

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	1
		ILLINOIS	CONTRACT NO. 68801	

D-94-039-08

FOR INDEX OF SHEETS, SEE SHEET NO. 2

HIGHWAY STANDARDS

280001-07	701006-05
420401-13	701301-04
420701-03	701306-04
515001-04	701311-03
542401-04	701321-18
601101-02	701326-04
630001-13	701901-09
630301-09	704001-08
631031-18	780001-05
701001-02	781001-04
	782006-01

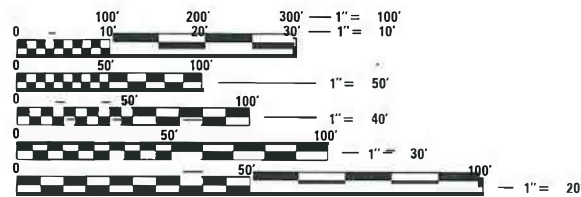
D4 CADD STANDARDS

205001-D4
205101-D4
406101-D4
606101-D4
630101-D4
667101-D4
780001-D4

ROADWAY DESIGNATION

OTHER PRINCIPAL ARTERIAL

ADT: 2400 (2021)
SU: 110 (2021)
MU: 200 (2021)



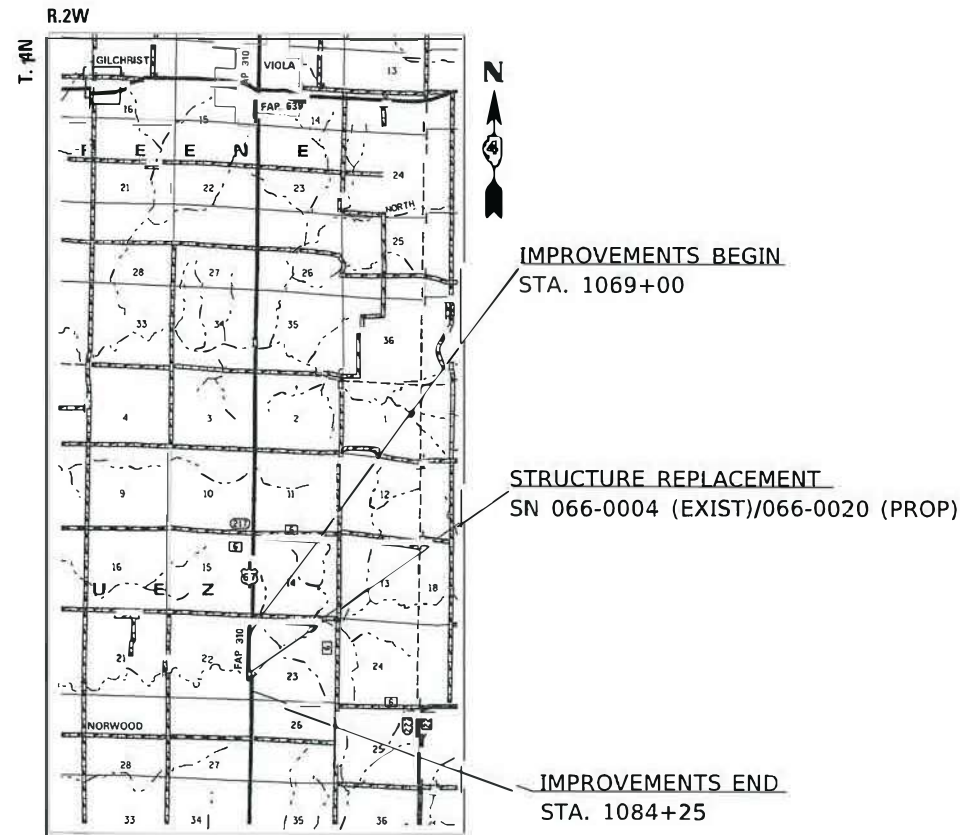
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

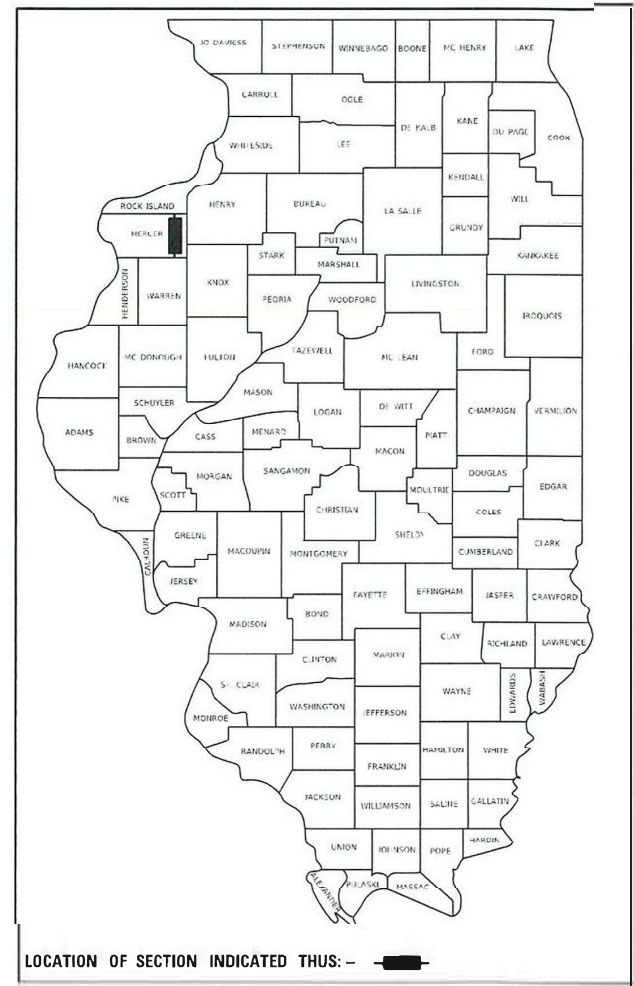
PROJECT ENGINEER: REBECCA MARRUFFO (309) 671-3454
PROJECT MANAGER: ANNA DEVINE (309) 671-3475
CATALOG NO. 033803-00D
CONTRACT NO. 68801

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 310 (US 67)
SECTION (102)BR-1
PROJECT NHPP-PGYD(002)
BRIDGE REPLACEMENT
MERCER COUNTY
C-94-058-08



GROSS LENGTH = 1525 FT. = 0.289 MILE
NET LENGTH = 1525 FT. = 0.289 MILE



PROJECT DESCRIPTION:
This project consists of a bridge replacement to SN 066-0004 carrying US 67 over N. Henderson Creek in Mercer County. Other improvements include roadway approaches, guardrail replacement, slope improvements, and any other collateral work necessary to complete the project.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 15, 2024
Kenneth A. Harnett REGIONAL ENGINEER

October 4, 2024
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

October 4, 2024
Thomas J. Gu
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS**

107.00 COMMITMENTS

Commitments are not to be altered without the written approval of all parties to which the commitment was made.

No commitments have been made on this project.

105.06 AVAILABILITY OF ELECTRONIC FILES

MicroStation and GEOPAK files of this project will be made available to the Contractor after contract award. 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 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.

202.08 EARTH EXCAVATION – INCIDENTAL TO CURB, GUTTER, & DRIVEWAY

Earth excavation and backfill for proposed curb and gutters and driveway pavements shall be included in the unit cost of the various items.

204.00 ENVIRONMENTAL REVIEWS

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

The required environmental resource documentation shall include the following:

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

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

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

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

250.01 SEEDING – SIDESLOPE RIPPING

All slopes steeper than 3 to 1 and over 15 ft. (4.5 m) in height shall be ripped. This shall consist of ripping between 18 inches to 24 inches (450 mm to 600 mm) deep normal to the slope. The interval of ripping along the slope shall be 12 ft. (3.6 m). This work shall be done after the seed bed has been prepared but before any fertilizer or seed has been applied. The fertilizer and seed shall be applied within a 24-hour period after the ripping has been done. This work will not be paid for separately but will be included in the cost of the various items of seeding involved.

351.08 AGGREGATE FOR DRIVEWAY REPLACEMENT

The material used for construction of permanent aggregate driveways shall be gravel or crushed stone, as directed by the Engineer, to replace in kind the existing aggregate driveways.

No additional compensation shall be provided for this requirement but shall be considered as included in the cost of the pay item for the aggregate as specified on the plans.

406.05 POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) RATES

Surface Type	Residual Rate
Milled (HMA or PCC)	0.08 lb /sq ft
Existing Pavement	0.08 lb /sq ft
Fog Coat (between lifts)	0.08 lb /sq ft

406.18 BUTT JOINT CUTTING TIME RESTRICTION

Butt joints shall not be milled more than three (3) days prior to placement of the HMA surface course.

406.19 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.

503.00 CROSSING EXISTING STRUCTURES WITH EQUIPMENT

The following structures, SN 066-0004 may be crossed with the empty MTD with the following maximum gross weight restrictions:
066-0004 (20 tons)

If the same MTD is used throughout the entire contract, then it must be limited to an empty gross weight of ≤ 20 tons.

Any structures not listed above shall be verified by the resident prior to beginning work.

701.00 SECURING DRAINAGE STRUCTURE GRATES

Prior to routing traffic onto the shoulders as shown in the staging plans, the Contractor shall secure gratings on shoulder inlets as directed by the Engineer. This work will not be paid for separately, but shall be included in the cost of the traffic control pay item.

780.00 NO PASSING ZONE VERIFICATION

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

INDEX OF SHEETS

1. COVER SHEET
2. INDEX OF SHEETS /GENERAL NOTES
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- 12-14. SCHEDULE OF QUANTITIES
15. LINE DIAGRAM
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20. US 67 PLAN AND PROFILE
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23. EROSION AND SEDIMENT CONTROL PLAN
- 24-49. BRIDGE PLANS SN 066-0004 (EX) /066-0020 (PROP)
- 50-58. CROSS-SECTIONS
59. PLAN DETAILS
- 60-64. FOR INFORMATION ONLY
- 65-77. D4 CADD STANDARDS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND GENERAL NOTES

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	2
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

JOB SPECIFIC NOTES

STATIONING

1. PLAN NOTES ARE BASED ON PROPOSED ENGLISH STATIONING.
2. STAMPED STATIONS ARE METRIC AND INCREASING TO THE NORTH.
3. PROPOSED ENGLISH STATIONING WILL INCREASE TO THE SOUTH.

STATUS OF UTILITIES

68801 STATUS OF UTILITIES						
Route	Location	Depth	Company	Type of Utility	Type of conflict	Disposition
US 67	North of Henderson Creek, varies 47' to 62' east of centerline	22" to 180"	Bluebird	Fiber	Regrading and Riprap	Clear
	South of Henderson Creek, Lt. Sta. 1077+00 to 1078+50, 66' east of centerline	35" to 40"			Riprap & Bedding	Caution
	South of Henderson Creek, Lt. Sta. 1081+50, 61' east of centerline	36"			Regrading backslope	Conflict
	South of Henderson Creek, Lt. Sta. 1078+50 to 1079+50, 1' inside ROW	Min. 36"	Geneseo (Cambridge) Telephone	144 CT F.O. in 1.25" ID	Riprap & Bedding	Conflict
	East Side, 1' inside ROW				Grading	Caution
	Crosses US 67, 750' south of Henderson Creek	Aerial	Ameren	Aerial Electric	Equipment	Caution
	Crosses US 67, 750' south of Henderson Creek	Aerial	Mediacom	Aerial Fiber (on Ameren poles)	Equipment	Caution

MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this project:

Location(s):	Mainline	Mainline	Mainline	Shoulders	Shoulders	Shoulders	Shoulders
Mixture Use(s):	Polymer Surface 2.0"	Polymer Binder 1.75"	Binder Build Up (Varies)	Polymer Surface 1.5"	Polymer Binder 1.5"	HMA Shoulder 4"	Lower Lift & Binder Build Up (Varies)
AC/PG:	SBS or SBR 70-28	SBS or SBR 70-28	PG 58-28	SBS or SBR 70-28	SBS or SBR 70-28	PG 58-28	PG 58-28
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
Mixture Composition: (Mixture Gradation)	IL 9.5	IL 9.5	IL 19.0	IL 9.5	IL 9.5	IL 9.5	IL 19.0
Friction Aggregate:	Mix D	N.A.	N.A.	Mix C	N.A.	Mix C	N.A.
Quality Management Program:	QCQA	QCQA	QCQA	QCQA	QCQA	QCQA	QCQA
MTD:	Yes	Yes	Yes	Yes	Yes	NO	NO

- Note: 1) Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal maximum aggregate size, unless otherwise approved by the Engineer.
 2) For design purposes, mixture weight for all mixes is determined to be 112.0 lb/s.y./in., unless otherwise noted.
 3) Sublot sizes for PFP and QCP mixes will be 1000 tons, unless otherwise agreed to by the Engineer and the paving contractor.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOB SPECIFIC NOTES, STATUS OF UTILITIES,
& MIXTURE REQUIREMENTS**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	3
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
20200100	EARTH EXCAVATION	CU YD	515	515	
20200500	EARTH EXCAVATION (WIDENING)	CU YD	7	7	
* 20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	217		217
20300100	CHANNEL EXCAVATION	CU YD	429		429
20400800	FURNISHED EXCAVATION	CU YD	375	375	
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	258	258	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	5005	5005	
25000210	SEEDING, CLASS 2A	ACRE	1	1	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	90	90	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	90	90	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	90	90	
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	5007	5007	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	59	59	
28000305	TEMPORARY DITCH CHECKS	FOOT	132	132	

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PLOT SCALE = 1:100	DRAWN -	REVISED -					310	(102)BR-1	MERCER	77	4
PLOT DATE = 8/15/2024	CHECKED -	REVISED -		SCALE: SHEET 1 OF 8 SHEETS STA. TO STA.			CONTRACT NO. 68801				
	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
28000400	PERIMETER EROSION BARRIER	FOOT	644	644	
28001100	TEMPORARY EROSION CONTROL BLANKET	SQ YD	2834	2834	
28100109	STONE RIPRAP, CLASS A5	SQ YD	1336		1336
28100207	STONE RIPRAP, CLASS A4	TON	456	456	
28100225	STONE RIPRAP, CLASS B3	TON	192	192	
28200200	FILTER FABRIC	SQ YD	2170	834	1336
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	61	61	
31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	25	25	
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	12768	12768	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	2448	2448	
40600990	TEMPORARY RAMP	SQ YD	195	195	
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	860	860	
40603205	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N50	TON	347	347	
40604160	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	421	421	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 2 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68801	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
42000060	WELDED WIRE REINFORCEMENT	SQ YD	80	80	
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	111	111	
44000164	HOT-MIX ASPHALT SURFACE REMOVAL, 3 3/4"	SQ YD	2746	2746	
44000165	HOT-MIX ASPHALT SURFACE REMOVAL, 4"	SQ YD	406	406	
44000400	GUTTER REMOVAL	FOOT	396	396	
44004250	PAVED SHOULDER REMOVAL	SQ YD	98	98	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	68	68	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	131	131	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	1206	1206	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	91		91
50300225	CONCRETE STRUCTURES	CU YD	64.2		64.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	195.9		195.9
50300260	BRIDGE DECK GROOVING	SQ YD	560		560

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**STATE OF ILLINOIS
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SUMMARY OF QUANTITIES

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	6
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
50300300	PROTECTIVE COAT	SQ YD	724		724
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	94.4		94.4
50401325	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL45N	FOOT	644		644
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	82500		82500
50800515	BAR SPLICERS	EACH	639		639
51201900	FURNISHING STEEL PILES HP14X89	FOOT	432		432
51202305	DRIVING PILES	FOOT	432		432
51203900	TEST PILE STEEL HP14X89	EACH	1		1
51204650	PILE SHOES	EACH	12		12
51500100	NAME PLATES	EACH	1		1
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	770		770
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	30	30	
54262724	METAL FLARED END SECTIONS 24"	EACH	1	1	
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	99		99

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**STATE OF ILLINOIS
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	55		55
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4		4
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	135		135
60600095	CLASS SI CONCRETE (OUTLET)	CU YD	12	12	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	637.5	637.5	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	785	785	
* 66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	2	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	13	13	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				80% FED/ 20% STATE		
				ROADWAY	BRIDGE	
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	14	14		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	328	328		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	109	109		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1075	1075		
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	141	141		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1075	1075		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1542	1542	
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	3050	3050	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 6 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	9
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	
				ROADWAY	BRIDGE
				0004 RURAL	0010 S.N. 066-0004 (EX) /066-0020 (PR)
* 78011025	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	1542	1542	
* 78011035	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	3050	3050	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	17	17	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	17	17	
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	432	432	
X0325318	LIGHTWEIGHT CELLULAR CONCRETE FILL	CU YD	371		371
X2850001	REVTMENT MAT REMOVAL	SQ YD	689	689	
X4400196	HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL)	SQ YD	221	221	
X5015225	PIPE CULVERT REMOVAL (SPECIAL)	FOOT	30	30	
X5080530	BAR TERMINATORS	EACH	394		394
X6062700	CONCRETE GUTTER, TYPE A (SPECIAL)	FOOT	86	86	
X6350204	LINEAR DELINEATOR PANELS, 4 INCH	EACH	15	15	
XZ013798	CONSTRUCTION STATION LAYOUT	L SUM	1	1	
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	223	223	

* = SPECIALTY ITEM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 7 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	10
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED/ 20% STATE	80% FED/ 20% STATE
				ROADWAY	BRIDGE
				0004	0010
				RURAL	S.N. 066-0004 (EX) /066-0020 (PR)
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	22		22
Z0004552	APPROACH SLAB REMOVAL	SQ YD	357	357	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
∅ Z0076600	TRAINEES	HOUR	1,000	1,000	
Z0034105	MATERIAL TRANSFER DEVICE	TON	2742	2742	
∅ Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000	
Z0065100	SETTLEMENT PLATFORMS	EACH	2		2
∅ 0042					

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PLOT DATE = 8/15/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 8 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	11
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

PAVEMENT TABLE																					
LOCATION				LEGNTH FT	LN WIDTH FT	RT SHLDR WIDTH FT	LT SHLDR WIDTH FT	HMA SURF. REMOVAL, BUTT JOINT SQ YD	TEMPORARY RAMP SQ YD	HMA SURFACE REMOVAL 3 3/4" SQ YD	POLY. HMA SURFACE COURSE, IL-9.5, MIX "D", N50		HMA SURFACE REMOVAL (SPECIAL) SQ YD	POLY. HMA BINDER COURSE, IL- 9.5, N50 TON	HMA BINDER COURSE IL- 19.0, N50 TON	HMA SHOULDERS TON	POLY. BITUMINOUS MATERIALS (TACK COAT)			MATERIAL TRANSFER DEVICE TON	
											2.0" TON	JOINT TRIM TON					# OF APPS	0.08 LBS/SF POUND	JOINT TRIM POUND		
US 67																					
STA.	1069+00.0	TO	1069+10.0	10.0	24.0	3.0	3.0	33.3	41.7												
STA.	1069+10.0	TO	1071+50.0	240.0	24.0	3.0	3.0			800.0	71.7	4.5	40.0	62.7		33.6	2	48.0	2.3	7.2	
STA.	1071+50.0	TO	1072+54.0	104.0	24.0	3.0	4.0			358.2	31.1	1.9	17.3	27.2		17.0	2	515.8	23.9	77.2	
STA.	1072+54.0	TO	1073+19.5	65.5	24.0	3.0	4.0	225.6			19.6	1.2	10.9	17.1		10.7	2	324.9	15.1	48.6	
STA.	1073+19.5	TO	1073+39.9	20.4	24.0	3.0	4.0	70.3			6.1	0.4	3.4	5.3	6.1	5.1	3	151.8	4.7	23.0	
STA.	1073+39.9	TO	1073+50.0	10.1	24.0	3.0	4.0	34.8			3.0	0.2	1.7	2.6	9.0	4.5	4	100.2	2.3	19.4	
STA.	1073+50.0	TO	1073+90.0	40.0	24.0	6.0	4.0	151.1			11.9	0.7	6.7	10.5	35.8	25.5	4	435.2	9.2	84.5	
STA.	1073+90.0	TO	1074+43.6	53.6	24.0	5.8	4.0	201.0			16.0	1.0	8.9	14.0	88.0	48.0	5	723.6	12.3	167.0	
STA.	1074+43.6	TO	1075+86.0	142.4	24.0	5.1	6.2	557.7	49.0		42.5	2.7	23.7	37.2	329.6	191.9	6	2409.4	32.7	603.9	
SUBTOTAL								2448.4	195.3	2745.5	396.3	24.8	221.2	346.8	859.8	1114.7		11878.6	305.1	2742.4	
HMA STAGING TABLE SUBTOTAL																			584.4		
TOTAL								2448.0	195.0	2746.0	421.0	221.0	347.0	860.0	1206.0				12768.0		2742.0

EARTHWORK TABLE										
LOCATION		EARTH EXCAVATION * CU YD	FURNISHED EXCAVATION CU YD	FOR INFORMATION ONLY				TOPSOIL FURNISH AND PLACE 4" SQ YD		
				USABLE EARTH EX FOR RIPRAP AREAS (INCLUDED IN RR PAY ITEMS) CU YD	EARTH EXCAVATION ADJUST FOR SHRINKAGE CU YD	EMBANKMENT * CU YD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CU YD			
US 67 RT.										
STA.	1072+00.0	TO	1076+25.0	99.2	208.0	59.9	119.3	327.3	-208.0	1871.7
STA.	1077+50.0	TO	1080+00.0	46.1	166.9	168.0	160.6	327.5	-166.9	962.0
US 67 LT.										
STA.	1072+50.0	TO	1076+25.0	7.7	110.0	50.1	43.4	153.4	-110.0	960.9
STA.	1077+50.0	TO	1082+00.0	361.7	-110.0	208.4	427.6	186.5	241.1	1212.7
SUBTOTAL				514.7	374.9	486.5	323.3	994.7	-484.9	5007.3
TOTAL				515.0	375.0					5005.0

*ACCOUNTED FOR ASSUMED 3" VEGETATION REMOVAL

CHANNEL EXCAVATION TABLE		
LOCATION		CHANNEL EXCAVATION CU YD
US 67		
STA.	1076+35.0 TO 1077+36.0	428.95
SUBTOTAL		429.0
TOTAL		429.0

AGGREGATE SHOULDER TABLE							
LOCATION			LEGNTH FT	WIDTH FT	AVG DEPTH INCH	AGGREGATE SHOULDERS, TYPE B TON	
							RT
STA.	1069+00.0	TO	1072+00.0	300.0	5.0	1.5	14.2
STA.	1072+00.0	TO	1072+50.0	50.0	4.0	3.0	3.8
STA.	1072+50.0	TO	1073+00.0	50.0	4.0	3.8	4.8
STA.	1073+00.0	TO	1073+29.5	29.5	4.0	5.9	4.4
LT							
STA.	1069+00.0	TO	1072+50.0	350.0	5.0	1.5	16.6
STA.	1072+50.0	TO	1073+00.0	50.0	4.0	4.5	5.6
STA.	1073+00.0	TO	1073+50.0	50.0	4.0	7.0	8.8
STA.	1073+50.0	TO	1073+98.0	48.0	4.0	8.0	9.7
SUBTOTAL							67.9
TOTAL							68.0

UNSUITABLE TABLE		
LOCATION	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL CU YD	
US 67		
STA.	1077+13.0 TO 1077+53.0	217.1
SUBTOTAL		217.1
TOTAL		217.0

APPROACH SLAB REMOVAL TABLE			
LOCATION		AREA	APPROACH SLAB REMOVAL
		SQ FT	SQ YD
US 67			
STA.	1075+86.0 TO 1076+50.0	2114.5	234.9
STA.	1077+50.1 TO 1077+84.0	1095.5	121.7
SUBTOTAL			356.7
TOTAL			357.0

PAVEMENT CONNECTOR TABLE							
LOCATION		AREA SQ FT	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB SQ YD	SUBBASE GRANULAR MATERIAL, TYPE A TON	AGGREGATE SUBGRADE IMPROVEMENT CU YD	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION SQ YD	WELDED WIRE REINFORCEMENT SQ YD
STA.	1075+86.0 TO 1076+01.0	499.4	55.5	12.6	35.4	133.5	40.0
STA.	1077+69.0 TO 1077+84.0	495.0	55.0	12.5	25.8	124.7	40.0
SUBTOTAL			110.5	25.2	61.2	258.2	80.0
TOTAL			111.0	25.0	61.0	258.0	80.0

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	12
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

DRAINAGE TABLE														
LOCATION			REVETMENT MAT REMOVAL	GUTTER REMOVAL	PIPE CULVERT REMOVAL (SPECIAL)	PIPE CULVERTS, CLASS D, TYPE I 24"	METAL FLARED END SECTIONS 24"	CONCRETE GUTTER, TYPE A (SPECIAL)*	CLASS SI CONCRETE (OUTLET)*	STONE RIPRAP CLASS B3	STONE RIPRAP CLASS A4	FILTER FABRIC **		
			SQ YD	FOOT	FOOT	FOOT	EACH	FOOT	CU YD	TON	TON	SQ YD		
US 67														
RT.	STA.	1076+01.0								16.3				
LT.	STA.	1076+01.0								15.8				
LT.	STA.	1075+76.0	TO	1076+64.0							83.9	133.2		
RI.	STA.	1076+00.0	TO	1076+61.0		30.0	30.0	1.0			22.9	70.7		
LT.	STA.	1077+12.0	TO	1080+00.0	322.0						176.5	350.0		
LT.	STA.	1080+00.0	TO	1082+08.0		212.0			5.8	89.6				
RT.	STA.	1077+00.0	TO	1080+57.0	366.8	184.0		85.5	5.8	70.6	172.7	280.0		
SUBTOTAL					688.8	396.0	30.0	30.0	1.0	85.5	11.6	192.2	456.0	833.9
TOTAL					689.0	396.0	30.0	30.0	1.0	86.0	12.0	192.0	456.0	834.0

* Tie Bars between the proposed TY. A Gutter and/or Outlet and the existing gutter shall be included in the cost of CONCRETE GUTTER TYPE A (SPECIAL)
 ** For Roadway - See Bridge Plans for additional quantity

HMA STAGING TABLE									
LOCATION				EARTH EXCAVATION (WIDENING)	PAVED SHOULDER REMOVAL	HMA SHOULDERS, 8"	HMA SURFACE REMOVAL, 4"	HMA SHOULDERS	POLY. BITUMINOUS MATERIALS (TACK COAT)
				CU YD	SQ YD	SQ YD	SQ YD	TON	POUND
US 67									
LT.	STA.	1071+50	TO	1074+45	7.0	98.3	131.1		
LT.	STA.	1074+45	TO	1076+48			173.6	38.9	250.0
LT.	STA.	1077+52	TO	1081+50			232.2	52.0	334.4
SUBTOTAL				7.0	98.3	131.1	405.9	90.9	584.4
TOTAL				7.0	98.0	131.0	406.0	SEE PAVEMENT TABLE	

SHORT TERM PAVEMENT MARKING TABLE						
LOCATION		PAVEMENT MARKING REMOVAL - WATER BLASTING	SHORT TERM PAVEMENT MARKING			SHORT TERM PAVEMENT MARKING REMOVAL
			# OF APPLICATION	CENTERLINE FOOT	SHOULDER FOOT	
		SQ FT				SQ FT
US 67						
STAGE I						
CL.	STA.	1069+75.0	TO	1072+00.0	20.0	
LT.	STA.	1072+50.0	TO	1081+40.0	296.7	
CL.	STA.	1081+00.0	TO	1083+75.0	115.0	
STAGE II						
Included in HWY Standard						
STAGE III (FINAL PAVING)						
CL.	STA.	1069+00.0	TO	1084+25.0	2.0	304.0
RT.	STA.	1074+00.0	TO	1081+50.0	2.0	12.0
LT.	STA.	1074+50.0	TO	1081+50.0	2.0	12.0
SUBTOTAL		431.7		304.0	24.0	109.3
TOTAL		432.0		328.0		109.0

TEMPORARY PAVEMENT MARKINGS SHOWN ON THE HIGHWAY STANDARD SHALL BE INCLUDED IN THE COST OF THE STANDARD AND SHALL BE TYPE IV TAPE

STAGING TABLE								
LOCATION		TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	PINNING TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY RUMBLE STRIPS
		FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
US 67								
STAGE I								
STA.	1071+13.0	TO	1081+87.0	1075.0	27.0	2.0	1.0	6.0
STAGE II								
STA.	1071+13.0	TO	1081+87.0	1075.0	114.0	2.0		
SUBTOTAL		1075.0	1075.0	141.0	2.0	2.0	1.0	6.0
TOTAL		1075.0	1075.0	141.0	2.0	2.0	1.0	6.0

SEEDING TABLE										
LOCATION		TEMPORARY EROSION CONTROL SEEDING	TEMPORARY EROSION CONTROL BLANKET	SEEDING, CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	HEAVY DUTY EROSION CONTROL BLANKET	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER*
		POUND	SQ YD	ACRE	90 lb/acre POUND	90 lb/acre POUND	90 lb/acre POUND	SQ YD	FOOT	FOOT
US 67										
RT.										
STA.	1072+00.0	TO	1076+20.0	38.67	1871.70	0.39	34.80	34.80	34.80	1871.70
STA.	1077+50.0	TO	1080+00.0	19.88	962.00	0.20	17.89	17.89	17.89	962.00
LT.										
STA.	1074+00.0	TO	1076+00.0			0.20	17.87	17.87	17.87	960.90
STA.	1077+50.0	TO	1082+00.0			0.25	22.55	22.55	22.55	1212.70
SUBTOTAL		58.55	2833.70	1.03	93.11	93.11	93.11	5007.30	132.0	644.0
TOTAL		59.0	2834.0	1.0	90.0	90.0	90.0	5007.0	132.0	644.0

*ACCOUNTS FOR DOUBLE ROW

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
SCALE:	SHEET 2	OF 3	SHEETS
STA.	TO STA.		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	13
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	

GUARDRAIL TABLE																			
LOCATION					LENGTH OF NEED STATION	GUARDRAIL REMOVAL	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	SPBGR TYPE A 6 FT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	LINEAR DELINATOR PANELS, 4"	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL AGGREGATE EROSION CONTROL							
													STA.	FOOT	EACH	FOOT	EACH	EACH	EACH
US 67																			
RT.	STA.	1073+54.1	TO	1074+04.1	1073+67.5	240.0	1.0			4.0	1.0	60.4							
	STA.	1074+04.1	TO	1075+79.1				175.0											
	STA.	1075+79.1	TO	1076+16.0					1.0										
LT.	STA.	1074+29.1	TO	1074+79.1	1074+50.8	152.5	1.0			3.0	1.0	41.3							
	STA.	1074+79.1	TO	1075+79.1				100.0											
	STA.	1075+79.1	TO	1076+16.0					1.0										
RT.	STA.	1077+54.0	TO	1077+90.9	1078+99.7	152.5				3.0		34.5							
	STA.	1077+90.9	TO	1078+65.9				75.0											
	STA.	1078+65.9	TO	1079+15.9					1.0										
LT.	STA.	1077+54.4	TO	1077+90.9	1079+55.4	239.5				5.0		86.3							
	STA.	1077+90.9	TO	1080+78.4				287.5											
	STA.	1080+78.4	TO	1081+28.4					1.0										
TOTAL						785.0	4.0	637.5	4.0	15.0	4.0	223.0							

* Removal of Existing wooden erosion control boards shall be included in the cost of GUARDRAIL REMOVAL

PAVEMENT MARKING TABLE											
LOCATION					MODIFIED URETHANE PAVEMENT MARKING - LINE 4"		GROOVING FOR RECESSED PAVEMENT MARKING 5"	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	GROOVING FOR RECESSED PAVEMENT MARKING 7"	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
					YELLOW - SKIP	YELLOW - SOLID					
					FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH
US 67											
STA.	1069+00.0	TO	1069+10.0	10.0	10.0	20.0	20.0	20.0	0.0	0.0	
STA.	1069+10.0	TO	1073+50.0	110.0		110.0	880.0	880.0	6.0	6.0	
STA.	1073+50.0	TO	1083+38.0	250.0	988.0	1238.0	1976.0	1976.0	10.0	10.0	
STA.	1083+38.0	TO	1084+25.0		174.0	174.0	174.0	174.0	1.0	1.0	
SUBTOTAL				370.0	1172.0	1542.0	3050.0	3050.0	17.0	17.0	
TOTAL				1542.0		1542.0	3050.0	3050.0	17.0	17.0	

JOBSITE TABLE											
LOCATION	MOBILIZATION	ENGINEER'S FIELD OFFICE, TYPE A	CHANGEABLE MESSAGE SIGN*	CONSTRUCTION LAYOUT	CONSTRUCTION STATION LAYOUT	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	TRAFFIC CONTROL SURVEILLANCE	PERMANENT SURVEY MARKERS, TYPE I **	CONCRETE HEADWALLS FOR PIPE DRAINS
	LSUM	CAL MO	CAL DAY	LSUM	LSUM	LSUM	LSUM	EACH	CAL DAY	EACH	EACH
JOBSITE	1.0	13.0	14.0	1.0	1.0	1.0	1.0	1.0	5.0	2.0	4.0
TOTAL	1.0	13.0	14.0	1.0	1.0	1.0	1.0	1.0	5.0	2.0	4.0

* TWO BOARDS FOR 7 DAYS EACH

** 1 FOR THE BRIDGE AND 1 IN THE ROADWAY

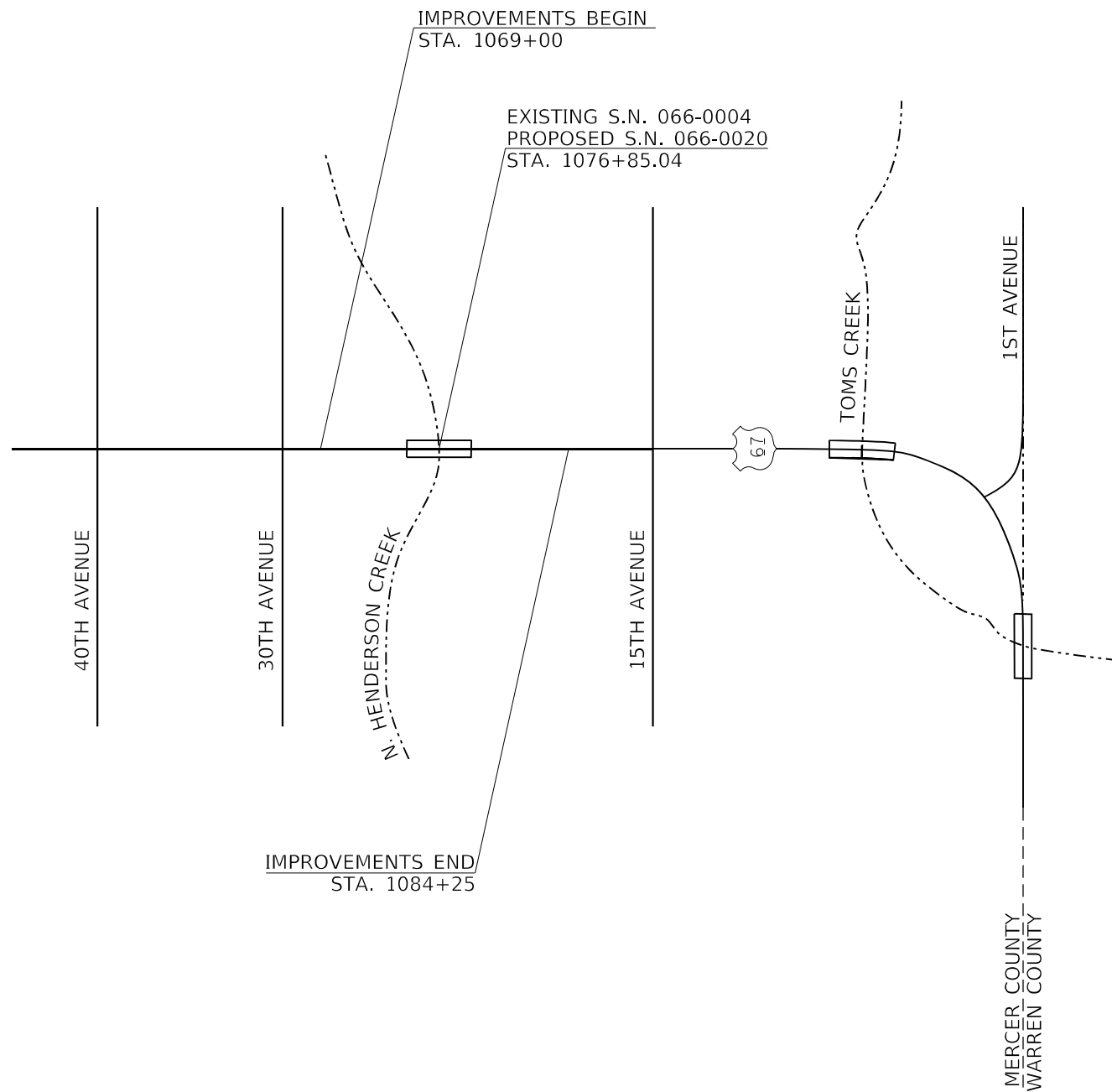
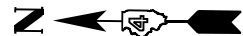
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PLOT DATE = 8/15/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
SCALE:	SHEET 3	OF 3	SHEETS
	STA.		TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	14
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



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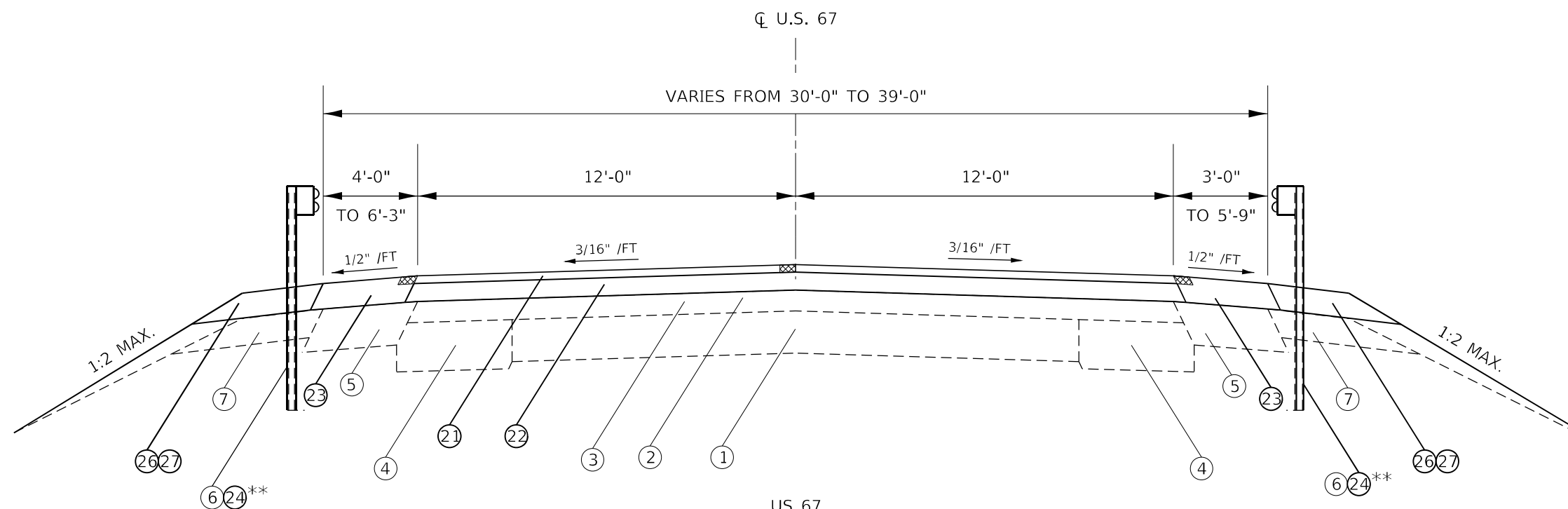
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LINE DIAGRAM

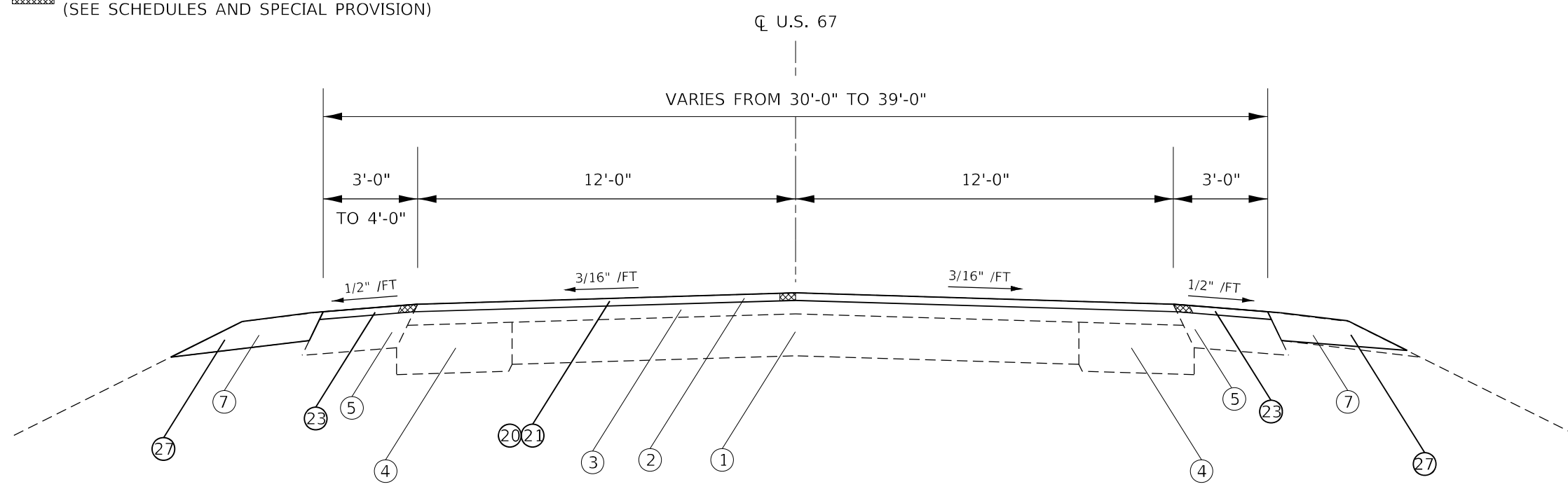
SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	15
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	



US 67
 STA. 1072+54 TO 1075+86.04
 (BRIDGE OMISSION STA. 1075+86.04 TO 1077+84.04*)
 RT. STA. 1077+84.04 TO RT. STA. 1079+35
 LT. STA. 1077+84.04 TO LT. STA. 1080+21

JOINT TRIMMING - 6" WIDE
 (SEE SCHEDULES AND SPECIAL PROVISION)



US 67
 STA. 1069+00 TO STA. 1072+54

NOT DRAWN TO SCALE

LEGEND

EXISTING ITEMS

- ① 9-6-9 PCC OR 9" PCC (APPROACH SLAB PAVEMENT)
- ② AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A
- ③ HMA OVERLAY, 8.5"±
- ④ HMA WIDENING, 10"
- ⑤ HMA SHOULDERS, 8"
- ⑥ GUARDRAIL
- ⑦ AGGREGATE SHOULDER
- ⑧ V-GUTTER

PROPOSED ITEMS

- ⑳ SURFACE REMOVAL, 3.75"
- ㉑ POLY BINDER (1.75") & POLY. SURFACE (2")
- ㉒ HMA BINDER BUILDUP, VARIES 2" TO 15.5"
- ㉓ HMA SHOULDERS
- ㉔ GUARDRAIL
- ㉕ TYPE A GUTTER
- ㉖ GUARDRAIL AGGREGATE EROSION CONTROL
- ㉗ PROP. AGGREGATE SHOULDERS, TYPE B

NOTES:

*NOT SHOWN-APPROACH PAVEMENT REMOVAL
 STA. 1075+86.04 TO 1076+50.2
 STA. 1077+49.8 TO 1077+84.04

****GUARDRAIL**

RT. STA. 1073+54.1 TO STA. 1076+16
 RT. STA. 1077+54 TO STA. 1079+15.9
 LT. STA. 1074+29.1 TO STA. 1076+16
 LT. STA. 1077+54.5 TO STA. 1081+28.4

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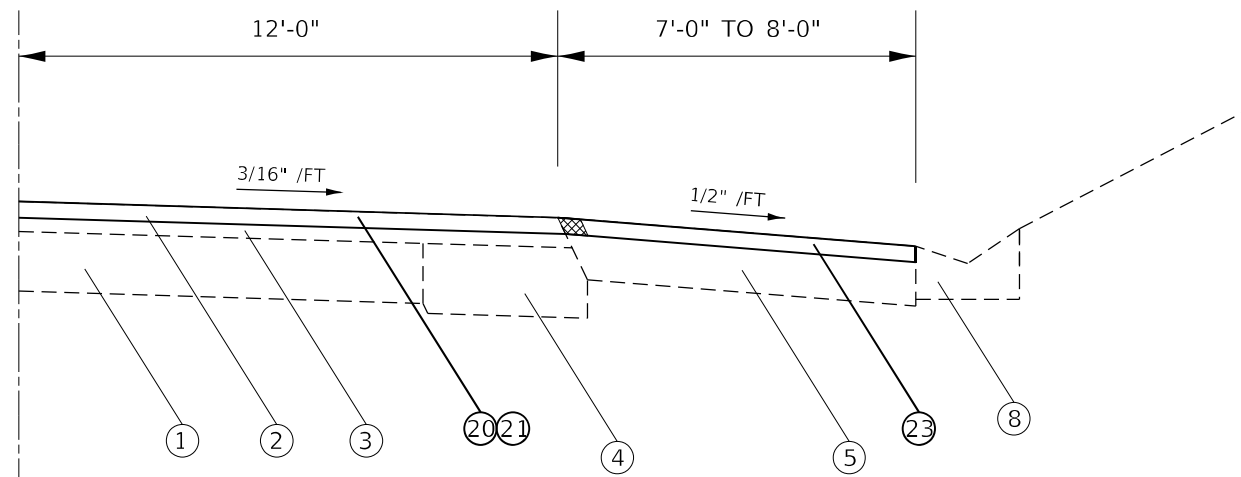
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	16
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

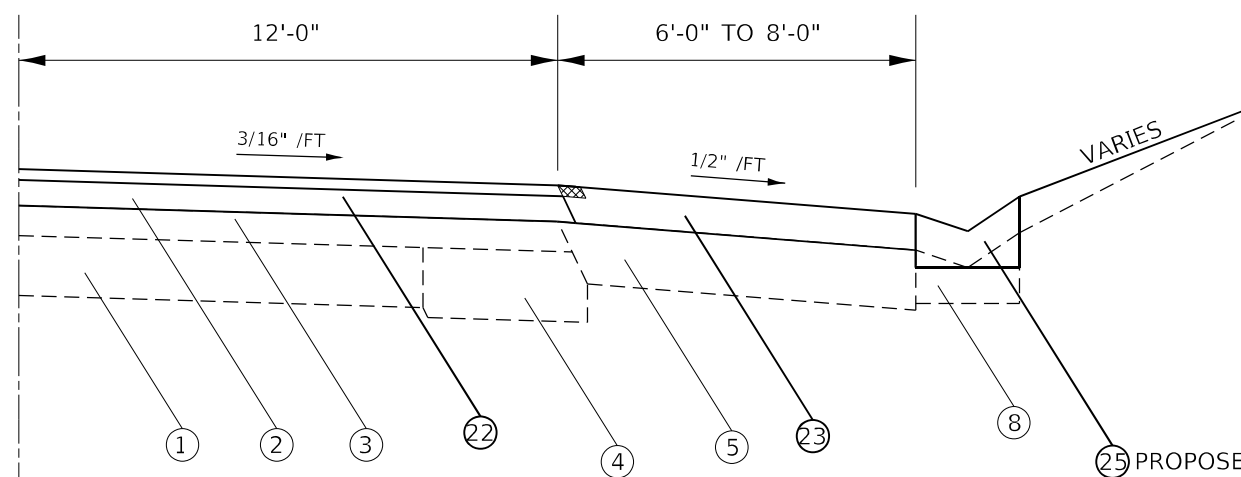
☐ U.S. 67



US 67
RT. STA. 1080+57 TO 1084+25
LT. STA. 1082+08 TO 1084+25

▨ JOINT TRIMMING - 6" WIDE
(SEE SCHEDULES AND SPECIAL PROVISION)

☐ U.S. 67



US 67
RT. STA. 1079+35 TO 1080+57
LT. STA. 1080+21 TO 1082+08

VARIES

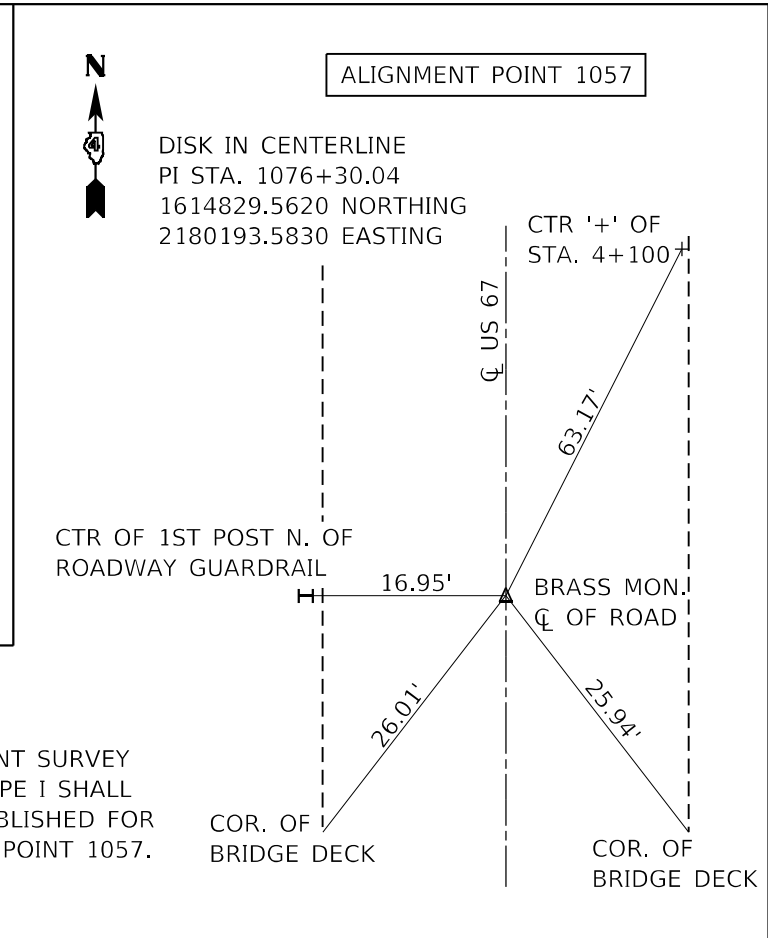
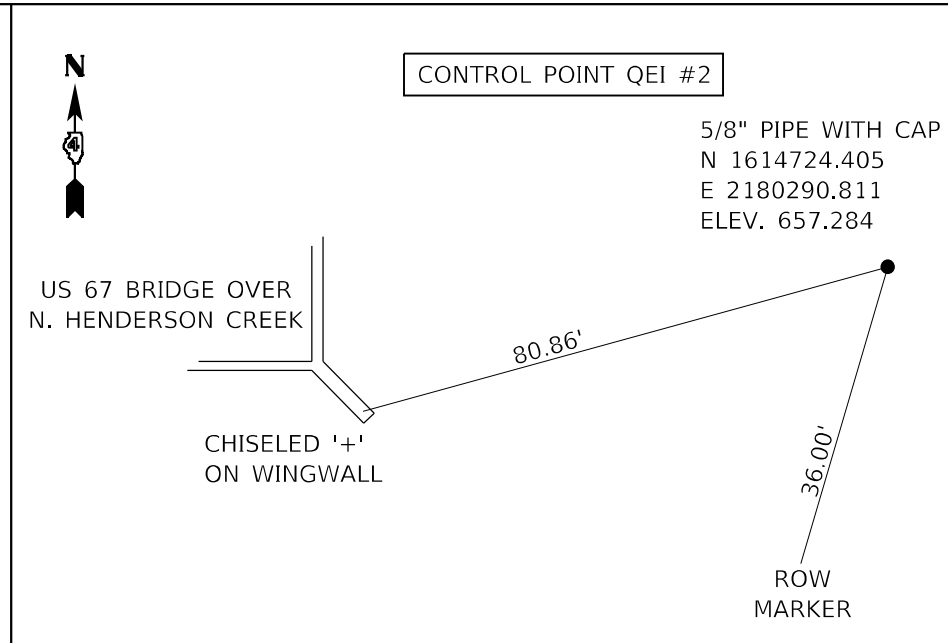
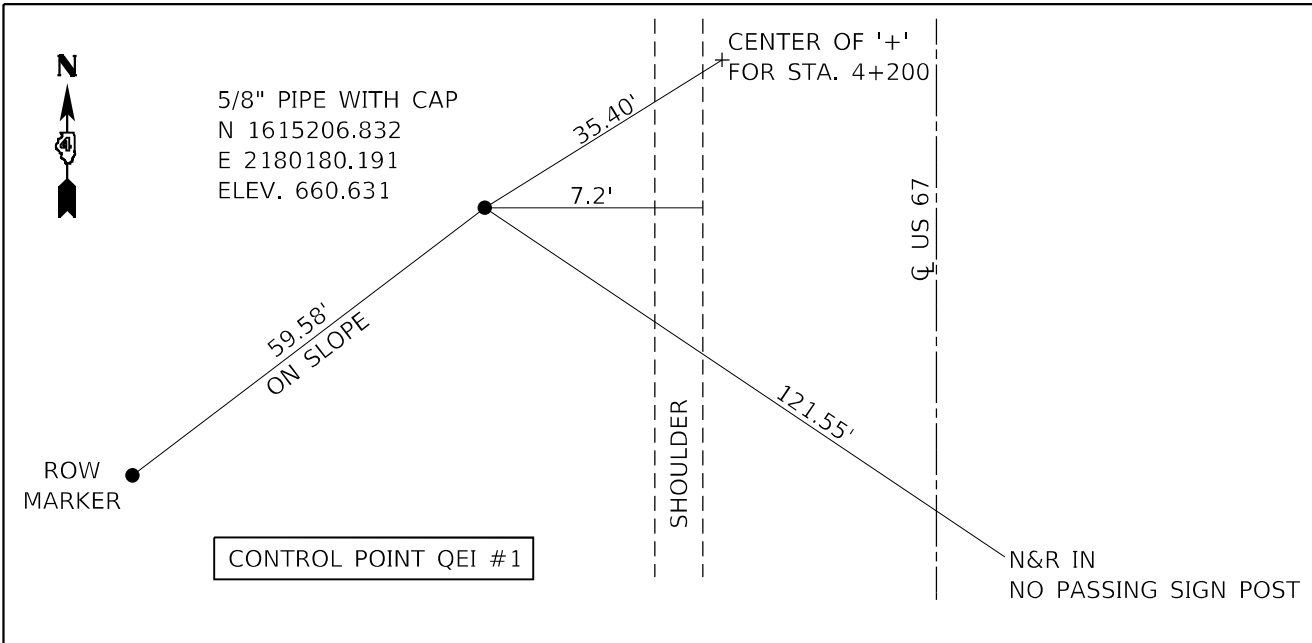
25 PROPOSED GUTTER OUTLET BEGINS
RT. STA. 1079+71
LT. STA. 1082+08

LEGEND	
EXISTING ITEMS	
①	9-6-9 PCC OR 9" PCC (APPROACH SLAB PAVEMENT)
②	AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A
③	HMA OVERLAY, 8.5"±
④	HMA WIDENING, 10"
⑤	HMA SHOULDERS, 8"
⑥	GUARDRAIL
⑦	AGGREGATE SHOULDER
⑧	V-GUTTER
PROPOSED ITEMS	
20	SURFACE REMOVAL, 3.75"
21	POLY BINDER (1.75") & POLY. SURFACE (2")
22	HMA BINDER BUILDUP, VARIES 2" TO 15.5"
23	HMA SHOULDERS
24	GUARDRAIL
25	TYPE A GUTTER
26	GUARDRAIL AGGREGATE EROSION CONTROL
27	PROP. AGGREGATE SHOULDERS, TYPE B

NOT DRAWN TO SCALE

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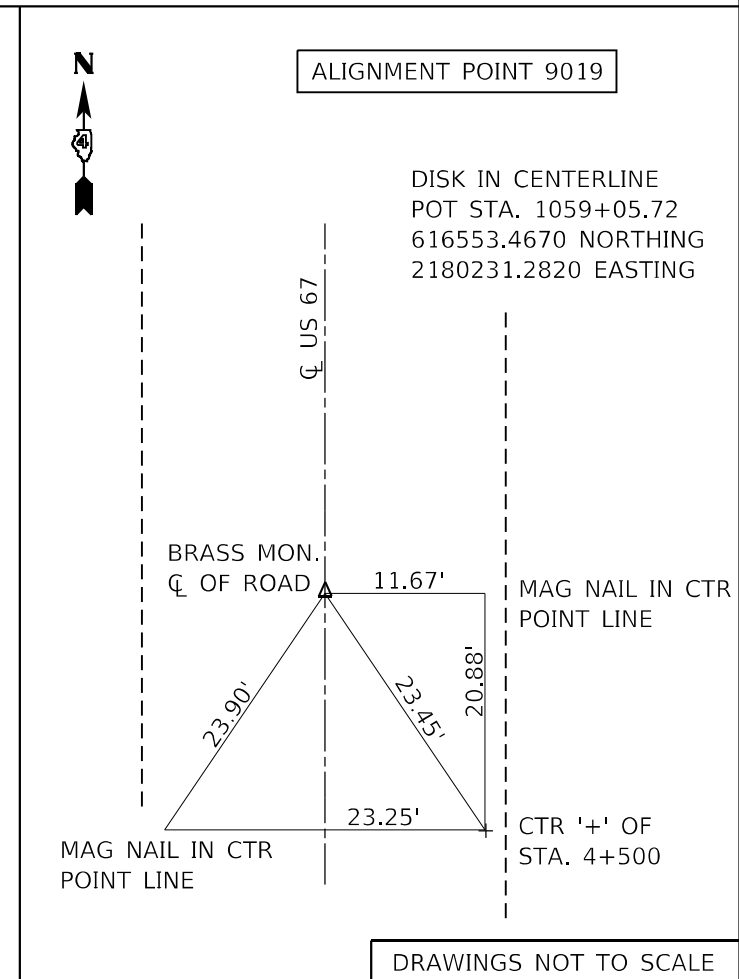
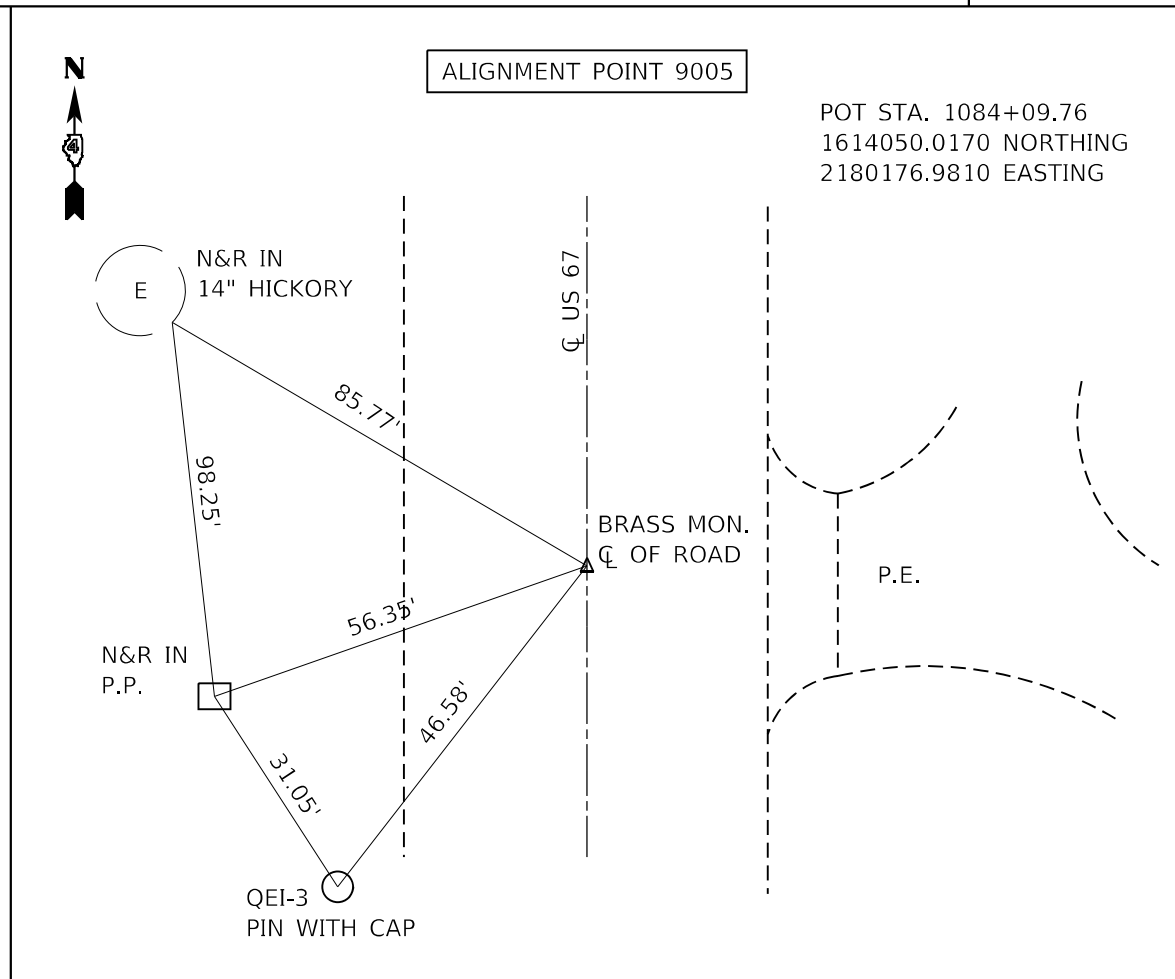
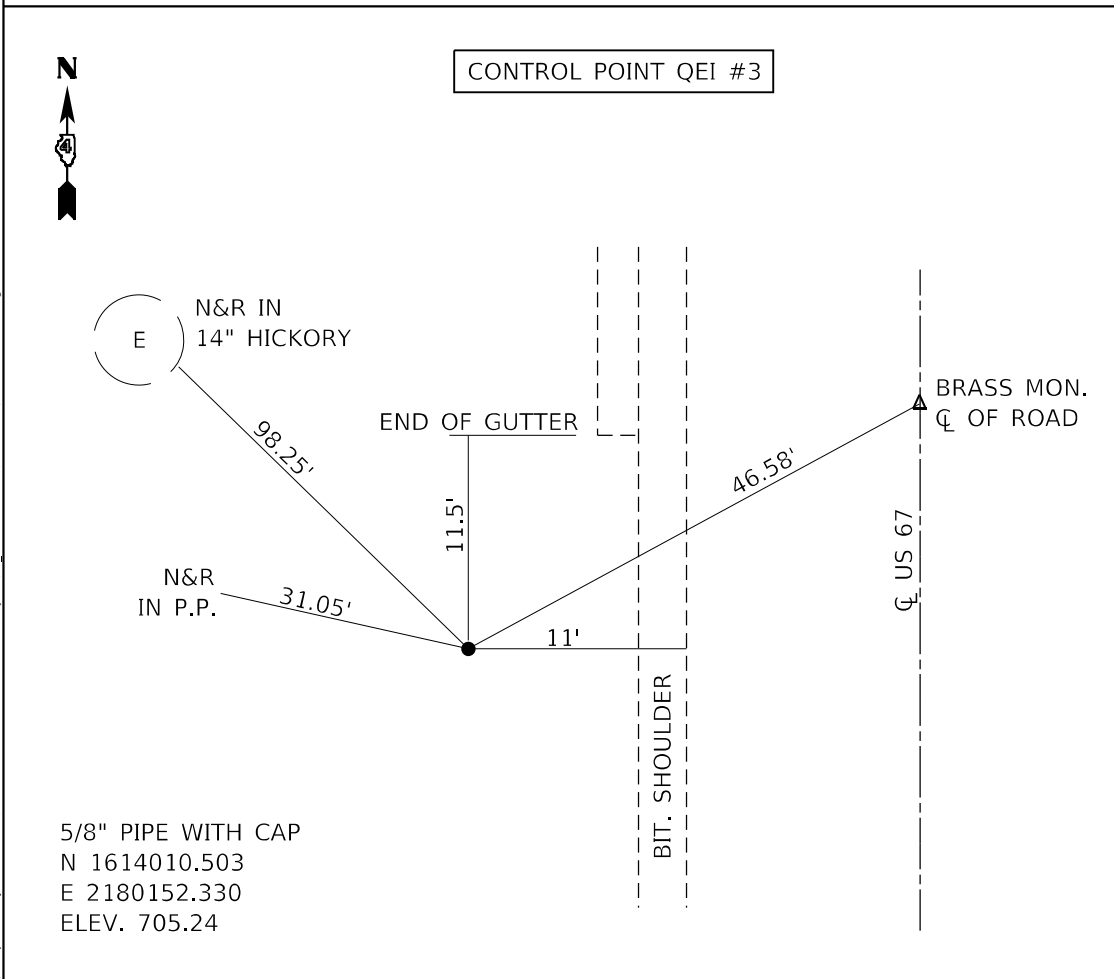
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PLOT DATE = 8/15/2024	CHECKED -	REVISED -		CONTRACT NO. 68801							
	DATE -	REVISED -		SCALE:	SHEET 2	OF 2	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	



NOTES:
HORIZONTAL CONTROL
IL STATE PLANE
IL WEST ZONE NAD 1983 (1997)

BM 1= 670.09
CHISELED '□' ON SE CORNER OF BRIDGE
DECK OF 066-0004 OVER N. HENDERSON CREEK
BM2= 664.364
CHISELED '□' NW ABUTMENT OF
066-0004 OVER N. HENDERSON CREEK

NOTE:
A PERMANENT SURVEY
MARKER, TYPE I SHALL
BE RE-ESTABLISHED FOR
ALIGNMENT POINT 1057.



DRAWINGS NOT TO SCALE

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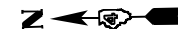
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US 67 ALIGNMENT TIE SHEET
IDOT CONTROL POINTS & BENCHMARKS

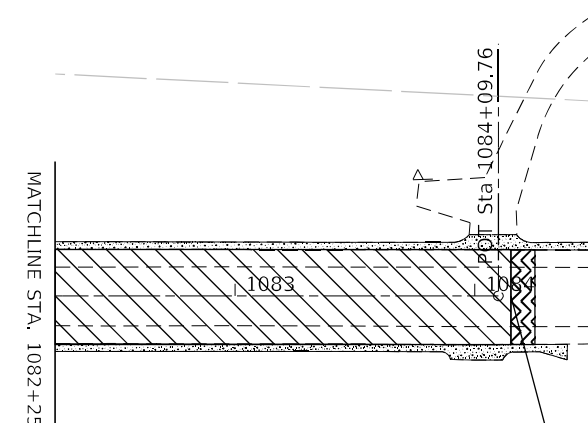
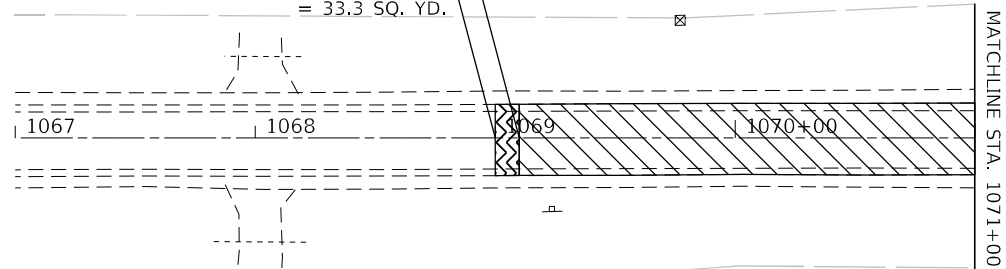
SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 18
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	

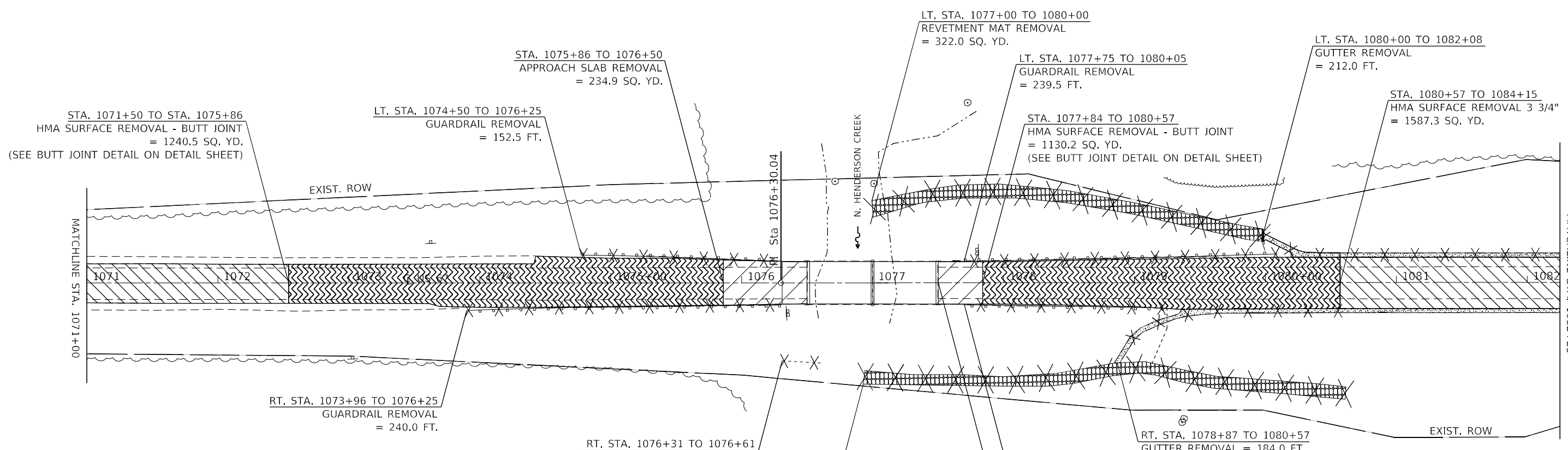


STA. 1069+10 TO STA. 1072+54
HMA SURFACE REMOVAL 3 3/4"
= 1158.2 SQ. YD.

STA. 1069+00 TO STA. 1069+10
HMA SURFACE REMOVAL - BUTT JOINT
= 33.3 SQ. YD.



STA. 1084+15 TO 1084+25
HMA SURFACE REMOVAL - BUTT JOINT
= 44.4 SQ. YD.



STA. 1071+50 TO STA. 1075+86
HMA SURFACE REMOVAL - BUTT JOINT
= 1240.5 SQ. YD.
(SEE BUTT JOINT DETAIL ON DETAIL SHEET)

LT. STA. 1074+50 TO 1076+25
GUARDRAIL REMOVAL
= 152.5 FT.

STA. 1075+86 TO 1076+50
APPROACH SLAB REMOVAL
= 234.9 SQ. YD.

LT. STA. 1077+00 TO 1080+00
REVTMENT MAT REMOVAL
= 322.0 SQ. YD.

LT. STA. 1077+75 TO 1080+05
GUARDRAIL REMOVAL
= 239.5 FT.

LT. STA. 1080+00 TO 1082+08
GUTTER REMOVAL
= 212.0 FT.

STA. 1080+57 TO 1084+15
HMA SURFACE REMOVAL 3 3/4"
= 1587.3 SQ. YD.

STA. 1077+84 TO 1080+57
HMA SURFACE REMOVAL - BUTT JOINT
= 1130.2 SQ. YD.
(SEE BUTT JOINT DETAIL ON DETAIL SHEET)

RT. STA. 1073+96 TO 1076+25
GUARDRAIL REMOVAL
= 240.0 FT.

RT. STA. 1076+31 TO 1076+61
PIPE CULVERT REMOVAL (SPECIAL) = 30.0 FT.

RT. STA. 1077+00 TO 1080+57
REVTMENT MAT REMOVAL = 366.8 SQ. YD.

RT. STA. 1077+75 TO 1079+25
GUARDRAIL REMOVAL = 152.5 FT.

RT. STA. 1078+87 TO 1080+57
GUTTER REMOVAL = 184.0 FT.

STA. 1077+50.1 TO 1077+84.0
APPROACH SLAB REMOVAL = 121.7 SQ. YD.

LEGEND

- HMA SURFACE REMOVAL - BUTT JOINT
- HMA SURFACE REMOVAL 3 3/4"
- REMOVAL OF FOOT/EACH ITEMS
- APPROACH SLAB REMOVAL (SEE SPECIAL PROVISION)



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PLOT DATE = 8/15/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVAL PLAN

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	19
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
STRUCTURE NOTATION CHECKED	
NOTE BOOK NO.	
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DATE	
BY	
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NOTE BOOK NO.	
FILE NAME	

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LT. STA. 1074+29.13 TO 1076+16.03
 TRAF. BAR. TERM. TYPE 1 (SPECIAL) TANGENT = 1.0 EACH
 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS = 100.0 FT.
 TRAFFIC BARRIER TERMINAL, TYPE 6 = 1.0 EACH
 LINEAR DELINEATOR PANELS, 4" = 3.0 EACH
 GUARDRAIL AGGREGATE EROSION CONTROL = 41.3 TON

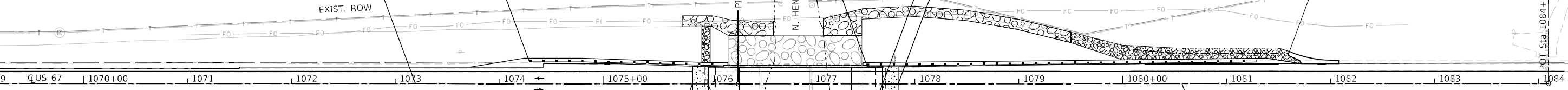
STA. 1072+54.0 TO STA. 1075+86.04
 P. HMA SURFACE COURSE, IL-9.5, MIX "D", N50 = 105.4 TON
 P. HMA BINDER COURSE IL-9.5, N50 = 86.8 TON
 HMA BINDER COURSE IL-19.0, N50 = 468.5 TON
 HMA SHOULDERS = 285.7 TON
 (SEE BUTT JOINT DETAIL ON DETAIL SHEET)

LT. STA. 1077+54.4 TO 1081+28.4
 TRAFFIC BARRIER TERMINAL, TYPE 6 = 1.0 EACH
 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS = 287.5 FT.
 TRAF. BAR. TERM. TYPE 1 (SPECIAL) TANGENT = 1.0 EACH
 LINEAR DELINEATOR PANELS, 4" = 5.0 EACH
 GUARDRAIL AGGREGATE EROSION CONTROL = 86.3 TON

STA. 1077+69.04 TO 1077+84.04
 PVT CON (PCC) BR APP SL = 55.0 SQ. YD.
 SUB. GRAN. MAT A = 12.5 TON
 WELDED WIRE REINF. = 40.0 SQ. YD.
 AGG SUBGRADE IMPROVE = 25.8 CU. YD.
 GEOTECH FAB F/GR STAB = 124.7 SQ. YD.

STA. 1077+84.04 TO 1080+57.0
 P. HMA SURFACE COURSE, IL-9.5, MIX "D", N50 = 86.6 TON
 P. HMA BINDER COURSE, IL-9.5, N50 = 71.3 TON
 HMA BINDER COURSE IL-19.0, N50 = 391.3 TON
 HMA SHOULDERS = 640.5 TON
 (SEE BUTT JOINT DETAIL ON DETAIL SHEET)

LT. STA. 1081+59 TO 1082+08
 CLASS SI CONCRETE (OUTLET)
 = 5.8 CU. YD.



STA. 1069+00.0 TO STA. 1072+54
 P. HMA SURFACE COURSE, IL-9.5, MIX "D", N50 = 112.3 TON
 P. HMA BINDER COURSE IL-9.5, N50 = 92.5 TON
 HMA SHOULDERS = 52.0 TON

RT. STA. 1073+54.1 TO 1076+16.03
 TRAF. BAR. TERM., TYPE 1 (SPECIAL) TANGENT = 1.0 EACH
 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS = 175.0 FT.
 TRAFFIC BARRIER TERMINAL, TYPE 6 = 1.0 EACH
 LINEAR DELINEATOR PANELS, 4" = 4.0 EACH
 GUARDRAIL AGGREGATE EROSION CONTROL = 60.4 TON

STA. 1075+86.04 TO 1076+01.04
 PVT CON (PCC) BR APP SL = 55.5 SQ. YD.
 SUB. GRAN. MAT A = 12.6 TON
 WELDED WIRE REINF. = 40.0 SQ. YD.
 AGG SUBGRADE IMPROVE = 35.4 CU. YD.
 GEOTECH FAB F/GR STAB = 133.5 SQ. YD.

STA. 1076+01.04 TO STA. 1077+69.04
 PROPOSED STRUCTURE
 (SEE BRIDGE PLANS FOR DETAILS)

RT. STA. 1077+54.04 TO 1079+15.94
 TRAFFIC BARRIER TERMINAL, TYPE 6 = 1.0 EACH
 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS = 75.0 FT.
 TRAF. BAR. TERM. TYPE 1 (SPECIAL) TANGENT = 1.0 EACH
 LINEAR DELINEATOR PANELS, 4" = 3.0 EACH
 GUARDRAIL AGGREGATE EROSION CONTROL = 34.5 TON

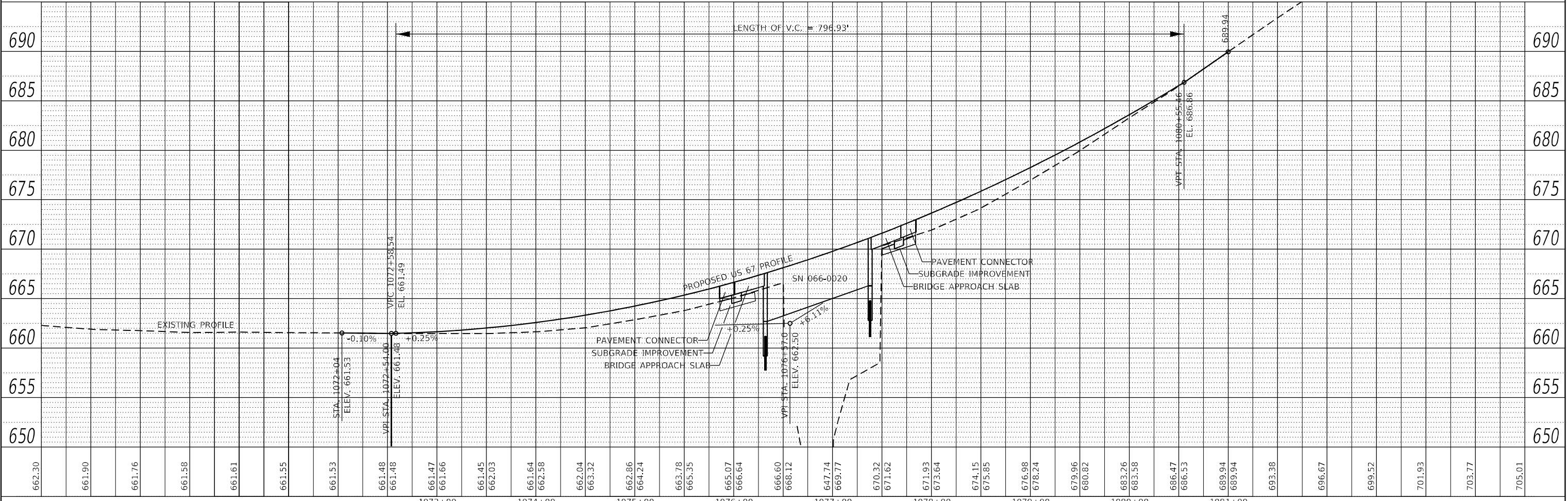
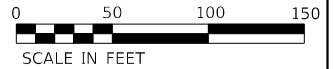
STA. 1080+57 TO 1084+25
 P. HMA SURFACE COURSE, IL-9.5, MIX "D", N50 = 116.8 TON
 P. HMA BINDER COURSE, IL-9.5, N50 = 96.2 TON
 HMA SHOULDERS = 136.6 TON

RT. STA. 1079+20 TO 1080+57
 CLASS SI CONCRETE (OUTLET) = 5.8 CU. YD.
 CONCRETE GUTTER, TYPE A (SPECIAL) = 85.5 FT.

STA. 1076+31, 59.6' RT TO 1076+61, 61.2' RT.
 PIPE CULVERTS, CLASS D, TYPE I, 24" = 30.0 FT.
 METAL FLARED END SECTIONS 24" = 1.0 EACH
 UPSTREAM INVERT = 651.93
 DOWNSTREAM INVERT = 651.59

- LEGEND**
- STONE RIPRAP CLASS B3
 - STONE RIPRAP CLASS A4
 - STONE RIPRAP CLASS A5
 - PVT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB

NOTE:
 SEE SCHEDULES FOR STATIONS AND QUANTITIES FOR RIPRAP PAY ITEMS



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


**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

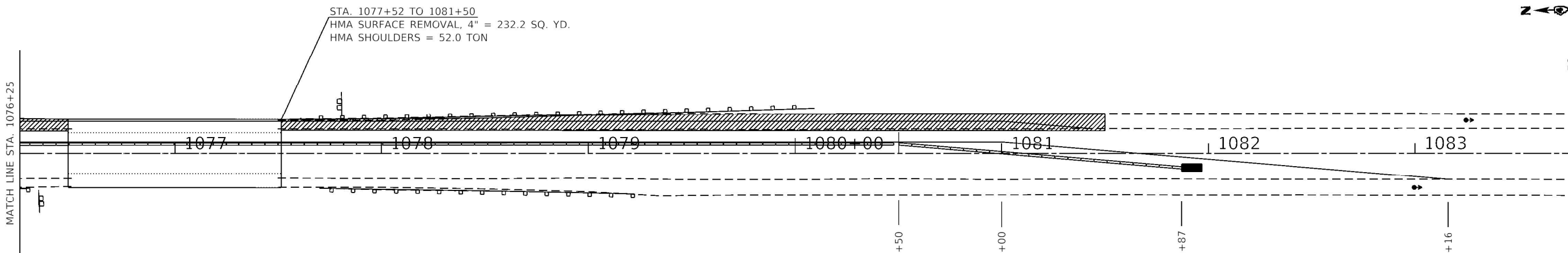
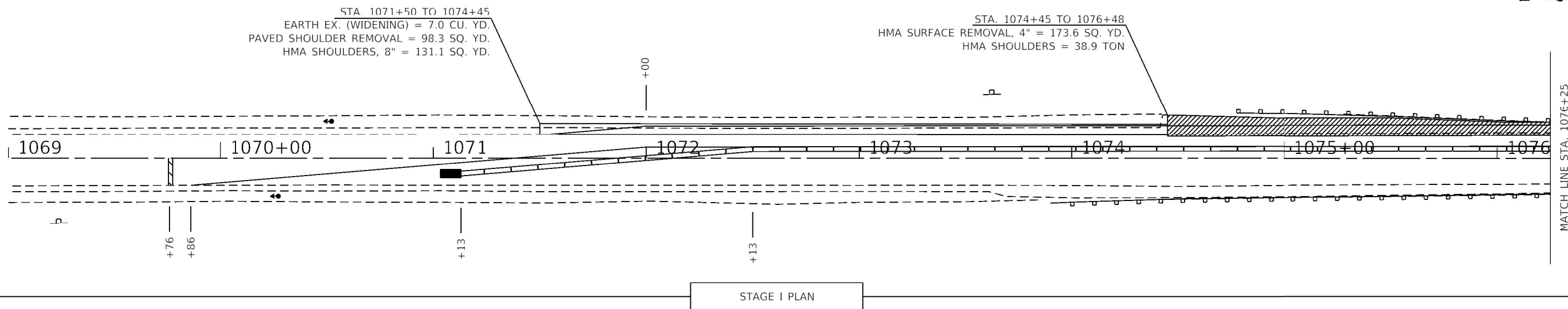
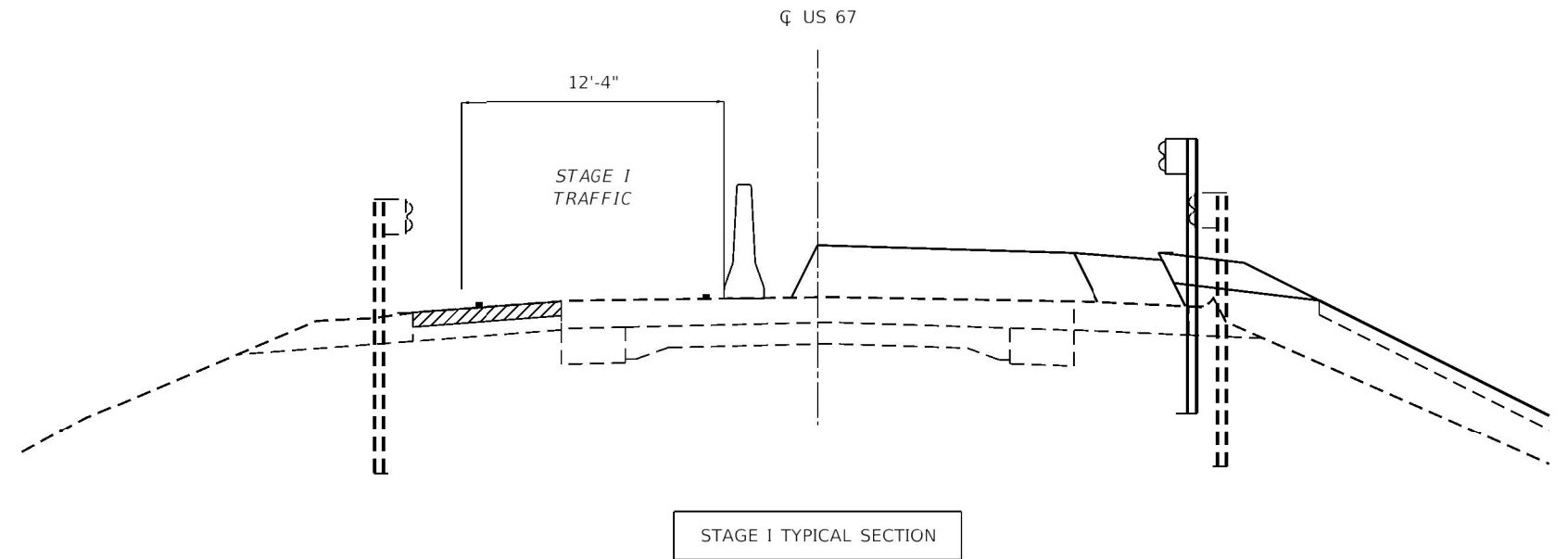
US 67 PLAN AND PROFILE			
SCALE:	SHEET 1	OF 1	SHEETS
STA.			TO STA.

