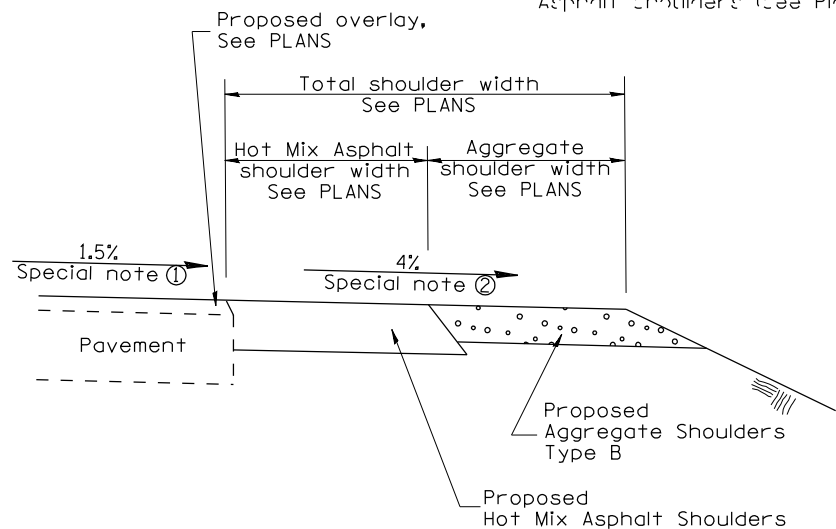
**SECTION C-C**  
SHOULDER TREATMENT FOR P.C.C. OR HOT MIX ASPHALT ENTRANCES



**SECTION D-D**  
RECONSTRUCTED P.C.C. OR HOT MIX ASPHALT ENTRANCE



**SECTION D-D**  
EXISTING P.C.C. OR HOT MIX ASPHALT ENTRANCE



**SECTION E-E**  
MAINLINE SHOULDER TREATMENT

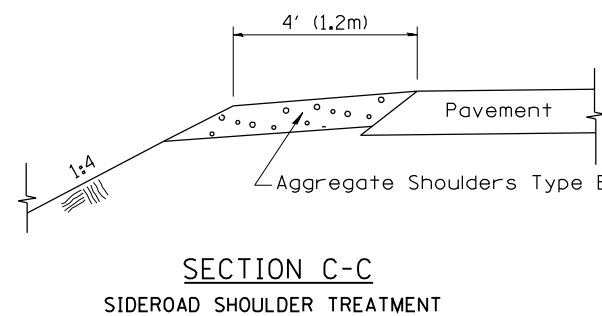
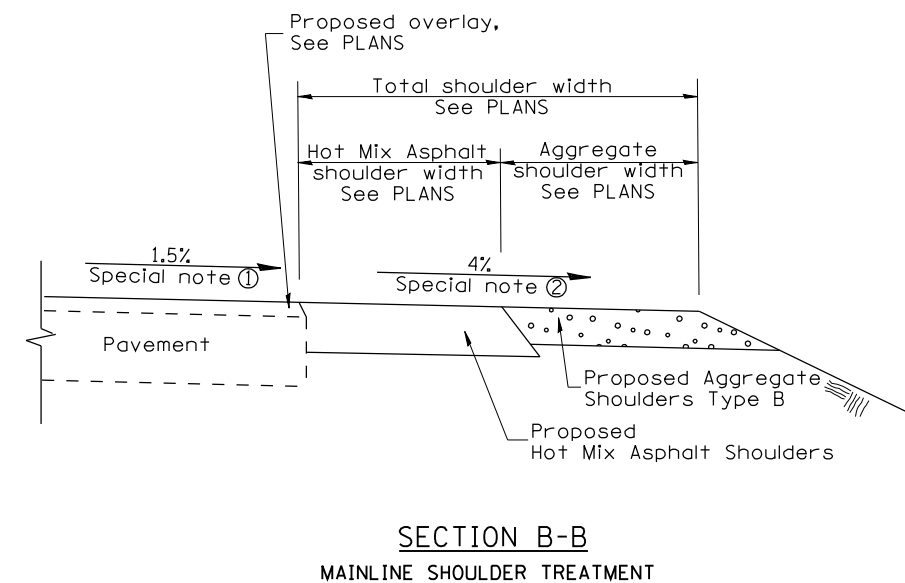
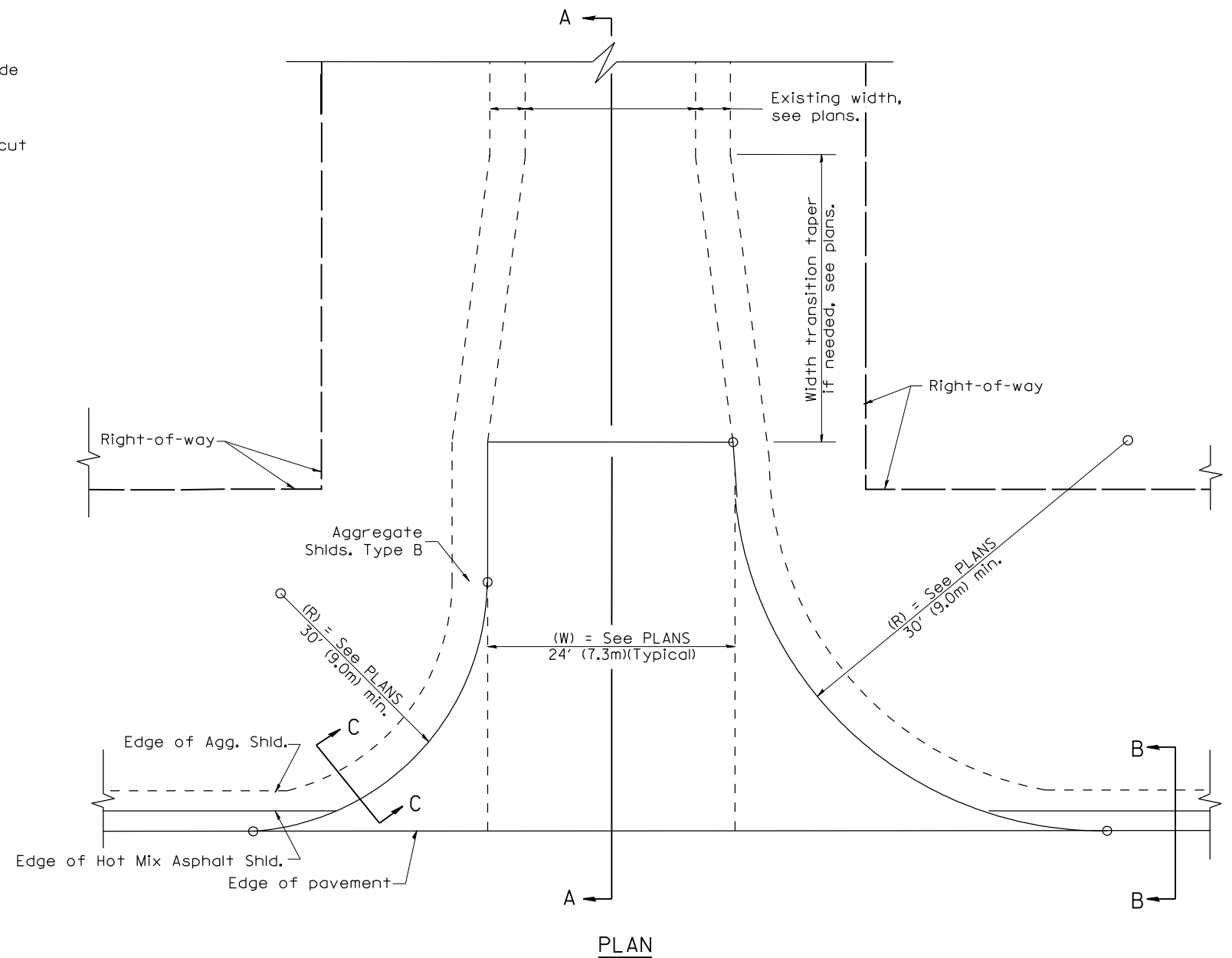
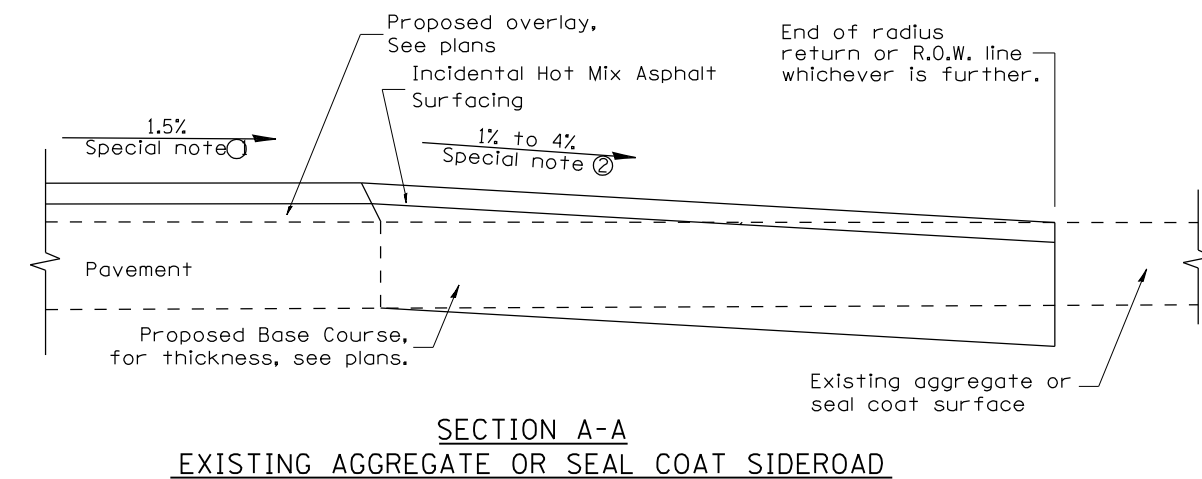
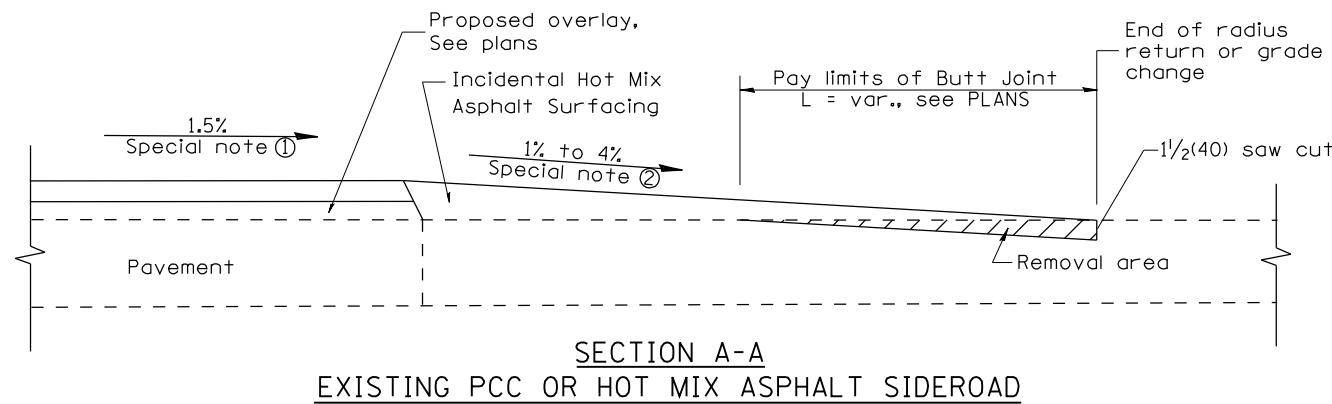
**SPECIAL NOTES**

- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.
- ② The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' (366cm) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

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

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>RURAL ENTRANCES FOR "3R" PROJECTS</b>				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				NOT TO SCALE							118	94
				SHI-2 OF 2 CADD SIG. 406301-04				CONTRACT NO.				
								FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:  
1. DESIGNER SHOULD CONSULT CHAPTER 49 OF THE BDE MANUAL.



**SPECIAL NOTES**

- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See Plans for cross-slope on superelevated horizontal curves.
- ② The sideroad profile should drain away from the mainline at 1% to 4% for 50' (15.0m) to 100' (30.0m), or as a minimum to the end of the radius return. When the sideroad is on the high side of a mainline superelevated curve, - 2% maximum should be provided in order to minimize breakover at the pavement edge. See plans for sideroad profiles.