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 20
CONTRACT NO. 68801				
ILLINOIS		FED. AID PROJECT		

NOTES:

1. EARTH EX. WIDENING, 8" SHOULDERS, AND SHOULDER RESURFACING SHALL BE COMPLETED USING TC HWY STD 701326 AND SHALL BE COMPLETED PRIOR TO SETTING UP HIGHWAY STANDARD 701321.
2. STAGE I SHALL FOLLOW HIGHWAY STANDARD 701321.
3. TEMPORARY BARRIER WALL SHALL BE FULLY PINNED FROM STA. 1075+86 TO STA. 1077+84.
4. TEMPORARY BARRIER WALL BETWEEN STA. 1076+30 AND STA. 1077+70 SHALL BE ANCHORED ACCORDING TO THE BRIDGE PLANS AND SHALL BE CONSIDERED INCLUDED IN THE COST OF TEMPORARY BARRIER WALL.
5. PAVEMENT MARKINGS SHOWN ON HWY STANDARD 701321 SHALL BE TYPE IV TAPE AND SHALL BE INCLUDED IN THE COST OF THE HIGHWAY STANDARD.
6. GUARDRAIL SHALL BE IN PLACE PRIOR TO SWITCHING STAGES
7. STAGE I HMA 1:1 BUILDUP TO BE REMOVED TO A VERTICAL FACE PRIOR TO STAGE II BUILDUP. SHALL BE CONSIDERED INCLUDED IN THE COST OF HMA BINDER PAY ITEMS.

LEGEND	
	IMPACT ATTENUATORS
	STOP BAR
	TRAFFIC SIGNAL
	HMA SURFACE REMOVAL AND REPLACEMENT



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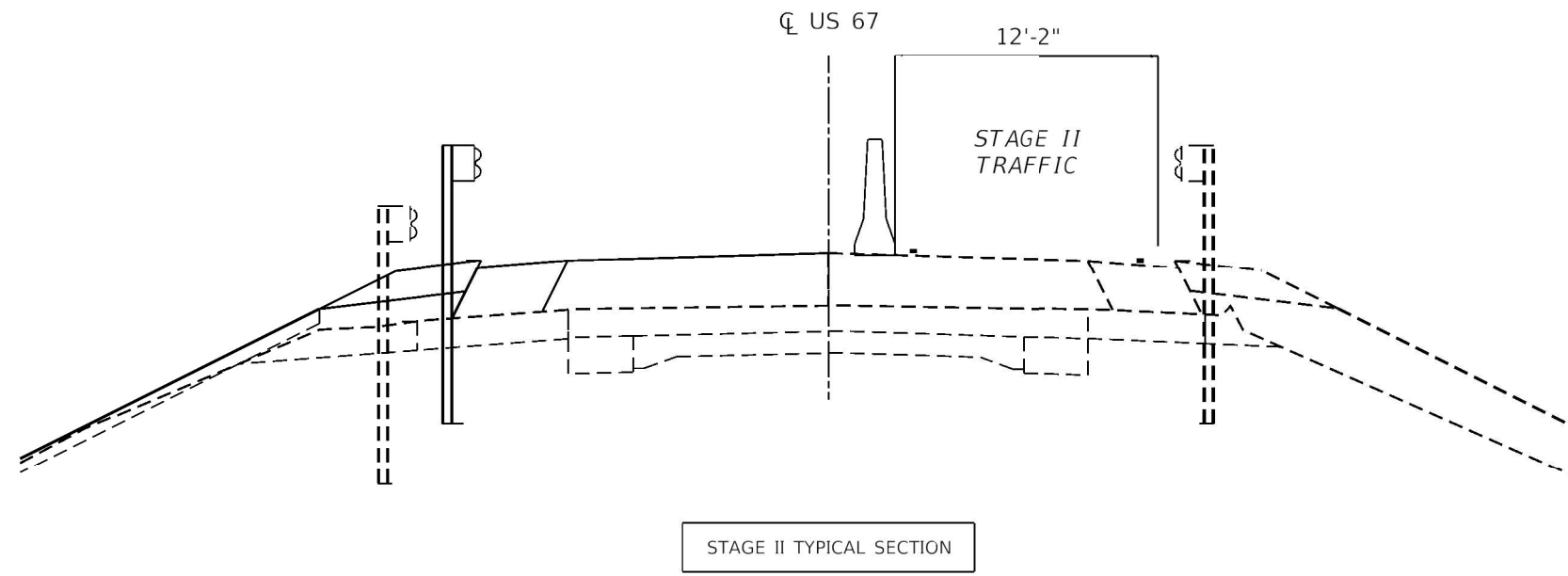
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL DETAILS STAGE I			
SCALE:	SHEET 1	OF 2 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	21
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

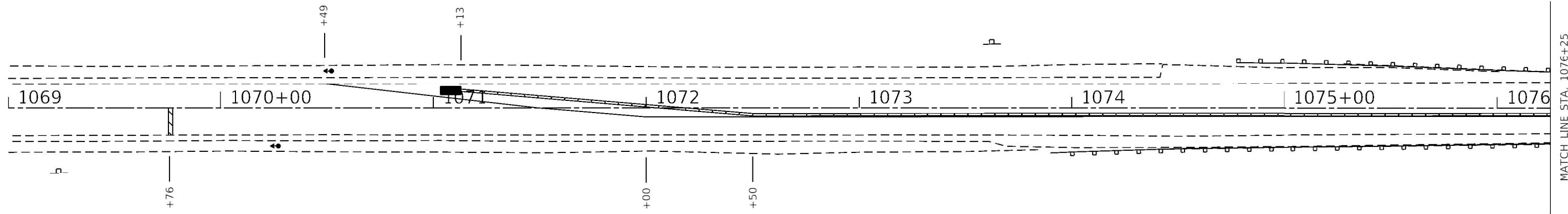
NOTES:

1. STAGE II SHALL FOLLOW HIGHWAY STANDARD 701321.
2. PAVEMENT MARKINGS SHOWN ON HIGHWAY STANDARD 701321 SHALL BE TYPE IV TAPE AND SHALL BE INCLUDED IN THE COST OF THE HIGHWAY STANDARD.
3. TEMPORARY BARRIER WALL SHALL BE FULLY PINNED FROM STA. 1073+40 TO STA. 1079+83.
4. TEMPORARY BARRIER WALL BETWEEN STA. 1075+86 AND STA. 1077+84 SHALL BE ANCHORED ACCORDING TO THE BRIDGE PLANS AND SHALL BE CONSIDERED INCLUDED IN THE COST OF TEMPORARY BARRIER WALL.
5. GUARDRAIL SHALL BE IN PLACE PRIOR TO SWITCHING TRAFFIC.

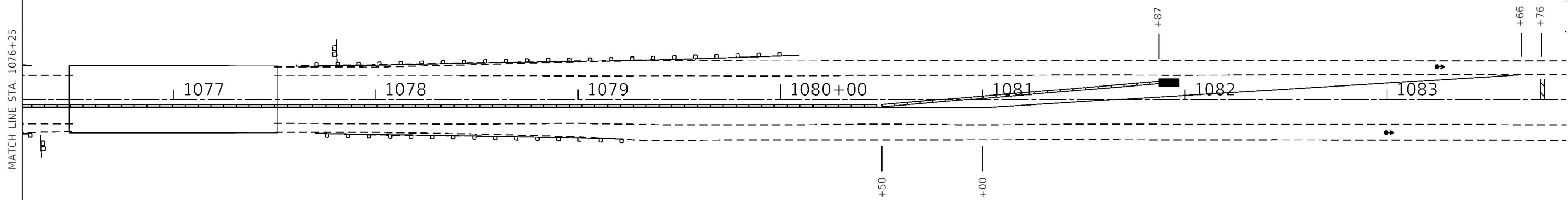


LEGEND

	IMPACT ATTENUATORS
	STOP BAR
	TRAFFIC SIGNAL
	HMA SURFACE REMOVAL AND REPLACEMENT



STAGE II PLAN



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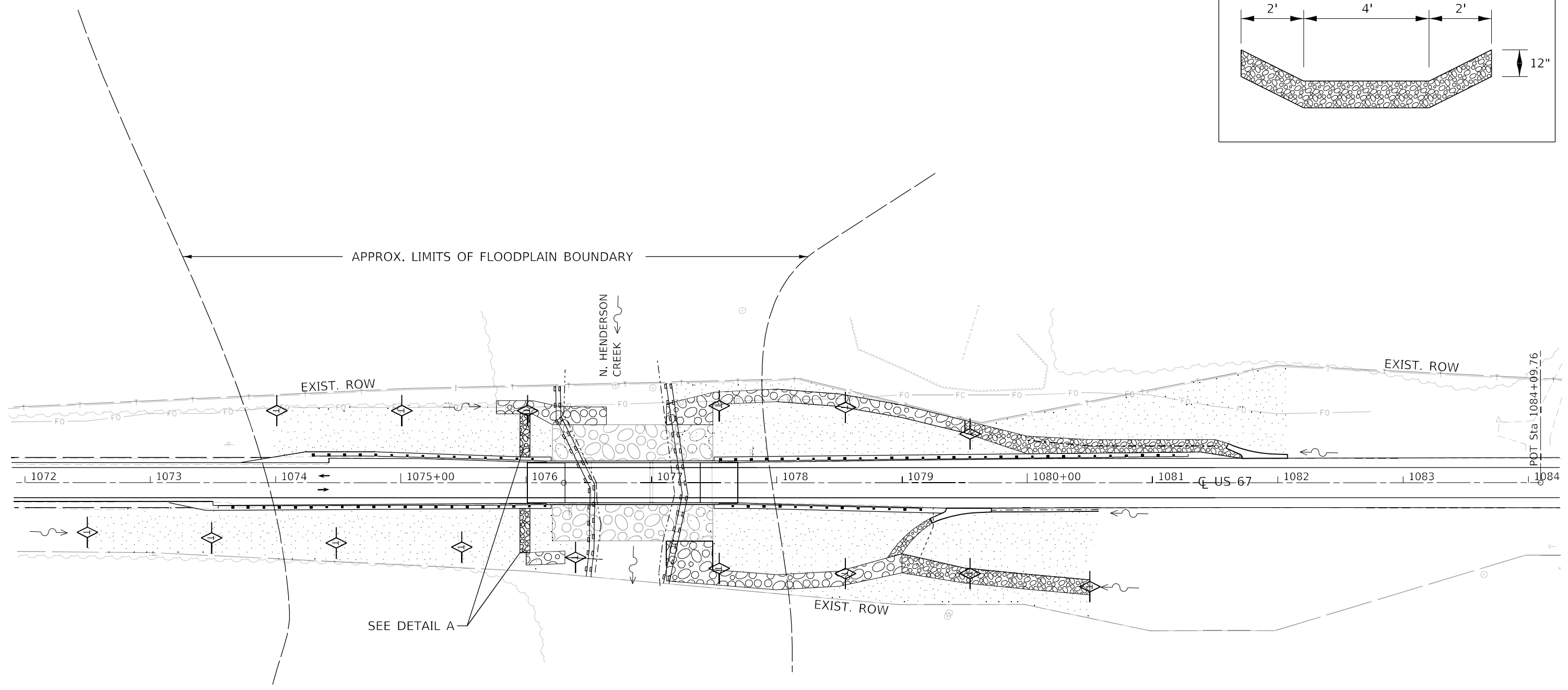
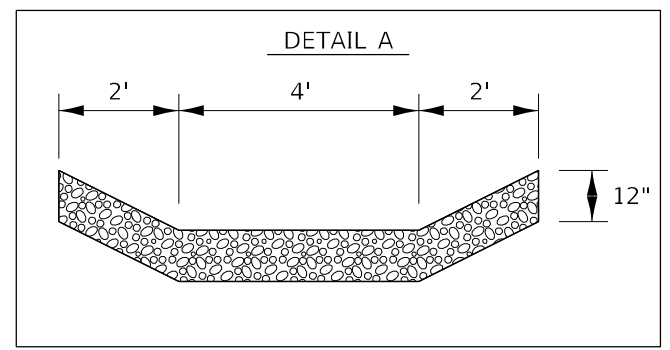
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PLOT DATE = 8/15/2024	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL DETAILS
STAGE II**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 22
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

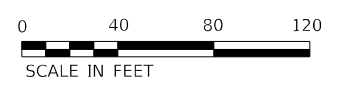


LEGEND

- SEEDING, CLASS 2A & HEAVY DUTY EROSION CONTROL BLANKET
- STONE RIPRAP CLASS B3
- PERIMETER EROSION BARRIER (DOUBLE ROW)
- TEMPORARY DITCH CHECKS (100' SPACING)
- STONE RIPRAP CLASS A4
- STONE RIPRAP CLASS A5 (SEE BRIDGE PLANS)

*SEE SCHEDULES FOR QUANTITIES

NOTE:
 THE RT. SIDE (WEST) CONSTRUCTION LIMITS SHALL HAVE ONE APPLICATION OF TEMPORARY SEEDING & TEMPORARY EROSION CONTROL BLANKET AFTER THE COMPLETION OF STAGE 1. SEE SCHEDULE FOR QUANTITY.



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	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

EROSION AND SEDIMENT CONTROL PLAN

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 23
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	

Bench Mark: Chisled "C" on southeast corner of bridge deck of bridge over Henderson Creek. Elev. 670.09

Existing Structure: S.N. 066-0004 was built in 1931, under construction Route FAP 310, US Rt. 67, Sec. 102B. The structure is a two span precast prestressed concrete structure that replaced the original steel truss. The total length of the structure is 103'-4" from back to back of abutments, and it has a width of 33'-0". In 1971, the original truss was replaced with a two-span PPC beam structure, the abutments were modified and a center pier was added to support the PPC deck beams. In 2001, the deck beams and substructures were repaired and 6 1/2" reinforced concrete overlay was placed over the deck beams. In 2008, temporary support beams were installed in both spans. Existing structure to be removed.

Traffic to be maintained using staged construction.

Salvage: Existing temporary steel beams to be delivered to the IDOT Bridge Maintenance Yard at 604 Camp St. East Peoria 61611 309-699-3822.

LOADING HL-93

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

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS

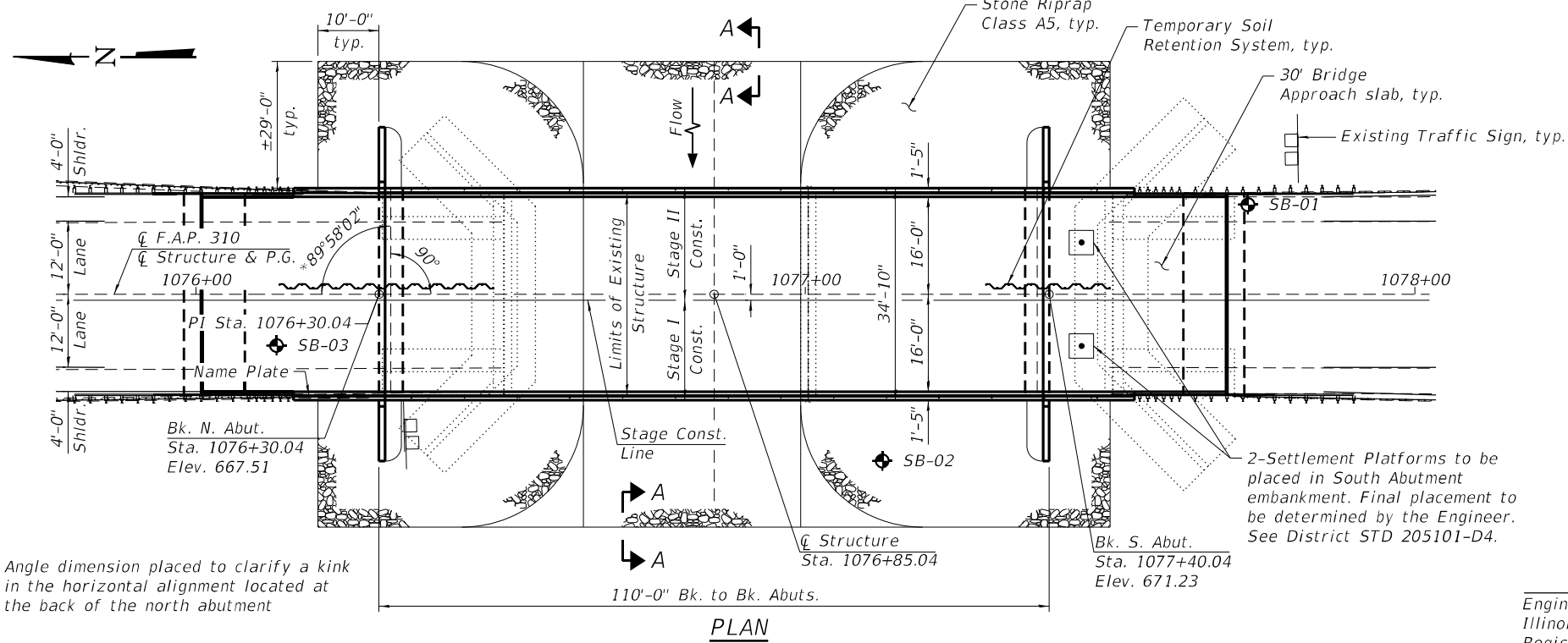
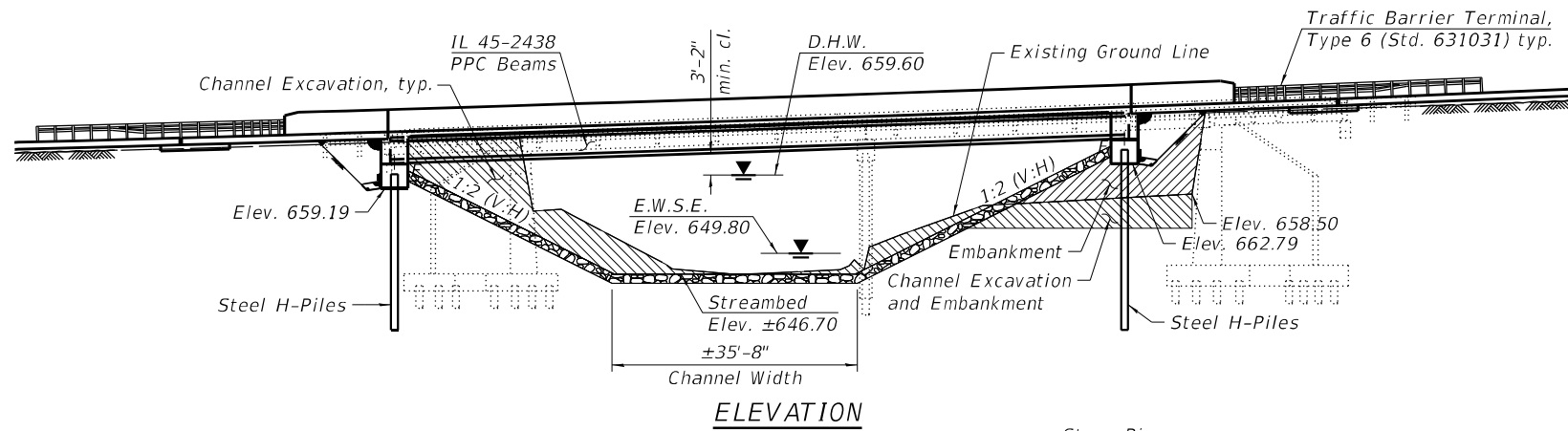
f'c = 3,500 psi (Substructure)
 f'c = 4,000 psi (Superstructure)
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50)

PRECAST PRESTRESSED UNITS

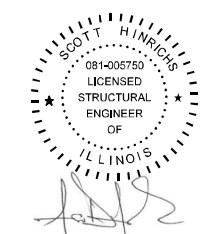
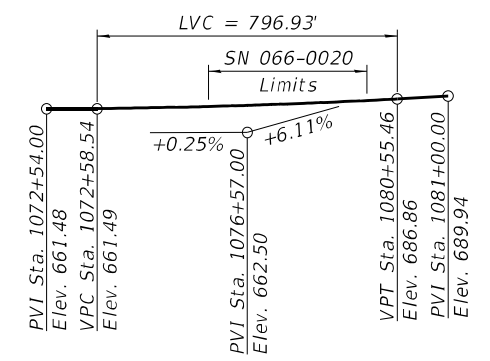
f'c = 8,500 psi
 f'ci = 6,500 psi
 fpu = 270,000 psi (0.6"Ø Lowlax strands)
 fpbt = 202,300 psi (0.6"Ø Lowlax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.094g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.138g
 Soil Site Class = D

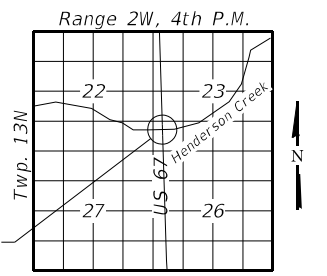


* Angle dimension placed to clarify a kink in the horizontal alignment located at the back of the north abutment



Engineer Full Name: Scott Hinrichs Date: 05-27-2024
 Illinois Registered Engineer No. 081-005750
 Registration Expires 11. 30, 2024

PROFILE GRADE
 Along C FAP 310 (US 67)



DESIGN SCOUR ELEVATION TABLE

Event / Limit	Design Scour Elevations (ft.)			Item 113
	State	N. Abut.	S. Abut.	
Q100	659.19	662.79		8
Q200	659.19	662.79		
Design	659.19	662.79		
Check	659.19	662.79		

WATERWAY INFORMATION

Drainage Area = 33.2 Sq. Mi. Existing Overtopping Elev. 661.5 @ Sta. 1072+00
 Proposed Overtopping Elev. 661.5 @ Sta. 1072+00

Flood Event	Freq. Yr.	Discharge (cfs)	Opening Ft ²		Nat. H.W.E.			Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Ten-Year Design	10	3,040	542	578	658.6	2.0	1.8	660.6	660.4	662.7	662.1
Base	100	5,370	671	718	660.0	3.7	2.9	663.7	662.9	663.3	663.3
Scour Check	200	5,800	681	738	660.2	4.0	3.1	664.2	663.3	-	-
Overtop Existing	38	4,167	605	-	659.3	2.8	-	662.1	-	-	-
Overtop Proposed	51	4,700	-	678	659.6	-	2.5	-	662.1	-	-

10 year velocity through existing bridge = 5.6 ft/s
 10 year velocity through proposed bridge = 5.3 ft/s



LEGEND

- Channel Excavation
- Channel Embankment

GENERAL PLAN & ELEVATION
US 67 OVER HENDERSON CREEK
F.A.P. RTE 310 - SECTION (102)BR-1
MERCER COUNTY
STATION 1076+85.04
STRUCTURE NO. 066-0020

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<p>8501 W. Higgins Road, Suite 280 Chicago, Illinois 60631; (773) 399-0112</p>	USER NAME =	DESIGNED - J.T.B.	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 24
	PLOT SCALE =	CHECKED - H.A.	REVISD -		SHEET 1 OF 26 SHEETS	CONTRACT NO. 68801		ILLINOIS FED. AID PROJECT	
PLOT DATE =	DRAWN - D.C.P.	REVISD -							
	CHECKED - S.H., K.G.W.	REVISD -							

GENERAL NOTES

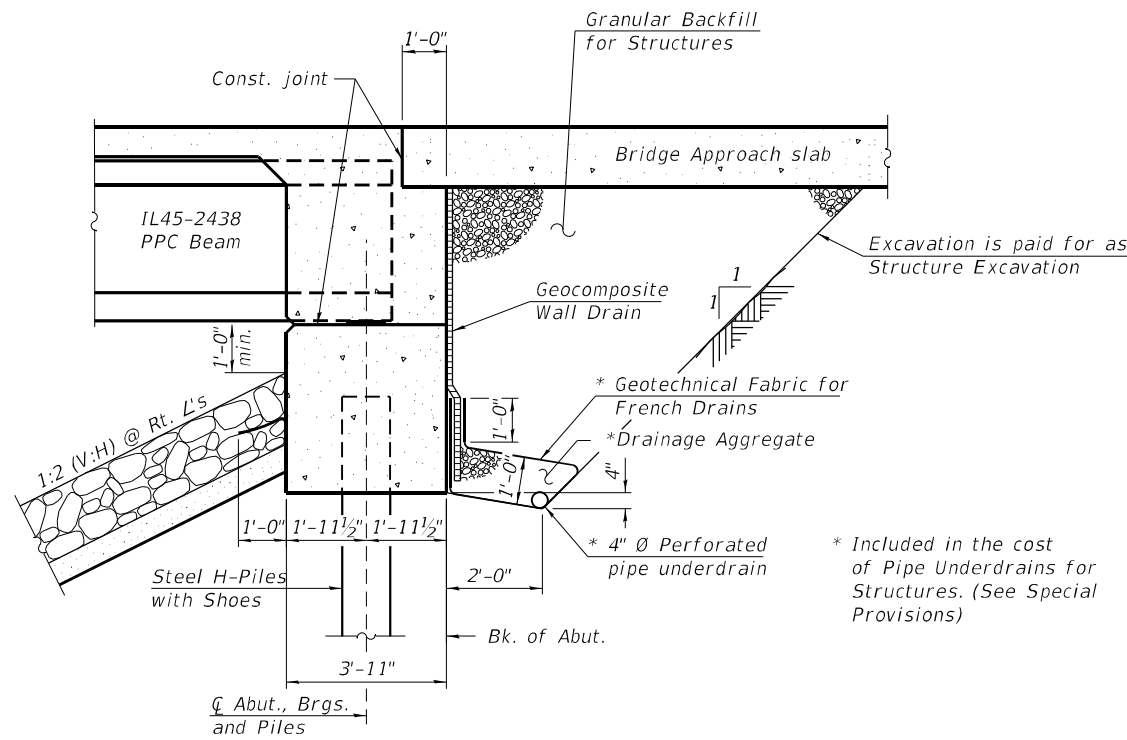
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Slipforming of the parapets is not allowed.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
5. All exposed concrete edges shall have a 3/4"x45° chamfer, except where shown otherwise.
6. The contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing procedures for removal of the superstructure.
7. All Lightweight Cellular Concrete Fill shall be Class I. See Special Provisions.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Stage Construction Details
4. Temporary Soil Retention System
5. Temporary Concrete Barrier
6. Top of Slab Elevations I
7. Top of Slab Elevations II
8. Top of North Approach Slab Elevation
9. Top of South Approach Slab Elevation
10. Superstructure
11. Superstructure Details
12. Diaphragm Details
13. North Approach Slab Details I
14. North Approach Slab Details II
15. South Approach Slab Details I
16. South Approach Slab Details II
17. PPC Beam Framing Plan and Details
18. IL45N Beam
19. IL45N Beam Details
20. North Abutment Details
21. South Abutment Details
22. HP Pile Details
23. Bar Splicer Assembly and Mechanical Splicer Details
24. Boring Logs I
25. Boring Logs II
26. Boring Logs III

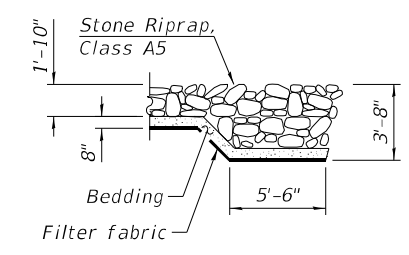
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		1,336	1,336
Filter Fabric	Sq. Yd.		1,336	1,336
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		91	91
Concrete Structures	Cu. Yd.		64.2	64.2
Concrete Superstructure	Cu. Yd.	195.9		195.9
Bridge Deck Grooving	Sq. Yd.	560		560
Protective Coat	Sq. Yd.	724		724
Concrete Superstructure (Approach Slab)	Cu. Yd.	94.4		94.4
Furnishing and Erecting Precast Prestressed Concrete Beams, IL45N	Foot	644		644
Reinforcement Bars, Epoxy Coated	Pound	74,160	8,340	82,500
Bar Splicers	Each	539	100	639
Furnishing Steel Piles HP14x89	Foot		432	432
Driving Piles	Foot		432	432
Test Pile Steel HP14x89	Each		1	1
Pile Shoes	Each		12	12
Name Plates	Each	1		1
Temporary Soil Retention System	Sq. Ft.		770	770
Granular Backfill for Structures	Cu. Yd.		99	99
Geocomposite Wall Drain	Sq. Yd.		55	55
Pipe Underdrains for Structures 4"	Foot		135	135
Lightweight Cellular Concrete Fill	Cu. Yd.		371	371
Bar Terminator	Each	394		394
Asbestos Bearing Pad Removal	Each	22		22
Settlement Platforms	Each		2	2



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

Note:
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).



SECTION A-A

STATION 1076+85.04
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 310 SEC. (102)BR-1
LOADING HL-93
STRUCTURE NO. 066-0020

NAME PLATE
See Std. 515001

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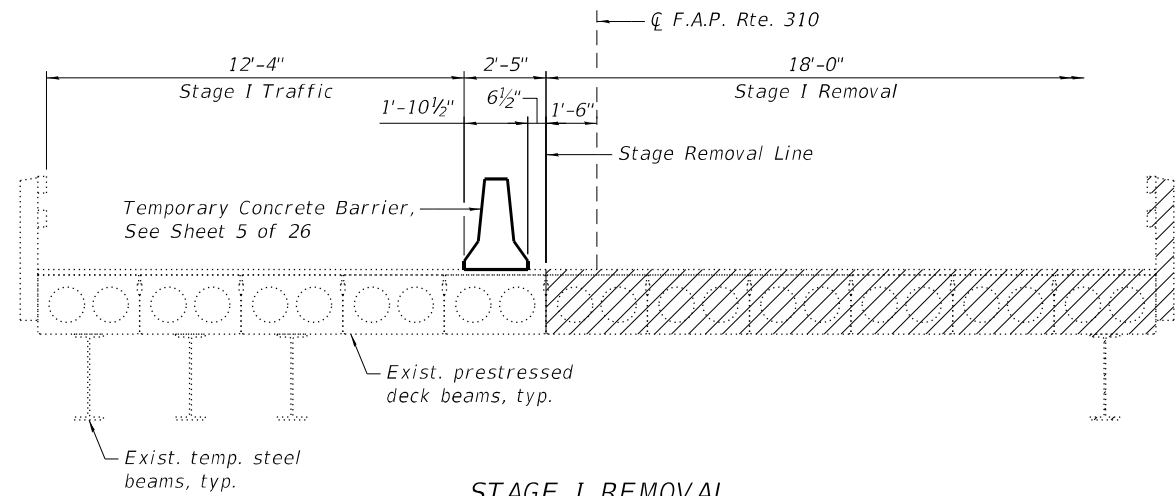
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Chicago, Illinois 60631; (773) 399-0112

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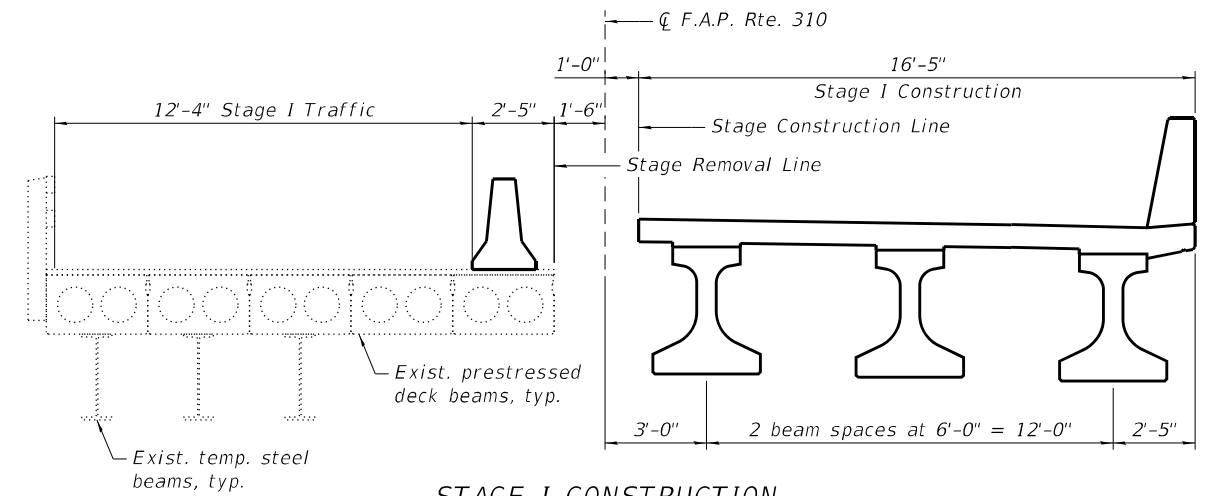
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 066-0020
SHEET 2 OF 26 SHEETS

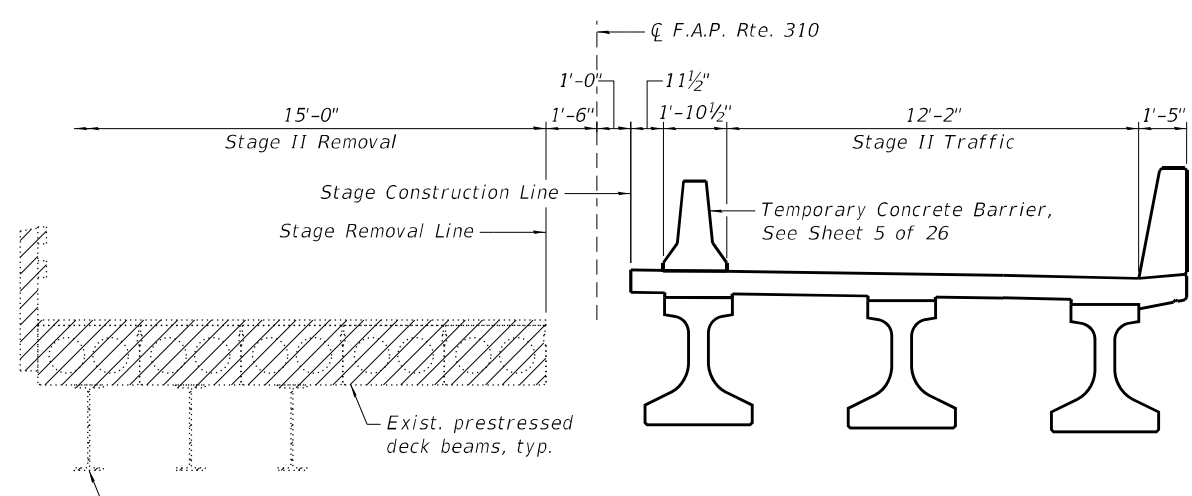
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310	(102)BR-1	MERCER	77	25
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



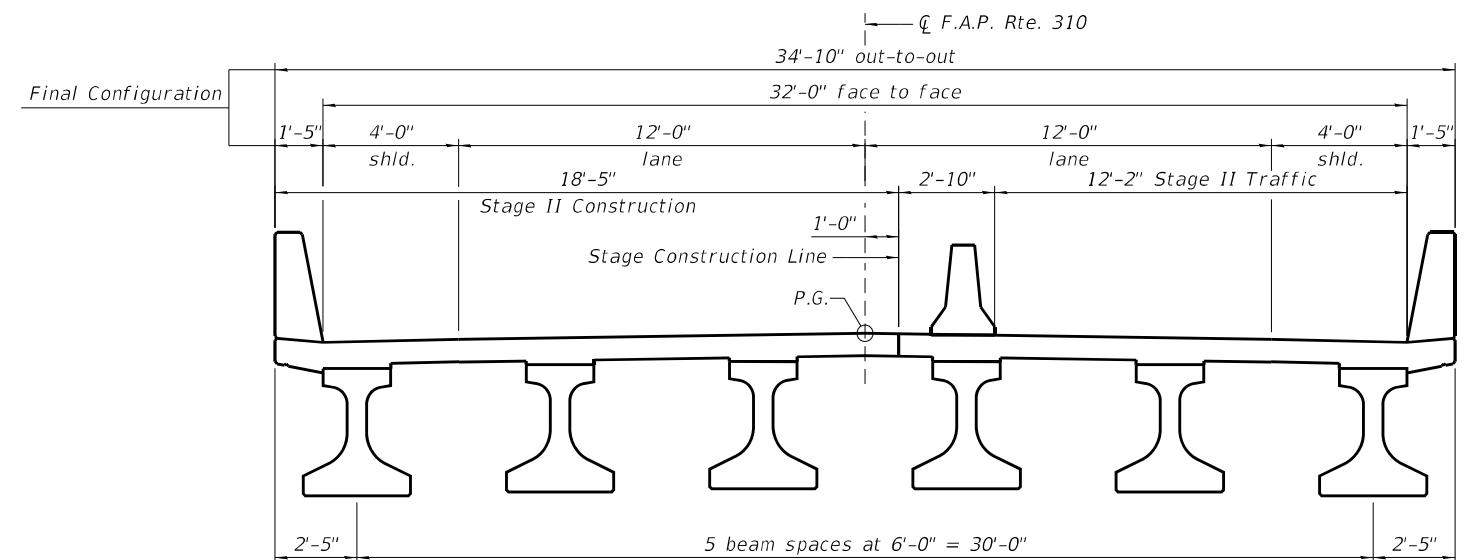
STAGE I REMOVAL
(Looking South)



STAGE I CONSTRUCTION
(Looking South)



STAGE II REMOVAL
(Looking South)



STAGE II CONSTRUCTION
(Looking South)

Notes:

1. Hatched areas indicate Removal of Existing Structure which shall include removal of the existing asphalt wearing surface.
2. For quantities of Temporary Concrete Barrier, see roadway plans.
3. Cost of removing the existing bridge rail is included with Removal of Existing Structures.
4. The cost of salvage and delivery of the temporary steel beams and supports to IDOT Bridge Maintenance Yard is included with Removal of Existing Structures.

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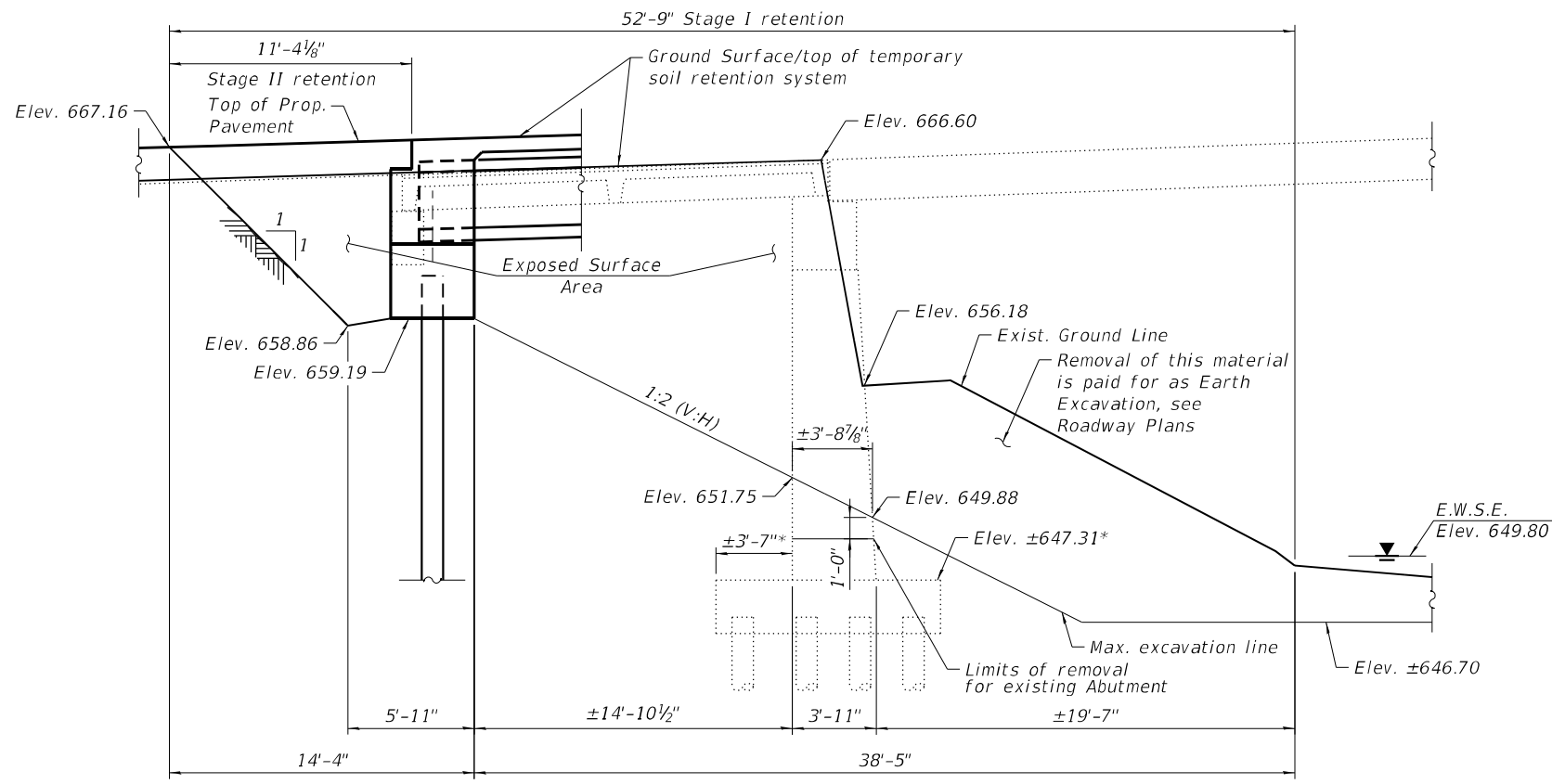
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

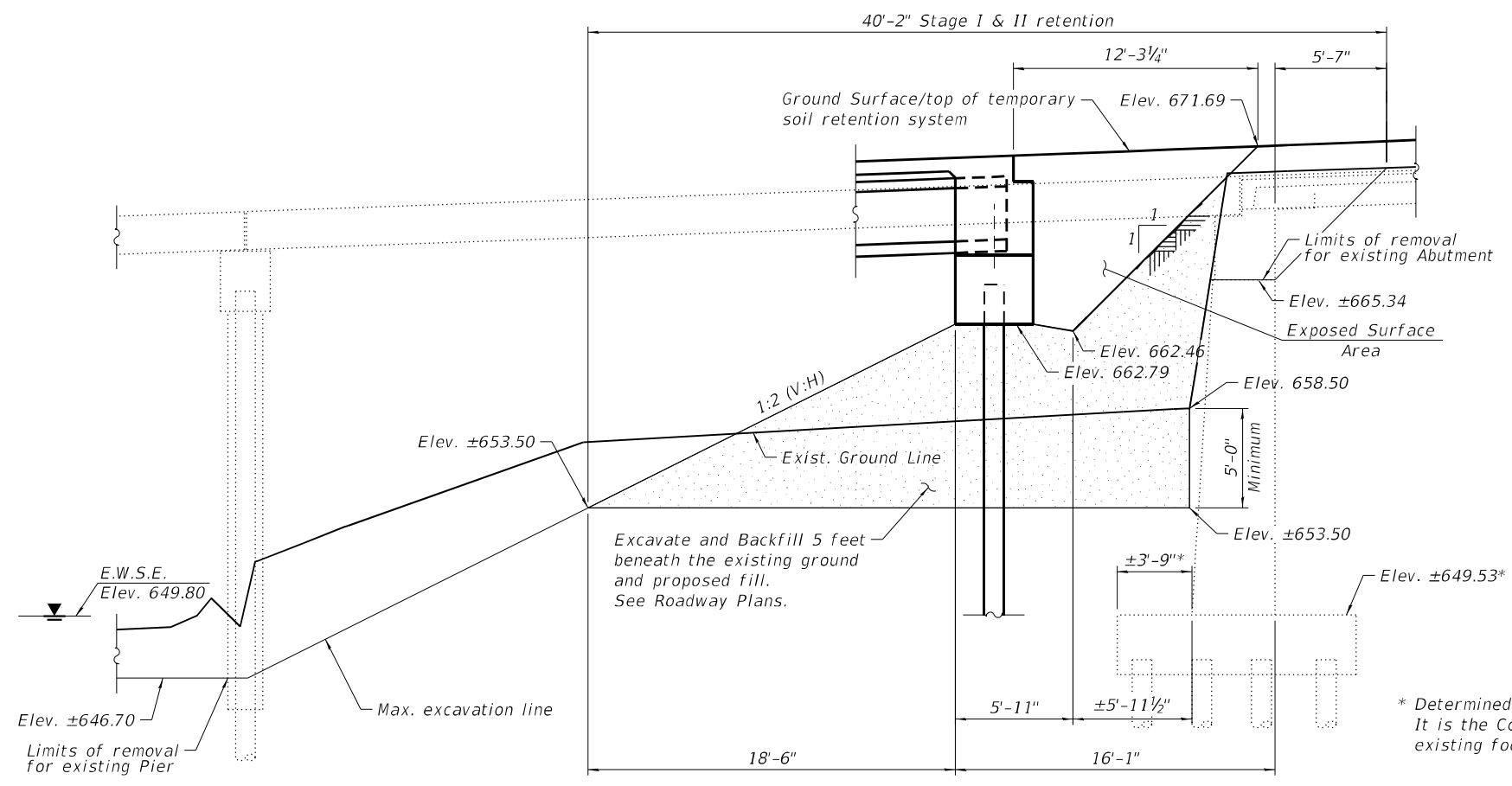
**STAGE CONSTRUCTION DETAILS
 STRUCTURE NO. 066-0020**

SHEET 3 OF 26 SHEETS

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 26
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



NORTH ABUTMENT - TEMPORARY SOIL RETENTION SYSTEM




SOUTH ABUTMENT - TEMPORARY SOIL RETENTION SYSTEM

Notes:

1. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
2. Dimensions and slopes are shown along the temporary soil retention unless otherwise noted.
3. Existing structure details are taken from the existing plans and are subject to nominal construction variations.