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

01-01-97	BENUM..C-105.02..NEW_REVISION_BOX	-I.P.-	
07-01-97	REVISE DESIGNER NOTES	-J.A.-	
09-15-05	REVISED DESIGNER NOTE	M.M.A.	
10-16-06	REVISED IQ 2007 SPEC.	-M.A.-	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**RURAL SIDEROADS FOR "3R" PROJECTS**

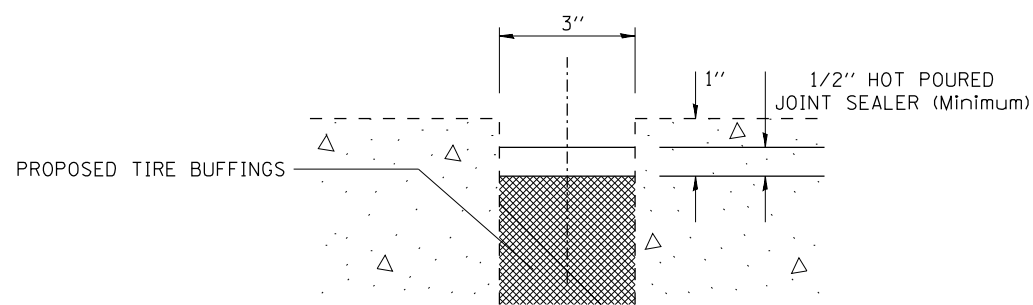
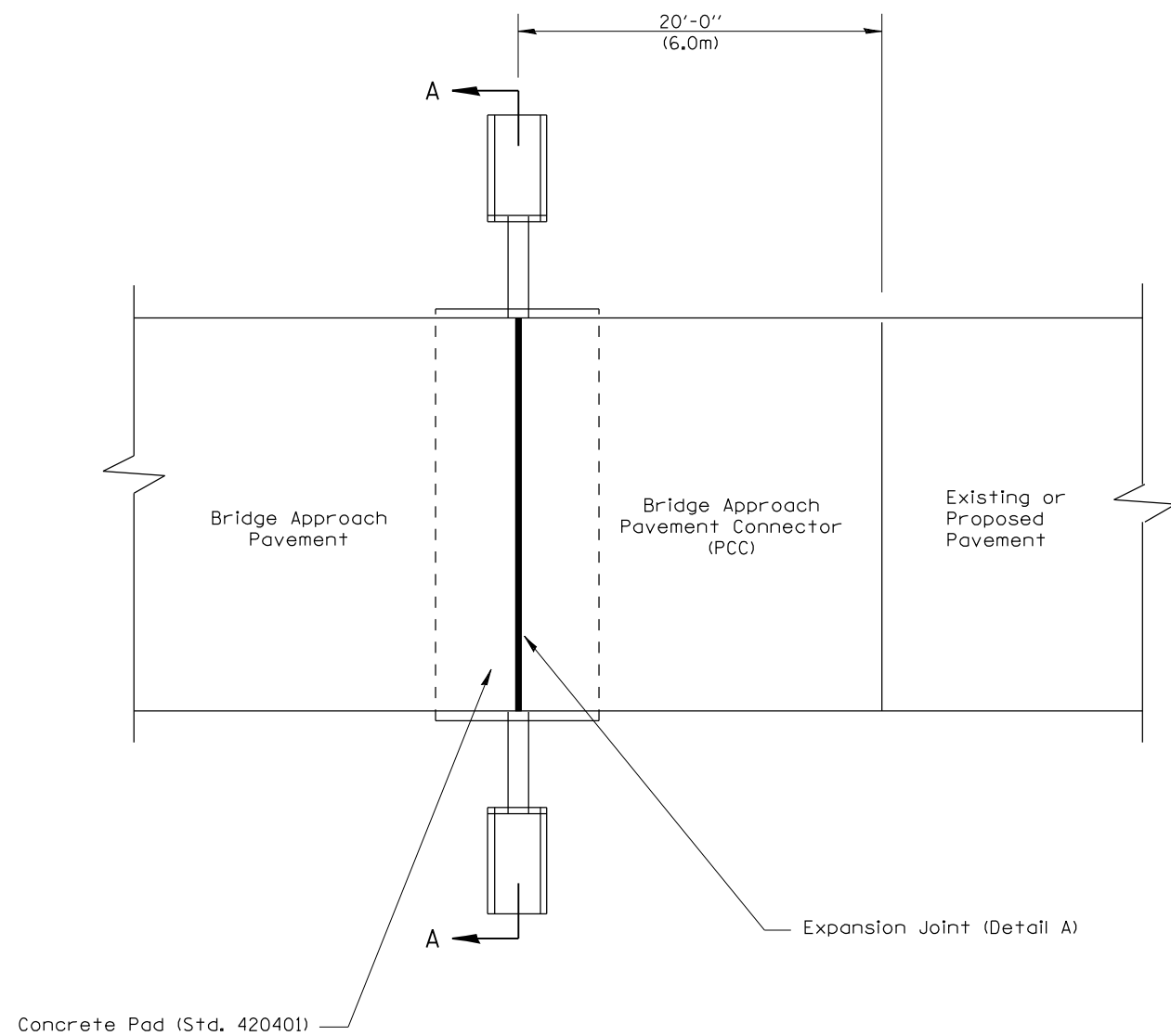
NOT TO SCALE

---CADD STD. 406401-04

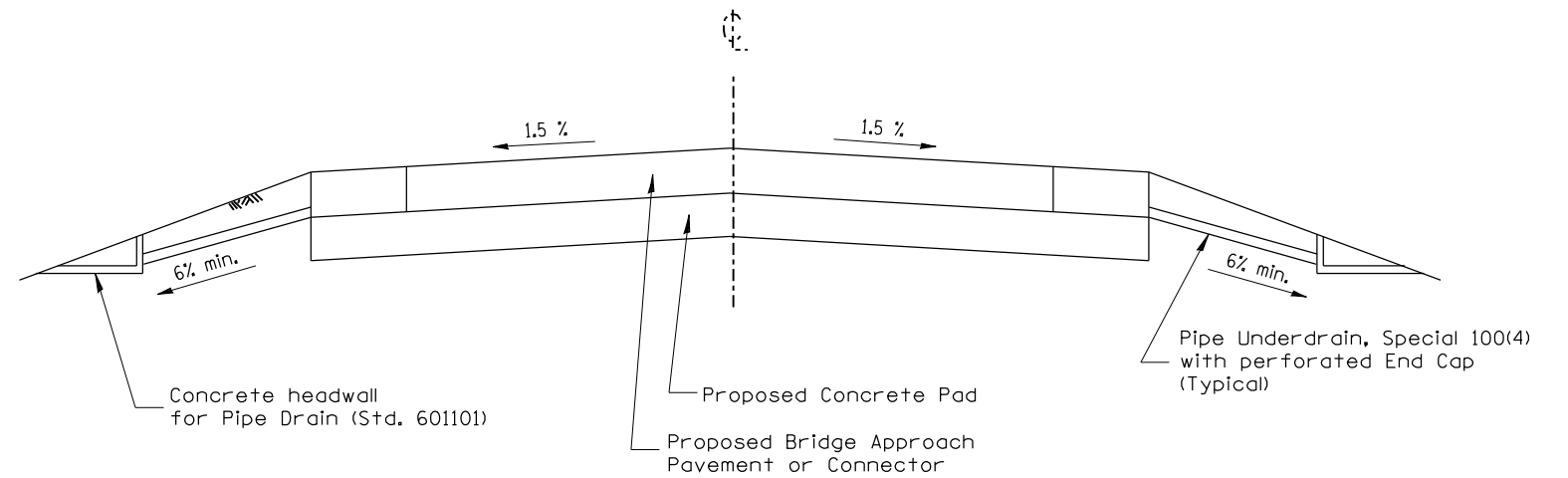
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	95
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**DESIGNER NOTE:**

1. Include Standards 420001, 601101 and 420401 in plans.
2. Use on bridge projects with PCC connector.
3. Pay for headwalls and UD (spl) 4".



**JOINT DETAIL**



**SECTION A-A**

**GENERAL NOTES:**

1. All work shall be done as directed by the Engineer.
2. All work shall be done in accordance with Standard 420401 except as shown herein.
3. The concrete headwalls and pipe underdrain special will be in accordance with Section 601.
4. The bridge approach pavement connector (pcc) shall be constructed similar to section G-G for existing construction rigid pavement as shown Standard 420401. Adjacent to PCC base course or pavement deformed bars will be required. Adjacent to bituminous pavement deformed bars will not be required. Use buffings from the tire retreading industry.
5. This work will be paid for in feet of PIPE UNDERDRAIN, SPECIAL, 4", and each of CONCRETE HEADWALL FOR PIPE DRAIN. The cost of providing and installing the tire buffings and hot-poured joint sealer is included in the cost of the Approach Pavement Connector.
6. Use buffings from the tire retreading industry.
7. Ensure tire buffings are clean, dry, and without any contamination.
8. Remove existing material and replace tire buffings.
9. Place loose buffings and strike off level.
10. Compact buffings by spading with a square-nose shovel.
11. Use hot-poured joint sealer that meets the requirement of Article 1050.02 and according to the applicable section of Article 420.12 of the Standard Specifications.
12. Avoid guardrail posts when constructing shoulders.

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

01-01-97	RENUM. H-6.09. NEW REVISION BOX. NOTES	-I.P.-	08-12-12	UPDATED JOINT MATERIAL TO BUFFINGS	-R.D.-
02-22-97	REVISED SECTION A-A				
03-01-97	CORRECT STD. NO. IN NOTES	-J.A.-			
10-16-06	REVISED IQ 2007 SPEC.	-M.A.-			

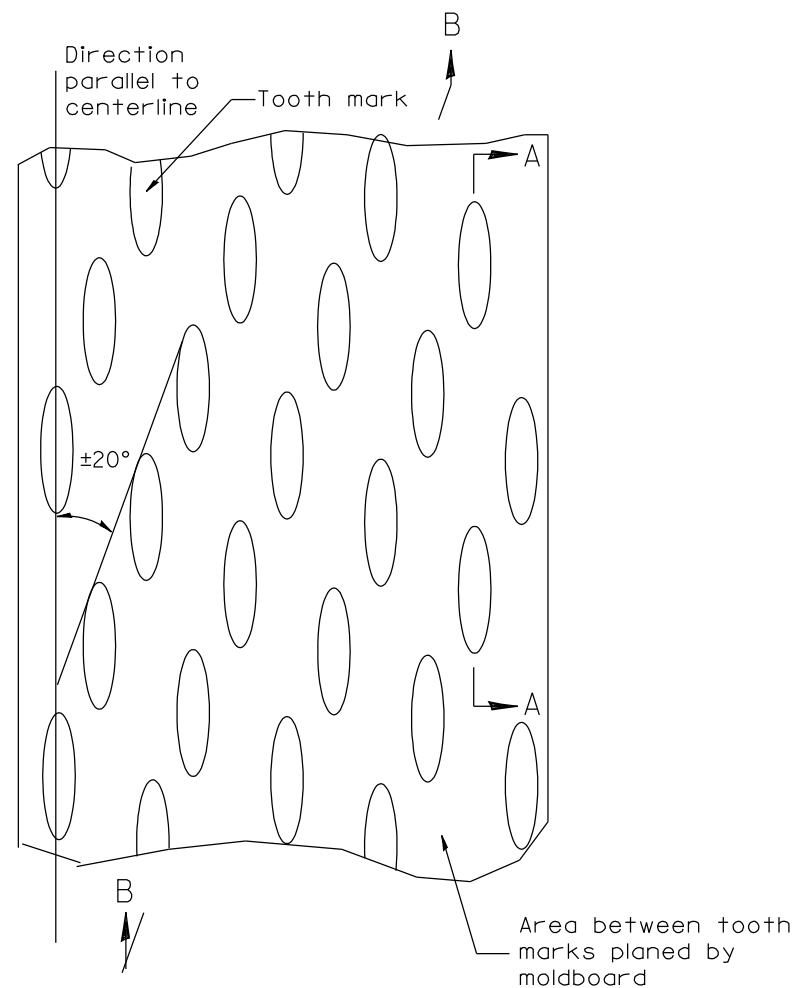
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH DETAIL**

NOT TO SCALE

---CADD STD. 420401-04

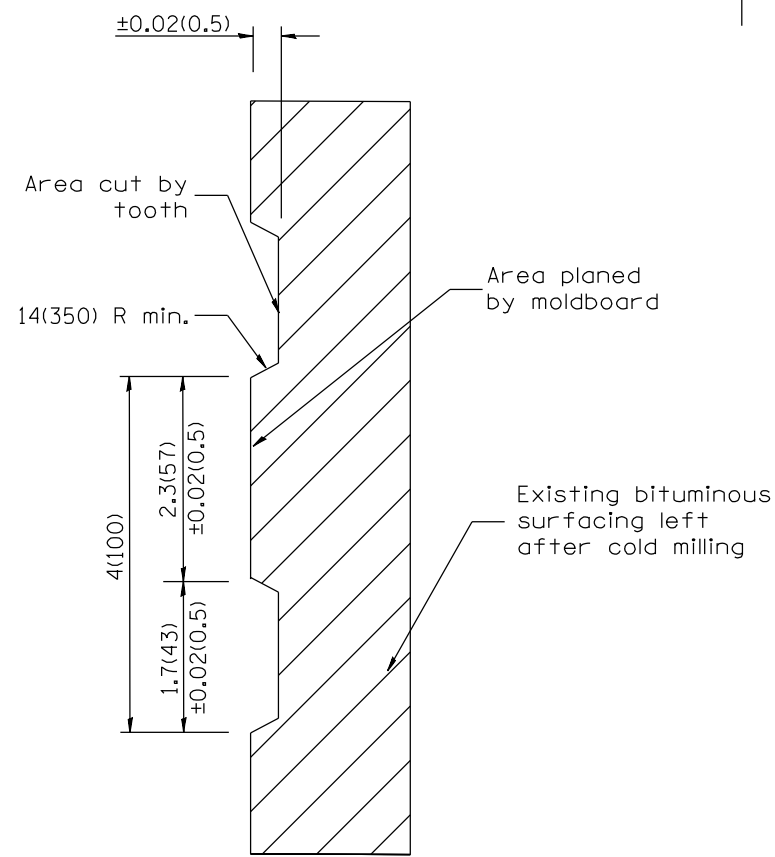
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	96
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



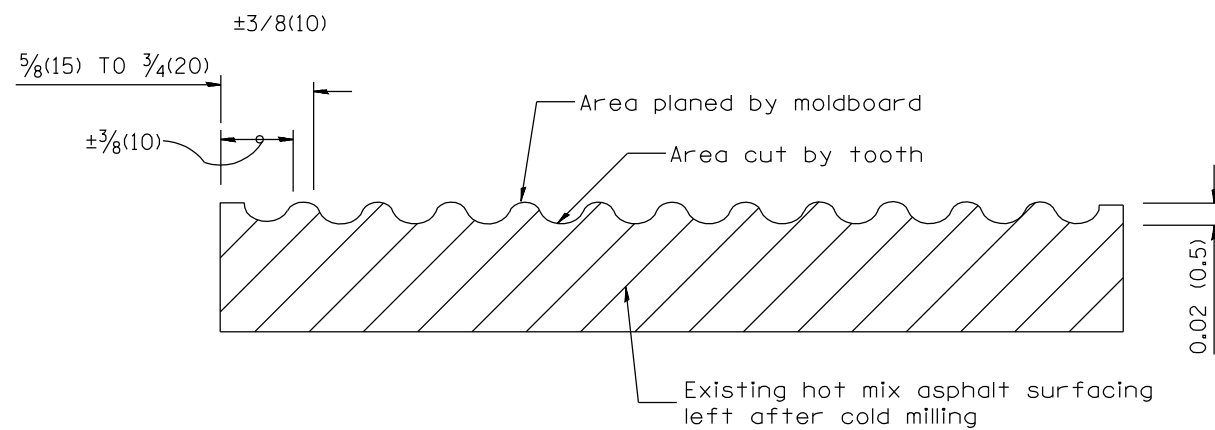
PLAN

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



SECTION A-A



SECTION B-B PROJECTED  
PERPENDICULAR TO CENTERLINE

DESIGNER NOTES:  
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

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

01-01-97	BENUM..C-104.01..NEW_REVISION_BOX	-I.P.-		
04-20-98	REMOVED_MILLING_DETAIL_FROM_STANDARD	-J.A.-		
09-08-98	CORRECT_NOTE_LEADER_PLACEMENT	-B.W.-		
10-16-06	REVISED_IQ_2007_SPEC.	-M.A.-		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