LEGEND

 Lightweight Cellular Concrete Fill

BILL OF MATERIAL

Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	770
Lightweight Cellular Concrete Fill	Cu. Yd.	371

* Determined from existing plans and survey data. It is the Contractor's responsibility to verify existing footing dimensions and elevations.

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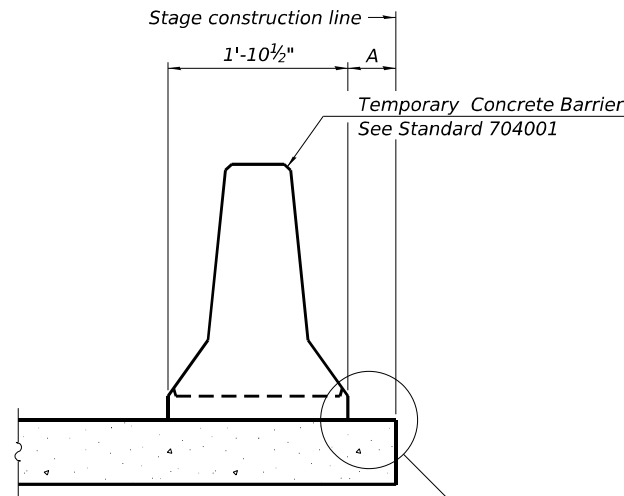
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

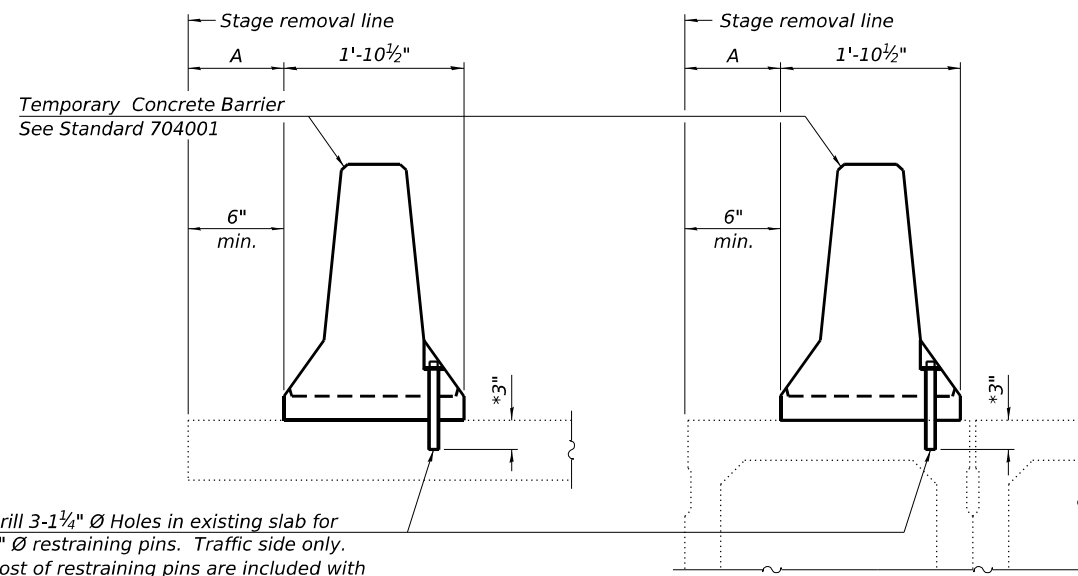
**TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 066-0020**
SHEET 4 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	27
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

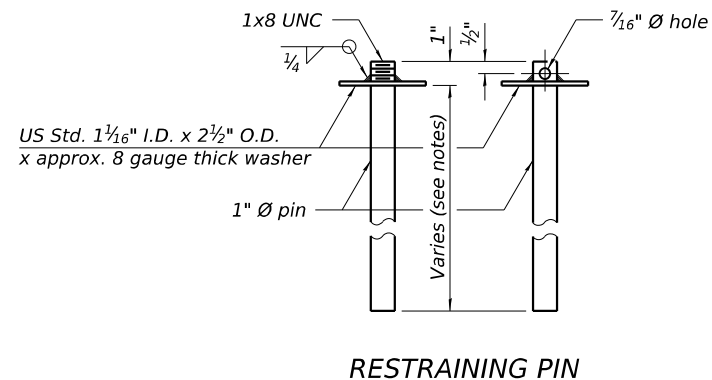


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

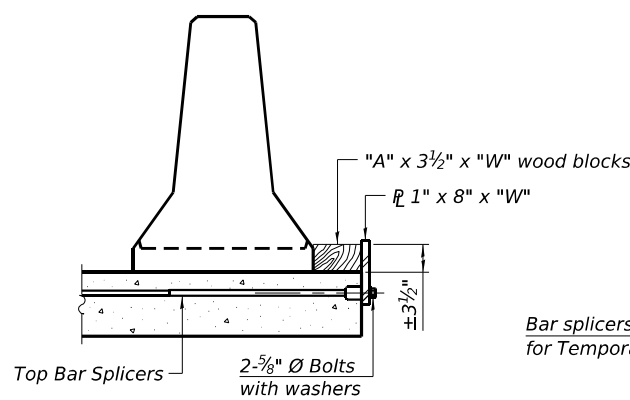
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

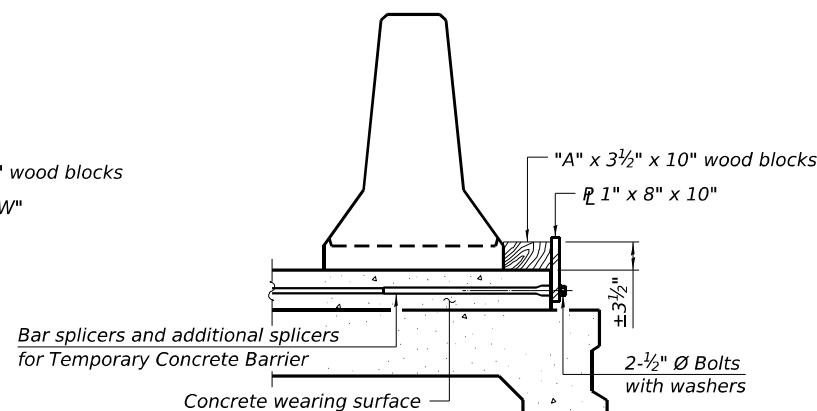


RESTRAINING PIN

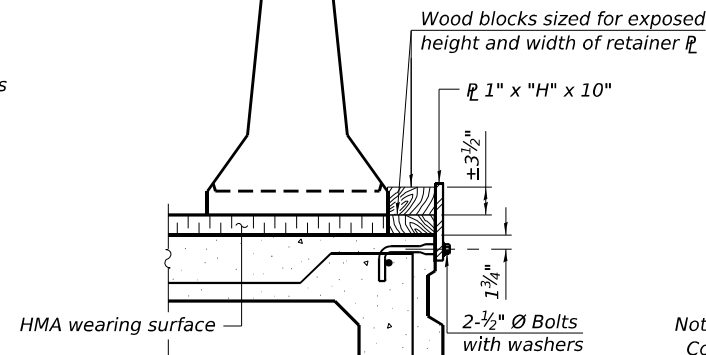
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.



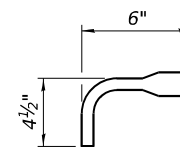
DETAIL I



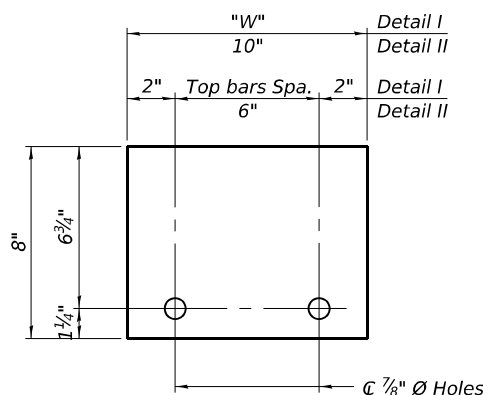
DETAIL II



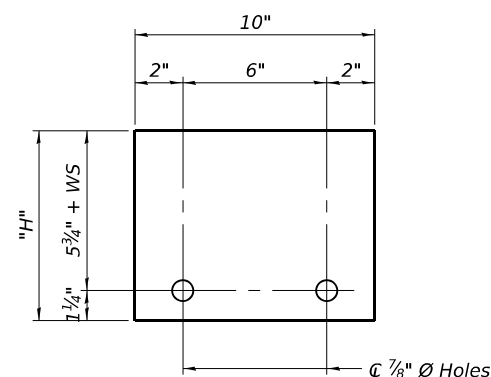
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate C of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate.
 For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 5-15-2023

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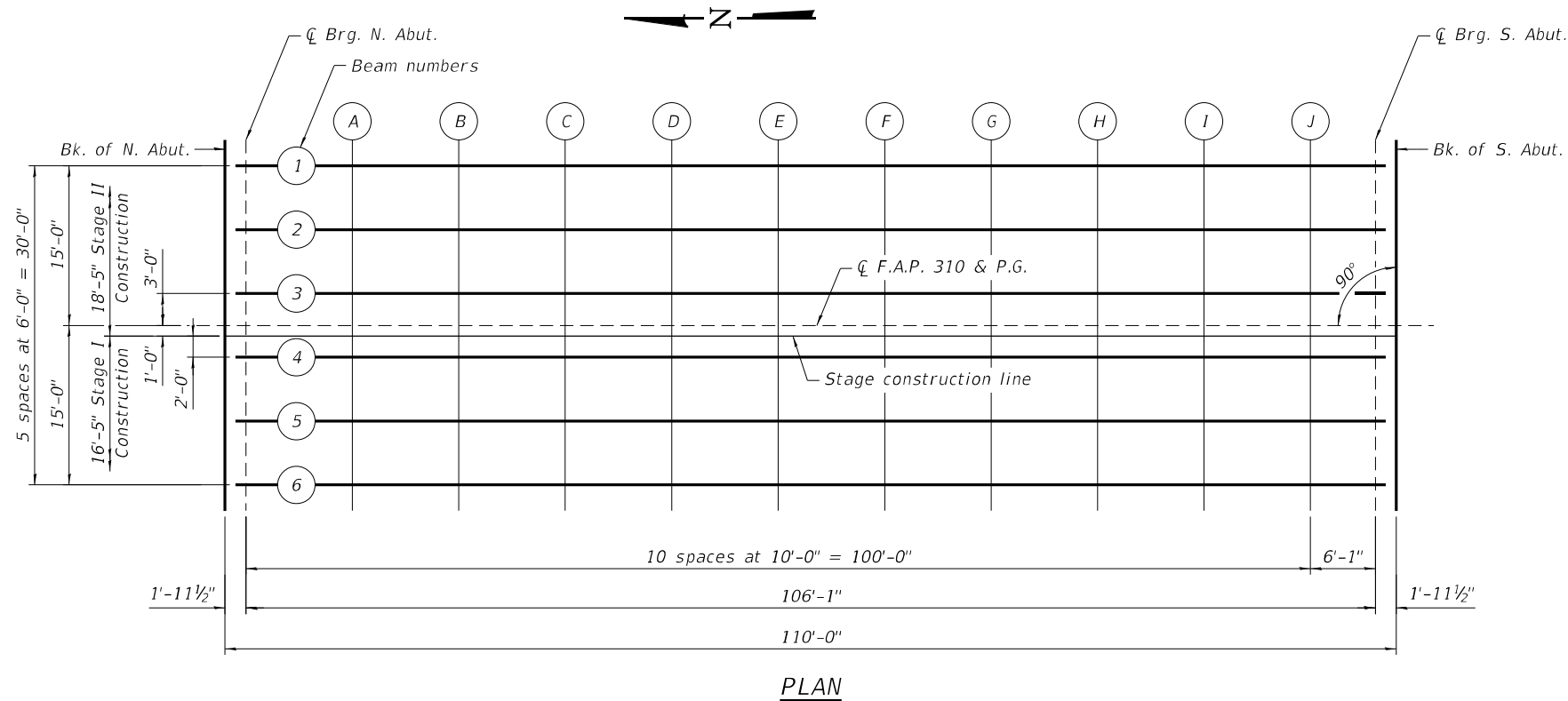
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

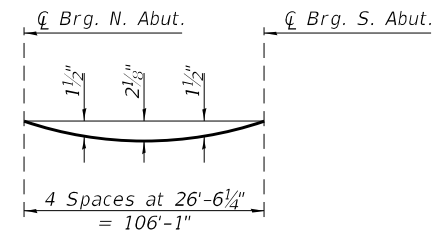
**TEMPORARY CONCRETE BARRIER
 STRUCTURE NO. 066-0020**

SHEET 5 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	28
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



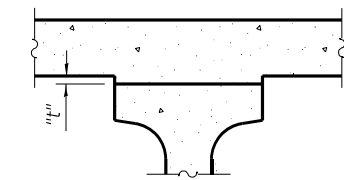
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only, excluding beams).

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 no. 7 of 26.



INTERIOR BEAMS

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below and on sheet no. 7 of 26, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	-15.00	667.26	667.26
☐ Brg. N. Abut.	1076+32.00	-15.00	667.31	667.31
A	1076+42.00	-15.00	667.62	667.67
B	1076+52.00	-15.00	667.93	668.02
C	1076+62.00	-15.00	668.25	668.37
D	1076+72.00	-15.00	668.57	668.72
E	1076+82.00	-15.00	668.91	669.07
F	1076+92.00	-15.00	669.25	669.40
G	1077+02.00	-15.00	669.59	669.74
H	1077+12.00	-15.00	669.95	670.06
I	1077+22.00	-15.00	670.31	670.39
J	1077+32.00	-15.00	670.68	670.71
☐ Brg. S. Abut.	1077+38.08	-15.00	670.91	670.91
Bk. of S. Abut.	1077+40.04	-15.00	670.98	670.98

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	-9.00	667.36	667.36
☐ Brg. N. Abut.	1076+32.00	-9.00	667.42	667.42
A	1076+42.00	-9.00	667.73	667.78
B	1076+52.00	-9.00	668.04	668.14
C	1076+62.00	-9.00	668.36	668.49
D	1076+72.00	-9.00	668.68	668.85
E	1076+82.00	-9.00	669.02	669.19
F	1076+92.00	-9.00	669.36	669.53
G	1077+02.00	-9.00	669.70	669.86
H	1077+12.00	-9.00	670.06	670.18
I	1077+22.00	-9.00	670.42	670.50
J	1077+32.00	-9.00	670.79	670.82
☐ Brg. S. Abut.	1077+38.08	-9.00	671.02	671.02
Bk. of S. Abut.	1077+40.04	-9.00	671.09	671.09

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	-3.00	667.46	667.46
☐ Brg. N. Abut.	1076+32.00	-3.00	667.52	667.52
A	1076+42.00	-3.00	667.82	667.87
B	1076+52.00	-3.00	668.13	668.23
C	1076+62.00	-3.00	668.45	668.59
D	1076+72.00	-3.00	668.78	668.94
E	1076+82.00	-3.00	669.11	669.29
F	1076+92.00	-3.00	669.45	669.62
G	1077+02.00	-3.00	669.80	669.95
H	1077+12.00	-3.00	670.15	670.28
I	1077+22.00	-3.00	670.52	670.60
J	1077+32.00	-3.00	670.89	670.92
☐ Brg. S. Abut.	1077+38.08	-3.00	671.11	671.11
Bk. of S. Abut.	1077+40.04	-3.00	671.19	671.19

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☐ F.A.P. 310 & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	0.00	667.51	667.51
☐ Brg. N. Abut.	1076+32.00	0.00	667.56	667.56
A	1076+42.00	0.00	667.87	667.92
B	1076+52.00	0.00	668.18	668.28
C	1076+62.00	0.00	668.50	668.64
D	1076+72.00	0.00	668.82	668.99
E	1076+82.00	0.00	669.16	669.33
F	1076+92.00	0.00	669.50	669.67
G	1077+02.00	0.00	669.84	670.00
H	1077+12.00	0.00	670.20	670.32
I	1077+22.00	0.00	670.56	670.64
J	1077+32.00	0.00	670.93	670.96
☐ Brg. S. Abut.	1077+38.08	0.00	671.16	671.16
Bk. of S. Abut.	1077+40.04	0.00	671.23	671.23

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	1.00	667.49	667.49
☐ Brg. N. Abut.	1076+32.00	1.00	667.55	667.55
A	1076+42.00	1.00	667.85	667.90
B	1076+52.00	1.00	668.16	668.26
C	1076+62.00	1.00	668.48	668.62
D	1076+72.00	1.00	668.81	668.97
E	1076+82.00	1.00	669.14	669.32
F	1076+92.00	1.00	669.48	669.65
G	1077+02.00	1.00	669.83	669.98
H	1077+12.00	1.00	670.18	670.31
I	1077+22.00	1.00	670.55	670.63
J	1077+32.00	1.00	670.92	670.95
☐ Brg. S. Abut.	1077+38.08	1.00	671.14	671.14
Bk. of S. Abut.	1077+40.04	1.00	671.22	671.22

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	3.00	667.46	667.46
☐ Brg. N. Abut.	1076+32.00	3.00	667.52	667.52
A	1076+42.00	3.00	667.82	667.87
B	1076+52.00	3.00	668.13	668.23
C	1076+62.00	3.00	668.45	668.59
D	1076+72.00	3.00	668.78	668.94
E	1076+82.00	3.00	669.11	669.29
F	1076+92.00	3.00	669.45	669.62
G	1077+02.00	3.00	669.80	669.95
H	1077+12.00	3.00	670.15	670.28
I	1077+22.00	3.00	670.52	670.60
J	1077+32.00	3.00	670.89	670.92
☐ Brg. S. Abut.	1077+38.08	3.00	671.11	671.11
Bk. of S. Abut.	1077+40.04	3.00	671.19	671.19

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	9.00	667.36	667.36
☐ Brg. N. Abut.	1076+32.00	9.00	667.42	667.42
A	1076+42.00	9.00	667.73	667.78
B	1076+52.00	9.00	668.04	668.14
C	1076+62.00	9.00	668.36	668.49
D	1076+72.00	9.00	668.68	668.85
E	1076+82.00	9.00	669.02	669.19
F	1076+92.00	9.00	669.36	669.53
G	1077+02.00	9.00	669.70	669.86
H	1077+12.00	9.00	670.06	670.18
I	1077+22.00	9.00	670.42	670.50
J	1077+32.00	9.00	670.79	670.82
☐ Brg. S. Abut.	1077+38.08	9.00	671.02	671.02
Bk. of S. Abut.	1077+40.04	9.00	671.09	671.09

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	1076+30.04	15.00	667.26	667.26
☐ Brg. N. Abut.	1076+32.00	15.00	667.31	667.31
A	1076+42.00	15.00	667.62	667.67
B	1076+52.00	15.00	667.93	668.02
C	1076+62.00	15.00	668.25	668.37
D	1076+72.00	15.00	668.57	668.72
E	1076+82.00	15.00	668.91	669.07
F	1076+92.00	15.00	669.25	669.40
G	1077+02.00	15.00	669.59	669.74
H	1077+12.00	15.00	669.95	670.06
I	1077+22.00	15.00	670.31	670.39
J	1077+32.00	15.00	670.68	670.71
☐ Brg. S. Abut.	1077+38.08	15.00	670.91	670.91
Bk. of S. Abut.	1077+40.04	15.00	670.98	670.98

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PLOT DATE =	CHECKED -	S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS II
STRUCTURE NO. 066-0020

SHEET 7 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	30
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

EAST EDGE OF SHOULDER

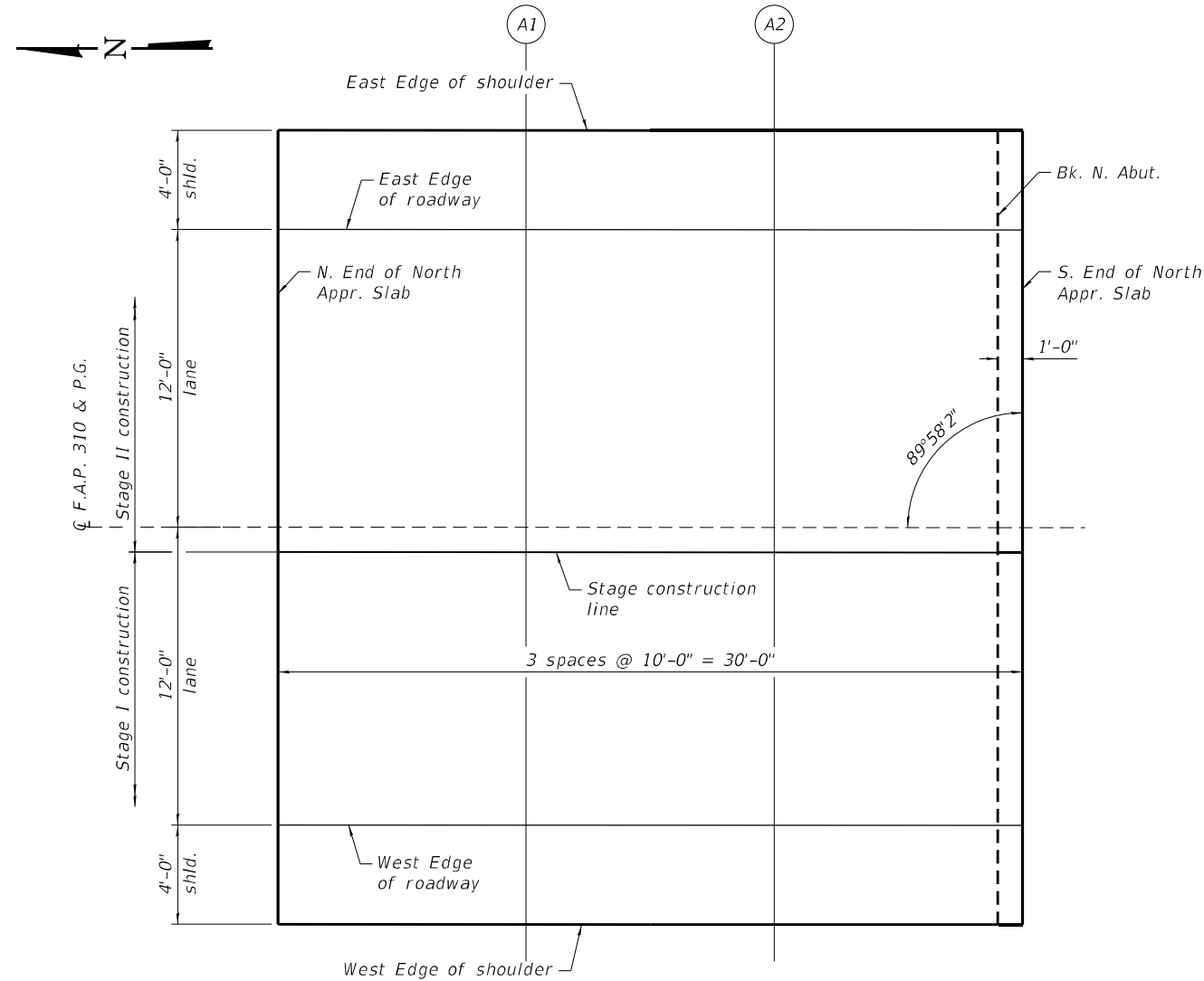
Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	-16.00	666.40
A1	1076+11.04	-16.00	666.68
A2	1076+21.04	-16.00	666.97
S. end of N. Appr.	1076+31.04	-16.00	667.26

EAST EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	-12.00	666.48
A1	1076+11.04	-12.00	666.76
A2	1076+21.04	-12.00	667.05
S. end of N. Appr.	1076+31.04	-12.00	667.35

∅ F.A.P. 310 & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	0.00	666.67
A1	1076+11.04	0.00	666.95
A2	1076+21.04	0.00	667.24
S. end of N. Appr.	1076+31.04	0.00	667.54



NORTH APPROACH SLAB PLAN

STAGE CONSTRUCTION LINE

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	1.00	666.66
A1	1076+11.04	1.00	666.94
A2	1076+21.04	1.00	667.22
S. end of N. Appr.	1076+31.04	1.00	667.52

WEST EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	12.00	666.48
A1	1076+11.04	12.00	666.76
A2	1076+21.04	12.00	667.05
S. end of N. Appr.	1076+31.04	12.00	667.35

WEST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of N. Appr.	1076+01.04	16.00	666.40
A1	1076+11.04	16.00	666.68
A2	1076+21.04	16.00	667.97
S. end of N. Appr.	1076+31.04	16.00	667.26

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PLOT DATE =	CHECKED -	S.H., K.G.W.	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	31
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

EAST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	-16.00	670.93
A3	1077+49.04	-16.00	671.31
A4	1077+59.04	-16.00	671.70
S. end of S. Apr.	1077+69.04	-16.00	672.10

EAST EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	-12.00	671.01
A3	1077+49.04	-12.00	671.39
A4	1077+59.04	-12.00	671.78
S. end of S. Apr.	1077+69.04	-12.00	672.18

℄ F.A.P. 310 & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	0.00	671.20
A3	1077+49.04	0.00	671.58
A4	1077+59.04	0.00	671.97
S. end of S. Apr.	1077+69.04	0.00	672.37

STAGE CONSTRUCTION LINE

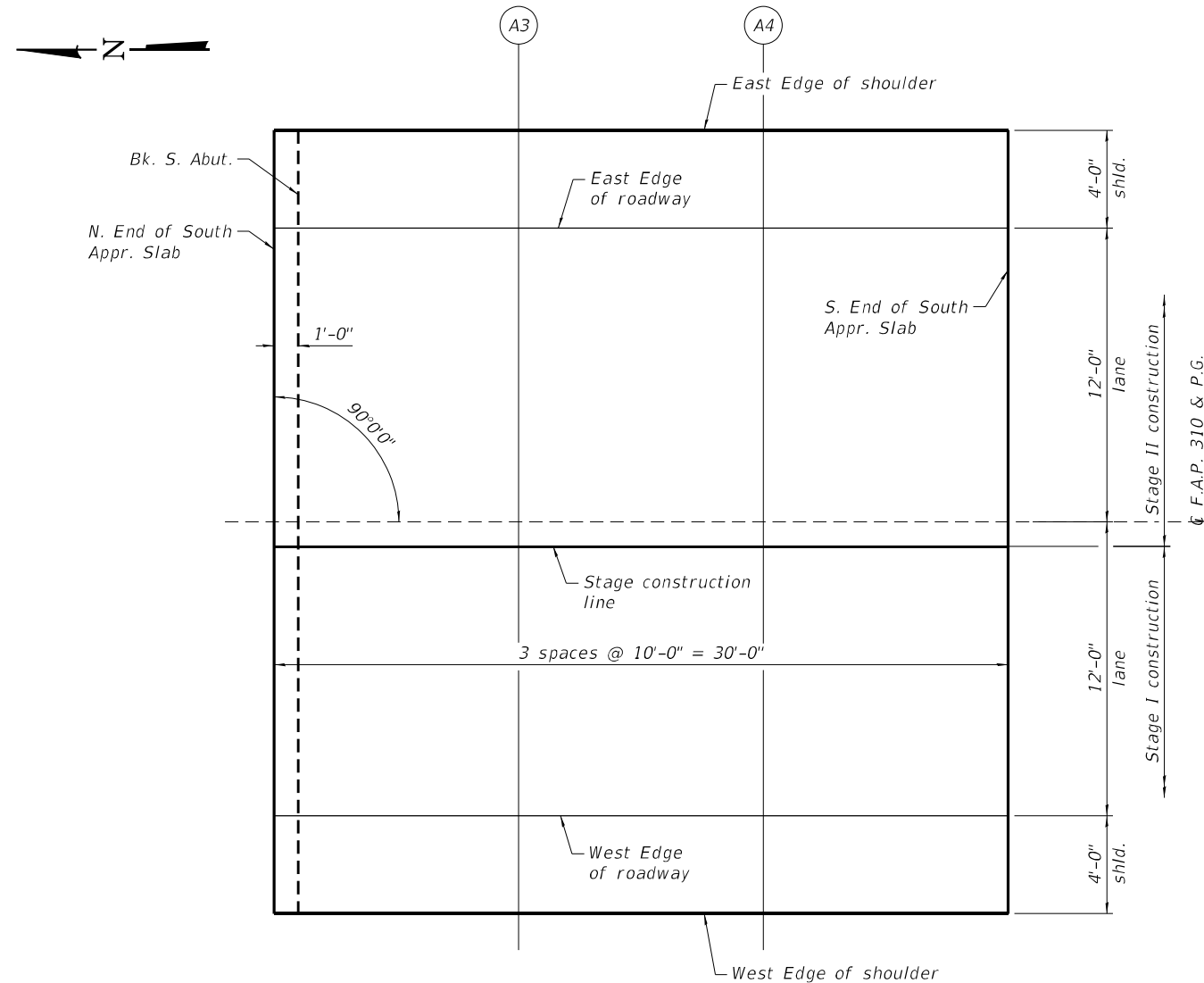
Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	1.00	671.18
A3	1077+49.04	1.00	671.56
A4	1077+59.04	1.00	671.95
S. end of S. Apr.	1077+69.04	1.00	672.35

WEST EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	12.00	671.01
A3	1077+49.04	12.00	671.39
A4	1077+59.04	12.00	671.78
S. end of S. Apr.	1077+69.04	12.00	672.18

WEST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end of S. Apr.	1077+39.04	16.00	670.93
A3	1077+49.04	16.00	671.31
A4	1077+59.04	16.00	671.70
S. end of S. Apr.	1077+69.04	16.00	672.10

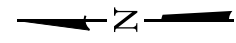


SOUTH APPROACH SLAB PLAN

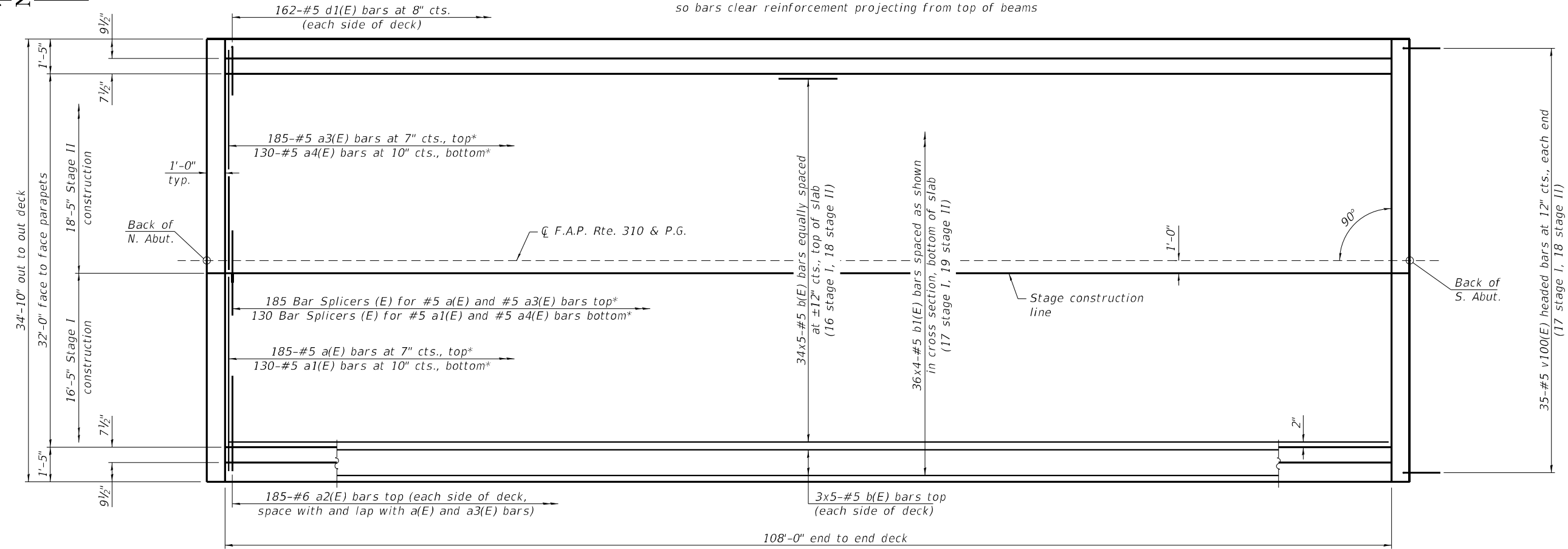
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PLOT DATE =	CHECKED -	S.H., K.G.W.	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	32
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



* Minor adjustments in spacing are allowed if necessary
so bars clear reinforcement projecting from top of beams

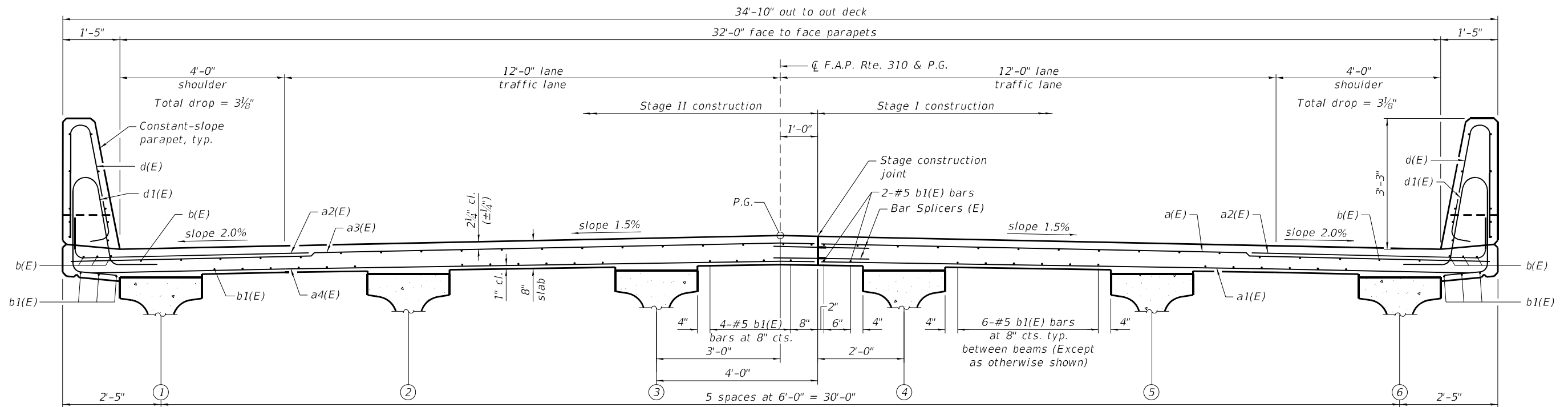


MINIMUM BAR LAP

#5 bar = 3'-6"

PLAN

Notes:
See sheet 11 of 26 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.



CROSS SECTION

(Looking South)

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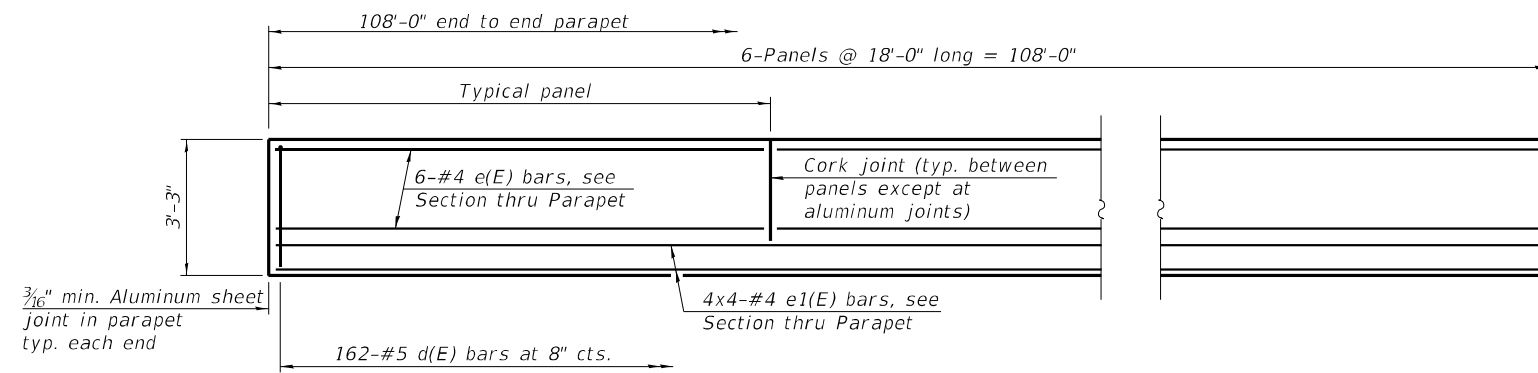
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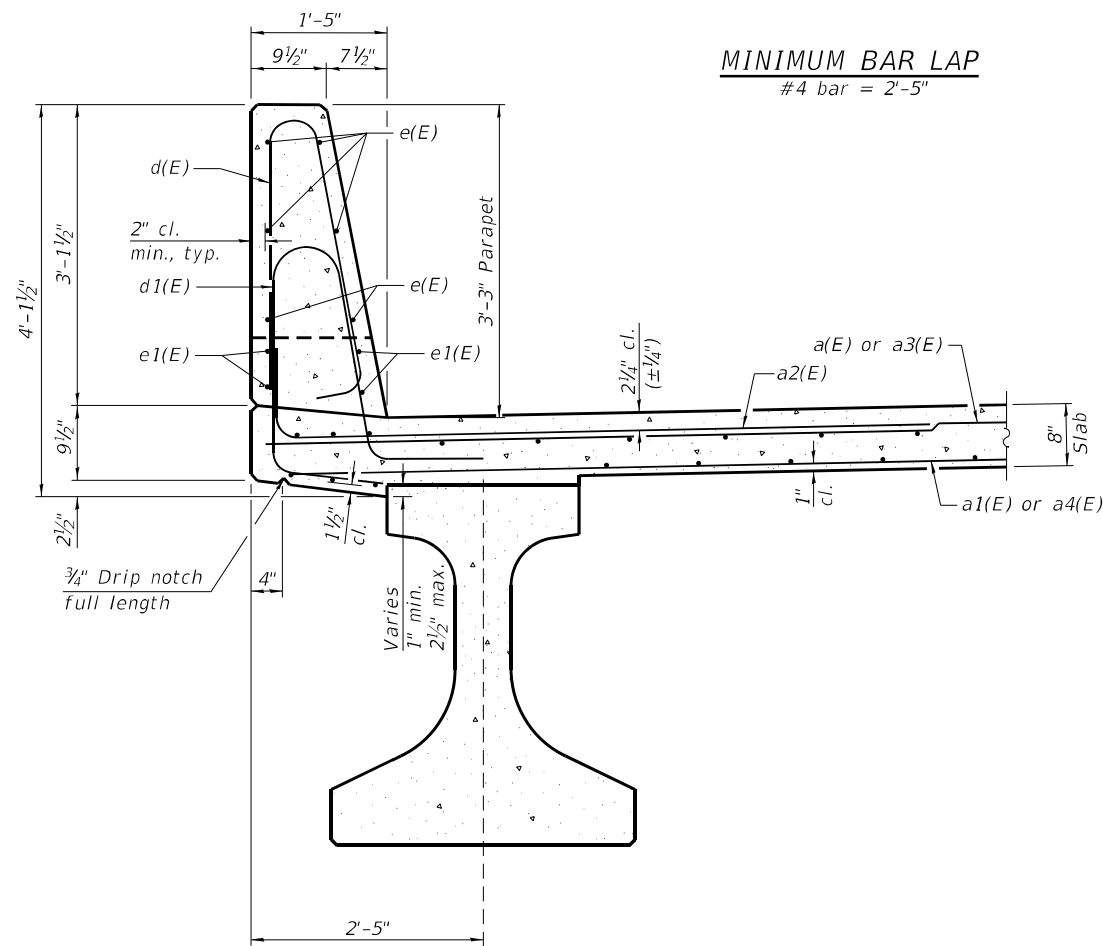
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE
STRUCTURE NO. 066-0020**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	33
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

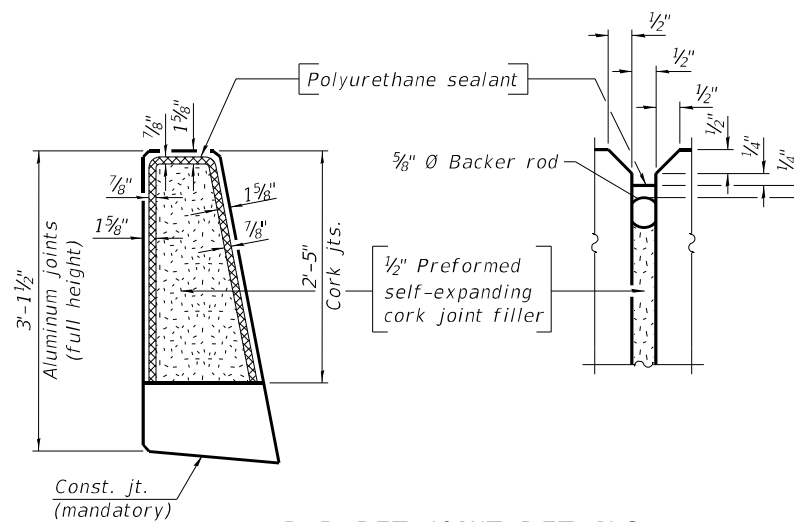


INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP
#4 bar = 2'-5"



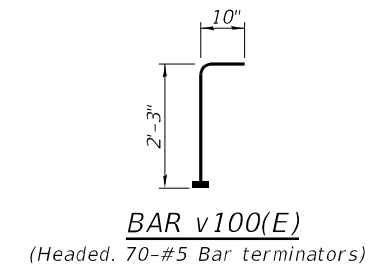
PARAPET JOINT DETAILS

Notes:

The 3/16" min. aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mils of either bitumen paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

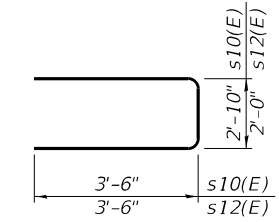
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Bar terminators, paid for separately. See Total Bill of Material.