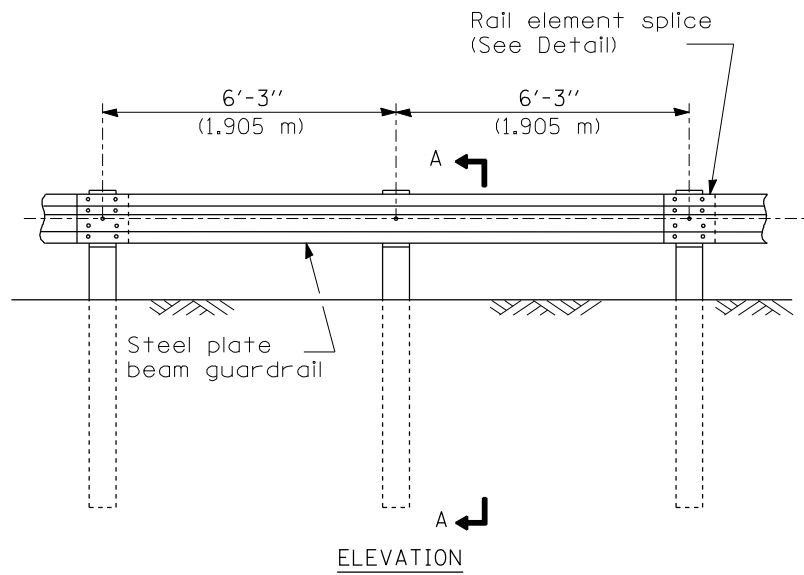
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

NOT TO SCALE

---CADD STD. 440001-04

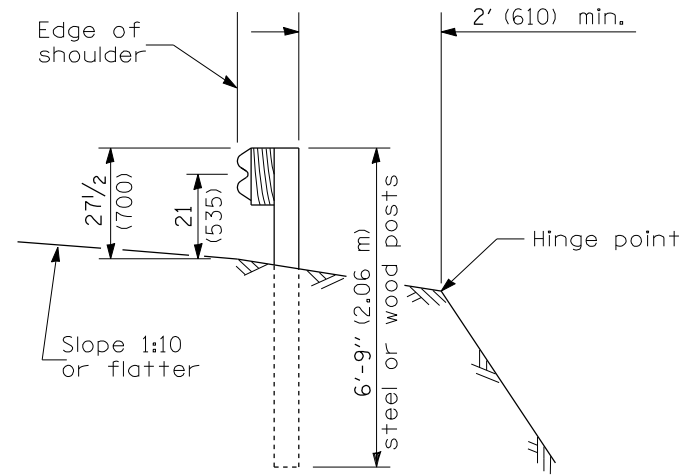
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	97
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTE: Use this CADD Standard when removing and re-erecting existing non-MGS guardrail that was originally installed prior to January 1, 2007 or to replace existing rail to match existing non-MGS rail. Note this is removing and re-erecting so the 27 1/2" height is maintained. If installing the new style MGS guardrail use the State Standard.

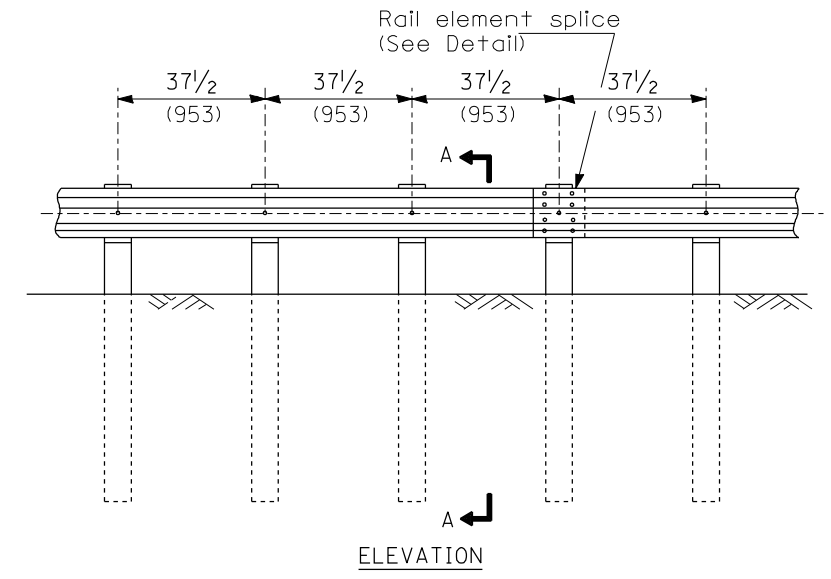


**TYPE A**

6'-3" (1.905 m) Typical post spacing

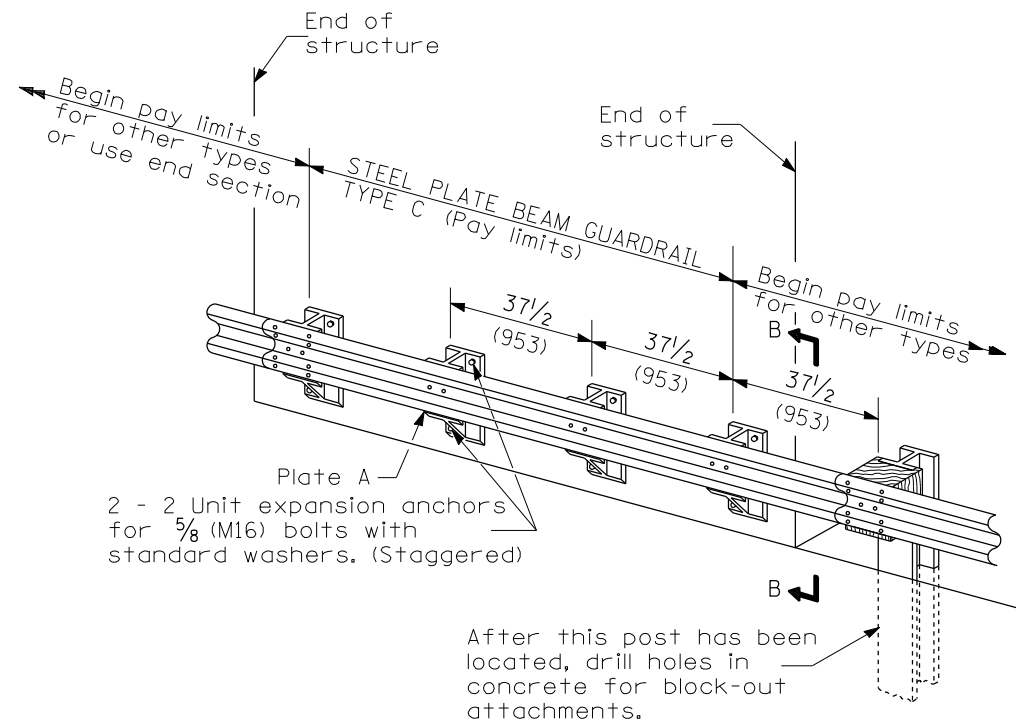


**SECTION A-A**



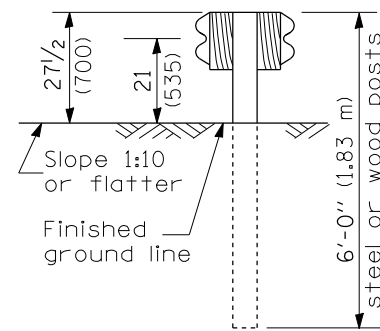
**TYPE B**

37 1/2 (953) Closed post spacing

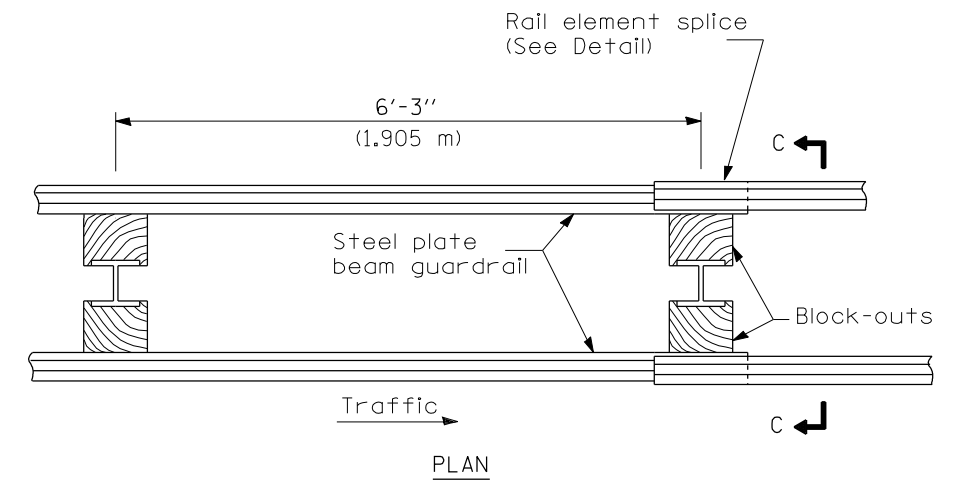


**TYPE C**

37 1/2 (953) Block-out spacing

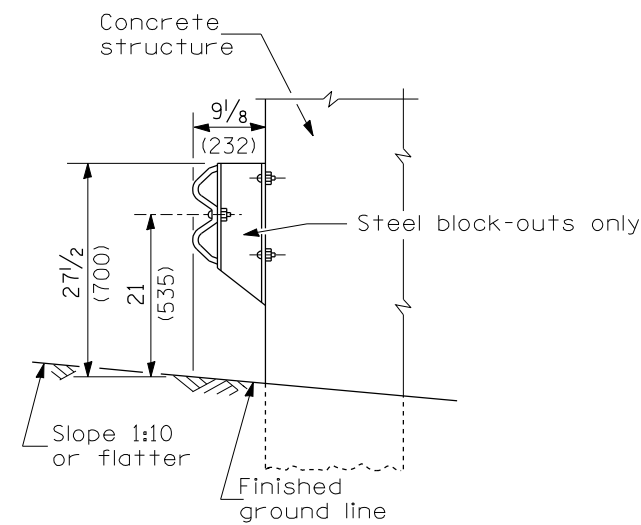


**SECTION C-C**



**TYPE D**

Double steel plate beam guardrail  
6'-3" (1.905 m) typical post spacing



**SECTION B-B**

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

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

03-01-07	NEW DETAIL	BJD			
03-07-11	Revised designer note	BJD			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