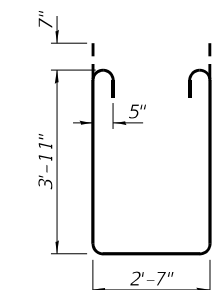


BAR v100(E)

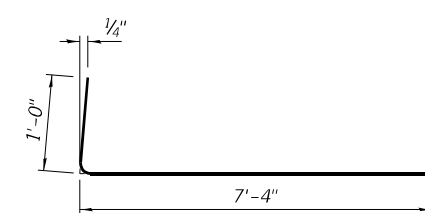
(Headed, 70-#5 Bar terminators)



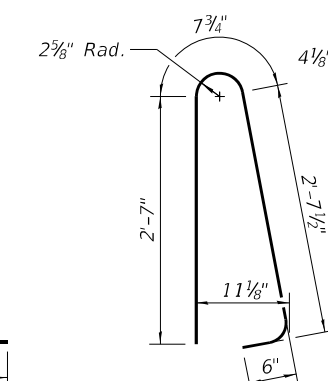
BARS s10(E) & s12(E)



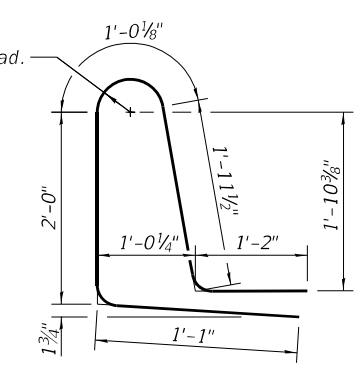
BAR s11(E)



BAR a2(E)



BAR d(E)



BAR d1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	185	#5	16'-1"	—
a1(E)	130	#5	15'-7"	—
a2(E)	370	#6	8'-4"	—
a3(E)	185	#5	18'-1"	—
a4(E)	130	#5	17'-7"	—
b(E)	200	#5	24'-5"	—
b1(E)	144	#5	29'-8"	—
d(E)	324	#5	6'-5"	—
d1(E)	324	#5	7'-3"	—
e(E)	72	#4	17'-8"	—
e1(E)	32	#4	28'-9"	—
m10(E)	12	#6	16'-1"	—
m11(E)	40	#6	4'-8"	—
m12(E)	16	#6	1'-6"	—
m13(E)	10	#6	2'-6"	—
m14(E)	4	#6	0'-6"	—
m15(E)	24	#5	4'-0"	—
m16(E)	12	#6	18'-1"	—
s10(E)	48	#5	9'-10"	—
s11(E)	58	#5	11'-7"	—
s12(E)	48	#5	9'-0"	—
v100(E)	70	#5	3'-1"	—
Reinforcement Bars, Epoxy Coated		Lbs.		35,260
Concrete Superstructure		Cu. Yds.		188.1

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

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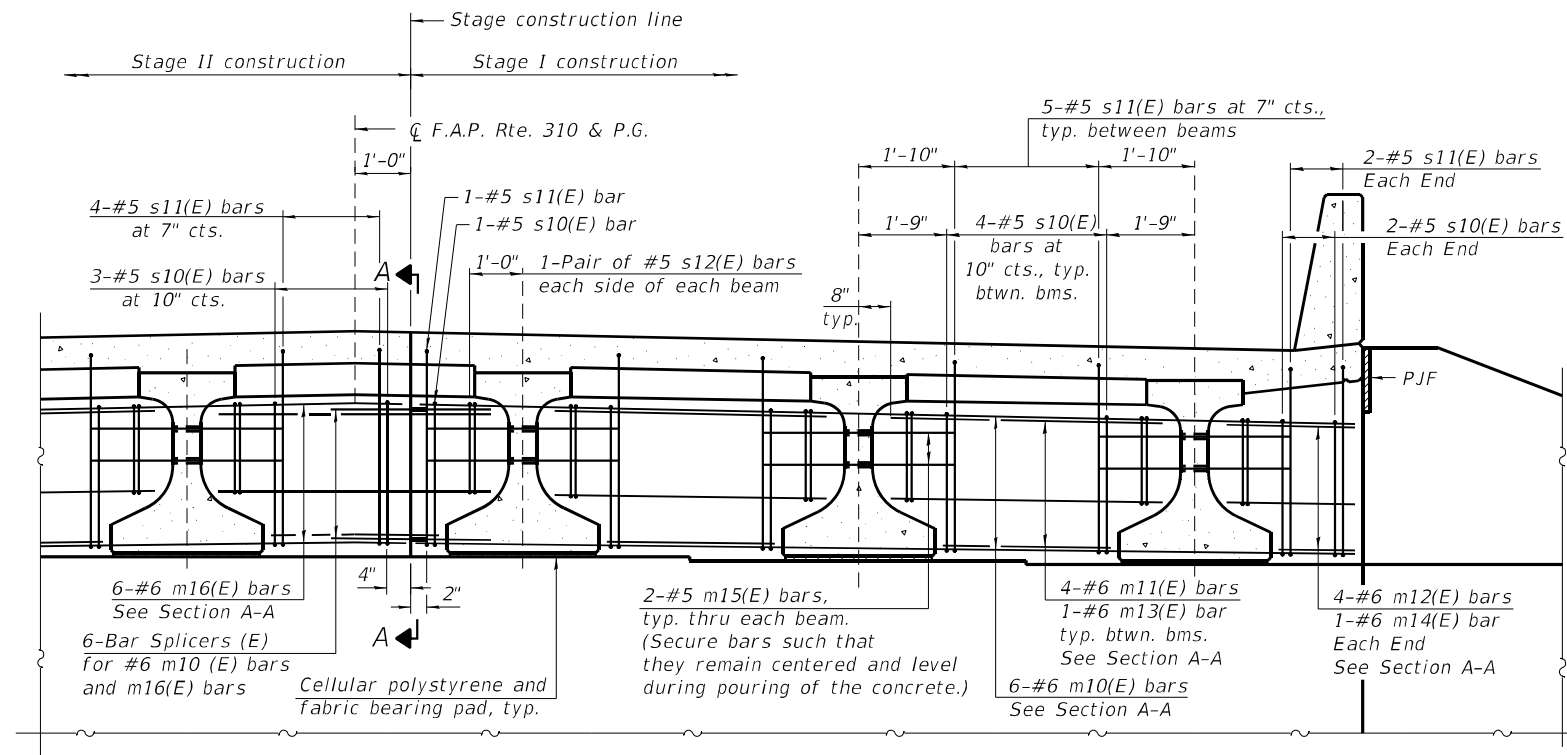


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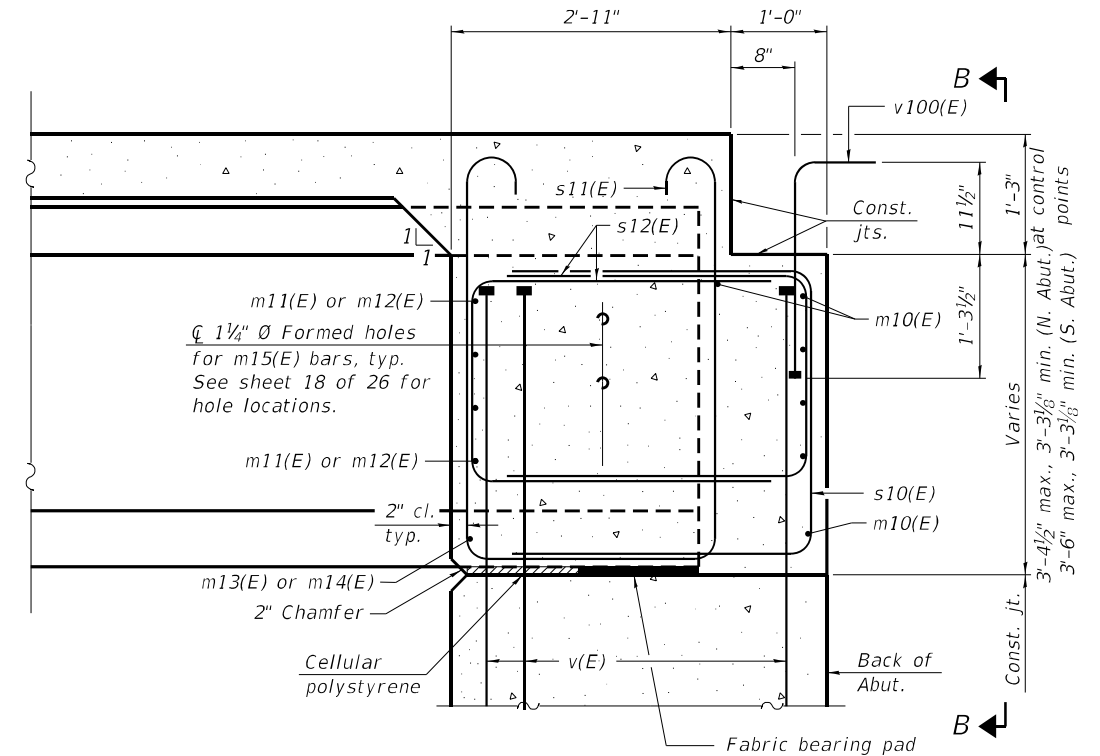
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 066-0020
SHEET 11 OF 26 SHEETS

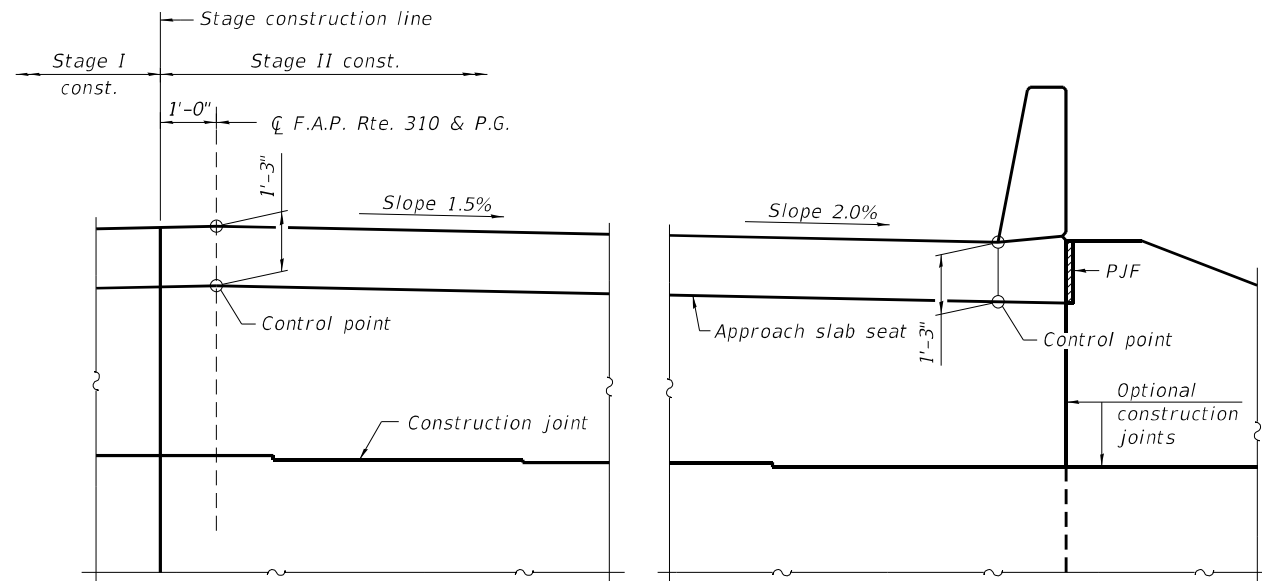
F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 34
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



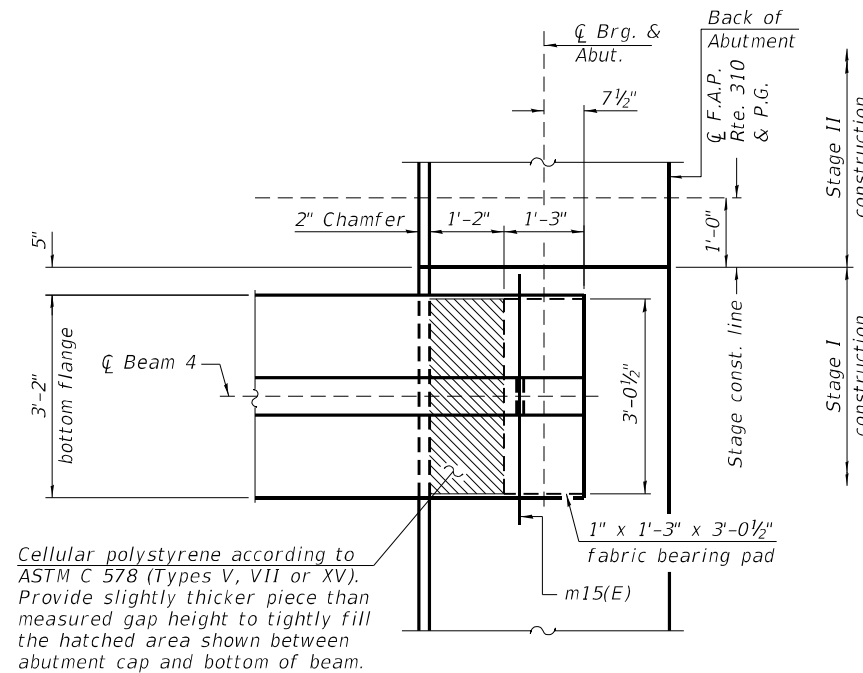
DIAPHRAGM AT ABUTMENT
 (Looking South at South Abutment, North Abutment similar)



SECTION A-A



VIEW B-B
 (Looking North at South Abutment, North Abutment similar)



Cellular polystyrene according to ASTM C 578 (Types V, VII or XV). Provide slightly thicker piece than measured gap height to tightly fill the hatched area shown between abutment cap and bottom of beam.

PLAN AT ABUTMENT
 (Showing bottom flange of beam)

Note:
 Diaphragms are to be poured monolithically with deck slab.

- Notes:
- See sheet 11 of 26 for superstructure details and Bill of Material.
 - Reinforcement bars in diaphragm are billed with superstructure on Sheet 11 of 26.
 - Concrete in diaphragm is included with Concrete Superstructure on Sheet 11 of 26.
 - For details of bars s10(E), s11(E), s12(E), s13(E), s14(E) and v100(E) see Sheet 11 of 26.
 - For details of bar v(E) see Sheets 20 and 21 of 26.
 - The approach slab seat shall have a constant slope determined from the control points shown.
 - Beams shall be braced for stability during erection and remain braced until the deck is poured and cured.
 - Cost of cellular polystyrene is included with Concrete Superstructure.
 - See sheets 13 and 15 of 26 for P.J.F. details.

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GRAEF
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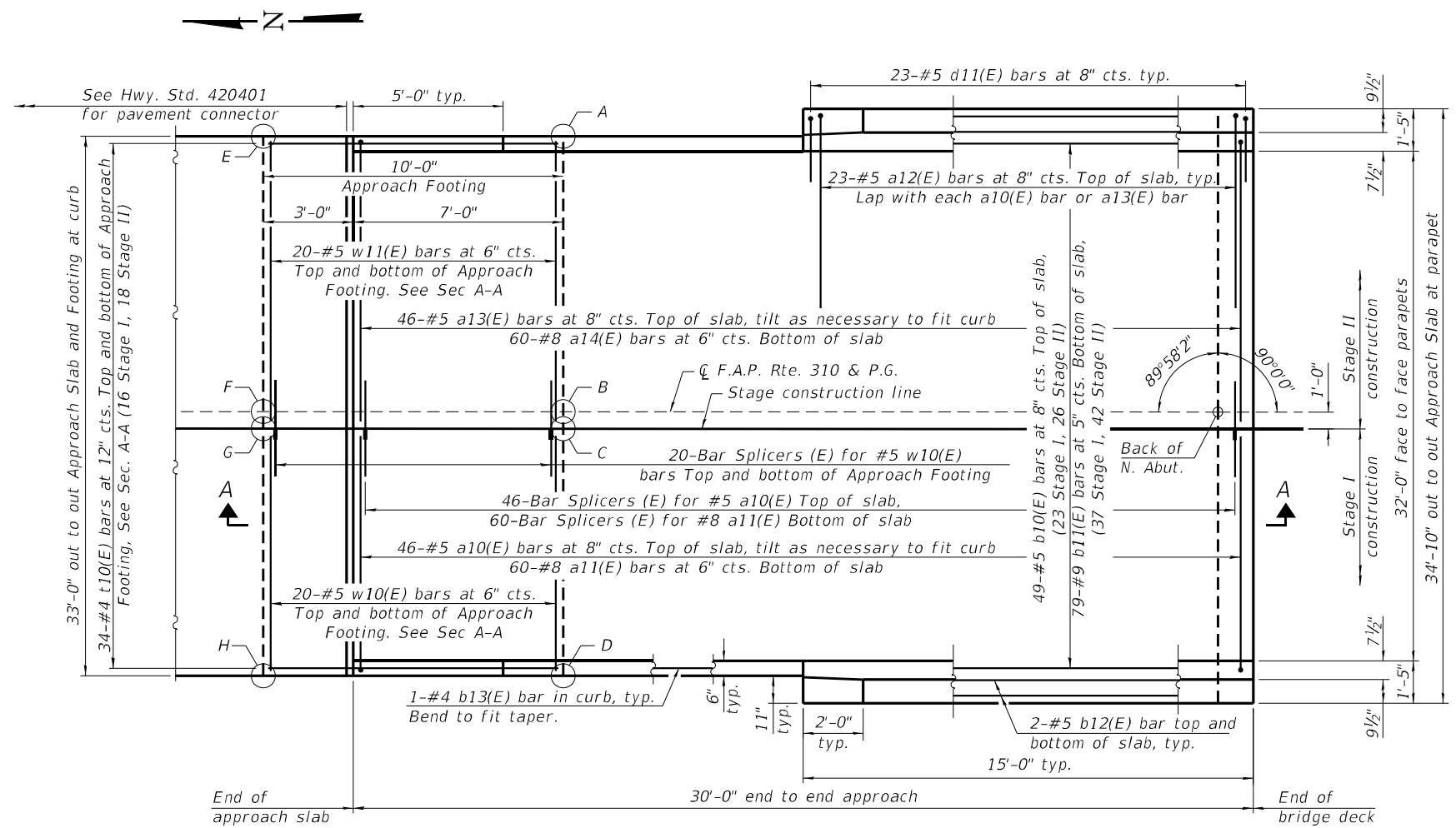
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PLOT DATE =	DRAWN -	D.C.P.	REVISED -
	CHECKED -	S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 066-0020

SHEET 12 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	35
CONTRACT NO. 68801				
ILLINOIS		FED. AID PROJECT		

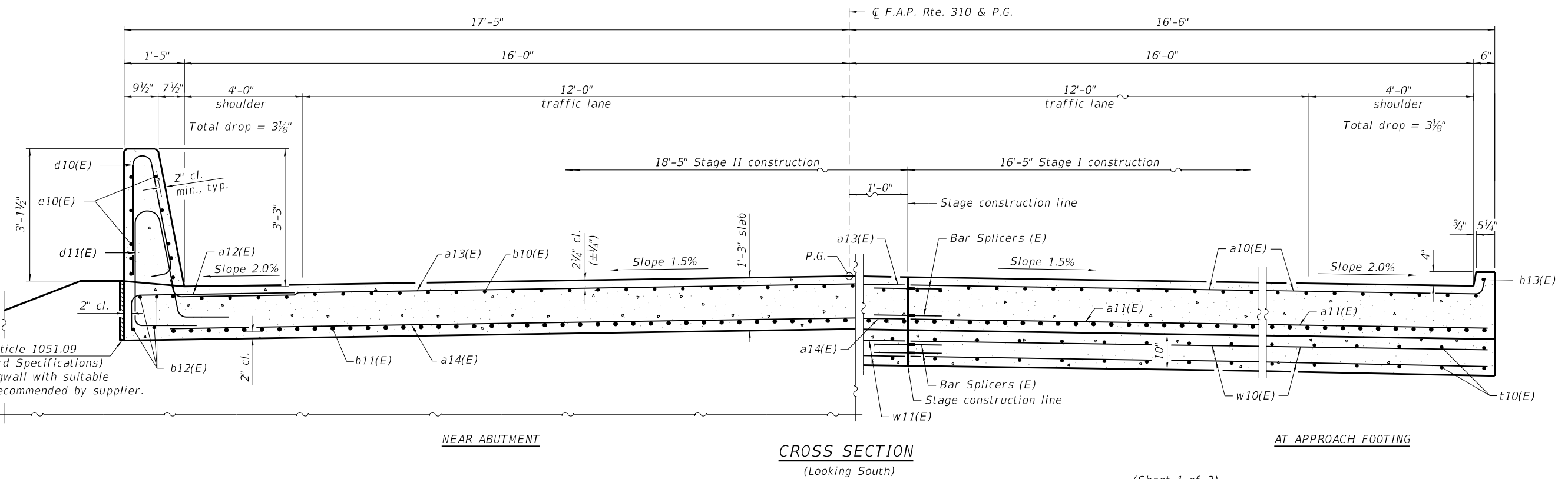


PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

North Approach		
Point/Location	Top	Bottom
A - SE	665.34	664.50
B - S \bar{C}	665.62	664.78
C - S SC	665.60	664.77
D - SW	665.34	664.50
E - NE	665.06	664.22
F - N \bar{C}	665.34	664.50
G - N SC	665.32	664.49
H - NW	665.06	664.22

Note:
See Sheet 14 of 26 for Section A-A, Bill of Material and additional details.
See Sheet 23 of 26 for Bar splicer details.



NEAR ABUTMENT

CROSS SECTION
(Looking South)

AT APPROACH FOOTING

(Sheet 1 of 2)

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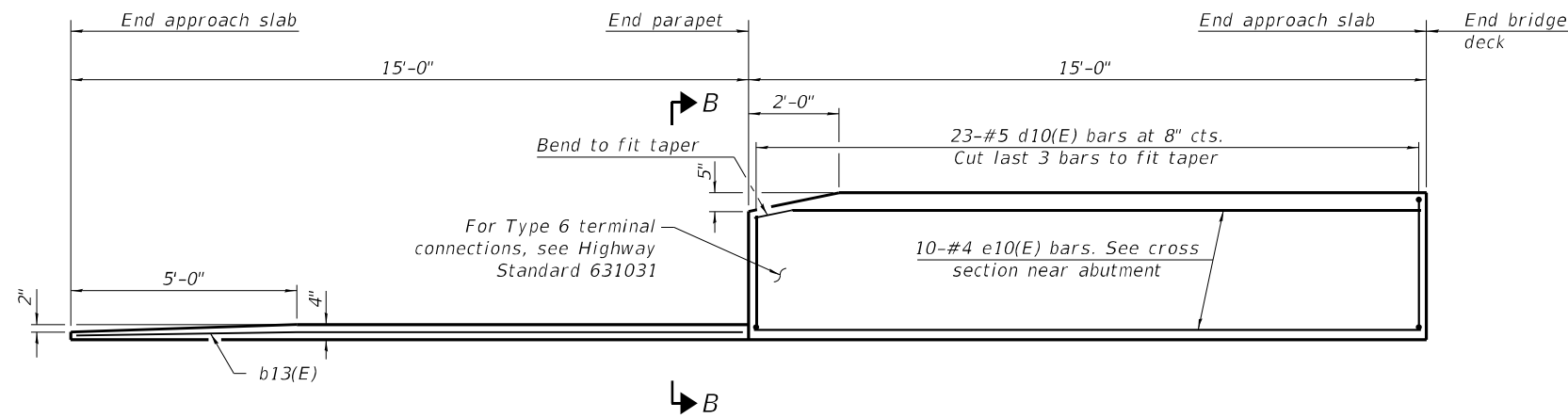
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	CHECKED - S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH APPROACH SLAB DETAILS I
STRUCTURE NO. 066-0020

SHEET 13 OF 26 SHEETS

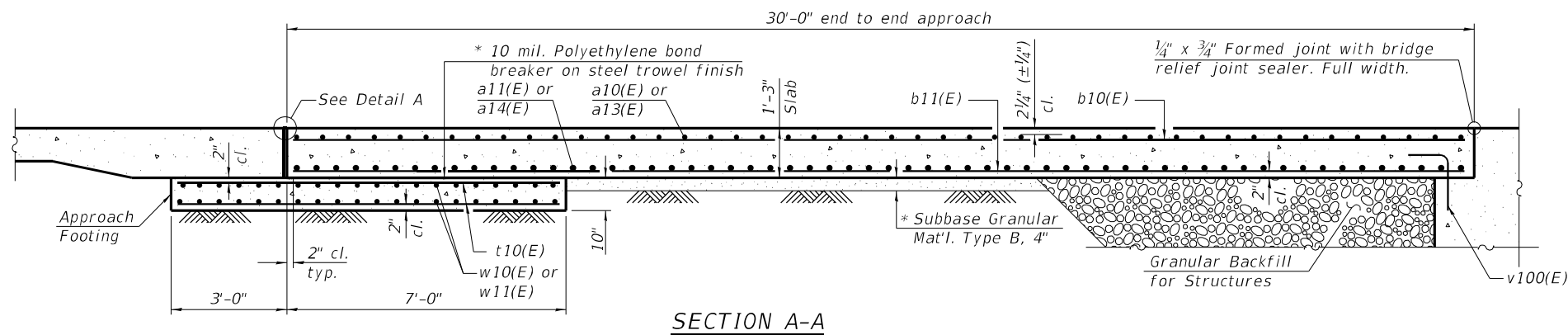
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CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



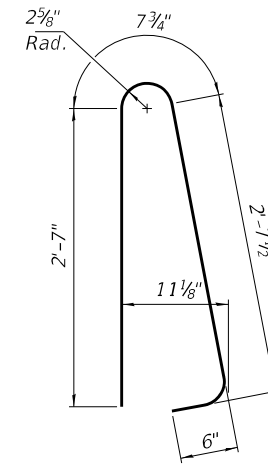
INSIDE ELEVATION OF PARAPET AND CURB

Notes:

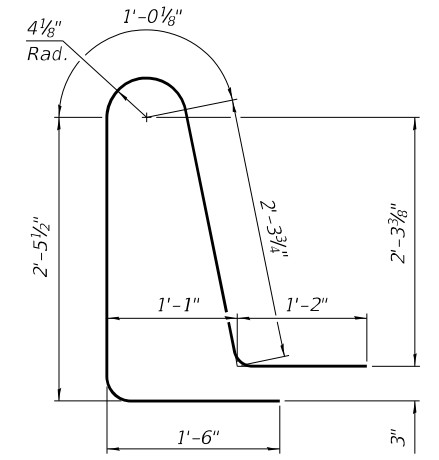
The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 26.



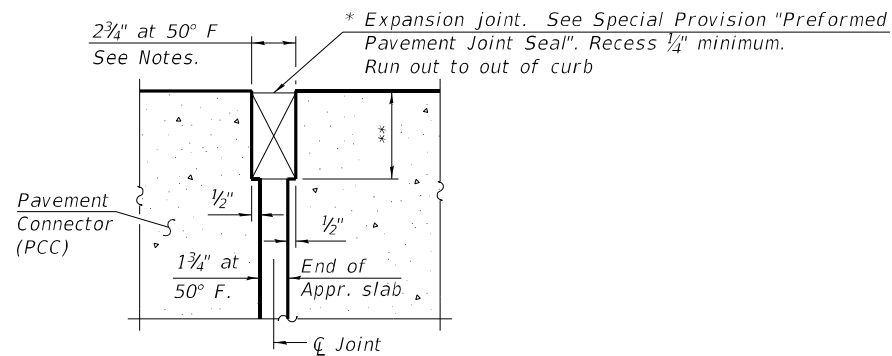
SECTION A-A



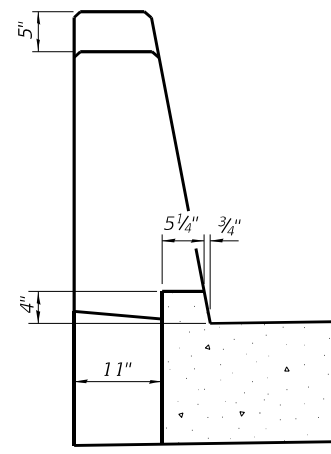
BAR d10(E)



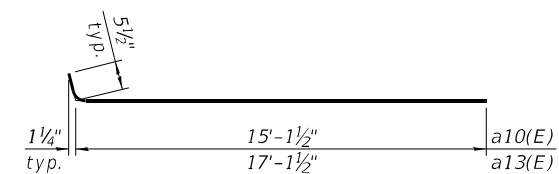
BAR d11(E)



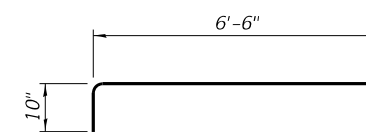
DETAIL A



VIEW B-B



BARS a10(E) & a13(E)



BAR a12(E)

NORTH APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	46	#5	15'-7"	
a11(E)	60	#8	15'-2"	
a12(E)	46	#5	7'-4"	
a13(E)	46	#5	17'-7"	
a14(E)	60	#8	17'-2"	
b10(E)	49	#5	29'-8"	
b11(E)	79	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	2	#4	14'-8"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	14'-8"	
t10(E)	68	#4	9'-8"	
w10(E)	40	#5	15'-2"	
w11(E)	40	#5	17'-2"	
Concrete Superstructure			Cu. Yd.	3.9
Concrete Superstructure (Approach Slab)			Cu. Yd.	47.2
Concrete Structures			Cu. Yd.	10.2
Reinforcement Bars, Epoxy Coated			Pound	19,450

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

(Sheet 2 of 2)

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GR&EF
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Chicago, Illinois 60631; (773) 399-0112

USER NAME =	DESIGNED -	J.T.B.	REVISED -	
	CHECKED -	K.J.M.	REVISED -	
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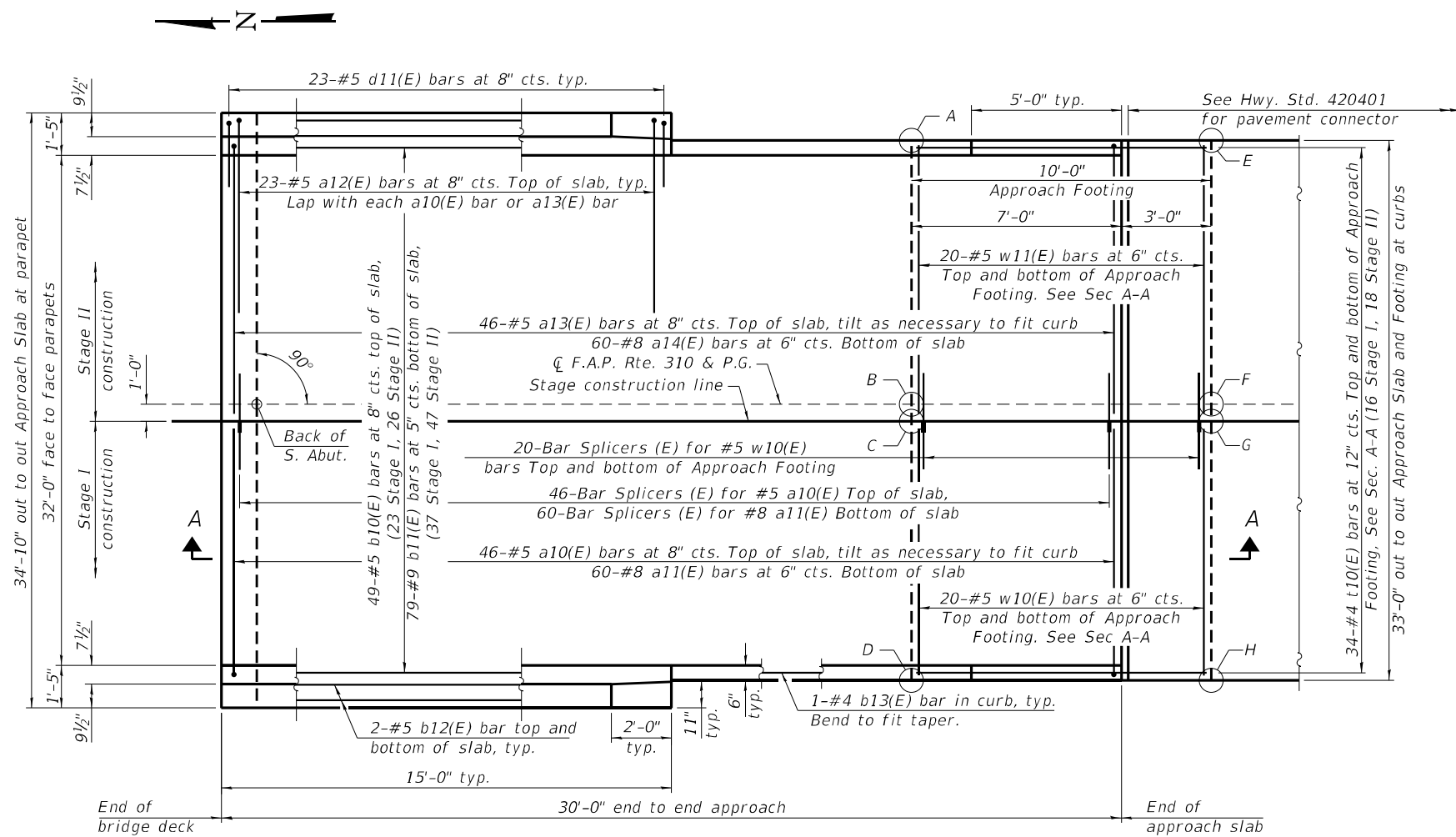
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH APPROACH SLAB DETAILS II
STRUCTURE NO. 066-0020

SHEET 14 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	37
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

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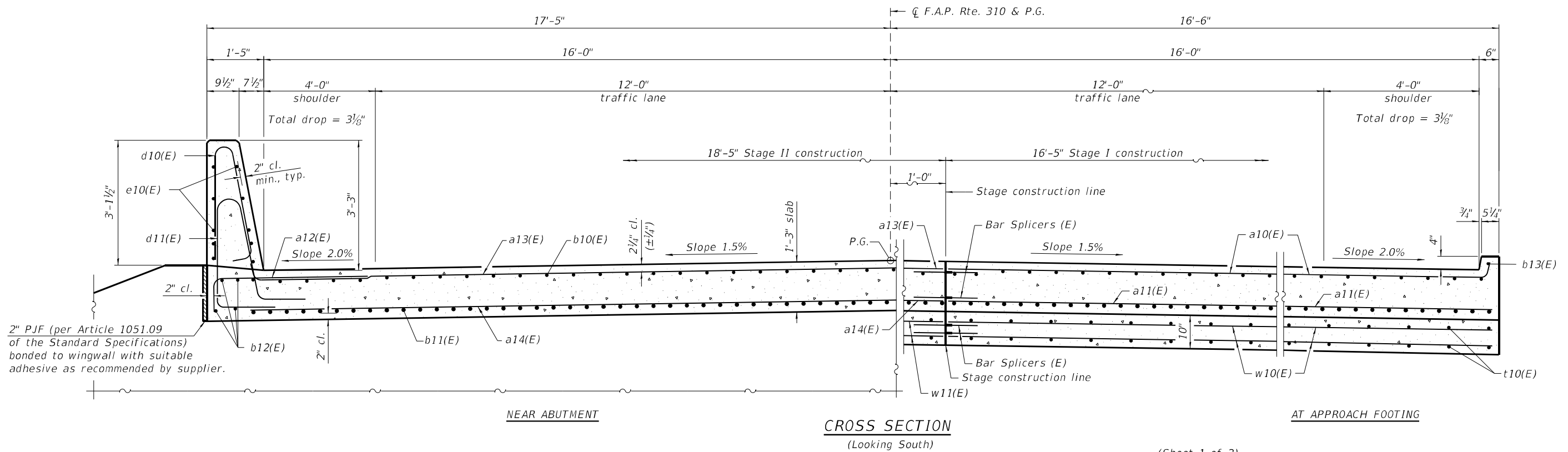


PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

South Approach		
Point/Location	Top	Bottom
A - NE	670.56	669.72
B - N C	670.84	670.00
C - N SC	670.82	669.99
D - NW	670.56	669.72
E - SE	670.96	670.12
F - S C	671.24	670.40
G - S SC	671.22	670.39
H - SW	670.96	670.12

Note:
See Sheet 16 of 26 for Section A-A, Bill of Material and additional details.
See Sheet 23 of 26 for Bar splicer details.



NEAR ABUTMENT

CROSS SECTION (Looking South)

AT APPROACH FOOTING

(Sheet 1 of 2)

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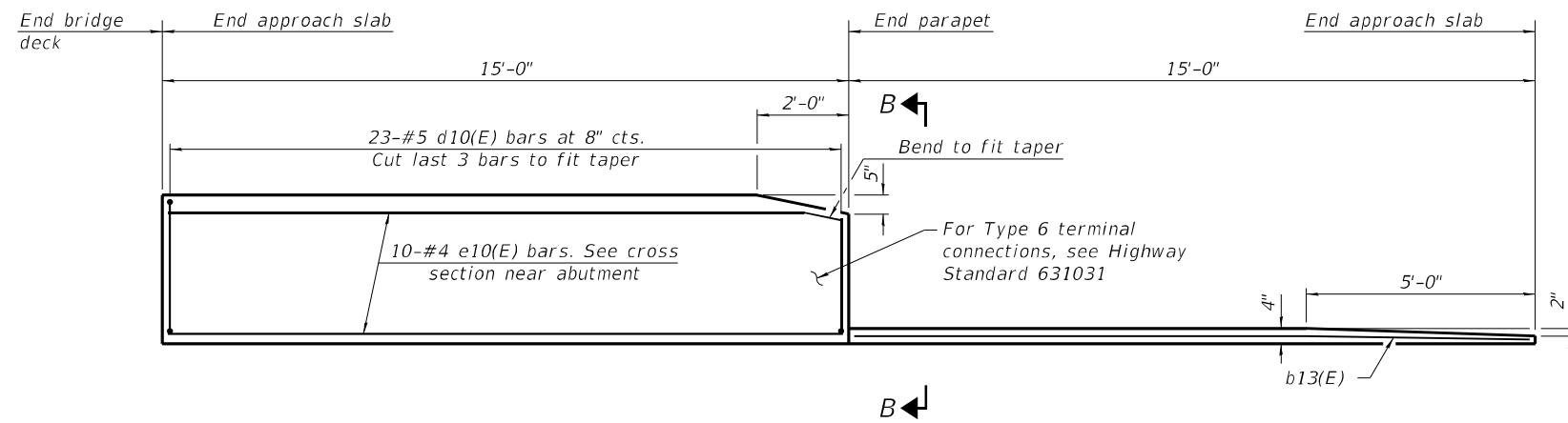
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PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB DETAILS I
STRUCTURE NO. 066-0020

SHEET 15 OF 26 SHEETS

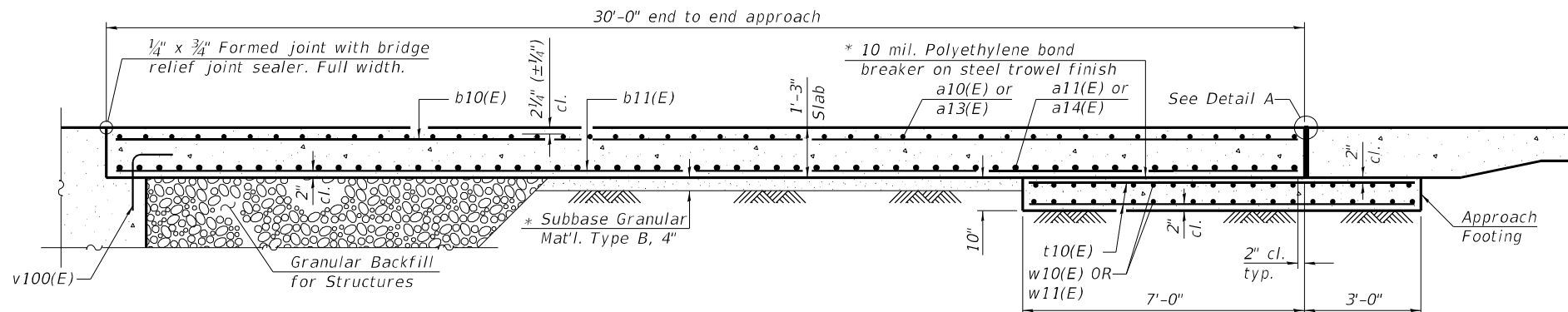
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CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



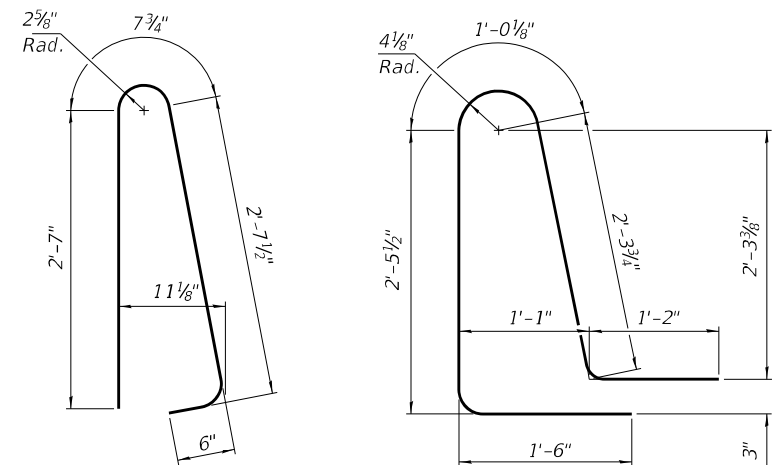
INSIDE ELEVATION OF PARAPET AND CURB

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 26.