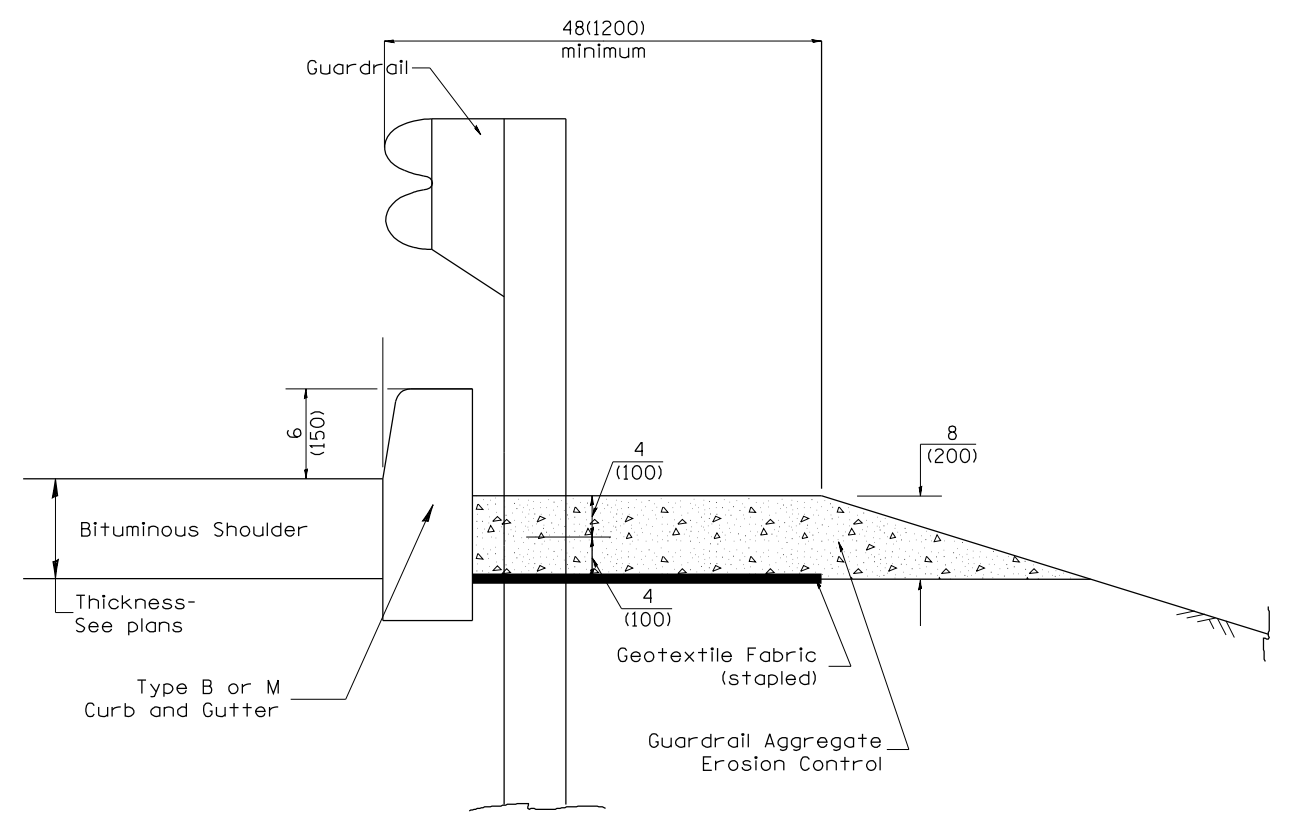
NOT TO SCALE

**STEEL PLATE BEAM GUARDRAIL, TYPE A,  
6.75 FOOT POSTS**

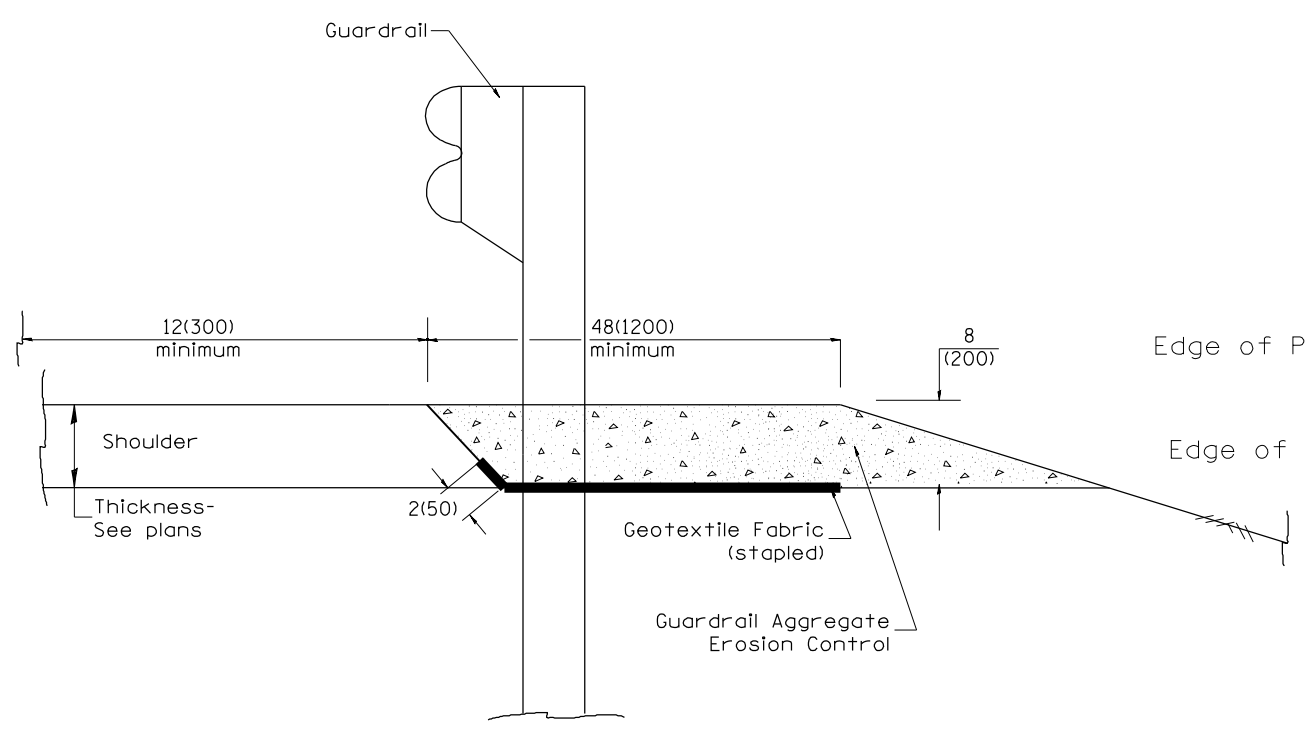
SHI\_1 OF 4  
CADD SID\_630011-04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	98
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:  
 1. Consider using a "B" curb pay item at guardrail installations where grades are equal to or greater than 1% and at inlets. (Include District Special Provision)  
 2. Use GUARDRAIL AGGREGATE EROSION CONTROL at guardrail installations where grades are less than 1%. (Include District Special Provision)  
 3. Include State Standards 609001, 609006 or 610001 if applicable.  
 4. Include the following District Cadd Standards as needed: Slope Drains for Exposed Pipes; Slope Drains for Buried Pipes; Slope Drains for Buried Pipes; Seepage Collars for Buried Pipes; Seepage Collars for Exposed Pipes; Concrete Thrust Blocks and Pipe Elbow.  
 5. Include District Special Provision "Aggregate Quality" for projects located in the Western Area of the District - approx. dividing line is IL 97.



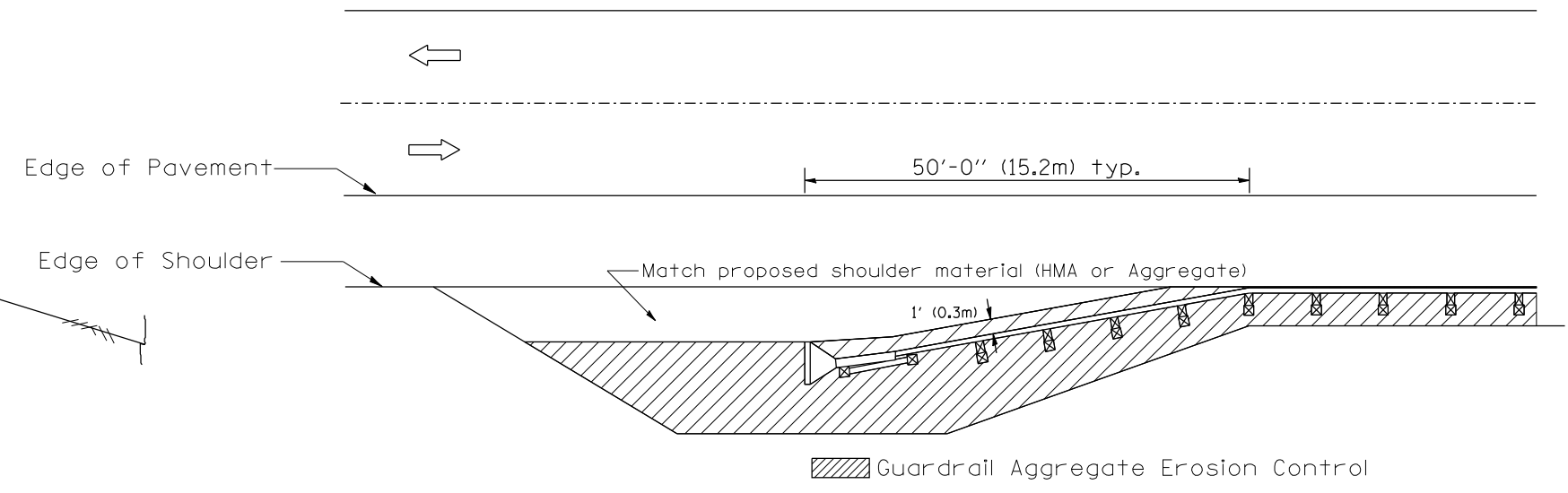
**TYPICAL SECTION WITH EROSION CONTROL CURB**



**TYPICAL SECTION WITHOUT EROSION CONTROL CURB**

**GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL**

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
  - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
  - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



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

01-01-97	RENUM. C-22.01. NEW REVISION BOX	-I.P.-	3-7-11	Added Detail showing plan view	R.D.
03-01-97	CORRECT SID. NUMBERS IN NOTES PG. 2	-J.A.-	8-10-12	Revised curb "B" and aggregate	R.D.
11-03-00	CORRECTION TO NOTES	-M.A.-			
10-16-06	REVISED TO 2007 SPEC.	-M.A.-			

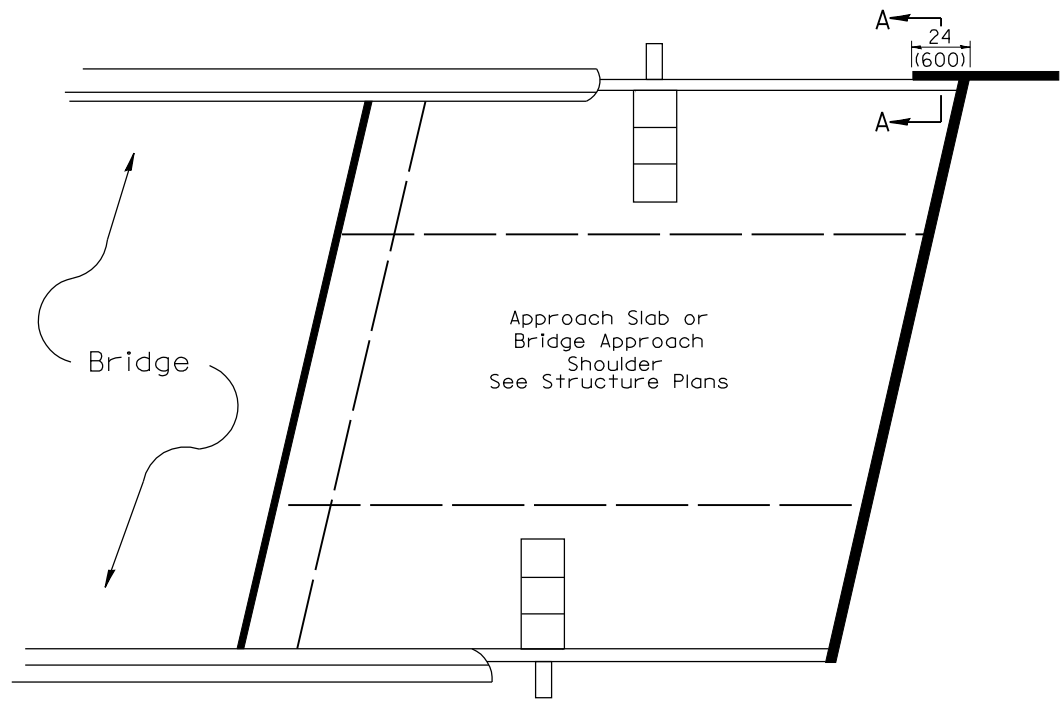
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL EROSION CONTROL TREATMENTS**

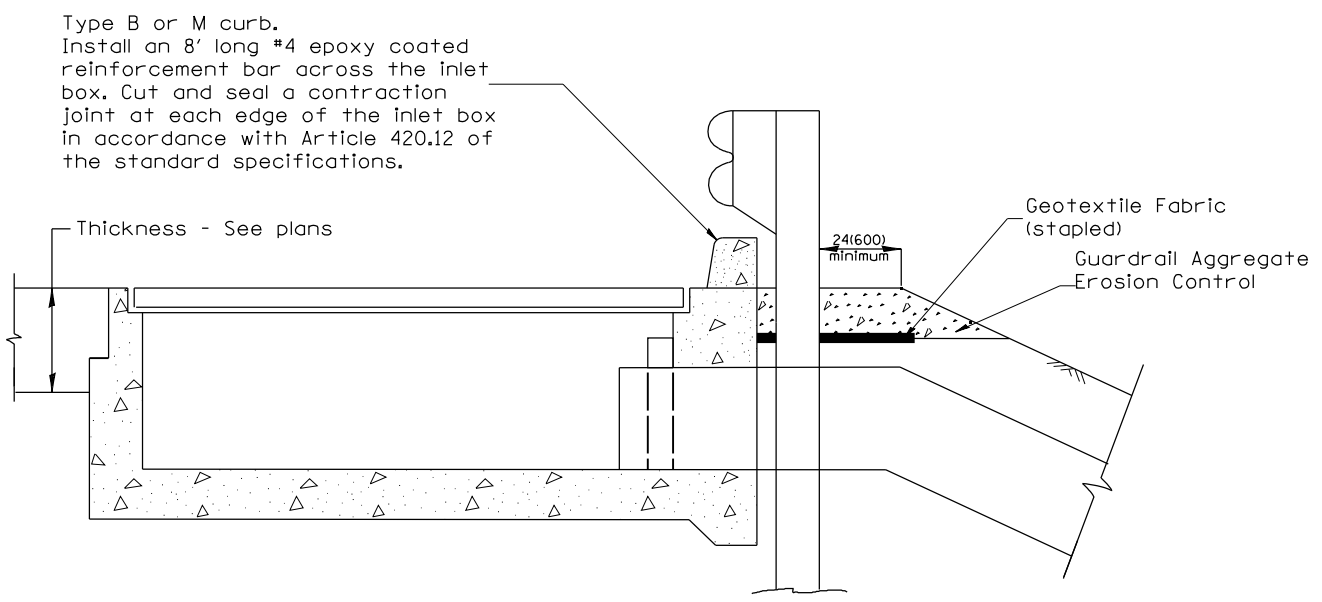
NOT TO SCALE

SHI\_1 OF 2  
 CADD SID. 630101-04

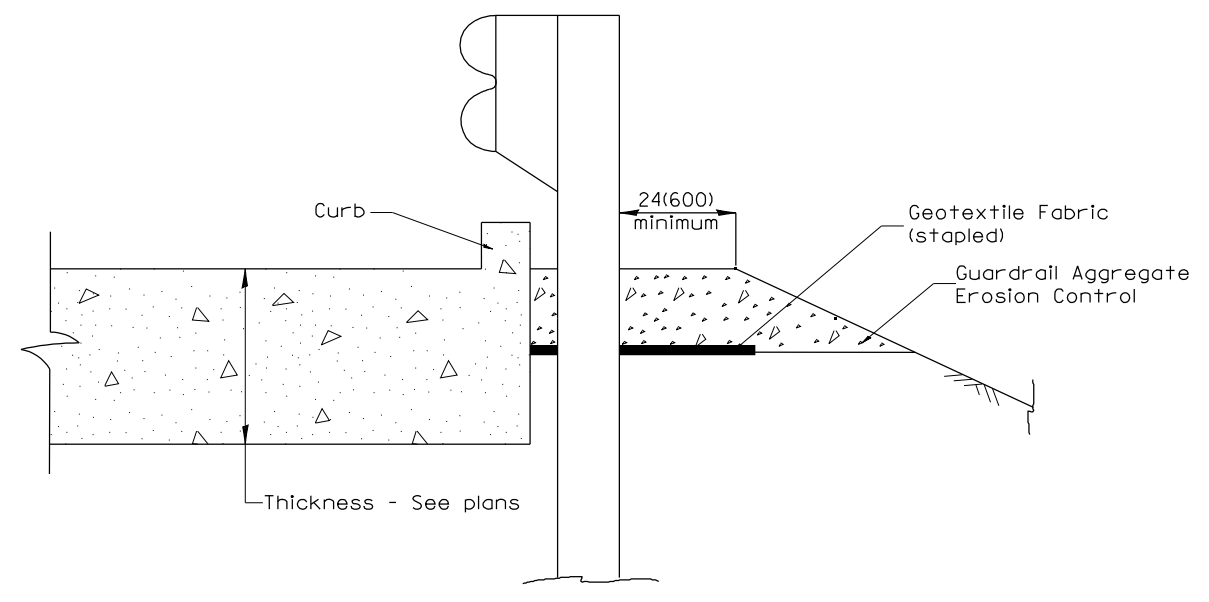
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	99
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



PLAN VIEW  
APPROACH SLAB OR BRIDGE APPROACH SHOULDER  
 (STANDARD 609001 or 609006)



TYPICAL SECTION AT INLETS  
TYPE E & F (STANDARD 610001)



SECTION A-A  
TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

				<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GUARDRAIL EROSION CONTROL TREATMENTS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					NOT TO SCALE				.118	.100
					SHI_2_OF_2 CADD_SID_630101-04	CONTRACT NO.				
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



# THIS SHEET INTENTIONALLY BLANK

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		DRAWN - JL	REVISED -				317	(137 BR, BR-1) BR	FULTON	118	101
	PLOT SCALE = \$SCALE\$	CHECKED - OAO	REVISED -			PROJECT	JOB NO.	CONTRACT NO. 68699			
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

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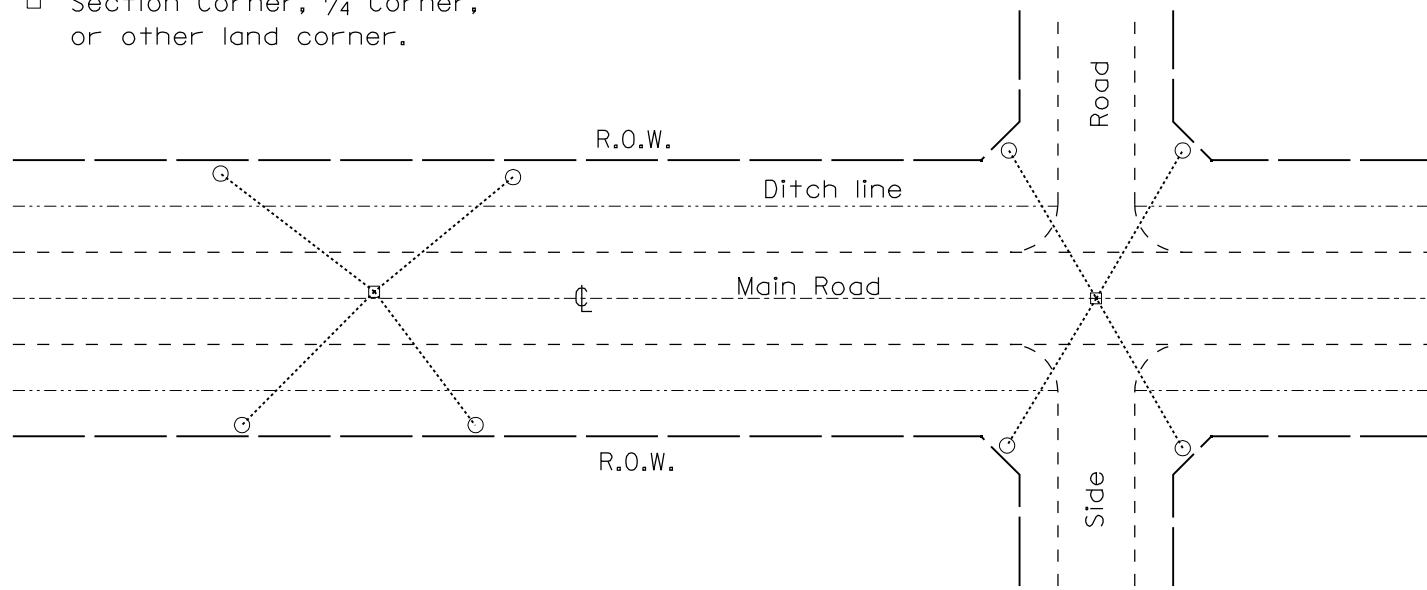
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		DRAWN - JL	REVISED -				317	(137 BR, BR-1) BR	FULTON	118	102
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	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

# THIS SHEET INTENTIONALLY BLANK

FILE NAME \$FILEL\$	USER NAME = \$USER\$	DESIGNED - JL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JL	REVISED -				317	(137 BR, BR-1) BR	FULTON	118	103
	PLOT SCALE = \$SCALE\$	CHECKED - OAO	REVISED -			PROJECT	JOB NO.	<b>CONTRACT NO. 68699</b>			
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**PERMANENT SURVEY TIES**

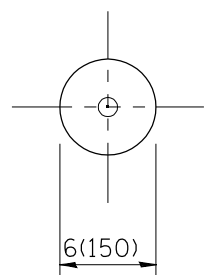
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



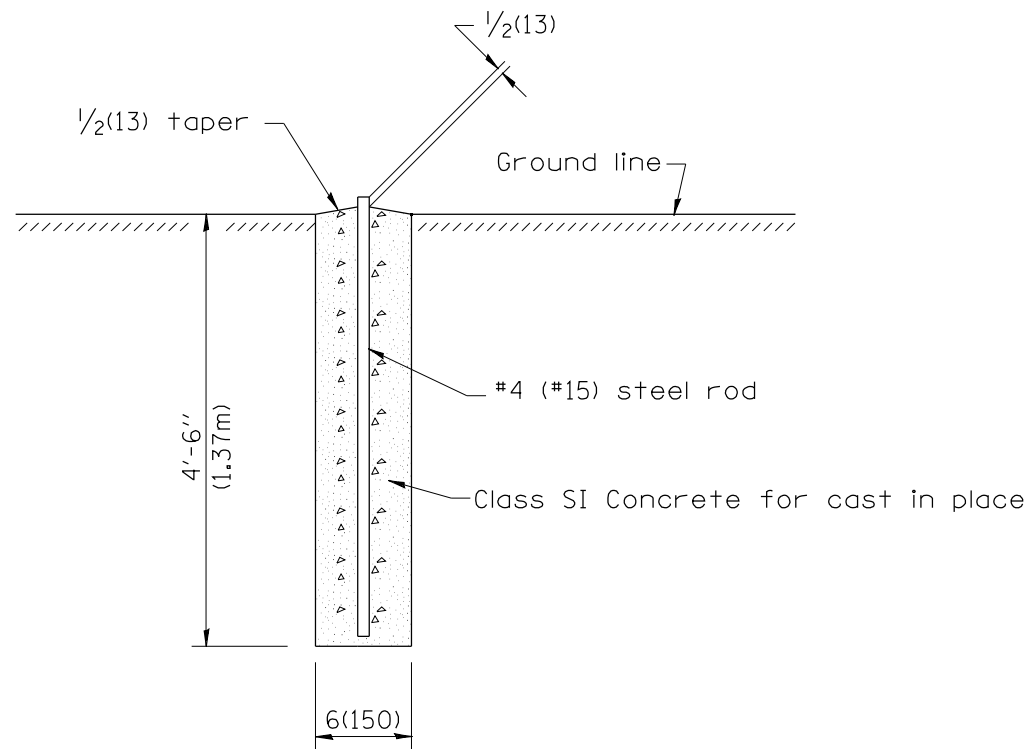
**TYPICAL APPLICATION**

**GENERAL NOTES**

1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS

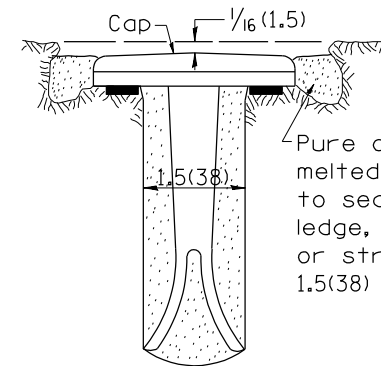
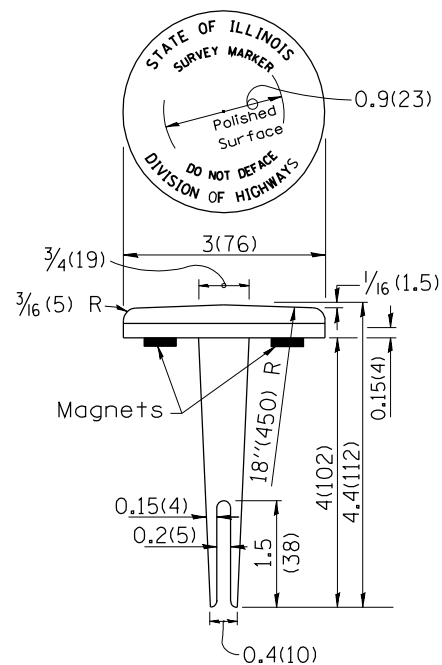


**PLAN**



**SECTION**

**PERMANENT SURVEY MARKERS**

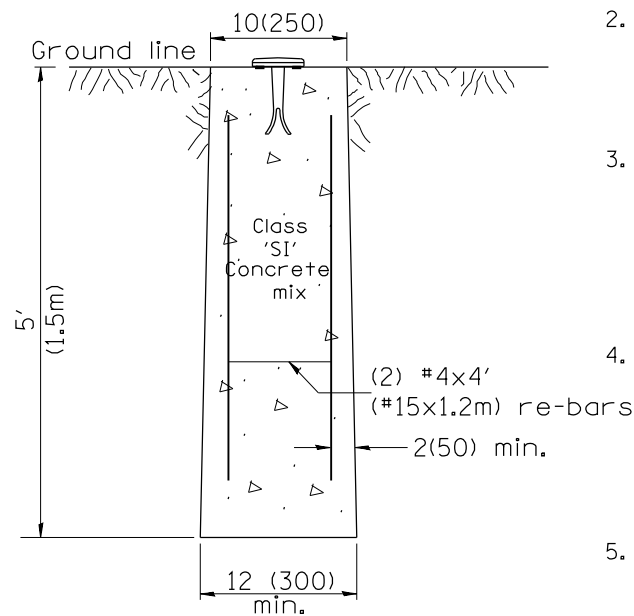


**INSTALLED**

**TYPE I**

**GENERAL NOTES**

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s located within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.



**MARKER CAST IN PLACE TYPE II**

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

DESIGNER NOTES:  
 1. ADD DISTRICT SPECIAL PROVISION IF PLACING A TYPE I MARKER ON A STRUCTURE.  
 2. MODIFIES STATE STD 667101. DON'T USE STATE STD IF USING CADD STANDARD  
 3. PERMANENT SURVEY MARKERS SHALL BE PLACED TO PERPETUATE THE SURVEY LINES OF DIVIDED HIGHWAYS AND THE CENTERLINE OF ALL OTHERS WHERE THESE LINES HAVE BEEN ESTABLISHED BY SURVEY.  
 4. PERMANENT SURVEY MARKERS SHALL BE PLACED AT ALL LAND SECTION CORNERS WITHIN THE STATE R.O.W. WHERE THE MONUMENTS HAVE BEEN FOUND OR RELOCATED BY SURVEY.

01-01-97	RENUM. 0-3.01. NEW REVISION BOX. REVISED	-I.P.-	10-16-06	REVISED TO 2007 SPEC.	-M.A.-
	TITLE BOX. ADD DESIGNER NOTE		01-04-11	REVISED FOR CORRECTIONS	-R.D.-
07-07-98	ADD DESIGNER NOTE	-J.A.-			
05-24-06	REMOVED GEN. NOTE UNDER TIES	-M.A.-			

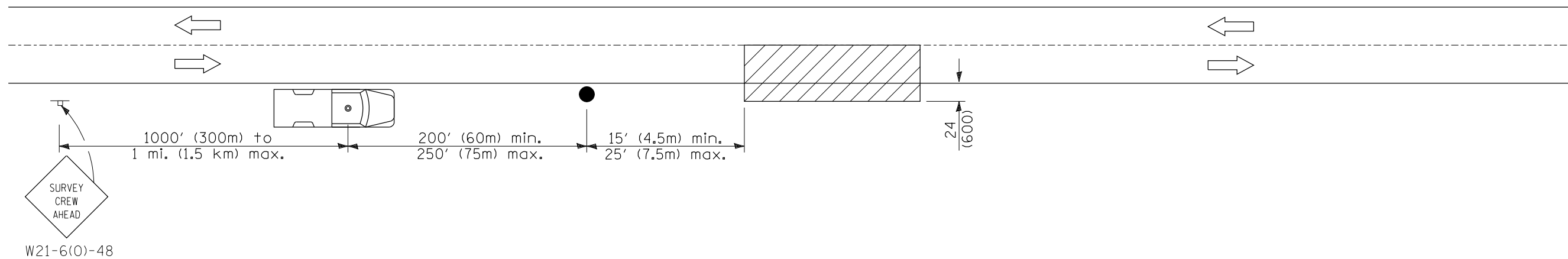
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PERMANENT SURVEY TIE &  
PERMANENT SURVEY MARKERS TY.I - TY.II**

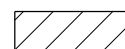
NOT TO SCALE

---CADD STD. 667101-04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			118	104
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