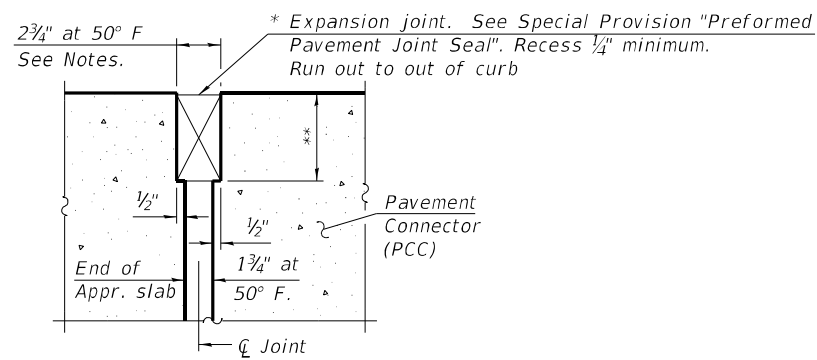


SECTION A-A

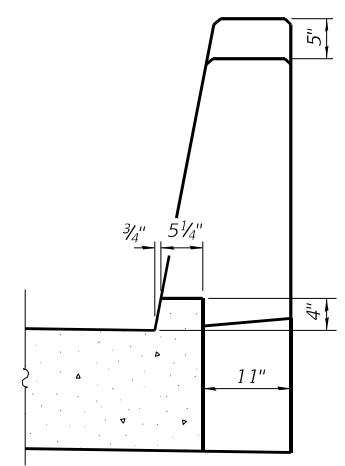


BAR d10(E)

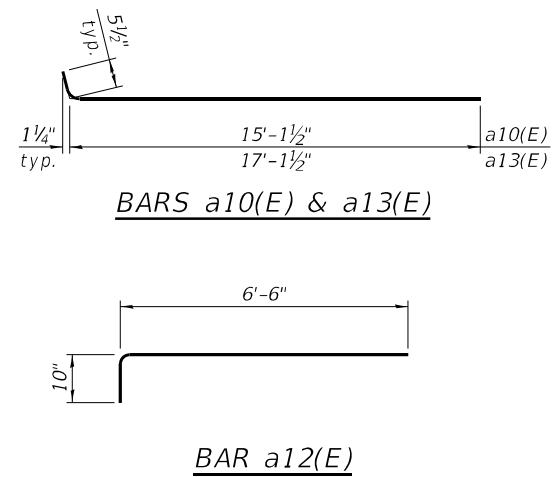
BAR d11(E)



DETAIL A



VIEW B-B



BARS a10(E) & a13(E)

BAR a12(E)

SOUTH APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	46	#5	15'-7"	
a11(E)	60	#8	15'-2"	
a12(E)	46	#5	7'-4"	
a13(E)	46	#5	17'-7"	
a14(E)	60	#8	17'-2"	
b10(E)	49	#5	29'-8"	
b11(E)	79	#9	29'-8"	
b12(E)	8	#5	14'-8"	
b13(E)	2	#4	14'-8"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	14'-8"	
t10(E)	68	#4	9'-8"	
w10(E)	40	#5	15'-2"	
w11(E)	40	#5	17'-2"	
Concrete Superstructure			Cu. Yd.	3.9
Concrete Superstructure (Approach Slab)			Cu. Yd.	47.2
Concrete Structures			Cu. Yd.	10.2
Reinforcement Bars, Epoxy Coated			Pound	19,450

* Cost included with Concrete Superstructure (Approach Slab).
 ** Per manufacturer recommendations

(Sheet 2 of 2)

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 Chicago, Illinois 60631; (773) 399-0112

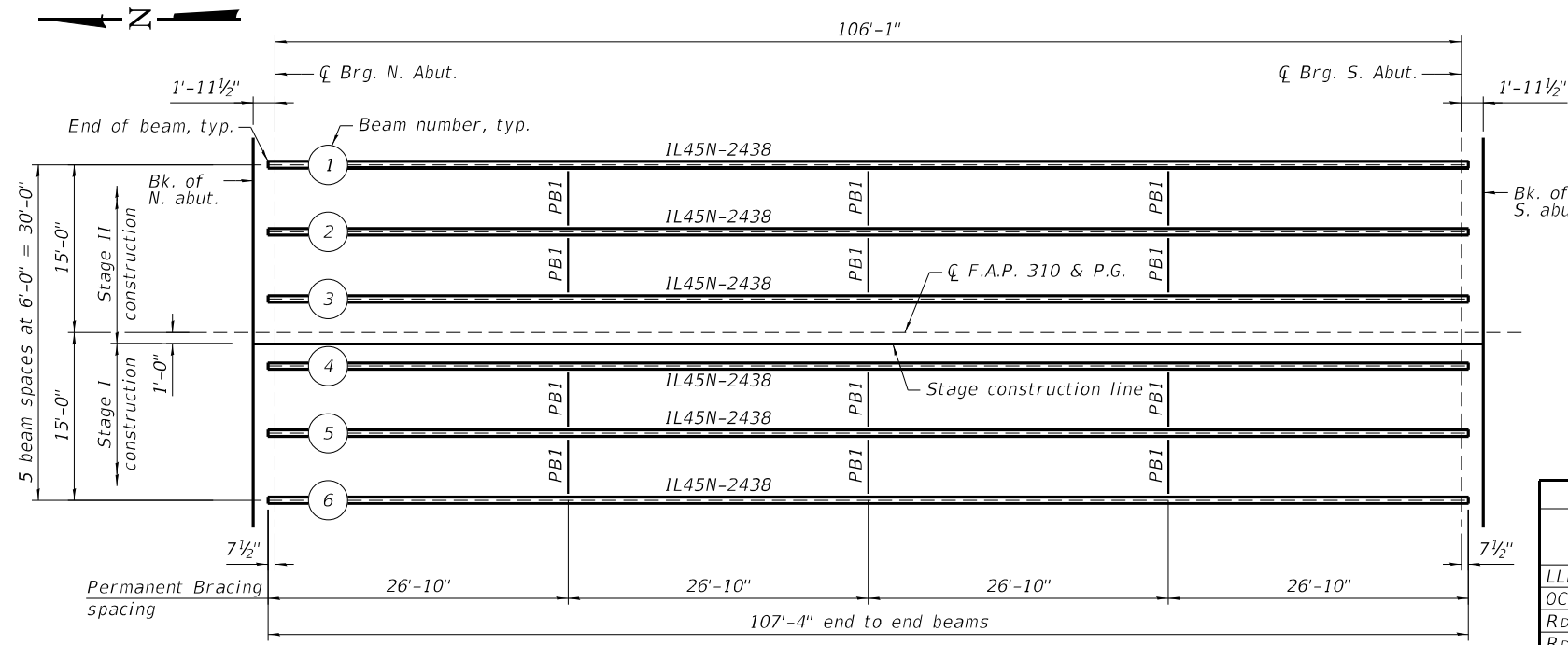
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	CHECKED - S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB DETAILS II
 STRUCTURE NO. 066-0020

SHEET 16 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	39
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

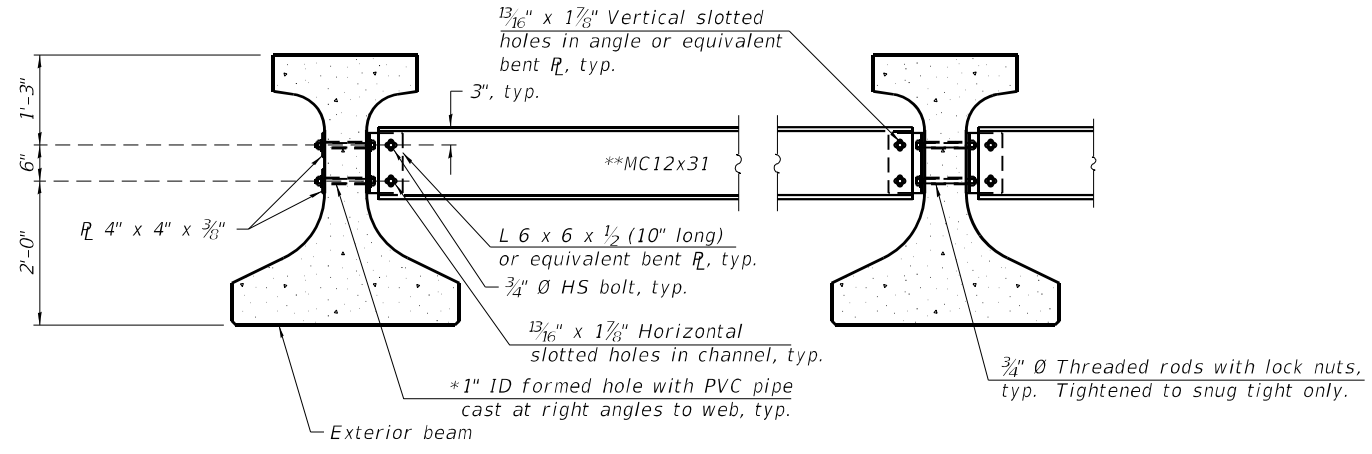


FRAMING PLAN

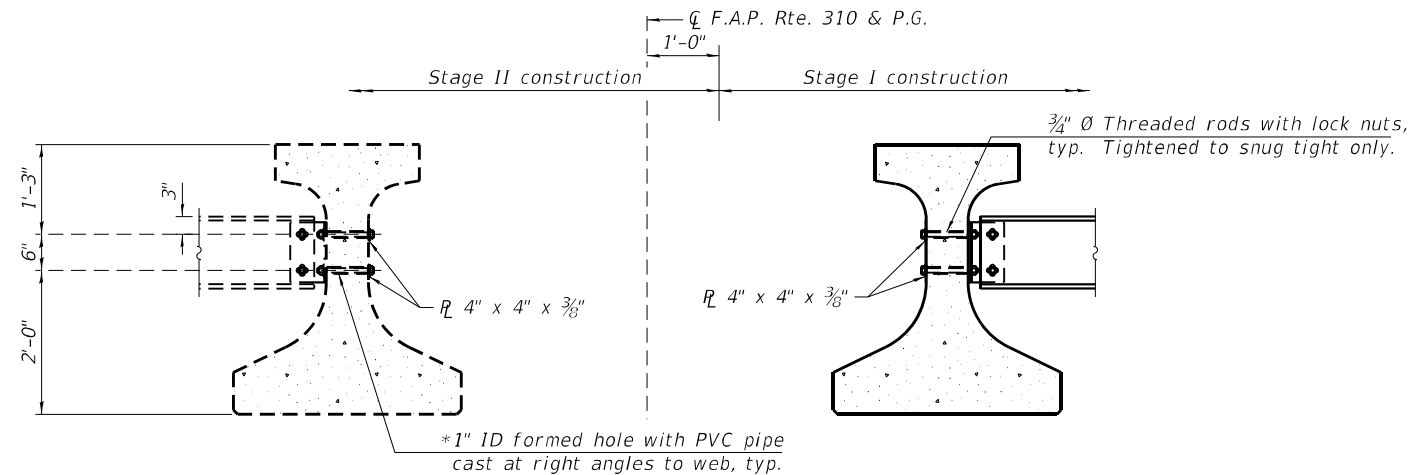
INTERIOR BEAM MOMENT TABLE		
		0.5 Span
I	(in ⁴)	182,623
I'	(in ⁴)	460,686.0
S _b	(in ³)	10,045
S _b '	(in ³)	15,621.8
S _t	(in ³)	6,809.2
S _t '	(in ³)	29,702.5
DC1	(k/ft)	1.475
MDC1	('k)	2,075
DC2	(k/ft)	0.175
MDC2	('k)	246
DW	(k/ft)	0.267
MDW	('k)	375
LLDF		0.528
M _L + I _M	('k)	1,619

BEAM REACTION TABLE			
		Abutment	
		Interior	Exterior
LLDF	(k)	0.679	0.500
OCF	(k)	-	1.00
R _{DC1}	(k)	78.2	76.1
R _{DC2}	(k)	9.3	9.3
R _{DW}	(k)	14.1	14.1
R _L + I _M	(k)	82.3	60.6
R _{Total} (Strength I)(Impact)	(k)	274.6	234.0
R _{Total} (Strength I)(No Impact)	(k)	248.8	215.1

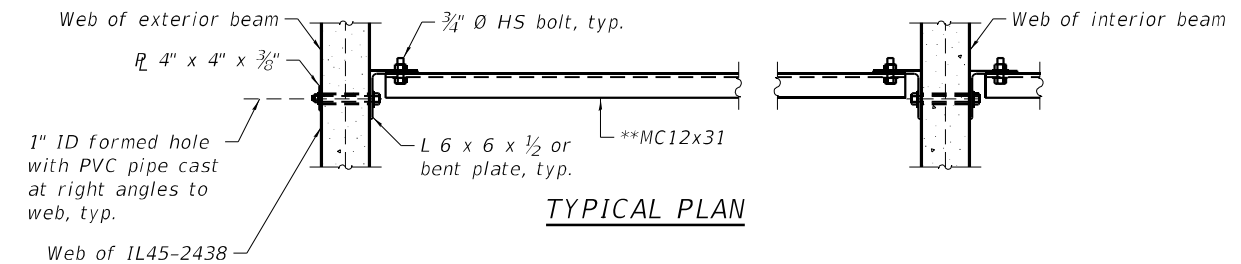
I: Non-composite moment of inertia of beam section (in.4).
 I': Composite moment of inertia of beam section (in.4).
 S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
 S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
 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 + I_M: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
 OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
 R_{DC1}: Un-factored reaction due to non-composite dead load (kip).
 R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
 R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
 R_L: Un-factored live load reaction (kip).
 R_{IM}: Un-factored dynamic load allowance (impact) (kip).
 R_{TOTAL} (Strength I): Total factored reaction including dynamic load allowance (Impact) (kip).
 R_{TOTAL} (Strength I): Total factored reaction not including dynamic load allowance (No Impact) (Impact) (kip).



TYPICAL ELEVATION



ELEVATION AT STAGE LINE
(Looking South)



TYPICAL PLAN

* Fabricator shall locate to miss strands within permissible tolerances.
 ** Alternate MC12x35 channels are permitted to facilitate material acquisition.

PERMANENT BRACING DETAILS (PB1)
(12 required)

Notes:
 All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
 Two hardened washers are required for each set of oversized holes. All holes shall be 15/16" Ø unless otherwise noted.
 3/16" x 3" x 3" plate washers are required over all slotted holes.
 All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55.
 Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
 Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.
 See Sheets 18 & 19 of 26 for additional PPC Beam details.

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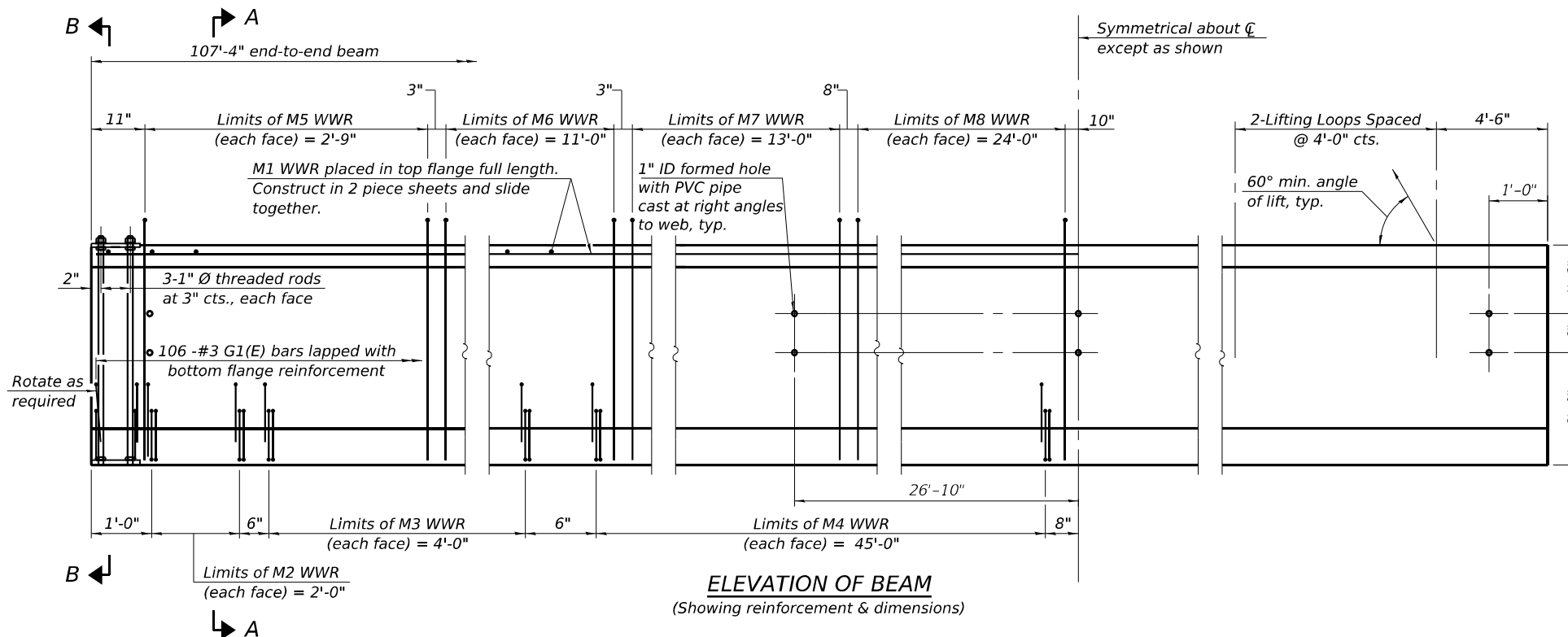
GR&E
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631; (773) 399-0112

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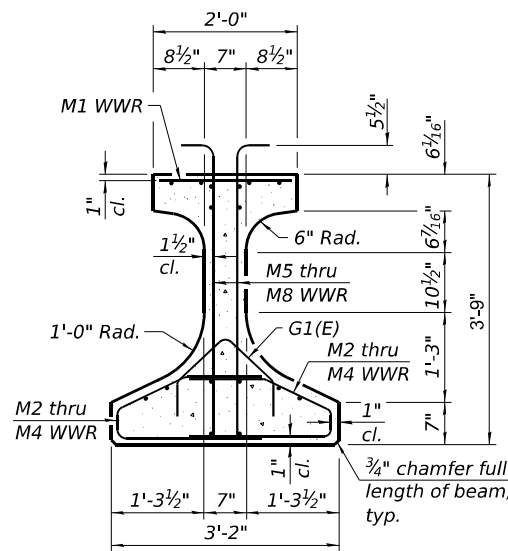
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM FRAMING PLAN AND DETAILS
STRUCTURE NO. 066-0020
 SHEET 17 OF 26 SHEETS

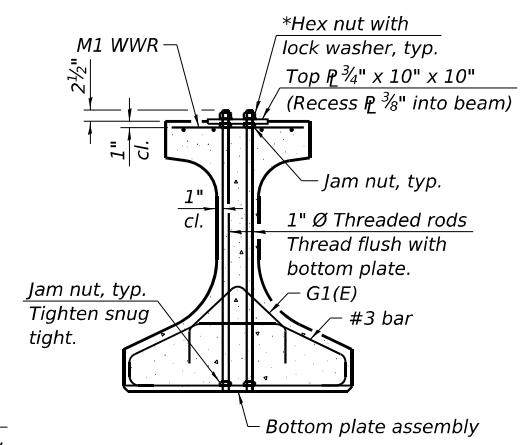
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CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	



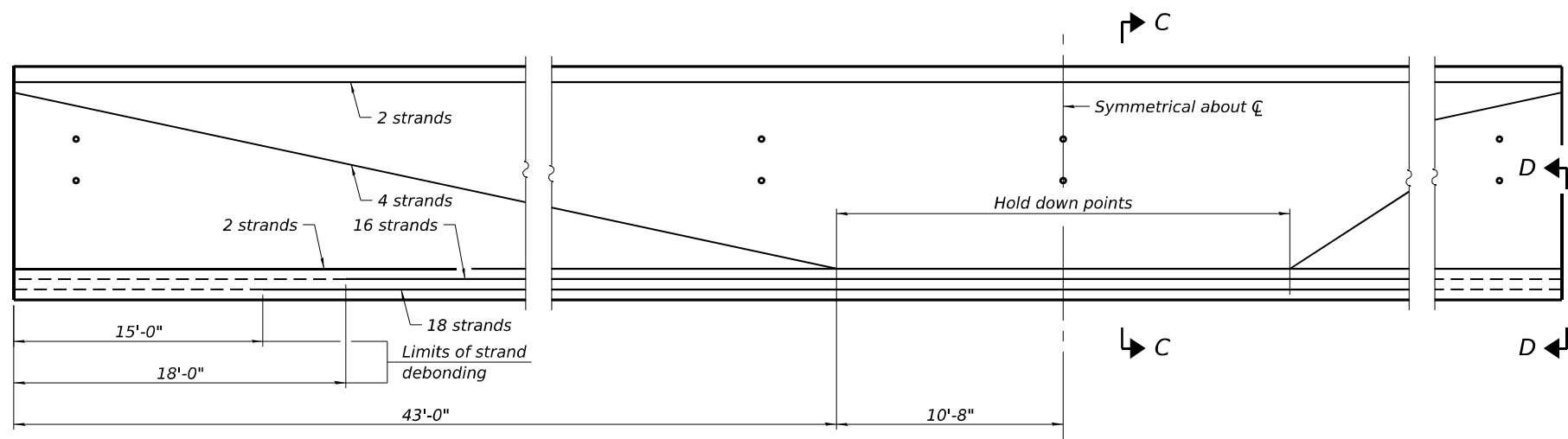
ELEVATION OF BEAM
(Showing reinforcement & dimensions)



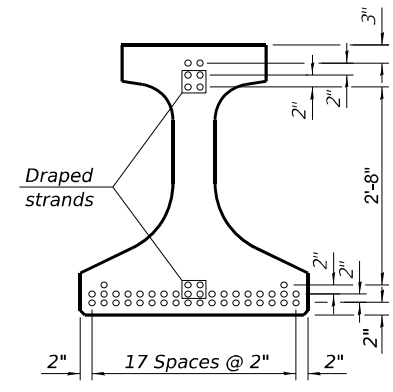
SECTION A-A



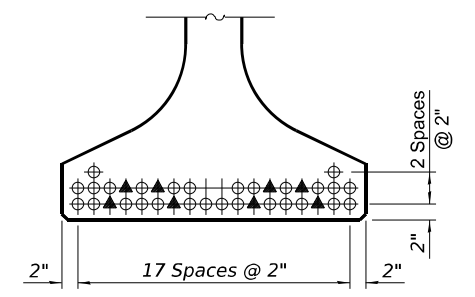
SECTION B-B
* Only tighten sufficiently to compress lock washers



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C
(42-0.6" Ø 270 ksi strands)
(Strand Pattern 40B-2T-8db-4d)



VIEW D-D
○ Fully bonded strand
▲ Partially debonded strand

Note:
See sheet 19 of 26 for additional details and Bill of Material.

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IL45-2438

5-15-2023

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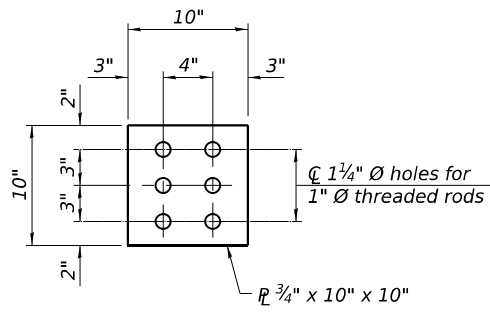
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

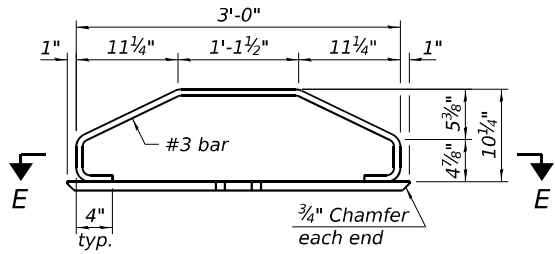
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STRUCTURE NO. 066-0020

SHEET 18 OF 26 SHEETS

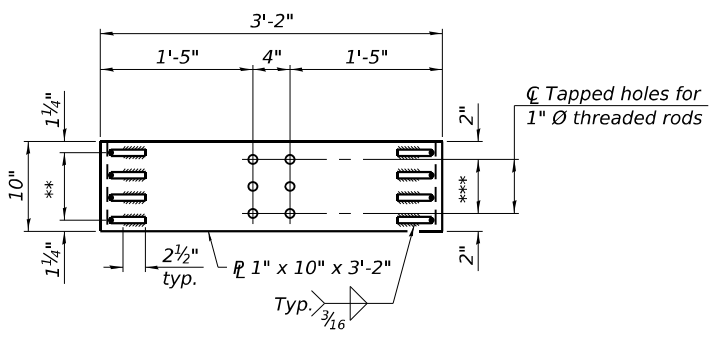
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	41
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

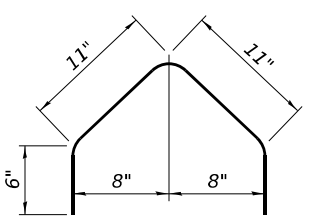


ELEVATION - BOTTOM PLATE ASSEMBLY

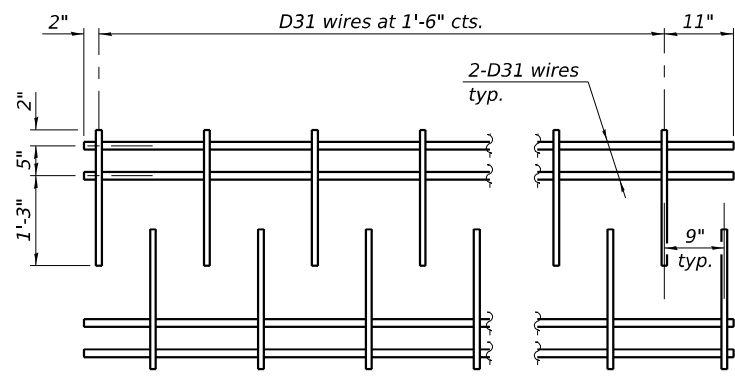


SECTION E-E

- ** 3 Spaces at 2 1/2" = 7 1/2"
- *** 2 Spaces at 3" = 6"

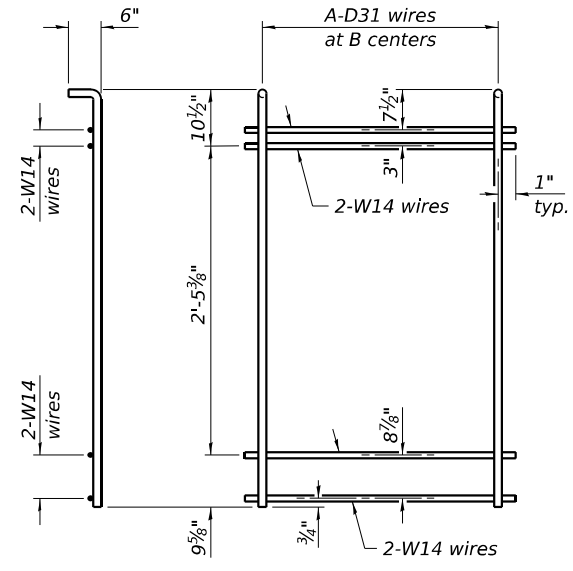


BAR G1(E)



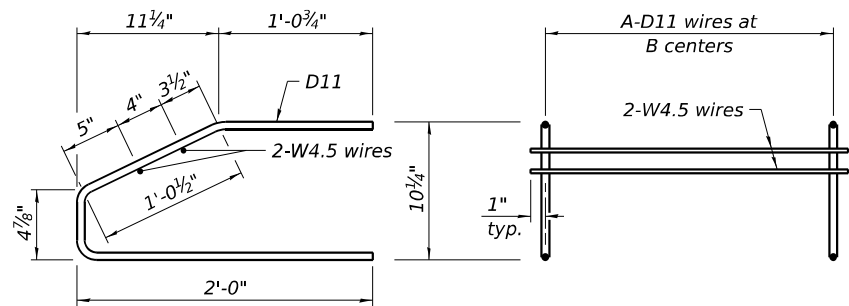
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

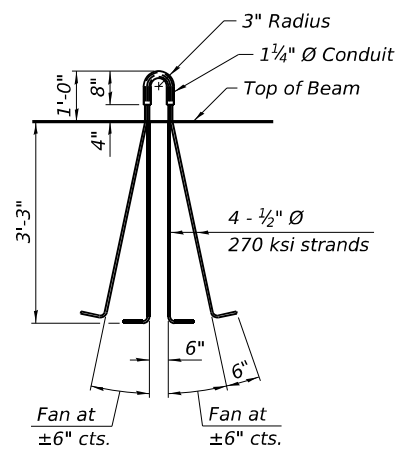
(The WWR designs assume grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

SPAN 1

WWR	A	B
M2	9	3"
M3	9	6"
M4	31	1'-6"
M5	12	3"
M6	23	6"
M7	14	1'-0"
M8	13	2'-0"

NOTES

- Inserts for 3/4" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in.
- The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 6500 psi.
- A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.
- Bend the extended strands inward on the fascia beams to maintain 1 1/2" clearance inside the pier diaphragm.
- The top and bottom plates shall be AASHTO M270 Grade 50.
- The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111.
- The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.
- Threaded rods shall be ASTM F 1554 Grade 55.
- Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060, Table 3 galvanized coating.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL45N	Ft.	644

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Chicago, Illinois 60631; (773) 399-0112

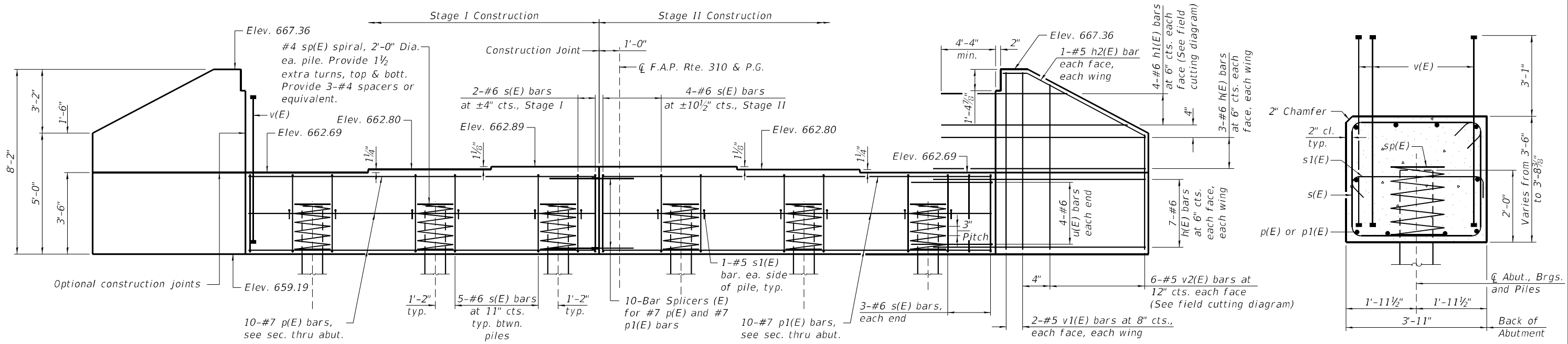
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL45N BEAM DETAILS
STRUCTURE NO. 066-0020

SHEET 19 OF 26 SHEETS

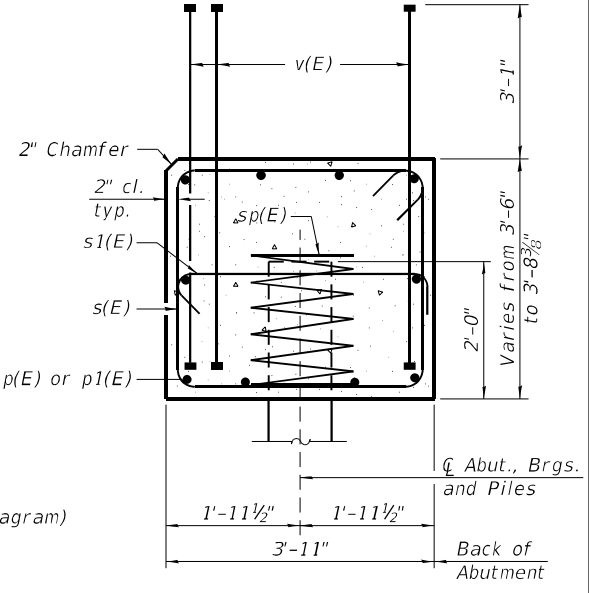
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			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				



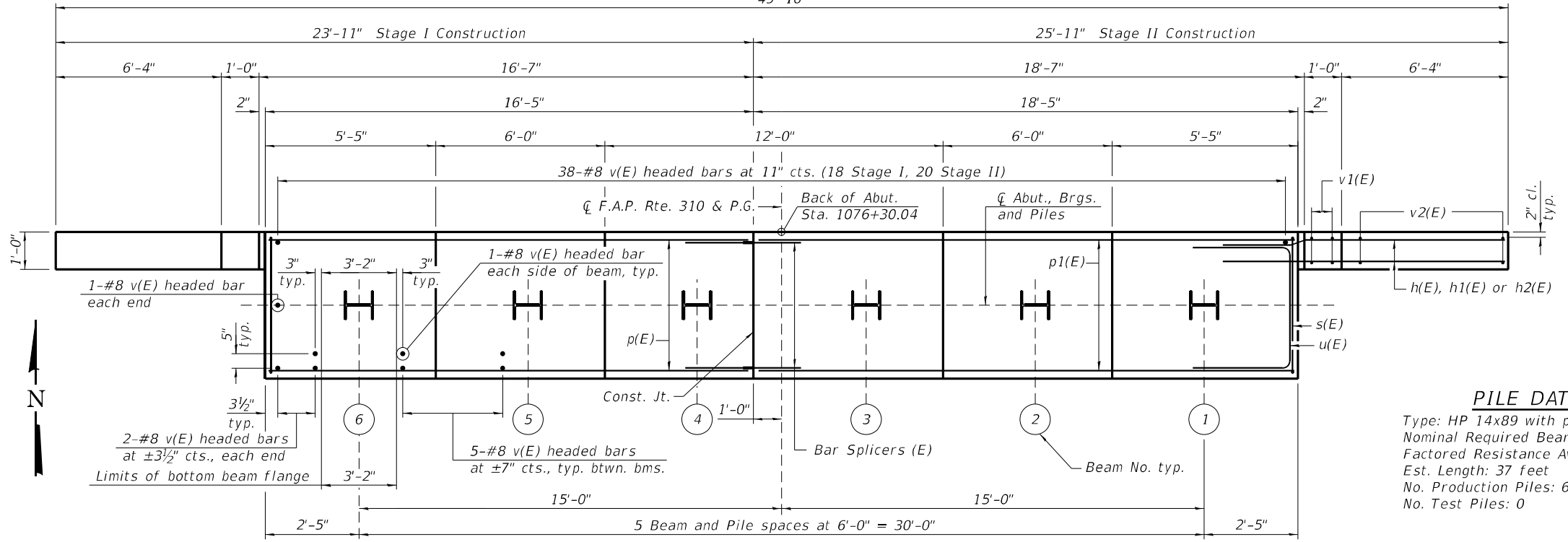
West Wing

ELEVATION
(Looking North)

East Wing



SEC. THRU ABUT.



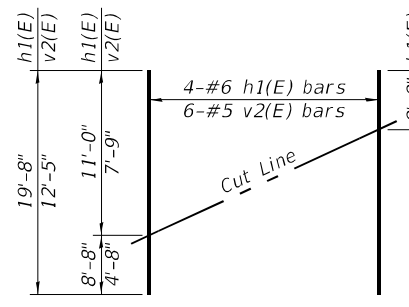
PLAN

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
h(E)	40	#6	11'-8"	—	
h1(E)	8	#6	19'-8"	—	
h2(E)	4	#5	8'-3"	—	
p(E)	10	#7	16'-1"	—	
p1(E)	10	#7	18'-1"	—	
s(E)	32	#6	14'-10"	□	
s1(E)	12	#5	4'-7"	□	
sp(E)	6	#4	2'-0"	≡≡≡	
u(E)	8	#6	12'-1"	□	
v(E)	81	#8	6'-3"	—	
v1(E)	8	#5	7'-10"	—	
v2(E)	12	#5	12'-5"	—	
Structure Excavation				Cu. Yd.	91
Concrete Structures				Cu. Yd.	21.9
Reinforcement Bars, Epoxy Coated				Pound	4,170
Furnishing Steel Piles, HP14x89				Foot	222
Driving Piles				Foot	222
Pile Shoes				Each	6

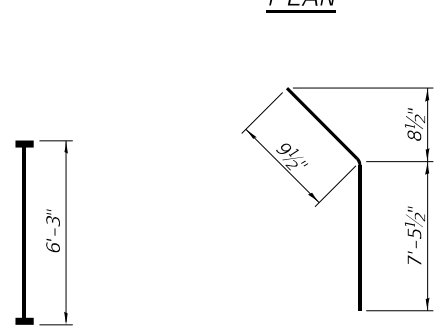
PILE DATA

Type: HP 14x89 with pile shoes
 Nominal Required Bearing: 705 kip
 Factored Resistance Available: 388 kip
 Est. Length: 37 feet
 No. Production Piles: 6
 No. Test Piles: 0

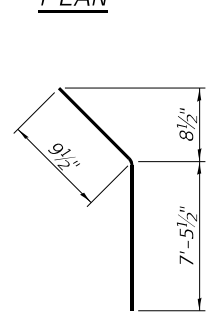


FIELD CUTTING DIAGRAM

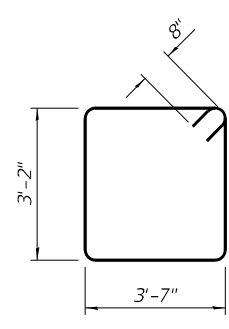
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



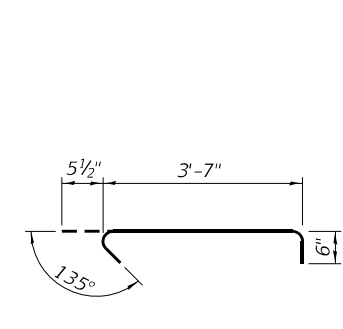
BAR v(E)



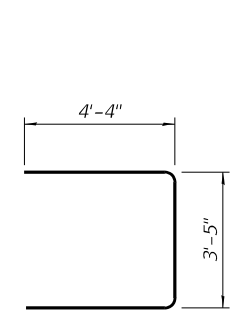
BAR h2(E)



BAR s(E)



BAR s1(E)



BAR u(E)

Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet 22 of 26.
 Bar terminators, paid for separately.
 See Total Bill of Material.

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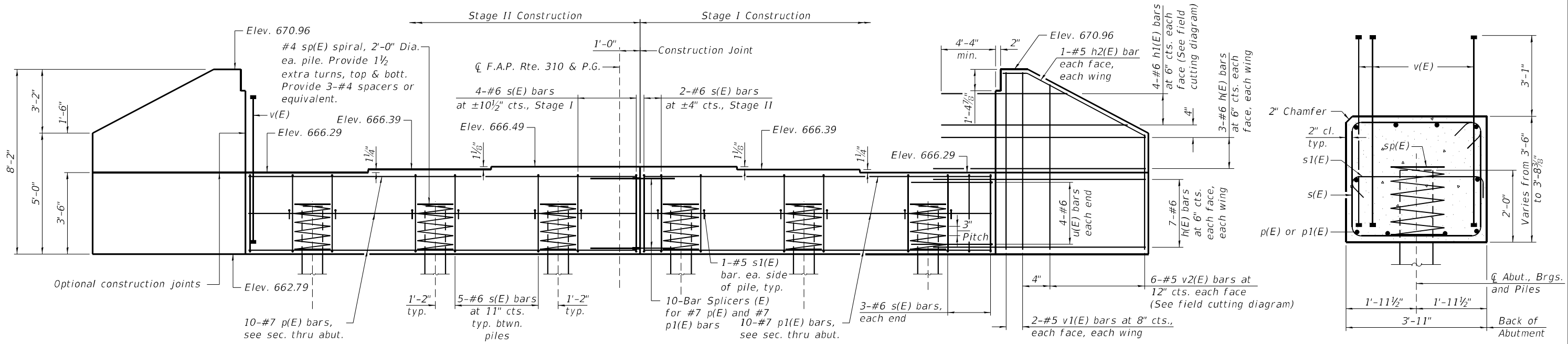
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT DETAILS
 STRUCTURE NO. 066-0020

SHEET 20 OF 26 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

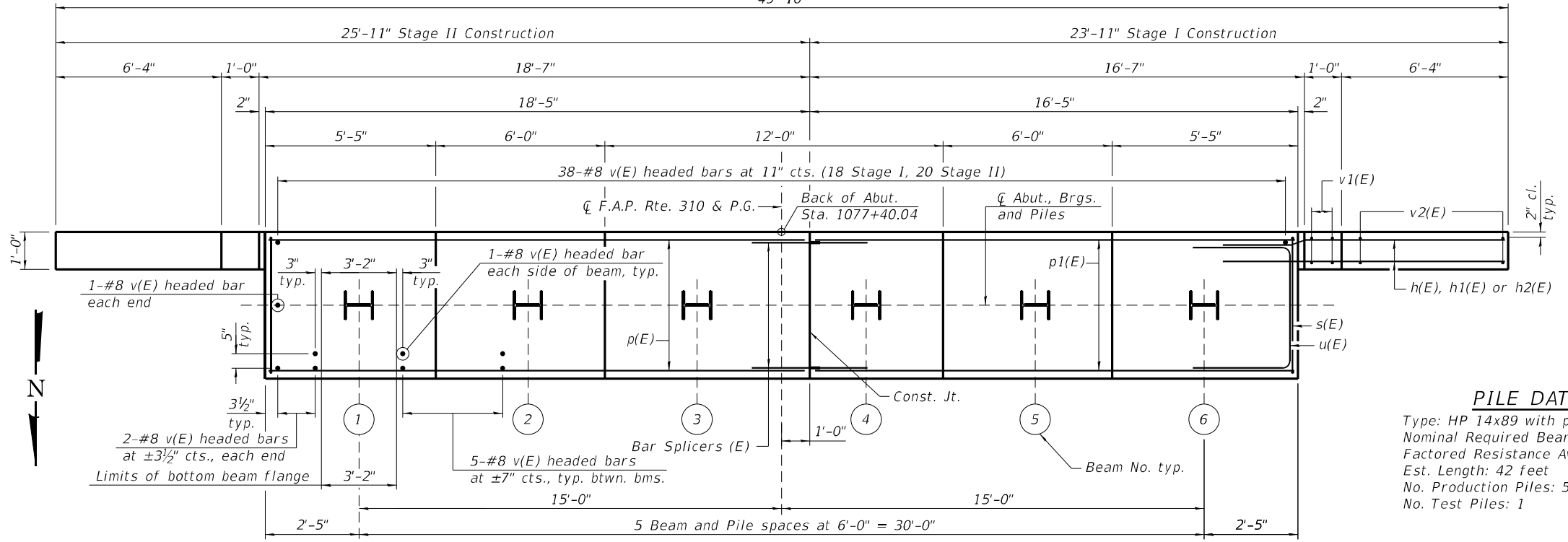


East Wing

ELEVATION
(Looking South)

West Wing

SEC. THRU ABUT.



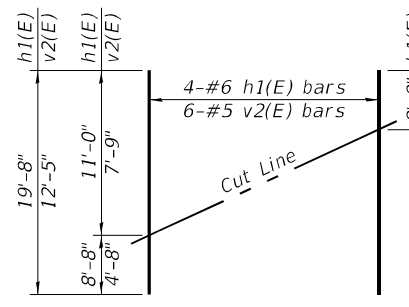
PLAN

SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#6	11'-8"	▬
h1(E)	8	#6	19'-8"	▬
h2(E)	4	#5	8'-3"	▬
p(E)	10	#7	16'-1"	▬
p1(E)	10	#7	18'-1"	▬
s(E)	32	#6	14'-10"	▬
s1(E)	12	#5	4'-7"	▬
sp(E)	6	#4	2'-0"	▬
u(E)	8	#6	12'-1"	▬
v(E)	81	#8	6'-3"	▬
v1(E)	8	#5	7'-10"	▬
v2(E)	12	#5	12'-5"	▬
Concrete Structures		Cu. Yd.	21.9	
Reinforcement Bars, Epoxy Coated		Pound	4,170	
Furnishing Steel Piles, HP14x89		Foot	210	
Driving Piles		Foot	210	
Test Pile Steel HP14x89		Each	1	
Pile Shoes		Each	6	

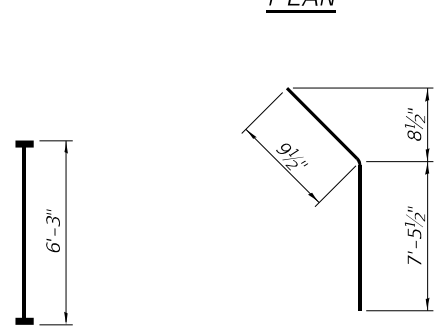
PILE DATA

Type: HP 14x89 with pile shoes
 Nominal Required Bearing: 705 kip
 Factored Resistance Available: 323 kip
 Est. Length: 42 feet
 No. Production Piles: 5
 No. Test Piles: 1

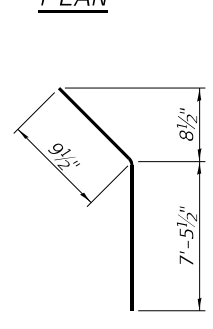


FIELD CUTTING DIAGRAM

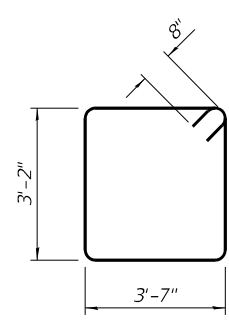
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



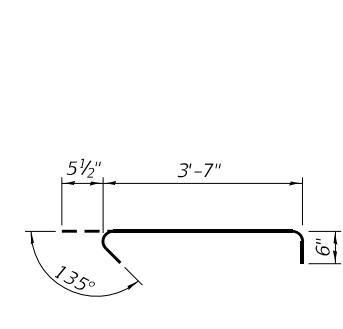
BAR v(E)



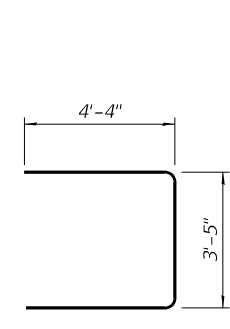
BAR h2(E)



BAR s(E)



BAR s1(E)



BAR u(E)

Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet 22 of 26.
 Bar terminators, paid for separately.
 See Total Bill of Material.

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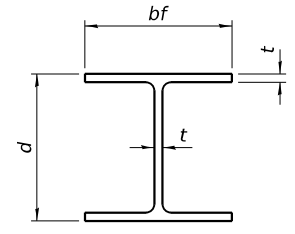
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS
 STRUCTURE NO. 066-0020

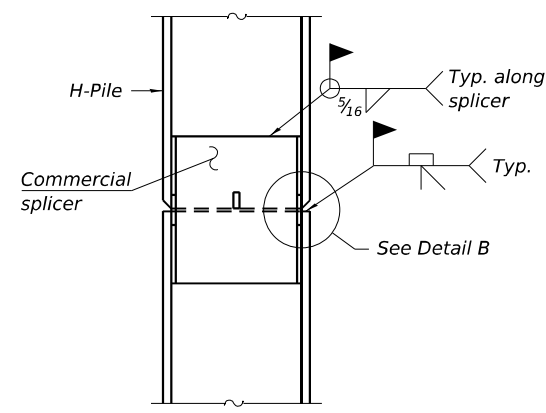
SHEET 21 OF 26 SHEETS

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ILLINOIS FED. AID PROJECT			CONTRACT NO. 68801	

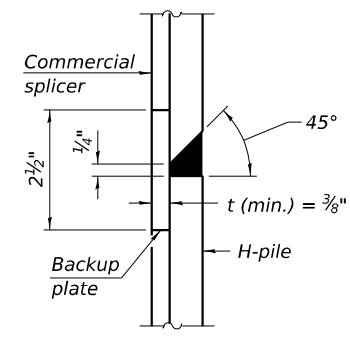


STEEL PILE TABLE

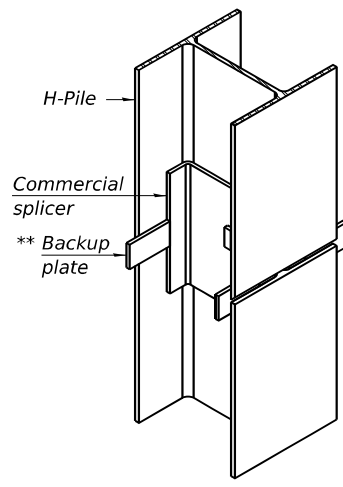
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17 ³ / ₄ "	17 ⁷ / ₈ "	⁷ / ₈ "	36"
x135	17 ¹ / ₂ "	17 ³ / ₄ "	³ / ₄ "	36"
HP 16x183	16 ¹ / ₂ "	16 ¹ / ₂ "	1 ¹ / ₈ "	36"
x162	16 ¹ / ₄ "	16 ¹ / ₈ "	1"	36"
x141	16	16	⁷ / ₈ "	36"
x121	15 ³ / ₄ "	15 ⁷ / ₈ "	³ / ₄ "	36"
HP 14x117	14 ¹ / ₄ "	14 ⁷ / ₈ "	¹³ / ₁₆ "	30"
x102	14"	14 ³ / ₄ "	¹¹ / ₁₆ "	30"
x89	13 ⁷ / ₈ "	14 ³ / ₄ "	⁵ / ₈ "	30"
x73	13 ⁵ / ₈ "	14 ³ / ₈ "	¹ / ₂ "	30"
HP 12x84	12 ¹ / ₄ "	12 ¹ / ₄ "	¹¹ / 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

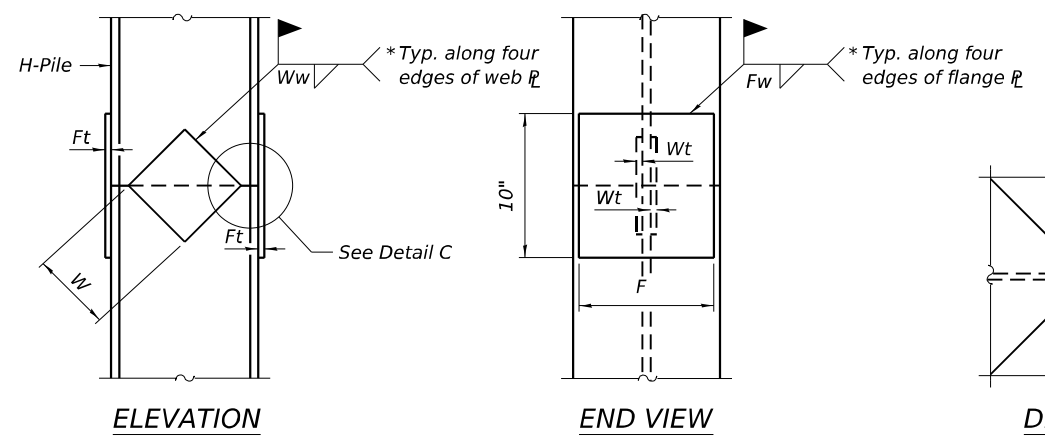


DETAIL B



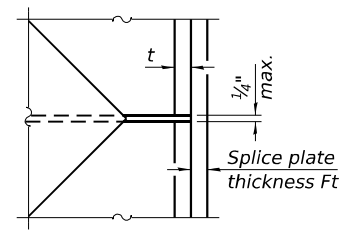
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



ELEVATION

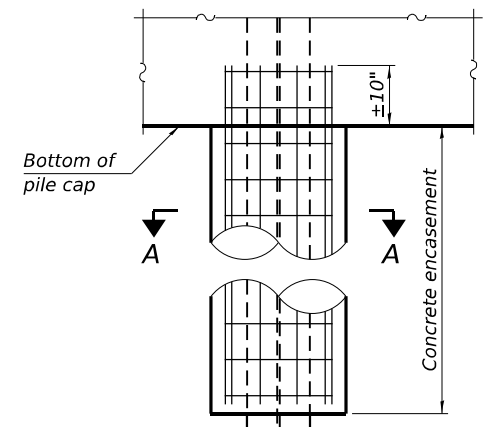
END VIEW



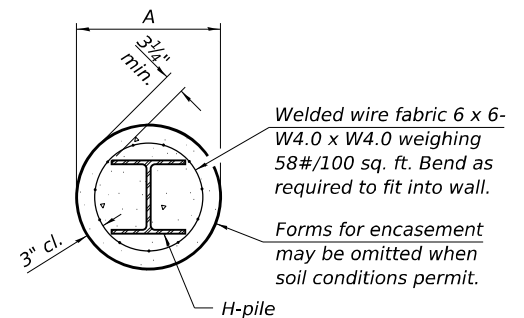
DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15 ¹ / ₂ "	1 ¹ / ₂ "	1"	9 ¹ / ₂ "	⁷ / ₈ "	³ / ₄ "
x157	15 ¹ / ₄ "	1 ¹ / ₄ "	1"	9 ¹ / ₂ "	⁷ / ₈ "	³ / ₄ "
x135	15 ¹ / ₄ "	1 ¹ / ₄ "	1"	9 ¹ / ₂ "	⁷ / ₈ "	³ / ₄ "
HP 16x183	13 ³ / ₄ "	1 ¹ / ₂ "	1"	8 ¹ / ₄ "	⁷ / ₈ "	³ / ₄ "
x162	13 ¹ / ₂ "	1 ¹ / ₂ "	1"	8 ¹ / ₄ "	³ / ₄ "	⁵ / ₈ "
x141	13 ¹ / ₂ "	1 ¹ / ₄ "	⁷ / ₈ "	8 ¹ / ₄ "	³ / ₄ "	⁵ / ₈ "
x121	13 ¹ / ₂ "	1 ¹ / ₄ "	⁷ / ₈ "	8 ¹ / ₄ "	³ / ₄ "	⁵ / ₈ "
HP 14x117	12 ¹ / ₂ "	1 ¹ / ₄ "	⁷ / ₈ "	7 ³ / ₄ "	⁵ / ₈ "	¹ / ₂ "
x102	12 ¹ / ₂ "	1"	³ / ₄ "	7 ³ / ₄ "	⁵ / ₈ "	¹ / ₂ "
x89	12 ¹ / ₂ "	⁷ / ₈ "	¹¹ / ₁₆ "	7 ³ / ₄ "	⁵ / ₈ "	¹ / ₂ "
x73	12 ¹ / ₂ "	³ / ₄ "	⁹ / ₁₆ "	7 ³ / ₄ "	⁵ / ₈ "	¹ / ₂ "
HP 12x84	10"	1"	¹¹ / ₁₆ "	6 ¹ / ₂ "	⁵ / ₈ "	¹ / ₂ "
x74	10"	⁷ / ₈ "	¹¹ / ₁₆ "	6 ¹ / ₂ "	⁵ / ₈ "	¹ / ₂ "
x63	10"	³ / ₄ "	¹ / ₂ "	6 ¹ / ₂ "	¹ / ₂ "	³ / ₈ "
x53	10"	³ / ₄ "	¹ / ₂ "	6 ¹ / ₂ "	¹ / ₂ "	³ / ₈ "
HP 10x57	8"	⁷ / ₈ "	⁹ / ₁₆ "	5 ¹ / ₄ "	¹ / ₂ "	³ / ₈ "
x42	8"	³ / ₄ "	⁹ / ₁₆ "	5 ¹ / ₄ "	¹ / ₂ "	³ / ₈ "
HP 8x36	6 ³ / ₄ "	⁵ / ₈ "	⁷ / ₁₆ "	4"	¹ / ₂ "	³ / ₈ "

WELDED PLATE FIELD SPLICE

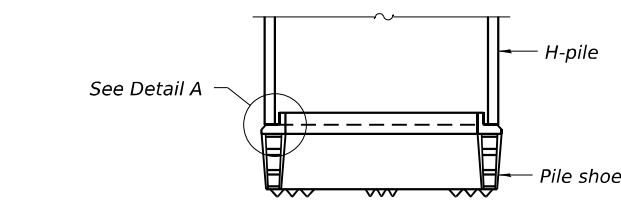


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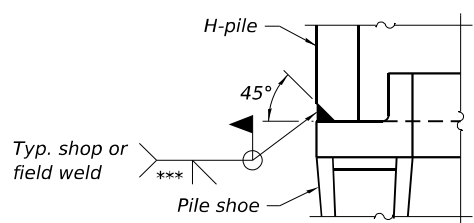


SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASUREMENT (when specified)

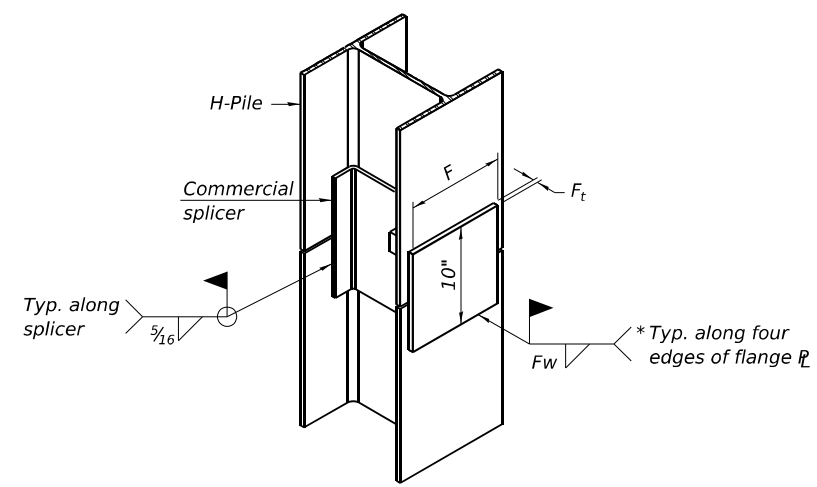


ELEVATION



DETAIL A

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 (⁷/₁₆" min.).

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

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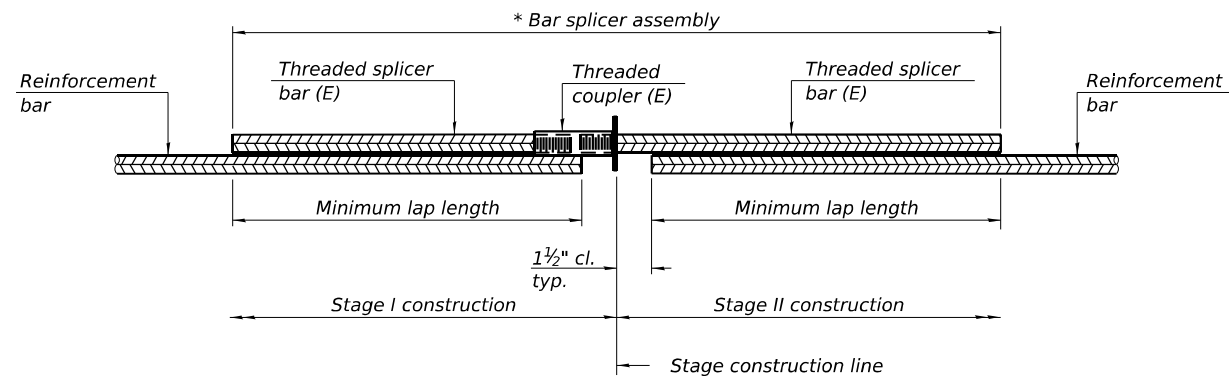
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	CHECKED - S.H., K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 066-0020**

SHEET 22 OF 26 SHEETS

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 45
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



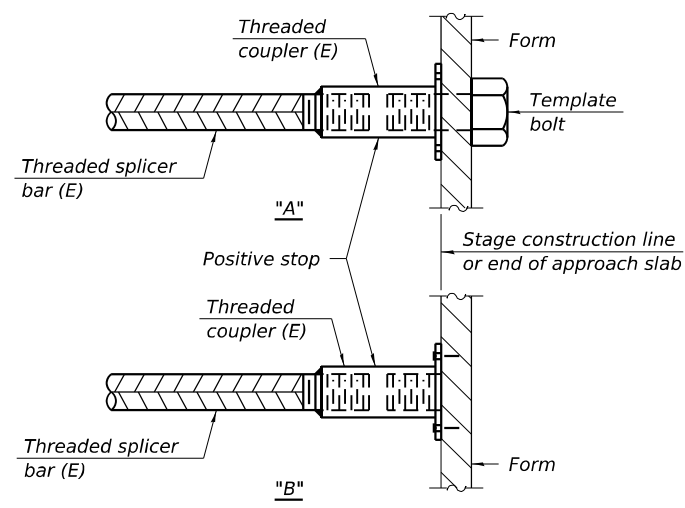
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

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

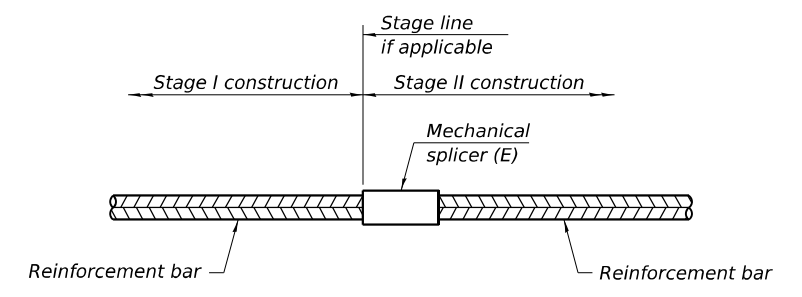
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top of slab	#5	185	3'-6"
Bottom of slab	#5	130	3'-6"
Diaphragms	#6	12	4'-0"
Top of approach	#5	92	3'-4"
Bottom of approach	#8	120	4'-9"
Top of approach ftg.	#5	40	3'-2"
Bottom of approach ftg.	#5	40	3'-2"
North Abutment	#7	10	5'-0"
South Abutment	#7	10	5'-0"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

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.

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	CHECKED - K.J.M.	REVISED -
PLOT SCALE =	DRAWN - D.C.P.	REVISED -
PLOT DATE =	CHECKED - S.H., K.G.W.	REVISED -

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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 066-0020

SHEET 23 OF 26 SHEETS

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 46
			CONTRACT NO. 68801	
		ILLINOIS FED. AID PROJECT		



SOIL BORING LOG

Date 7/18/22

ROUTE F.A.P.310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.0994° N, -90.5889° W

COUNTY Mercer DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO. 066-0020	DEPT	BLOGS	MOST	Surface Water Elev.	ft	DEPT	BLOGS	MOST
Station 1007+85.04	H	S	T	Stream Bed Elev.	ft	H	S	T
BORING NO. SB-01	TH	SW	QU	Groundwater Elev.:	ft	TH	SW	QU
Station 1077+72.60	S	W	QU	First Encounter	643.9	S	W	QU
Offset 14.7 ft LT				Upon Completion				
Ground Surface Elev. 670.91	ft	(ft)	(/6")	After	Hrs.	ft	(ft)	(/6")

ASPHALT PAVEMENT - 9"	670.2			SILTY CLAY - Dark gray, med-stiff, w/ some sand and organics, moist (continued) becomes dark gray					
CONCRETE PAVEMENT - 10"	669.3	4				1			
SANDY CLAY - Brown and gray, med-stiff, with some gravel LL = 36%, PL = 10%, PI = 26%	667.9	5	1.7			3	0.8	31	
CLAY LOAM - Brown, med-stiff		5	B		647.9	4	B		
		3		CLAY - Dark gray, med-stiff, w/ some sand, moist		3			
		2	1.5			4	0.8	27	
		3	B		646.4	4	B		
becomes brown and gray, moist		2		SANDY CLAY - Dark gray, med-stiff, w/ organics		2			
		2	1.1		643.9	2	0.4	35	
		5	B	SAND - Gray, med-dense, med-coarse grained, wet GWT Encountered at 27"		2	B		
no more sand		2		w/ some organics, well graded, w/ some clay		1			
		2	1.0			2	-	25	
		4	P			2			
Shelby Tube Pushed 11'-13' 1.3% Gravel, 26.6% Sand, 42.2% Silt, 29.8% Clay			2.0						
			P						
	657.4	2		becomes dark gray, w/ organics (wood fragment - 5")		1			
SILTY CLAY - Dark gray, med-stiff, w/ some sand and organics, moist		3	0.5			2	-	32	
		4	B			4			
		2							
		3	0.6						
		5	B						
becomes gray, w/ sand seams, gravel and organics		1		w/ weathered shale fragments		50/4"			
		3	0.6					17	
		3	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 7/18/22

ROUTE F.A.P.310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.0994° N, -90.5889° W

COUNTY Mercer DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO. 066-0020	DEPT	BLOGS	MOST	Surface Water Elev.	ft	DEPT	BLOGS	MOST
Station 1007+85.04	H	S	T	Stream Bed Elev.	ft	H	S	T
BORING NO. SB-01	TH	SW	QU	Groundwater Elev.:	ft	TH	SW	QU
Station 1077+72.60	S	W	QU	First Encounter	643.9	S	W	QU
Offset 14.7 ft LT				Upon Completion				
Ground Surface Elev. 670.91	ft	(ft)	(/6")	After	Hrs.	ft	(ft)	(/6")

SAND - Gray, med-dense, med-coarse grained, wet GWT Encountered at 27" (continued)									
	628.4								
SHALE - Gray, mod. hard, wet									
		20							
		41	-	11					
	625.9	45	50/5"						
Borehole continued with rock coring.									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



ROCK CORE LOG

Date 7/18/22

ROUTE F.A.P.310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.0994° N, -90.5889° W

COUNTY Mercer CORING METHOD

STRUCT. NO. 066-0020	DEPT	CORE	RECOVERY	R-Q	CORE	STRENGTH
Station 1007+85.04	H	RE	Y	D	TI	NG
BORING NO. SB-01	TH	RE	Y	D	TI	NG
Station 1077+72.60	S	RE	Y	D	TI	NG
Offset 14.73 LT						
Ground Surface Elev. 670.91	ft	(ft)	(#)	(%)	(min/ft)	(tsf)

SHALE - Gray, Highly weathered, Mod. hard, w/ pebbles	625.91	1	73	25	2.2	
	624.41					
LIMESTONE - Gray, Hard, Mod. weathered	623.81					
SHALE - Black, hard, slightly weathered becomes highly fractured						
w/ limestone seams		2	100	60	1.2	
	618.91					
COAL - mod. hard						
	617.58					
SHALE - Gray, hard, slightly weathered						40.8
	615.91					
End of Boring						

Color pictures of the cores _____ Cores will be stored for examination until _____ The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) BBS, form 138 (Rev. 8-99)

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USER NAME =	DESIGNED - J.T.B.	REVISED -
PLOT SCALE =	CHECKED - K.J.M.	REVISED -
PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - S.H., K.G.W.	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS I STRUCTURE NO. 066-0020 SHEET 24 OF 26 SHEETS

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 47
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 7/19/22

ROUTE F.A.P 310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.099610° N, -90.589091° W

COUNTY Mercer DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.	Station	DEPTH (ft)	DIAMETER (in)	SOIL TYPE	MOISTURE (%)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	REMARKS
066-0020	1007+85.04						Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
SB-02	1077+12.60						Groundwater Elev.: _____ ft First Encounter Upon Completion After _____ Hrs.
		657.5		TOPSOIL - 2"			
		10		CLAY LOAM - Brown, med-stiff, w/ some gravel and organics			SANDY LOAM - Gray, loose, w/ some clay, well graded, wet GWT encountered at 16'
		6	0.2		24		(continued) w/ gravel and pebbles
		3	B				
		4		Poor Recovery no more gravel			7.0% Gravel, 54.9% Sand, 24.1% Silt, 14.0% Clay
		4	0.5		21		633.4
		3	P				
		652.1		SILTY CLAY - Dark gray, soft, w/ organics and sand, moist			SILTY CLAY - Gray, med-stiff, w/ some sand, moist
		1					632.1
		1	0.1		34		
		1	B				630.6
		1		SAND - Gray, poorly graded, med-coarse grained, med-dense, w/ pebbles			39
		1		SHALE - gray, weathered, mix w/ sand			629.6
		1		becomes med-stiff			
		2	0.4		33		
		2	B				
		10					
		644.6		Shelby Tube Pushed 11'-13' LL = 34%, PL = 14%, PI = 20%			
		1	0.8		P		
		1		SANDY CLAY - Gray, soft, w/ organics, moist			
		1	0.1		27		
		1	B				
		15					
		641.6		SANDY LOAM - Gray, loose, w/ some clay, well graded, wet GWT encountered at 16'			
		1					
		2			37		
		1		becomes med-dense, w/ pebbles			
		4			19		
		3					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways

ROCK CORE LOG

Page 1 of 1

Date 7/19/22

ROUTE F.A.P 310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.099610° N, -90.589091° W

COUNTY Mercer CORING METHOD

STRUCT. NO.	Station	DEPTH (ft)	DIAMETER (in)	RECOVERY (%)	CORE DIAMETER (in)	STRENGTH (tsf)	REMARKS
066-0020	1007+85.04						Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
SB-02	1077+12.60						Groundwater Elev.: _____ ft First Encounter Upon Completion After _____ Hrs.
		657.5					TOPSOIL - 2"
		10					CLAY LOAM - Brown, med-stiff, w/ some gravel and organics
		6	0.2		24		(continued) w/ gravel and pebbles
		3	B				
		4					Poor Recovery no more gravel
		4	0.5		21		7.0% Gravel, 54.9% Sand, 24.1% Silt, 14.0% Clay
		3	P				
		652.1					SILTY CLAY - Dark gray, soft, w/ organics and sand, moist
		1					SAND - Gray, poorly graded, med-coarse grained, med-dense, w/ pebbles
		1	0.1		34		
		1	B				SHALE - gray, weathered, mix w/ sand
		1					becomes med-stiff
		2	0.4		33		
		2	B				
		10					
		644.6					Shelby Tube Pushed 11'-13' LL = 34%, PL = 14%, PI = 20%
		1	0.8		P		
		1					SANDY CLAY - Gray, soft, w/ organics, moist
		1	0.1		27		
		1	B				
		15					
		641.6					SANDY LOAM - Gray, loose, w/ some clay, well graded, wet GWT encountered at 16'
		1					
		2			37		
		1					becomes med-dense, w/ pebbles
		4			19		
		3					

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

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GR&EF
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

USER NAME =	DESIGNED -	J.T.B.	REVISED -	
CHECKED -	K.J.M.	REVISED -		
PLOT SCALE =	DRAWN -	D.C.P.	REVISED -	
PLOT DATE =	CHECKED -	S.H., K.G.W.	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS II
STRUCTURE NO. 066-0020
SHEET 25 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	48
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 7/19/22

ROUTE F.A.P 310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.099892° N, -90.589012° W

COUNTY Mercer DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.	Station	D E P T H H	B L O W S	U C S Qu	M O I S T T	Surface Water Elev.	Stream Bed Elev.	D E P T H H	B L O W S	U C S	M O I S T T
BORING NO.	Station	(ft)	(/6")	(tsf)	(%)	ft	ft	(ft)	(/6")	(tsf)	(%)
066-0020	1007+85.04										
SB-03	1076+13.20										
	Offset 8.4 ft RT										
	Ground Surface Elev. 665.44										
ASPHALT PAVEMENT - 15"											
CLAY LOAM - Brown, med-stiff, w/ some gravel											
LL = 37%, PL = 12%, PI = 25%											
		3							1	0.2	30
		2	1.0	21							
		3	B								
		2							1	0.1	29
		2	0.7	18							
		2	B								
		2							1	0.3	24
		2	1.5	25							
		3	P								
SILTY CLAY - Gray, med-stiff											
becomes moist, soft, w/ some sand											
		1							4	-	21
		2	0.2	28							
		2	B								
		2							14		
		4	1.2	25							
		5	B								
no more sand											
		1							40	3.5	12
		3	0.8	31							
		4	B								
SANDY CLAY - Black, soft, moist											
becomes gray											
		1									
		2	0.4	57							
		1	B								
Shelby Tube Pushed 18'-20'											
			0.5								
			P								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways

ROCK CORE LOG

Page 1 of 1

Date 7/19/22

ROUTE F.A.P 310 (US 67) DESCRIPTION US 67 over Henderson Creek LOGGED BY KEG

SECTION (102)BR-1 LOCATION 41.099892° N, -90.589012° W

COUNTY Mercer CORING METHOD

STRUCT. NO.	Station	CORING BARREL TYPE & SIZE	D E P T H H	C O R E R Y	R - Q - D -	C O R E T I M E	S T R E N G T H
BORING NO.	Station	Core Diameter Top of Rock Elev.	(ft)	(#)	(%)	(min/ft)	(tsf)
066-0020	1007+85.04	630.44 in					
SB-03	1076+13.20	630.44 ft					
	Offset 8.42 RT	630.44 ft					
	Ground Surface Elev. 665.44						
SHALE - Black, Mod. Hard, Mod. Fracture, Mod. Weathered							
			630.44	1	60	12	3.4
LIMESTONE - Gray, Mod. Hard, Mod. Weathered, Slightly Fracture							
			626.19				
COAL - Highly Fractured, Mod. Hard							
			625.44	2	18	30	1
End of Boring							
			620.44				

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

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GR&EF
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

USER NAME =	DESIGNED - J.T.B.	REVISED -
CHECKED -	K.J.M.	REVISED -
PLOT SCALE =	DRAWN - D.C.P.	REVISED -
PLOT DATE =	CHECKED - S.H., K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS III
STRUCTURE NO. 066-0020

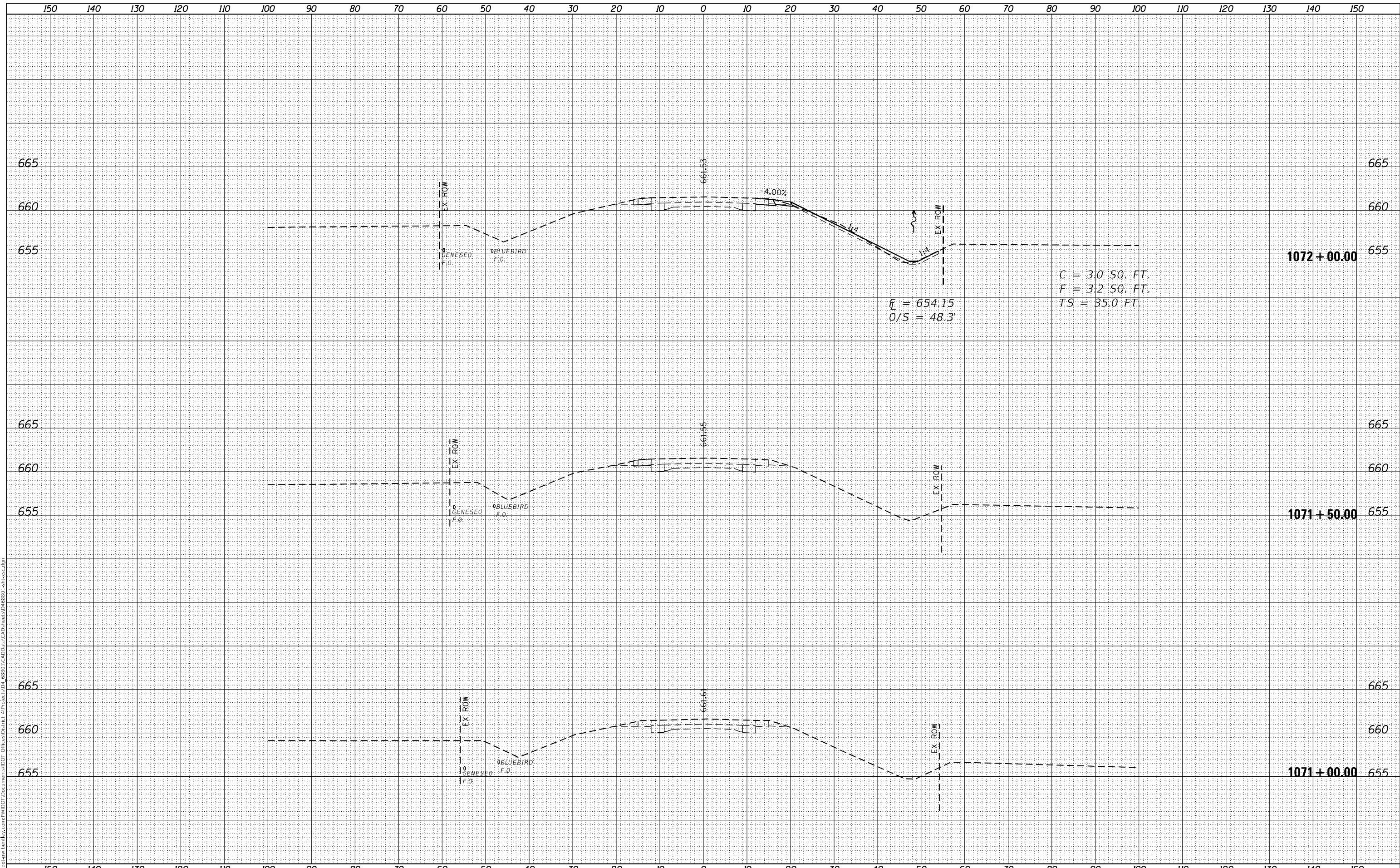
SHEET 26 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	49
CONTRACT NO. 68801				
ILLINOIS		FED. AID PROJECT		

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AREAS CHECKED	TEMPLATE	
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS-SECTIONS

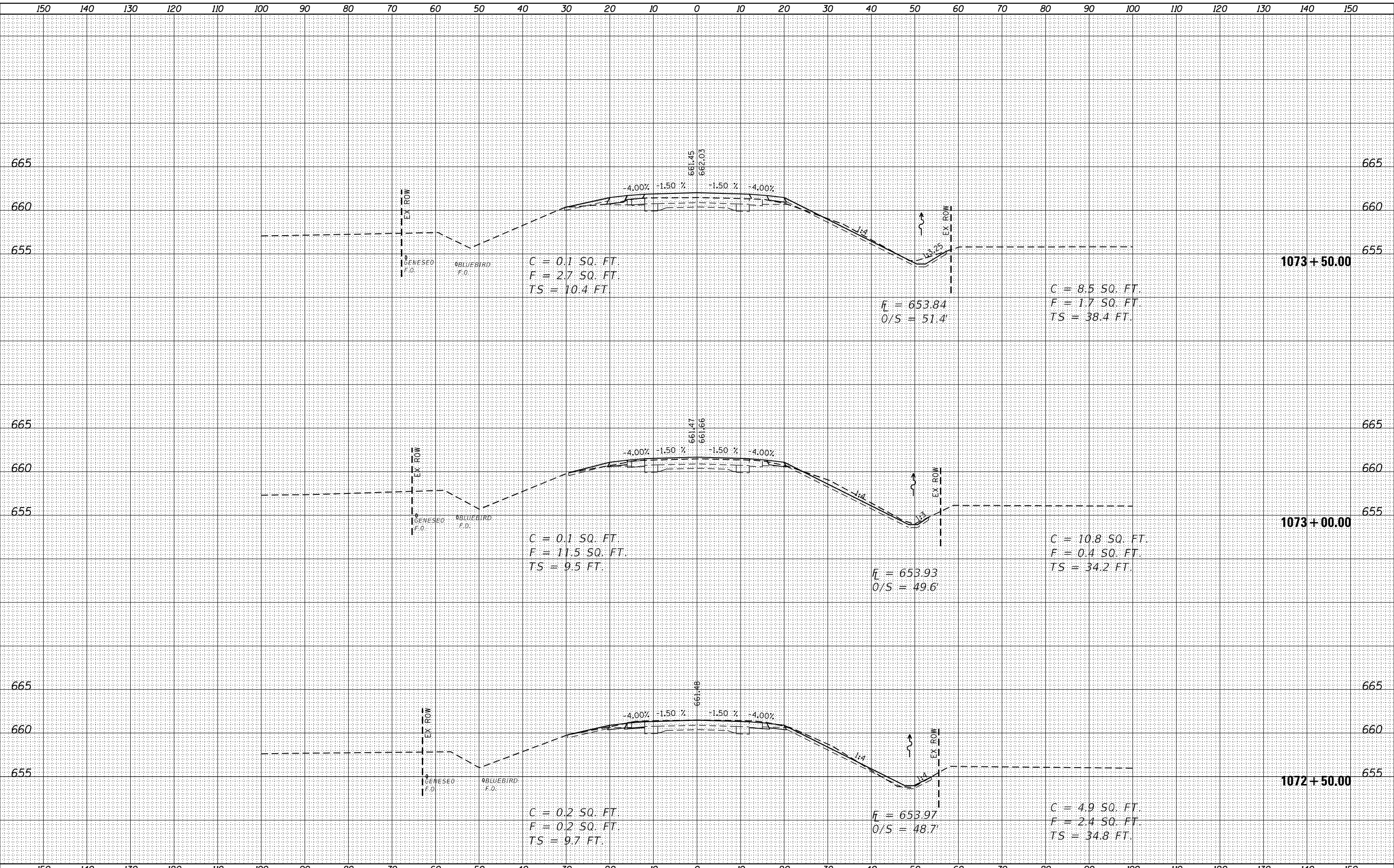
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	50
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

DATE	
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NOTE BOOK	PLOTTED
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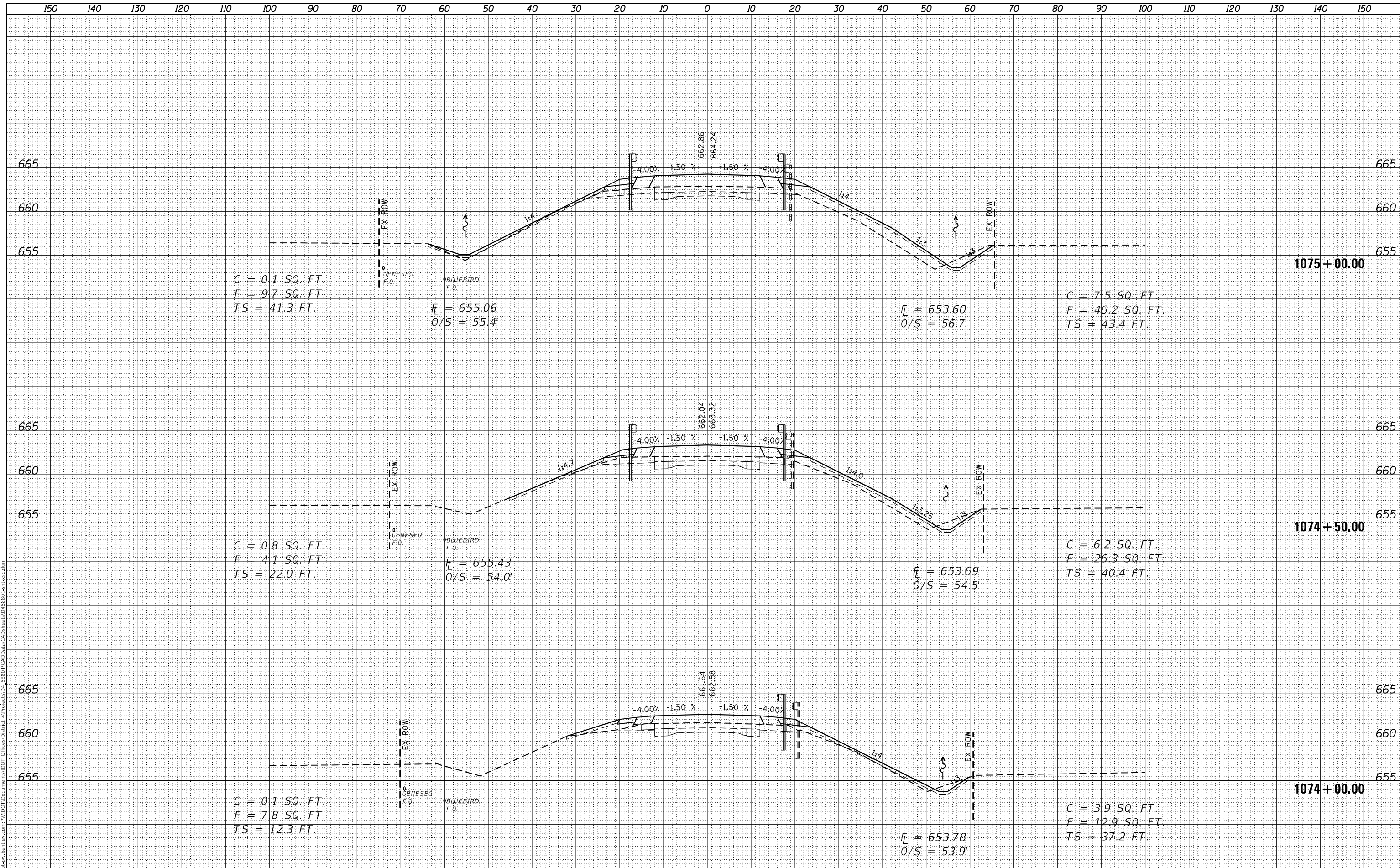


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PLOT DATE = 8/16/2024	CHECKED -	REVISED -							ILLINOIS FED. AID PROJECT		
	DATE -	REVISED -									

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

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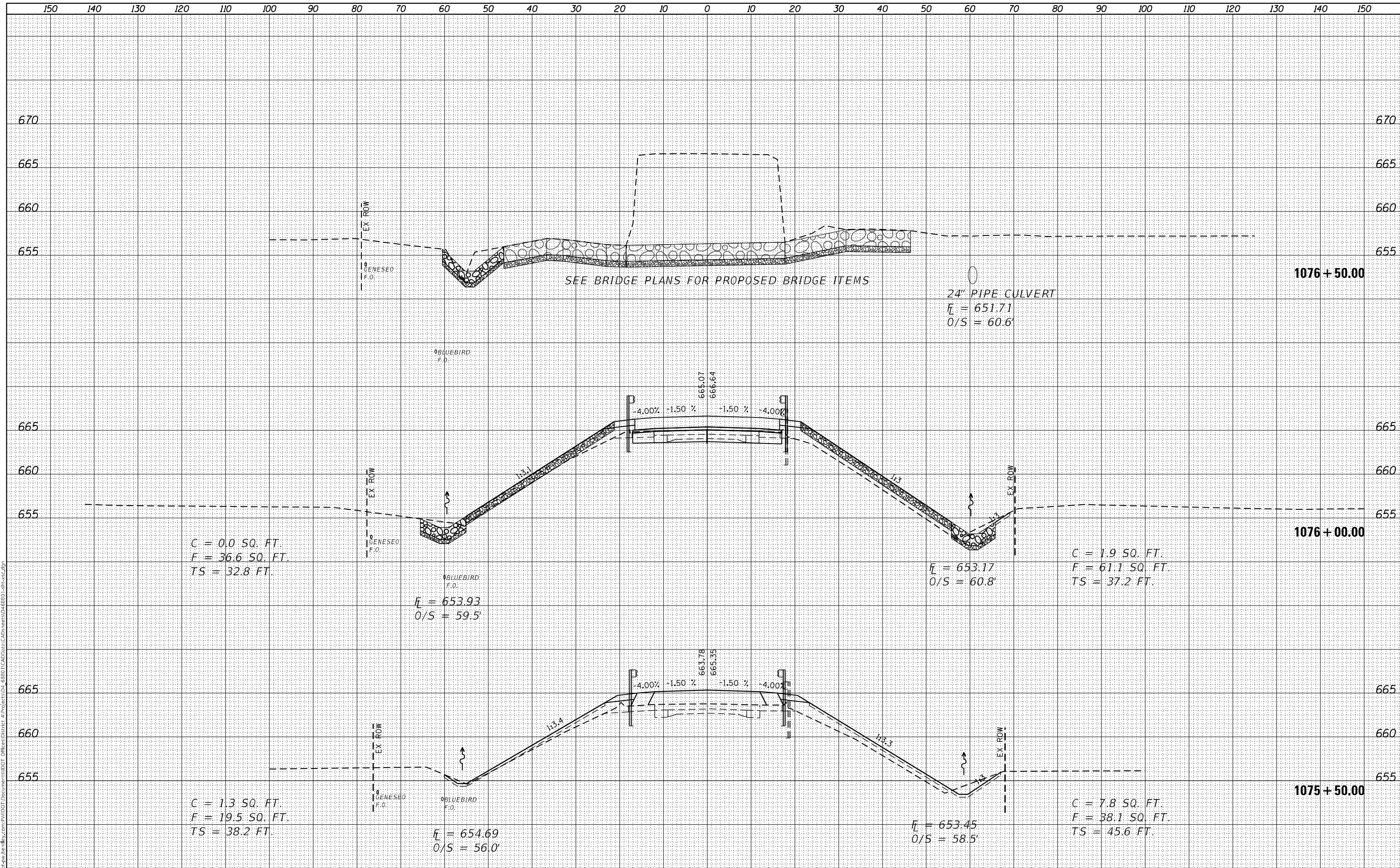
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F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 52
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
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DATE	
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS-SECTIONS