### SYMBOLS



Work area



Sign on portable or permanent support



Truck with flashing amber light and dual emergency flashers



Flagger with traffic control sign

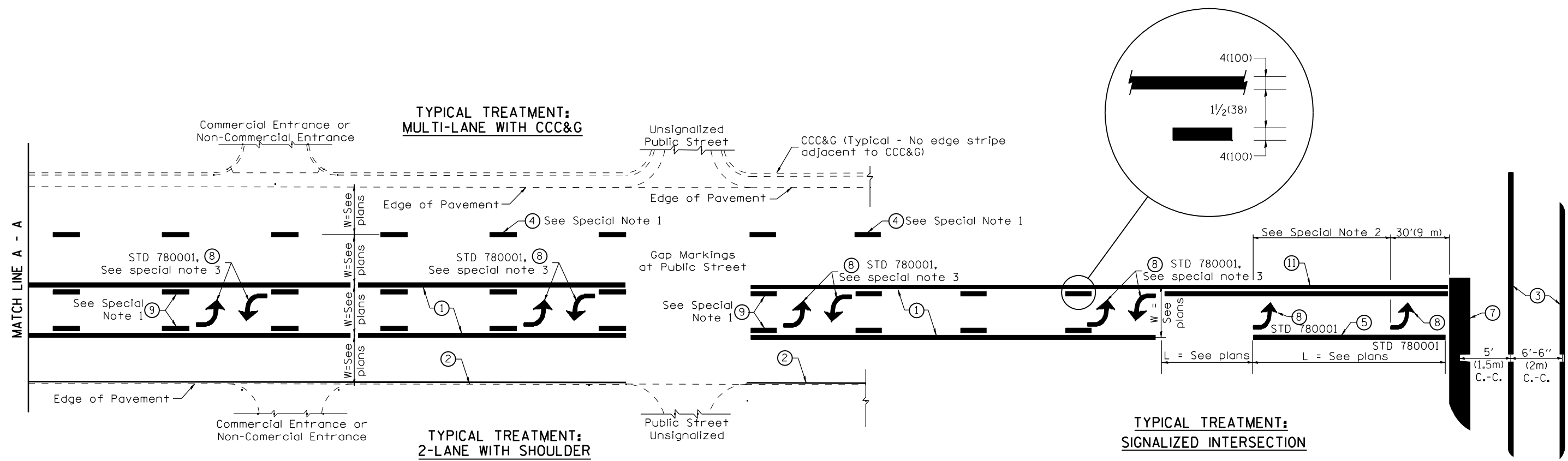
### TYPICAL APPLICATIONS

Utility operations

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

01-01-97	BENUM_E-3.04_METRICS_NEW_REVISION_BOX_REVISED	-I.P.-				<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>NIGHTTIME LIGHTING INSPECTION</b>	F.A. RTE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	IIILE_BOX												
10-16-06	REVISED_IQ_2007_SPEC	-M.A.-											
							NOT TO SCALE	---CADD STD. 701301-04		CONTRACT NO. _____			
							FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT						

DESIGNER NOTES:  
1. Include State Standard 780001 (Typical Pavement Markings)



**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) 45°
- ⑪ 4(100) Double Solid (Yellow) 11(280) C.-C. See Table A

**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).

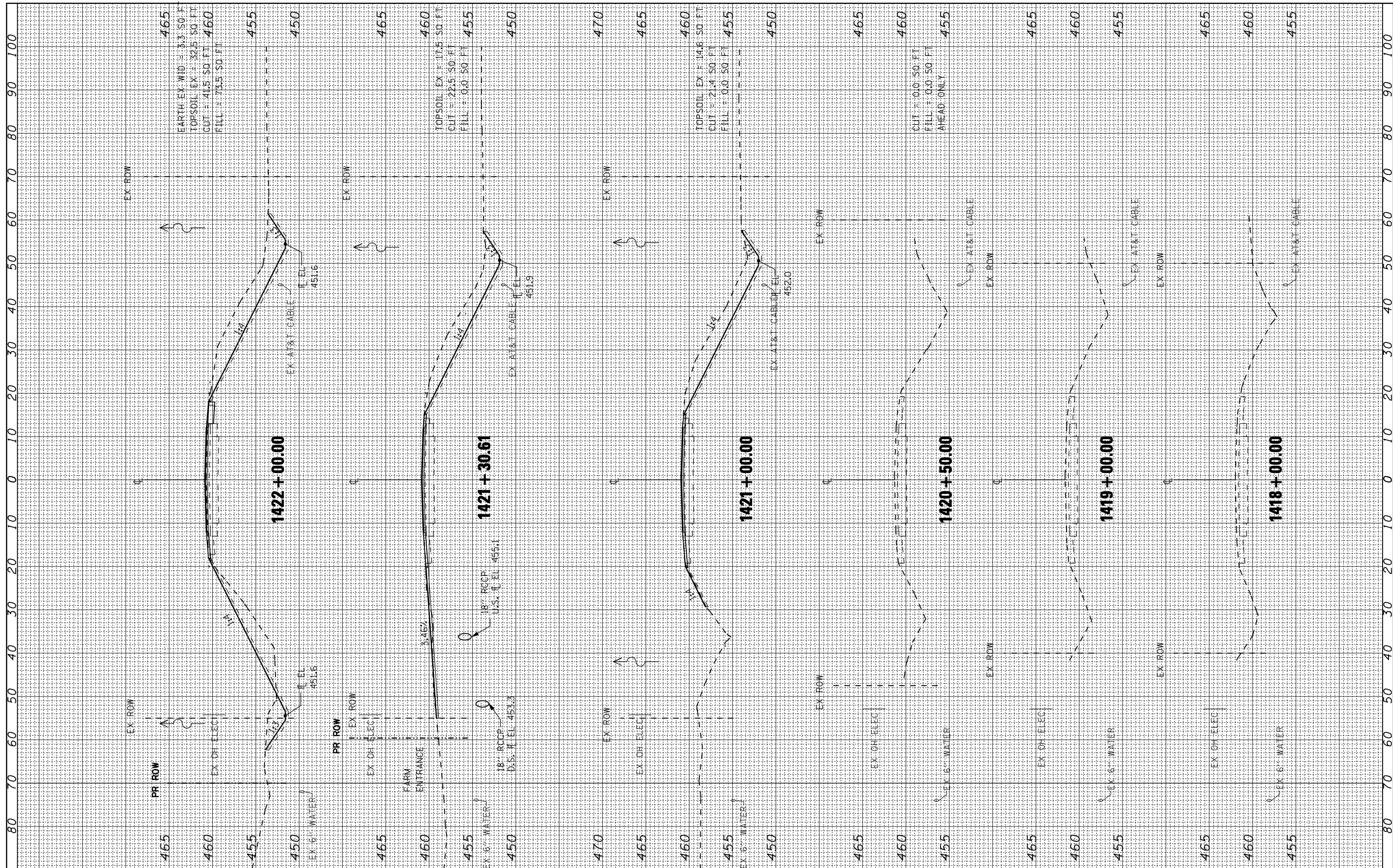
**GENERAL NOTES**

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. E-8.03. NEW REVISION BOX	-I.P.-	10-16-06	REVISED TO 2007 SPEC.	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL PAVEMENT MARKINGS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
02-07-97	ADD BI DIRECTIONAL DIMENSION	-J.A.-										
10-97	CORRECT BI DIRECTIONAL DIMENSION	-J.A.-										
08-02	ADD CROSSWALK DIMS. WITH I.S.	-M.A.-										
NOT TO SCALE						SHI_1_OF_2		CADD STD. 780001-04		CONTRACT NO. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT												

FINAL SURVEY NO.	SURVEY PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEY PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME =	USER NAME = *USER*
*FILEL*	DESIGNED - JL
	DRAWN - JL
	CHECKED - JES
	DATE - 12-07-12

	REVISD -
	REVISD -
	REVISD -
	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**  
SCALE: 1" = 10'    SHEET NO. 1 OF 12 SHEETS    STA. 1418+00 TO STA. 1422+00

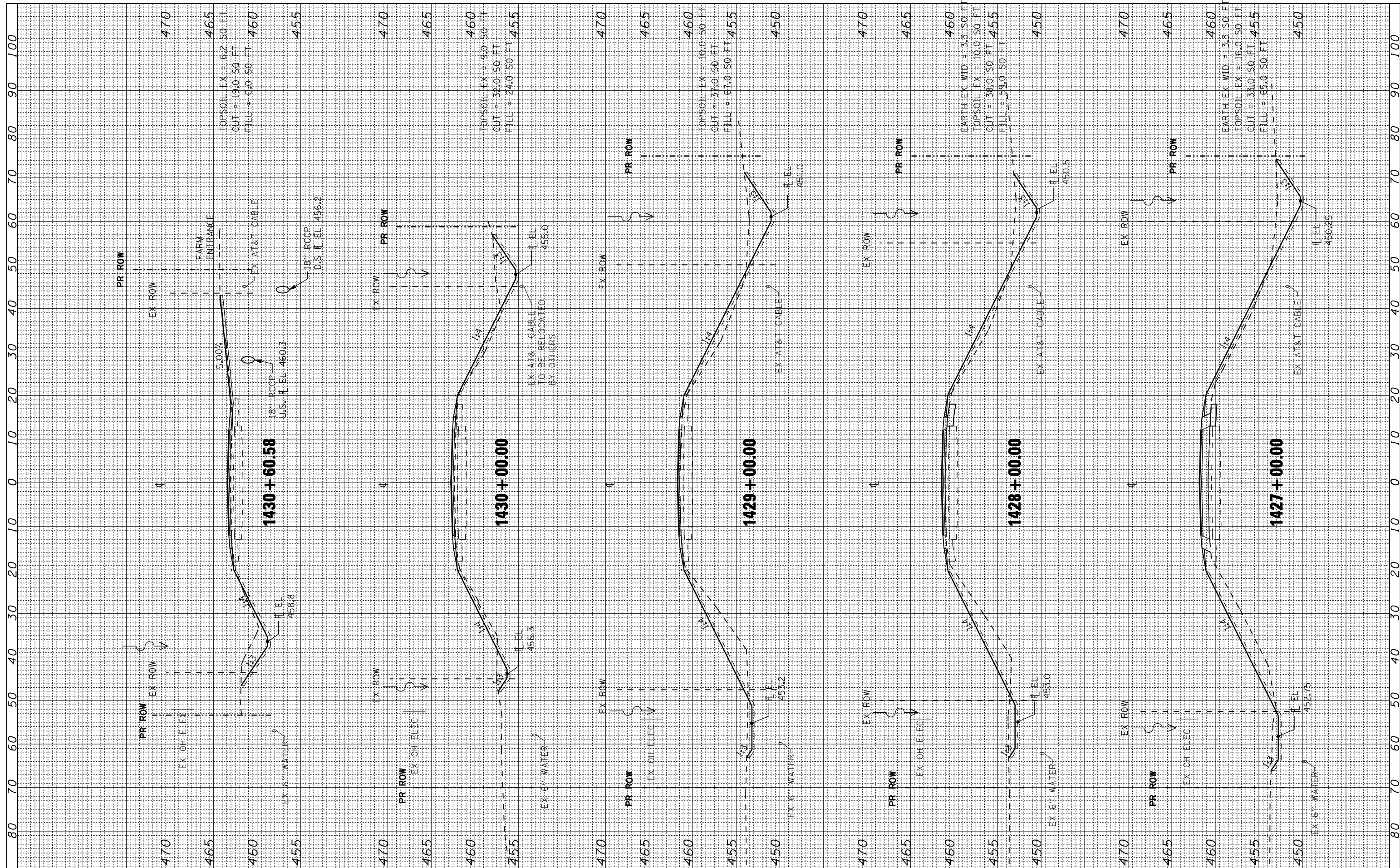
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	107
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				





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

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



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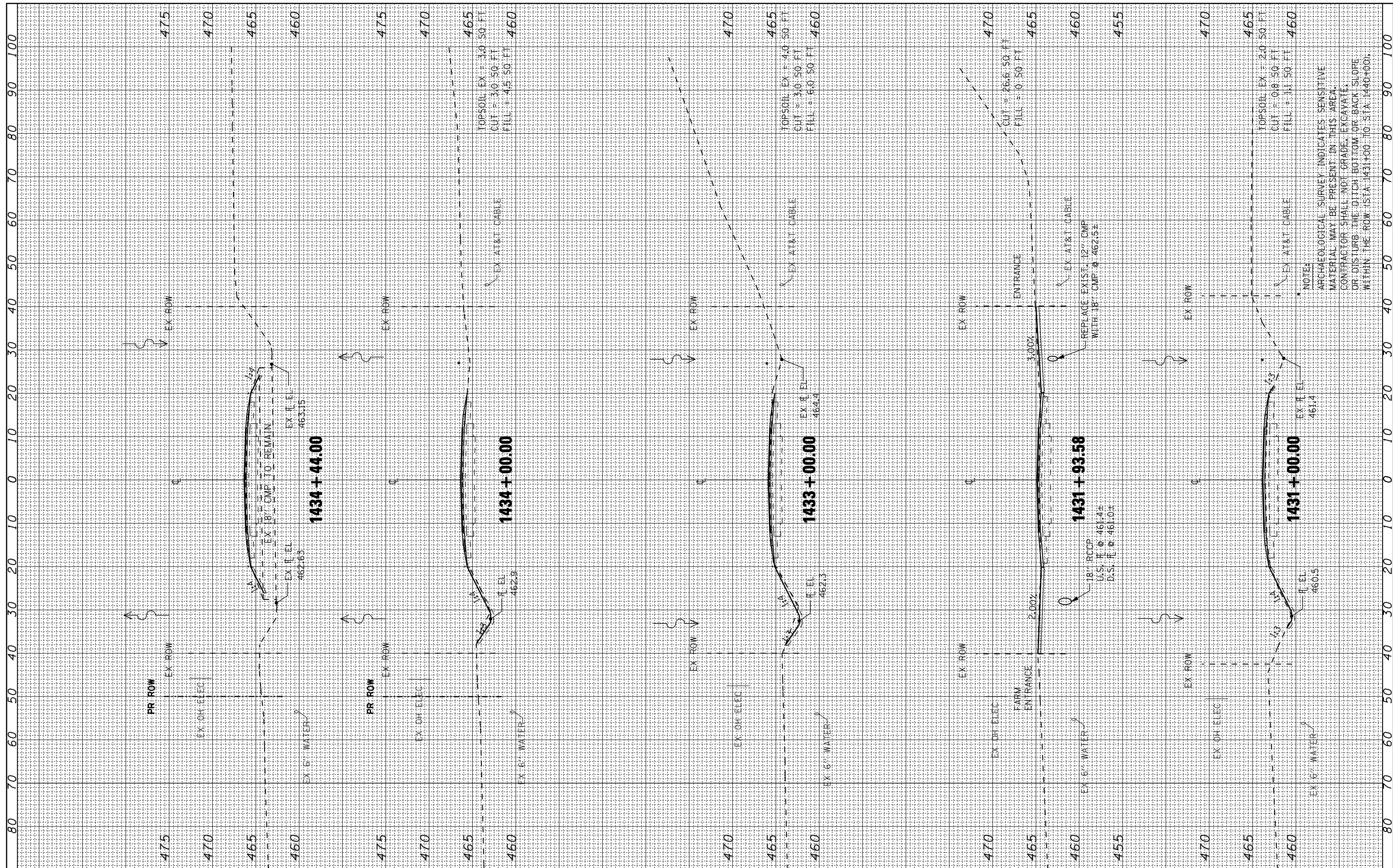
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**  
 SCALE: 1" = 10' SHEET NO. 3 OF 12 SHEETS STA. 1427+00 TO STA. 1430+60.58

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	109
				CONTRACT NO. 68699
ILLINOIS FED. AID PROJECT				

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

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



FILE NAME =	USER NAME = *USER*
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DATE - 12-07-12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

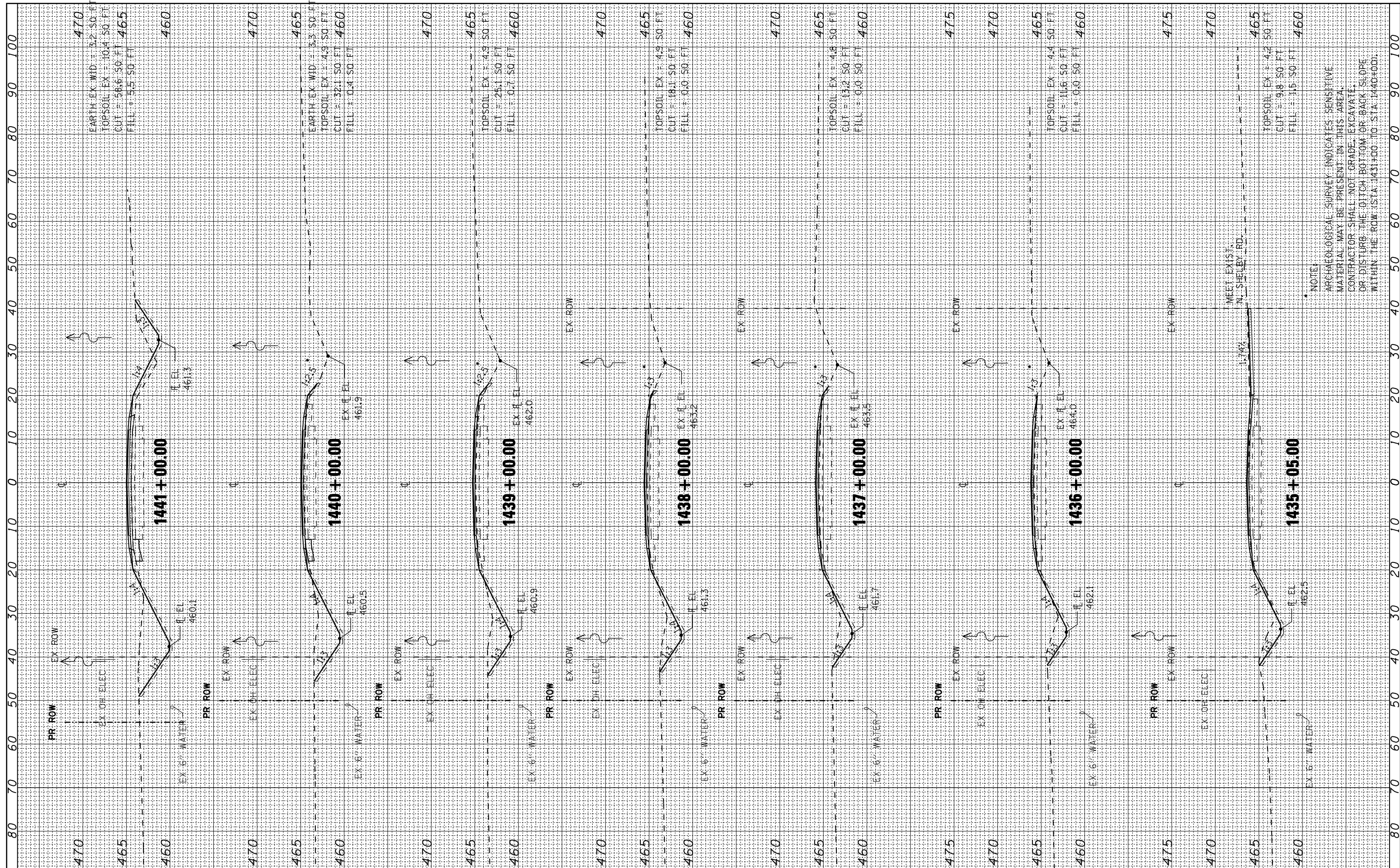
<b>CROSS SECTIONS</b>	
<b>US RTE 24 OVER BIG SISTER CREEK &amp; LITTLE SISTER CREEK</b>	
SCALE: 1" = 10'	SHEET NO. 4 OF 12 SHEETS
STA. 1431+00 TO STA. 1434+44	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	110
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

NOTE:  
ARCHAEOLOGICAL SURVEY INDICATES SENSITIVE MATERIAL MAY BE PRESENT IN THIS AREA. CONTRACTOR SHALL NOT GRAZE, EXCAVATE, OR DISTURB THE DITCH BOTTOM OR BACK SLOPE WITHIN THE ROW (STA. 1431+00 TO STA. 1446+00).

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

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



NOTE:  
 ARCHAEOLOGICAL SURVEY INDICATES SENSITIVE MATERIAL MAY BE PRESENT IN THIS AREA. CONTRACTOR SHALL NOT GRADE, EXCAVATE OR DISTURB THE DITCH BOTTOM OR BANK SLOPE WITHIN THE ROW (STA 1431+00 TO STA 1440+00).

FILE NAME =	USER NAME = *USER*
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	CHECKED - JES
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DRAWN - JL	REVISED -
CHECKED - JES	REVISED -
DATE - 12-07-12	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>	
<b>US RTE 24 OVER BIG SISTER CREEK &amp; LITTLE SISTER CREEK</b>	
SCALE: 1" = 10'	SHEET NO. 5 OF 12 SHEETS
STA. 1435+05	TO STA. 1441+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	111
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

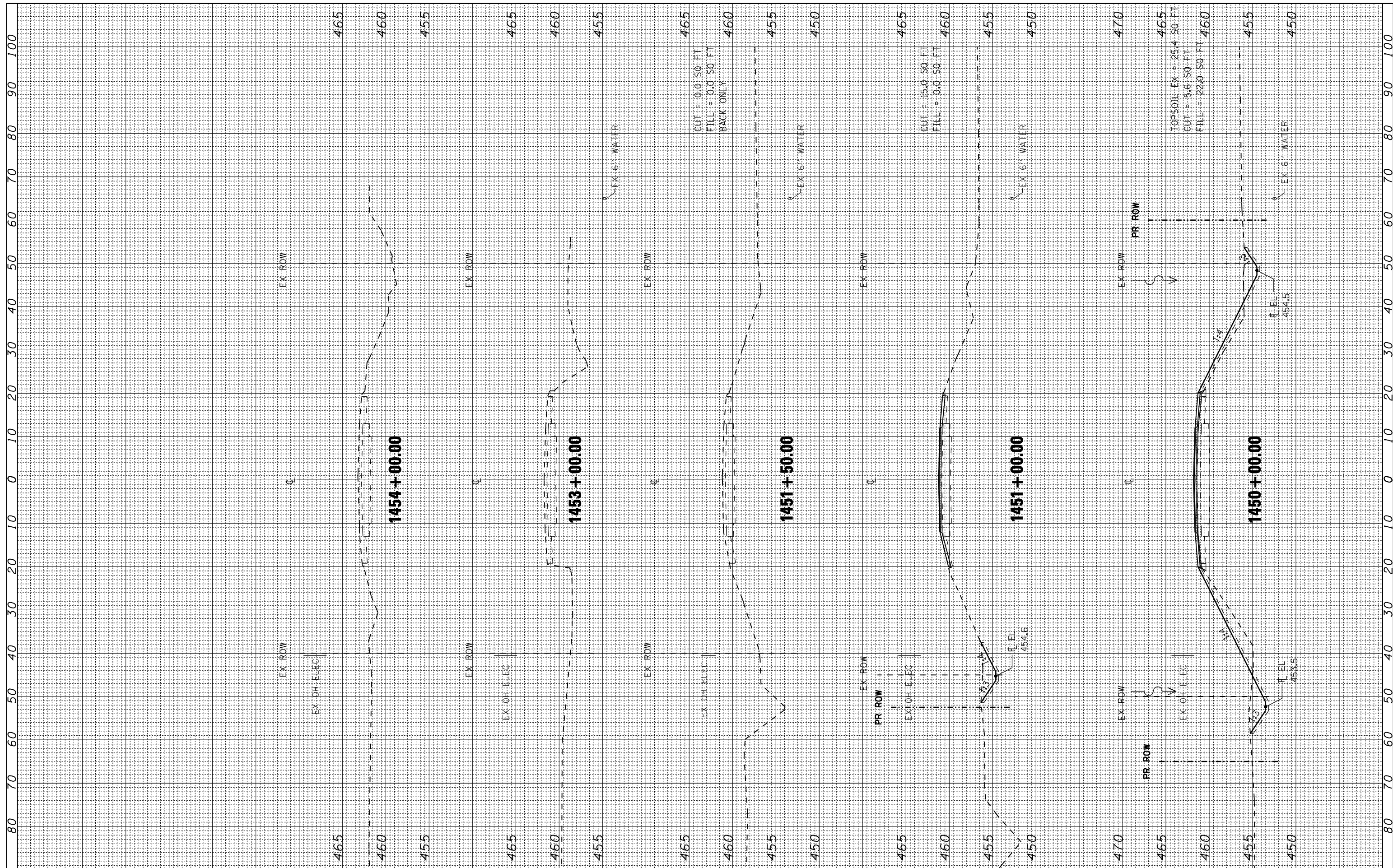






FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

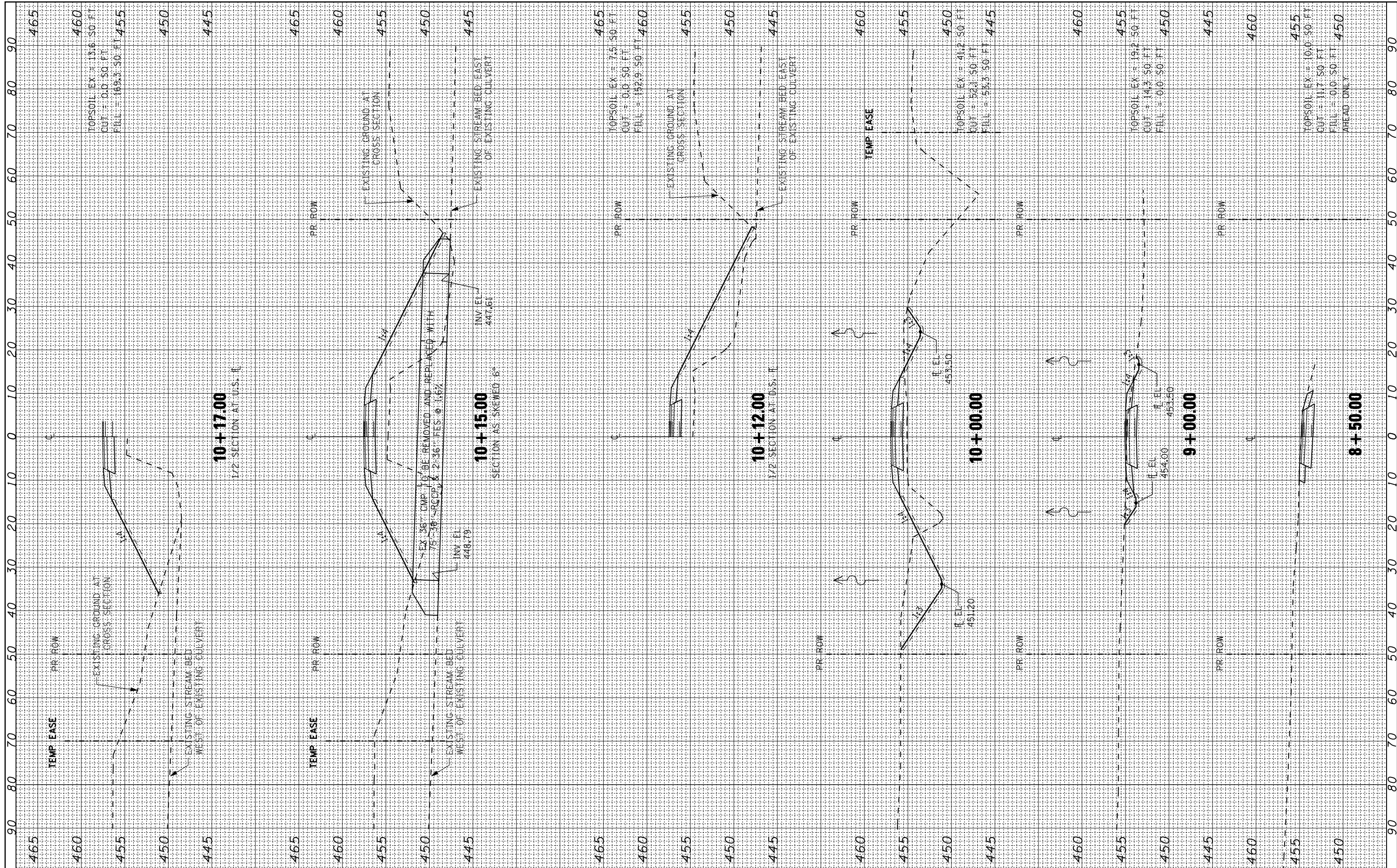
**CROSS SECTIONS**  
**US RTE 24 OVER BIG SISTER CREEK & LITTLE SISTER CREEK**  
SCALE: 1" = 10'    SHEET NO. 8 OF 12 SHEETS    STA. 1450+00 TO STA. 1454+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	114
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



FILE NAME =  
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 CHECKED - JES  
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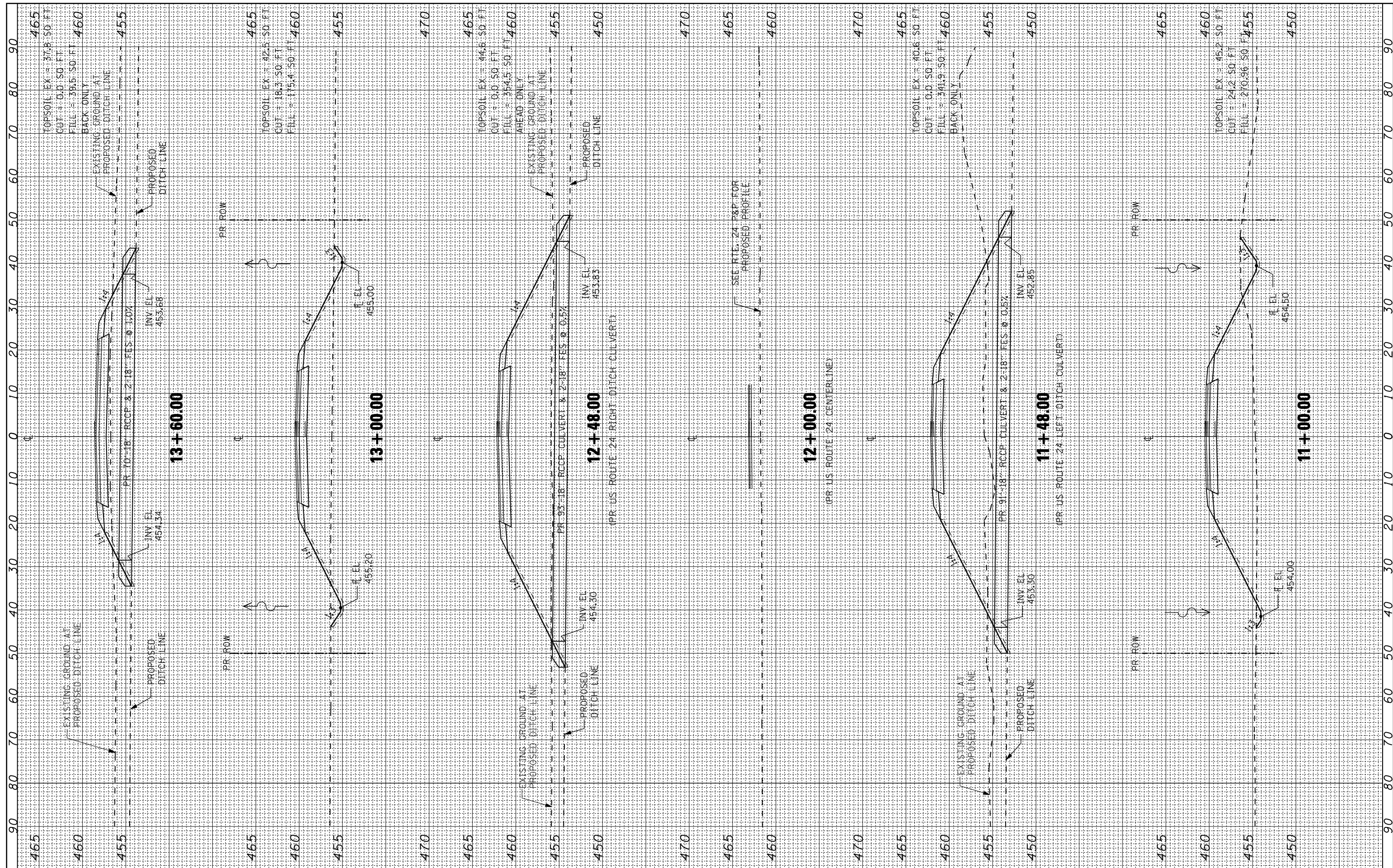
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 MUDD RD. - S. OF US RTE 24**  
 SCALE: 1" = 10'  
 SHEET NO. 9 OF 12 SHEETS  
 STA. 8+50.00 TO STA. 10+17.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	115
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	BY	DATE
NO.		

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	BY	DATE
NO.		



FILE NAME =	USER NAME = *USER*
*FILEL*	DESIGNED - JL
	DRAWN - JL
	CHECKED - JES
	DATE - 12-07-12
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PLLOT DATE = *DATE*	REVISION -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

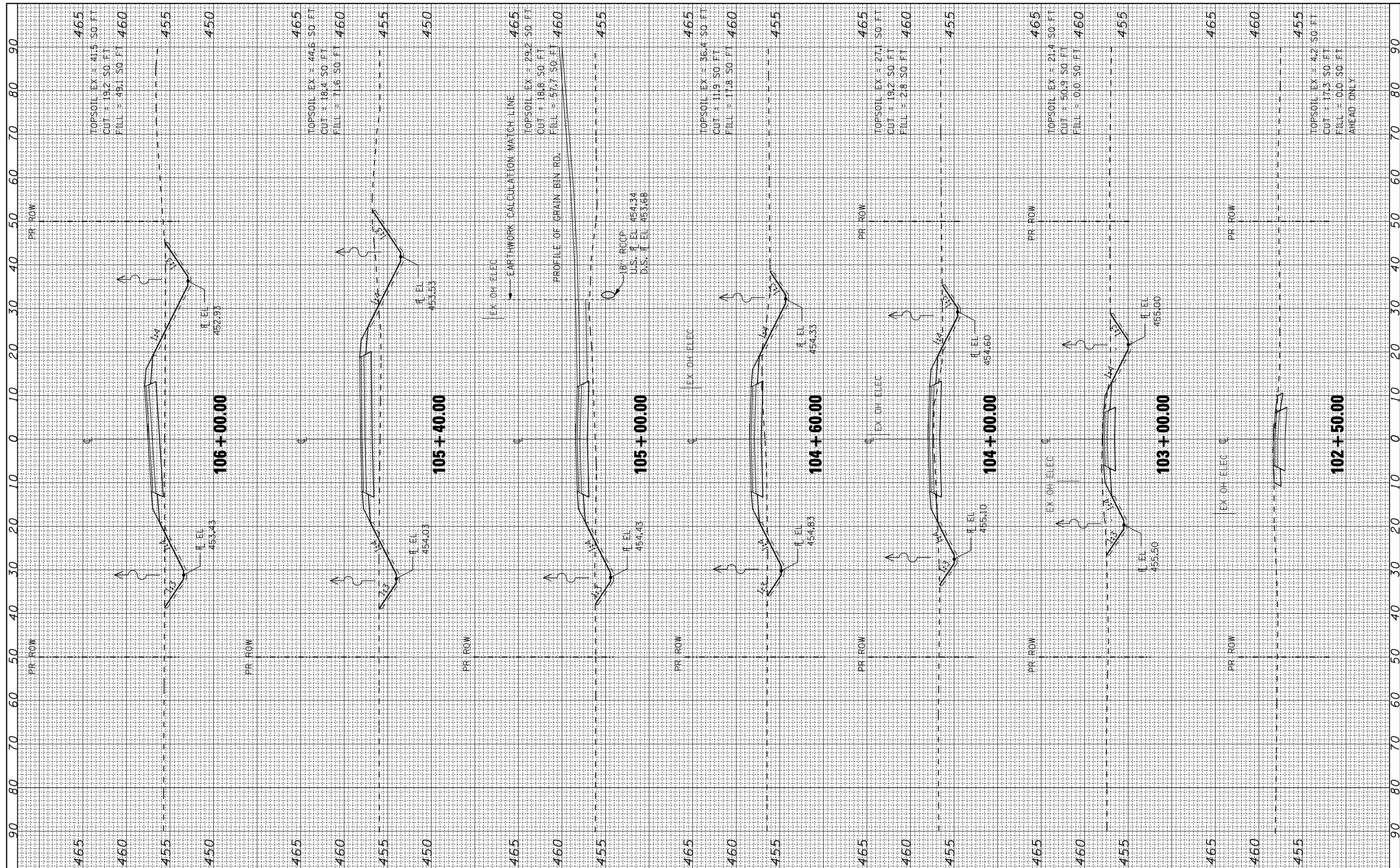
<b>CROSS SECTIONS</b>	
<b>GRAIN BIN RD.-N. OF US RTE 24</b>	
SCALE: 1" = 10'	SHEET NO. 10 OF 12 SHEETS
STA. 11+00.00	TO STA. 13+60.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	116
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				



FINAL SURVEY PLOTTED	BY	DATE
NOTE BOOK NO.		
AREAS CHECKED		

ORIGINAL SURVEY PLOTTED	BY	DATE
NOTE BOOK NO.		
AREAS CHECKED		



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 CHECKED - JES  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

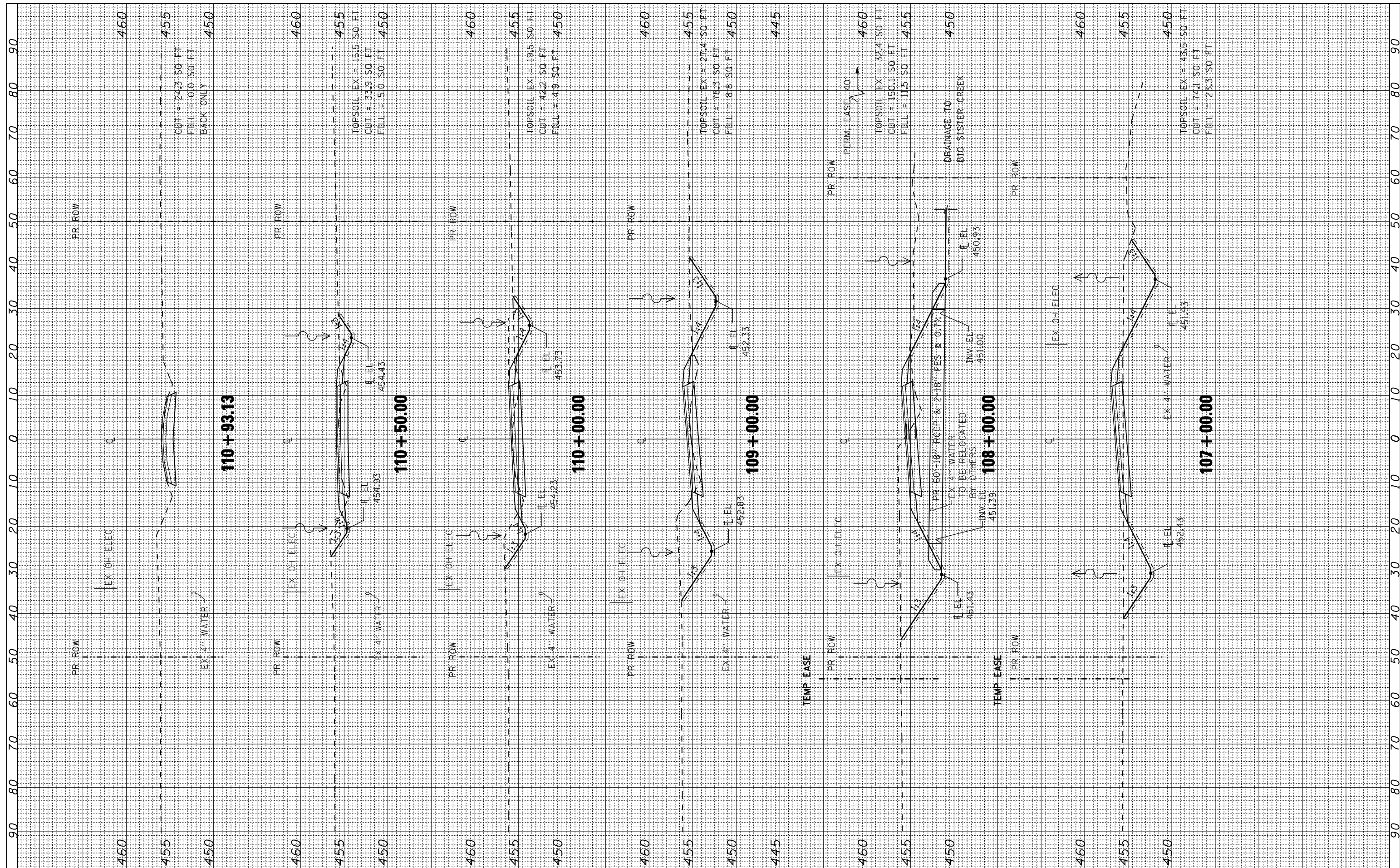
**CROSS SECTIONS  
 NOTT RD. AND GRAIN BIN RD.**

SCALE: 1" = 10'  
 SHEET NO. 11 OF 12 SHEETS  
 STA. 102+50.00 TO STA. 106+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	117
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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	AREAS CHECKED		



FILE NAME =  
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 CHECKED - JES  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: 1" = 10'  
 SHEET NO. 12 OF 12 SHEETS  
 STA. 107+00.00 TO STA. 110+93.13

**CROSS SECTIONS  
 GRAIN BIN ROAD**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(137BR, BR-1)BR	FULTON	118	118
CONTRACT NO. 68699				
ILLINOIS FED. AID PROJECT				