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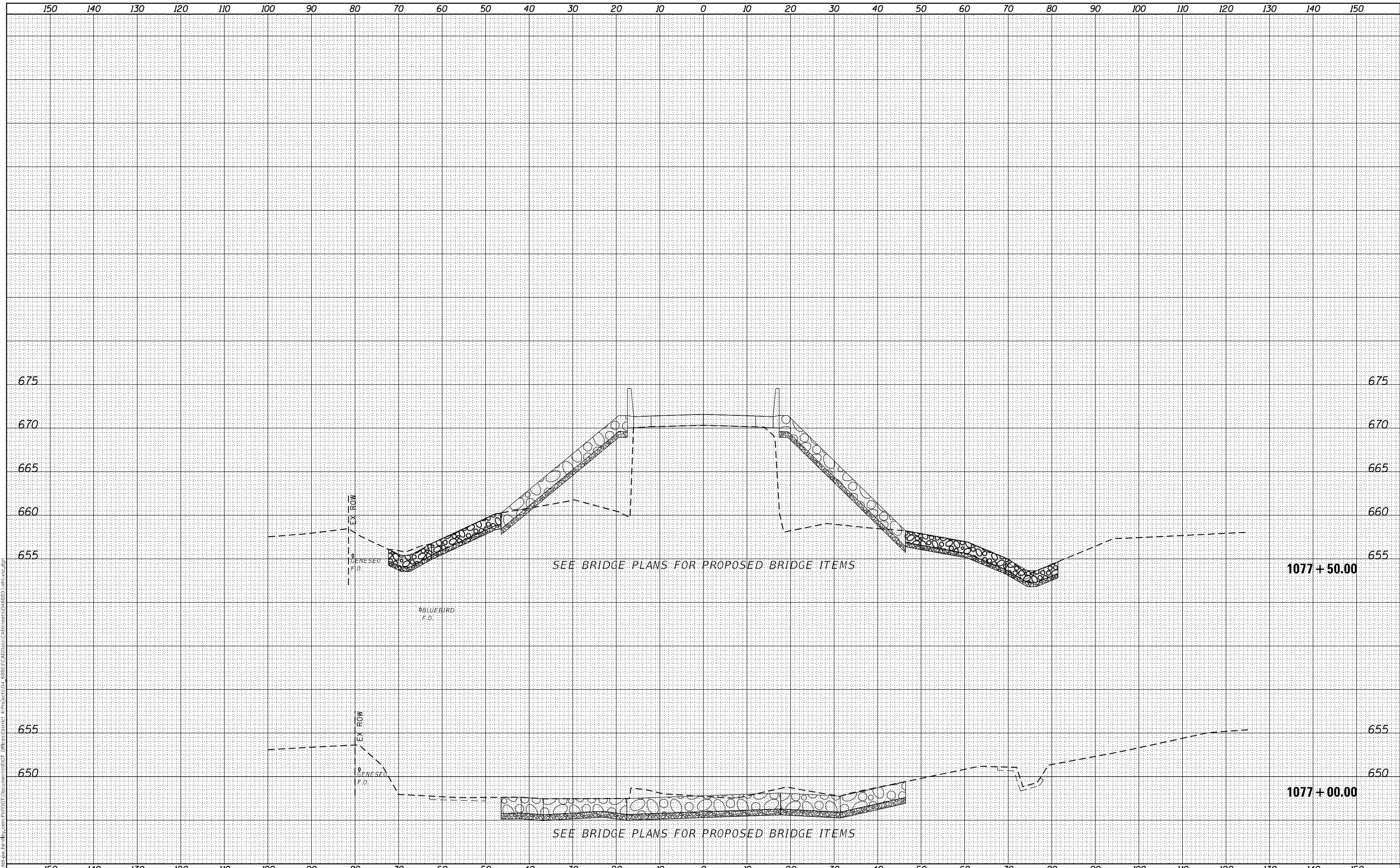
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F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 53
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

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AREAS CHECKED	TEMPLATE		
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ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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PLOT DATE = 8/15/2024	DATE -	REVISD -

DESIGNED -	REVISD -
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CHECKED -	REVISD -
DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

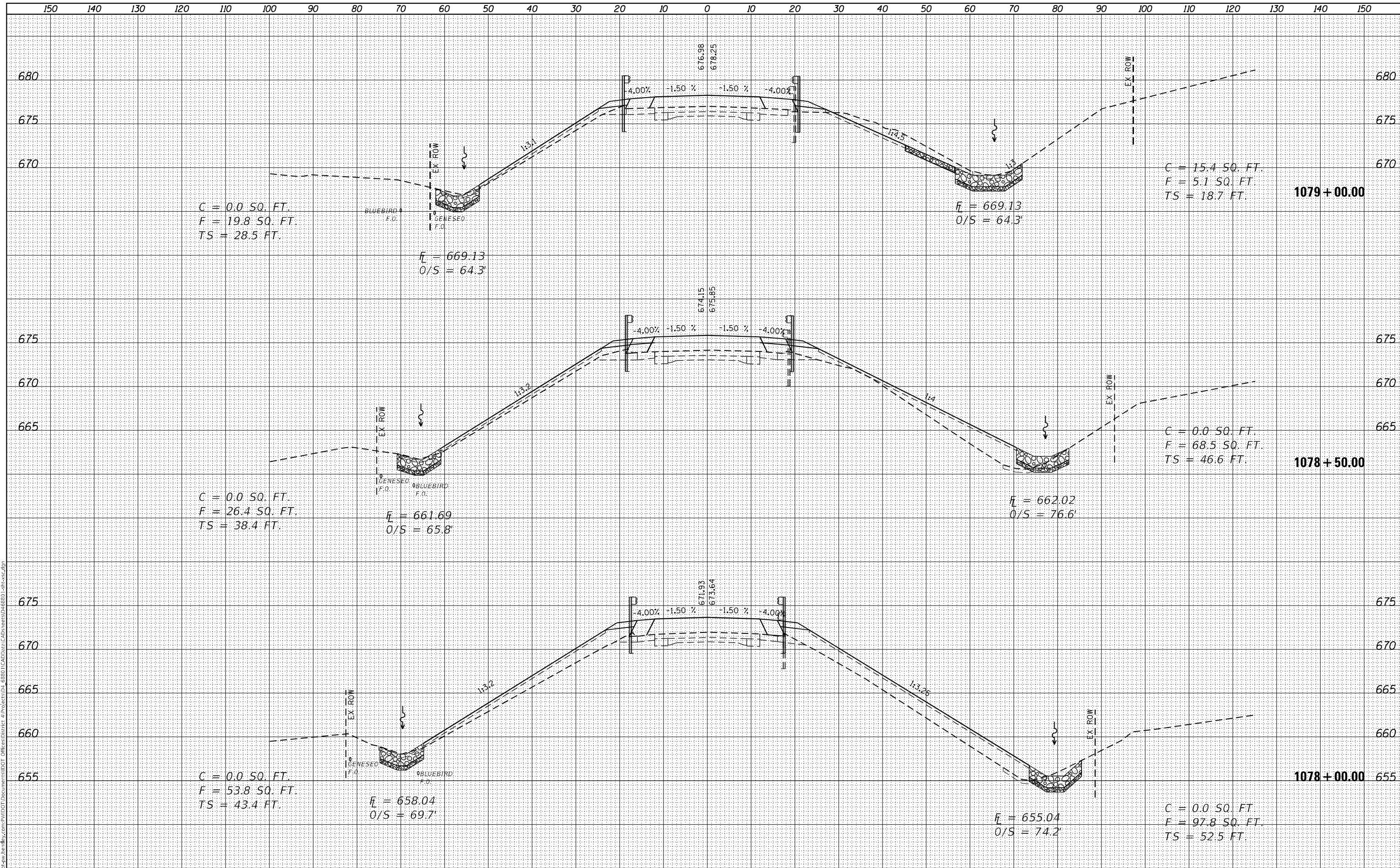
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	54
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

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

DATE	
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS-SECTIONS

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	DRAWN -	REVISED -
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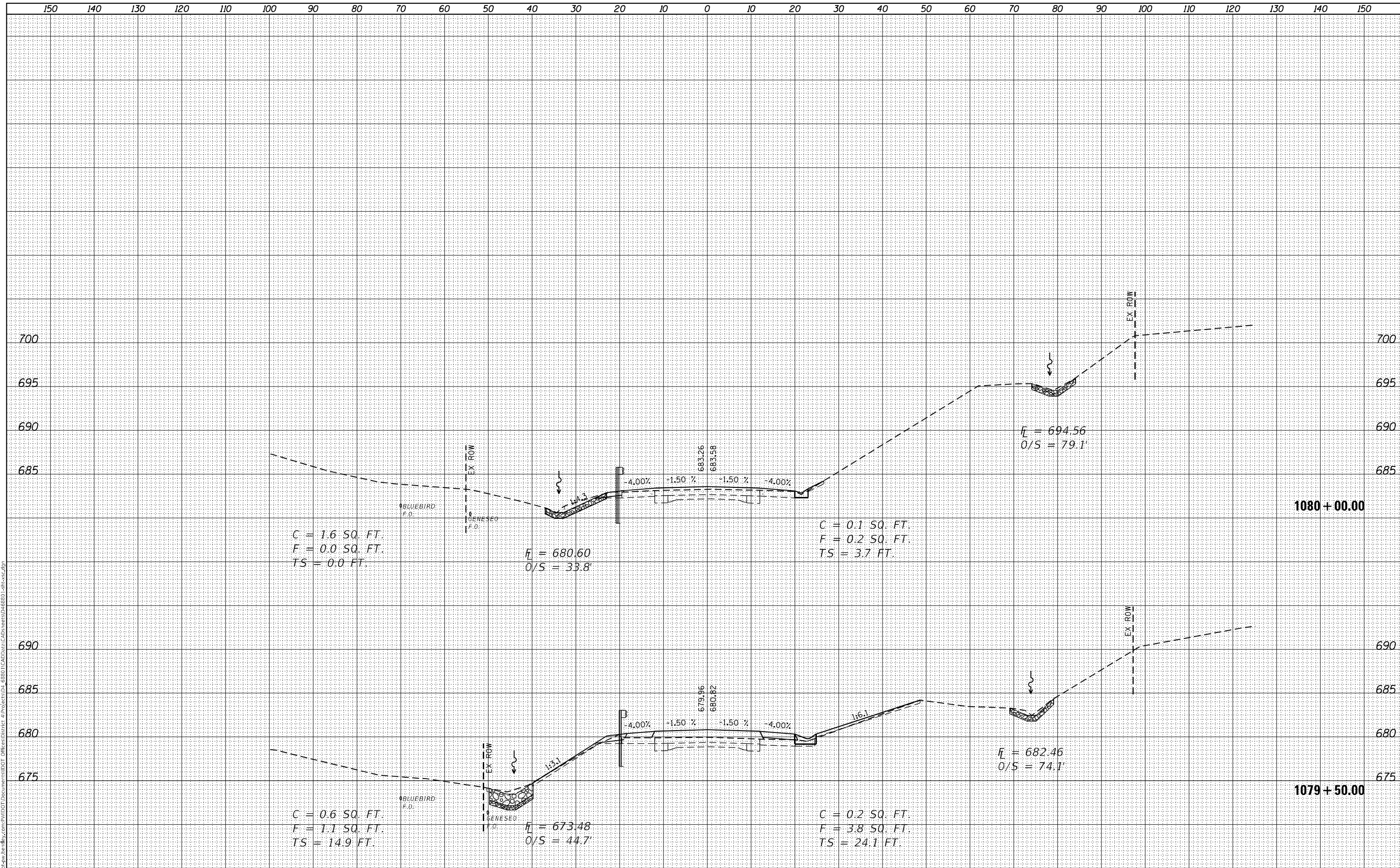
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	55
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

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

ORIGINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

USER NAME = susers	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1:20	CHECKED -	REVISED -
PLOT DATE = 8/15/2024	DATE -	REVISED -

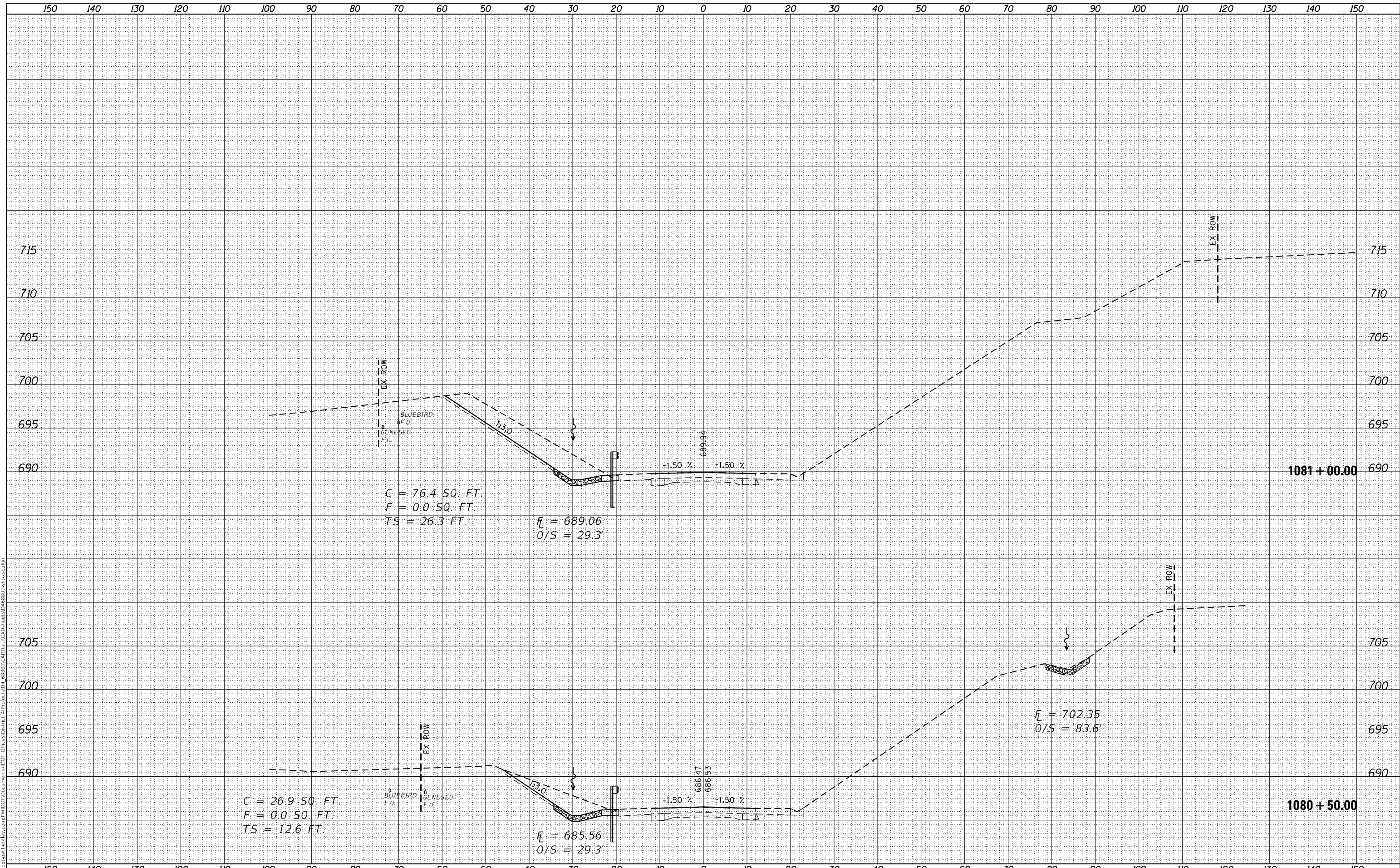
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F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 56
			CONTRACT NO. 68801	
ILLINOIS			FED. AID PROJECT	

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

ORIGINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS-SECTIONS

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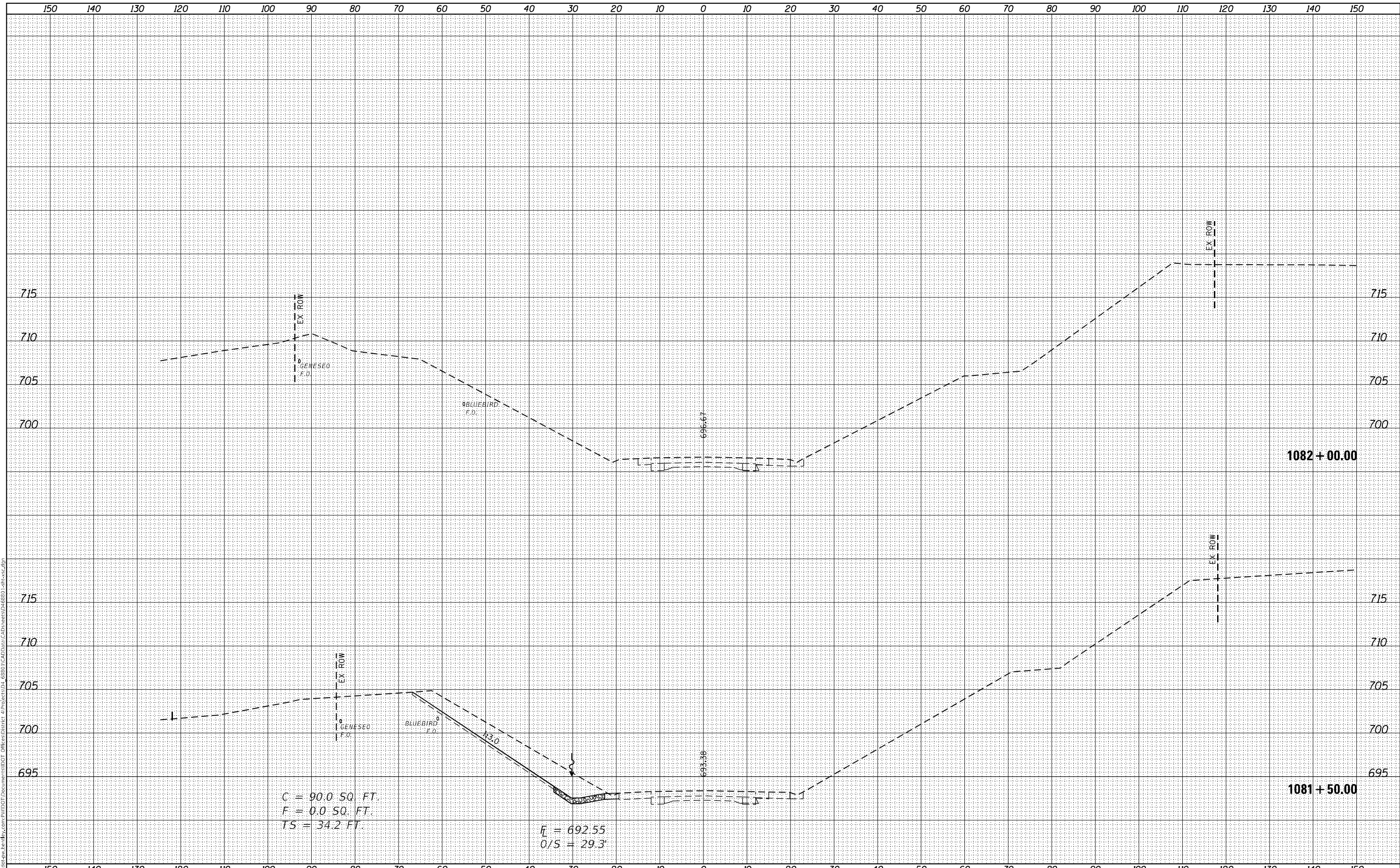
SCALE: SHEET 8 OF 9 SHEETS STA. 1080+50.00 TO STA. 1081+00.00

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 57
			CONTRACT NO. 68801	
			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	DATE
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AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

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

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	DRAWN -	REVISED -
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PLOT DATE = 8/15/2024	DATE -	REVISED -

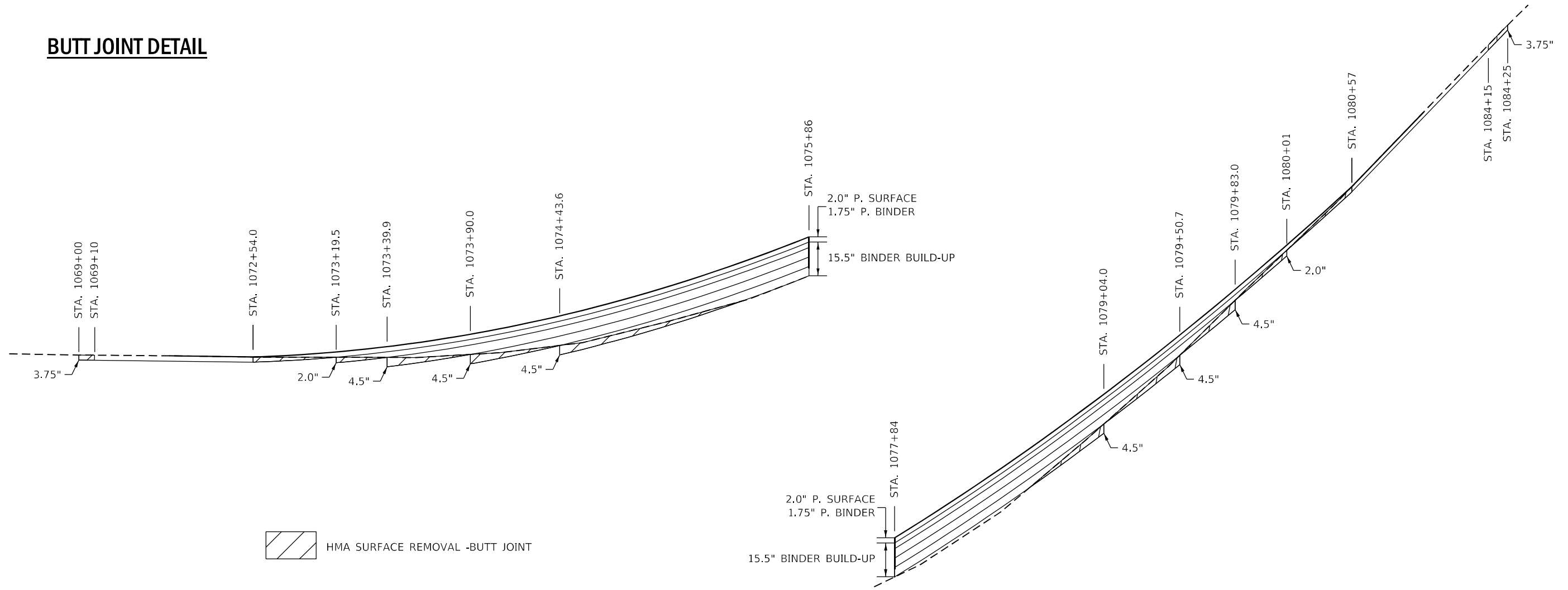
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS-SECTIONS

SCALE: SHEET 9 OF 9 SHEETS STA. 1081+50.00 TO STA. 1082+00.00

F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 58
			CONTRACT NO. 68801	
		ILLINOIS FED. AID PROJECT		

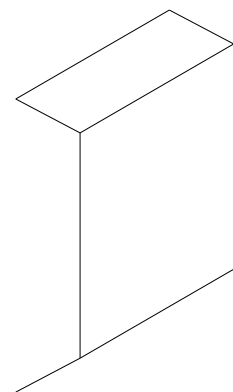
BUTT JOINT DETAIL



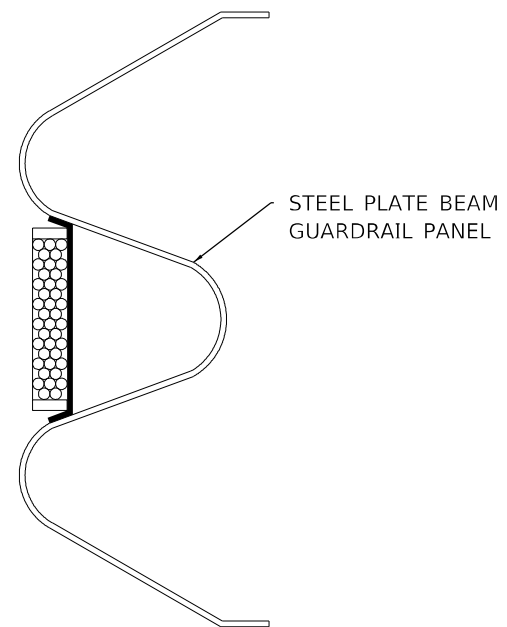
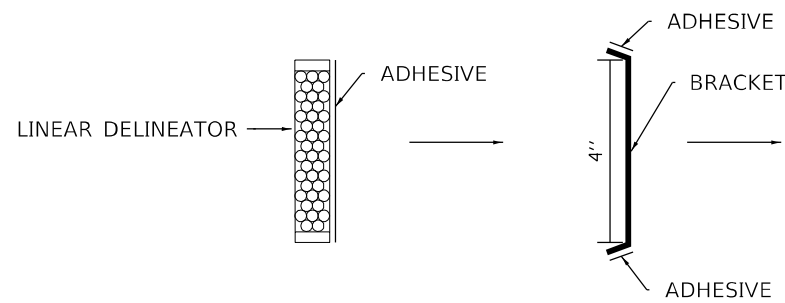
 HMA SURFACE REMOVAL -BUTT JOINT

LINEAR DELINEATOR APPLICATION TO STANDARD GALVANIZED GUARDRAIL

LINEAR DELINEATOR SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS



4" BRACKET



SEE LINEAR DELINEATOR PANELS, 4 INCH
SPECIAL PROVISION FOR ADDITIONAL DETAILS

MODEL: Default
FILE: \\nafe.pva\public\paw.bentley.com\P\I\DOT\Documents\DOT Office\Dir\ref. d\Project\ID_68801\CADD\Draws\CADD\Draws\68801-59-centallic.dgn

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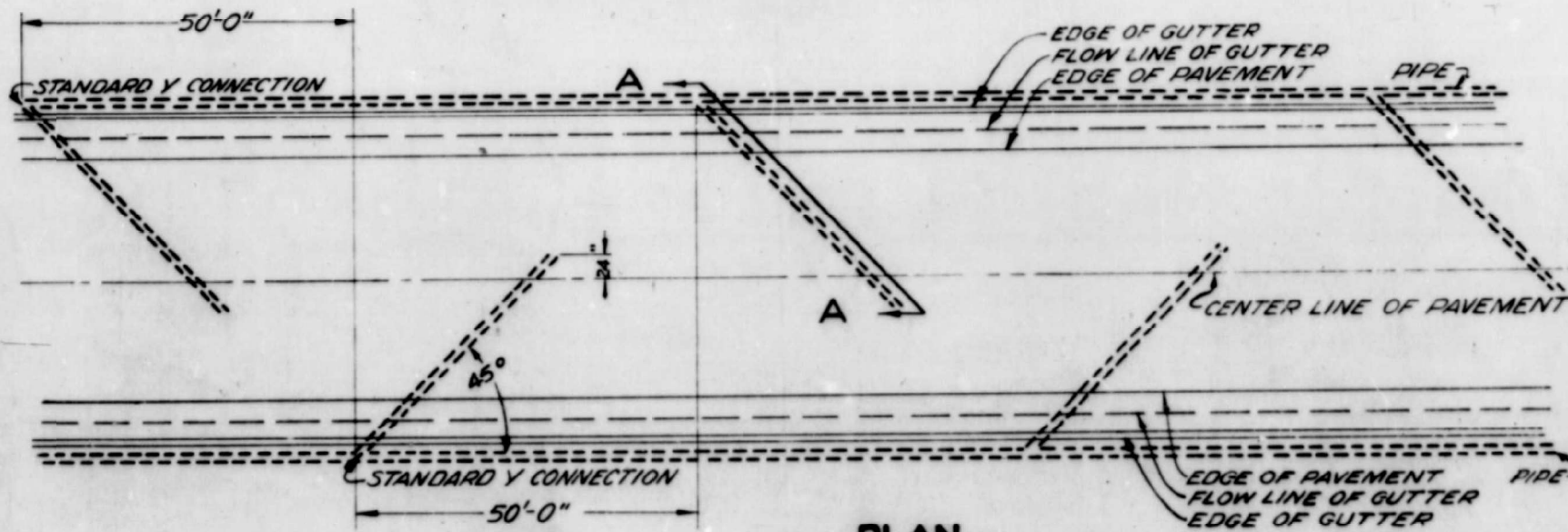
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN DETAILS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	59
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

SYSTEM OF PIPE UNDERDRAINS



PLAN

SCALE: LONG. 1" = 20'
TRANS. 1" = 10'

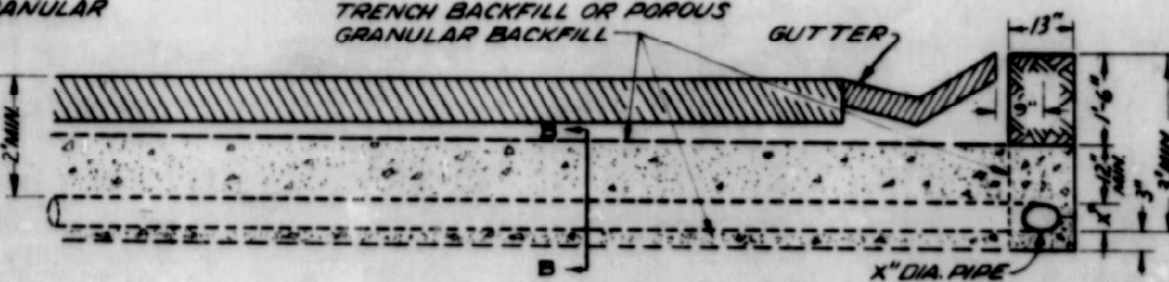
SEC. B-B

TRENCH BACKFILL
OR POROUS GRANULAR
BACKFILL



SEC. A-A
SCALE 1" = 3'

TRENCH BACKFILL OR POROUS
GRANULAR BACKFILL



WHERE SHOWN ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR PIPE UNDERDRAINS.

THIS SKETCH SHOWS THE GENERAL LOCATION OF THE PIPE AND DEPTH THE PIPE IS TO BE PLACED IN CUTS WHERE IT IS PLANNED TO USE GUTTERS ALONG THE PAVEMENT.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICES FOR "PIPE UNDERDRAINS", "TRENCH BACKFILL" OR "POROUS GRANULAR BACKFILL". THE UNIT PRICE FOR "PIPE UNDERDRAINS" SHALL INCLUDE ALL "Y" "T" AND OTHER NECESSARY CONNECTIONS, TOGETHER WITH THE "GRANULAR BEDDING MATERIAL" CONFORMING TO THE REQUIREMENTS OF ARTICLE 70.4 OF THE STANDARD SPECIFICATIONS.

STANDARD 1353 R

REVISED 2/10-25-52

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
PASSED	Nov 7 1952
H. J. [Signature] ENGINEER OF ROAD PLANS AND CONTRACTS	
APPROVED	Nov 7 1952
[Signature] ENGINEER OF DESIGN	

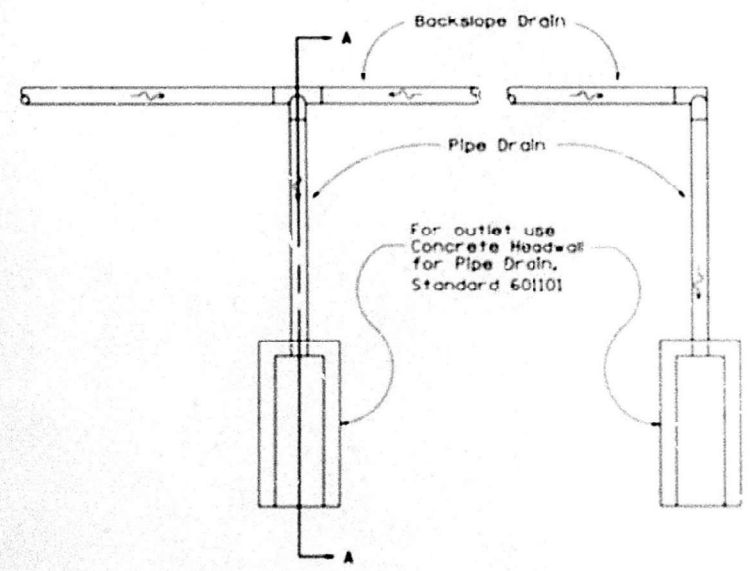
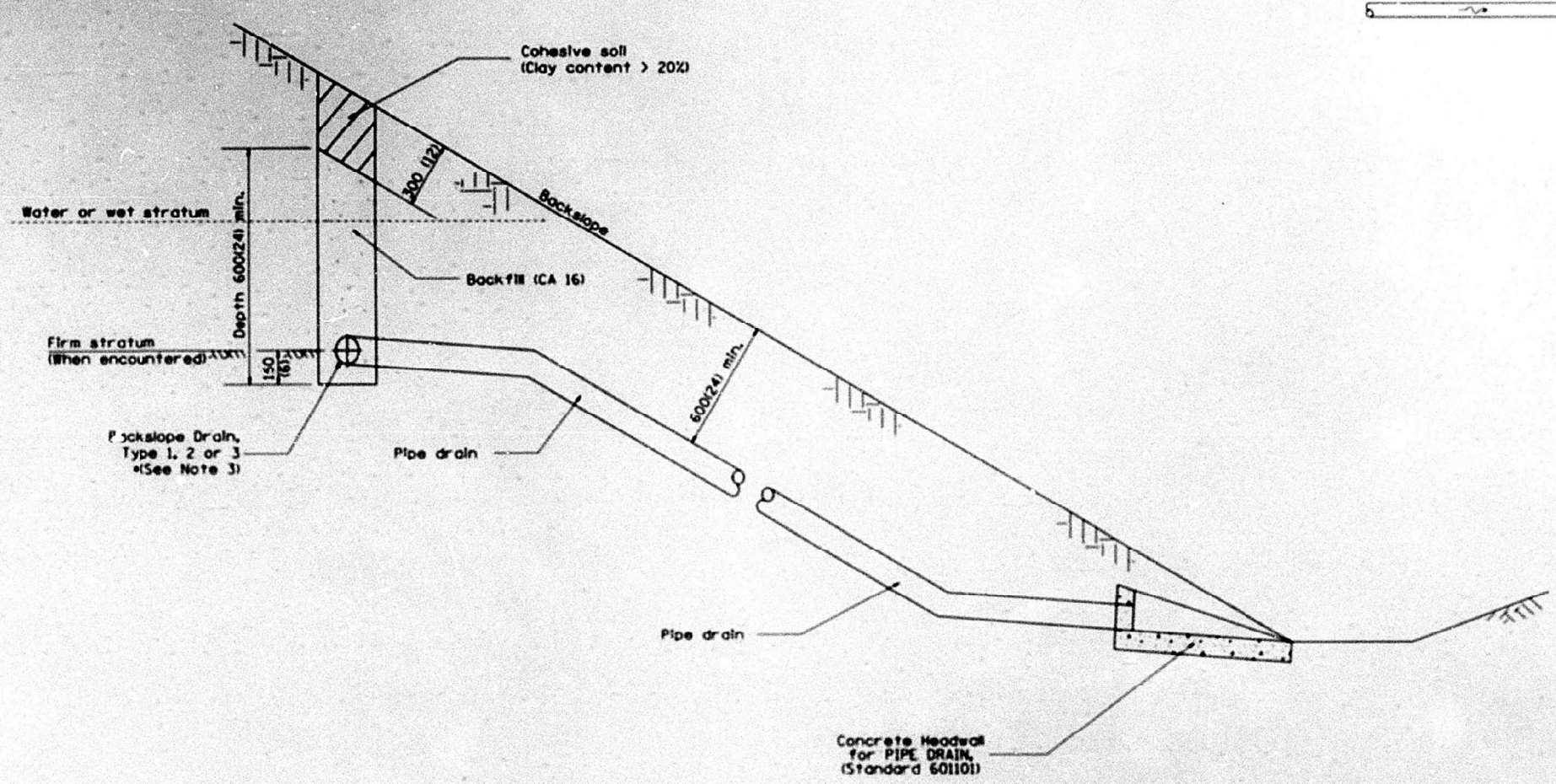
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FOR INFORMATION ONLY

SCALE: SHEET 1 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	60
CONTRACT NO. 68801				
ILLINOIS		FED. AID PROJECT		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310		MERCER & WABSEN	266	150
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*101R5-3102R5-4102R5-1102R5-1102R5.C11				



DESIGNER NOTE 1
 1. LOCATIONS AND SIZES OF BACKSLOPE DRAINS DEFINED IN GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER.
 2. GENERAL GUIDES FOR SIZES: OVER 150 m (500') USE 150(6), UNDER 150 m (500') USE 100(4).
 3. INCLUDE STANDARD 601101 FOR "CONCRETE HEADWALL FOR PIPE DRAIN".
 4. INCLUDE DISTRICT SPECIAL PROVISIONS.

7-24-97

SECTION A-A

GENERAL NOTES:

- The District Geotechnical Engineer will determine the Backslope Drain design, after the backslope has been constructed.
- This work shall be done in accordance with the applicable portion of Articles 601 and 207 of the Standard Specifications.
- See plans for "Type".

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

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
BACKSLOPE DRAINS	
CADD STD. NO. 60001-04	DESIGNED BY
SCALE: NOT DRAWN TO SCALE	DRAWN BY
DATE: 7-24-97	CHECKED BY

DATE	BY	REVISION

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = 1:100	DRAWN -	REVISED -
PLOT DATE = 8/15/2024	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FOR INFORMATION ONLY

SCALE: SHEET 2 OF 5 SHEETS STA. TO STA.

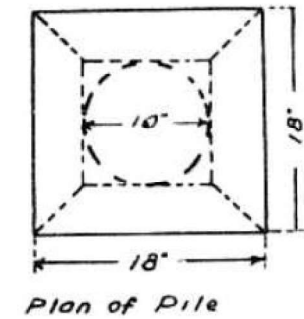
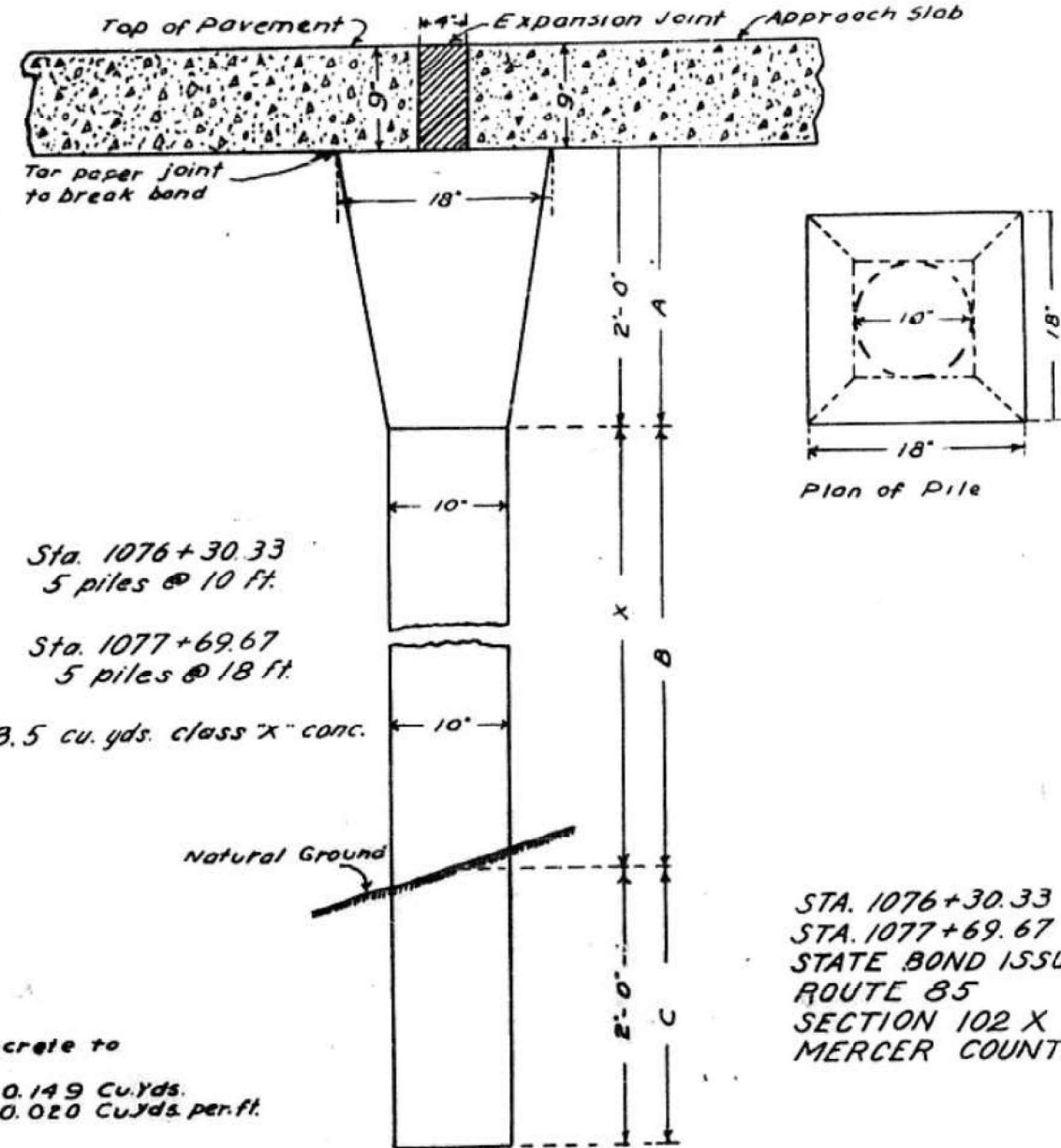
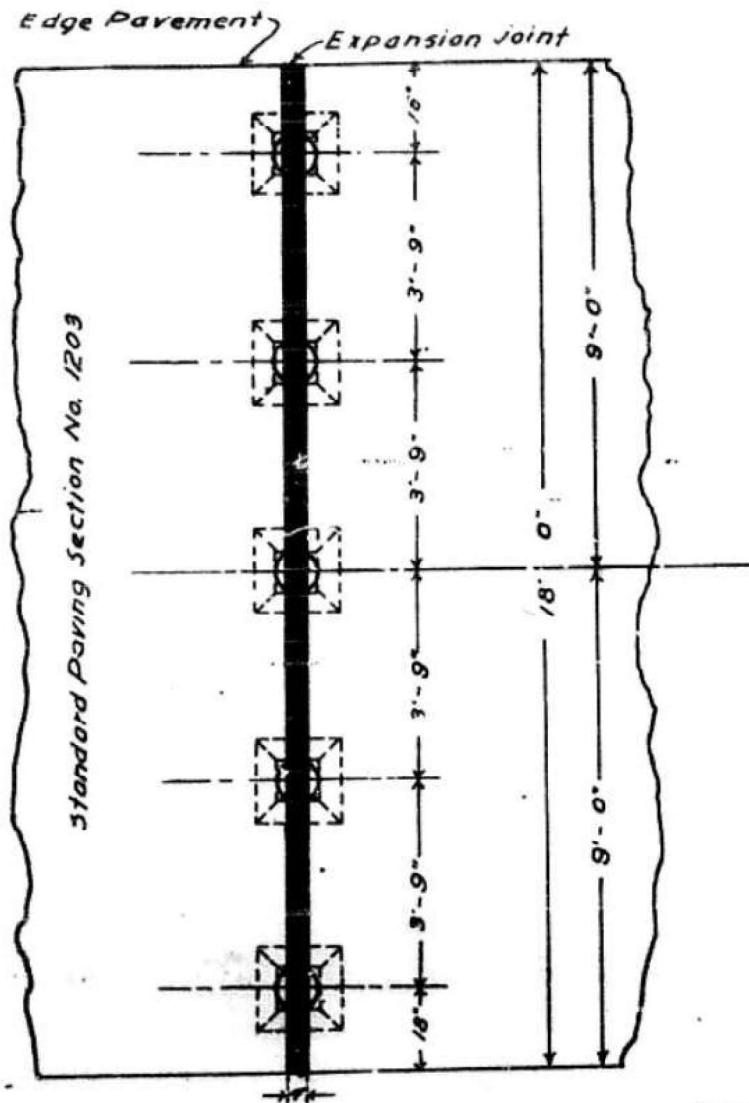
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	61
CONTRACT NO. 68801			ILLINOIS FED. AID PROJECT	

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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

BOND ISSUE ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
85	B-102X	Mercer	51	50
ROAD DIST NO 7			ILLINOIS	FED AID PROJECT 144

SPECIAL CONCRETE PILING UNDER EXPANSION JOINT-STANDARD PAVING SECTION NO. 1203



Sta. 1076+30.33
5 piles @ 10 ft.

Sta. 1077+69.67
5 piles @ 18 ft.

3.5 cu. yds. class "X" conc.

STA. 1076+30.33
STA. 1077+69.67
STATE BOND ISSUE
ROUTE 85
SECTION 102 X
MERCER COUNTY

Note: Class "X" Concrete to be used thruout
Sections A+C = 0.149 Cu.Yds.
Section B = 0.020 Cu.Yds. per ft.

MODEL: Default; FILE: 31012.ctb; PROJECT: 68801; CADD: 31012.ctb; PROJECT: 68801; CADD: 31012.ctb; PROJECT: 68801; CADD: 31012.ctb

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = 1:100	DRAWN -	REVISED -
PLOT DATE = 8/15/2024	CHECKED -	REVISED -
	DATE -	REVISED -

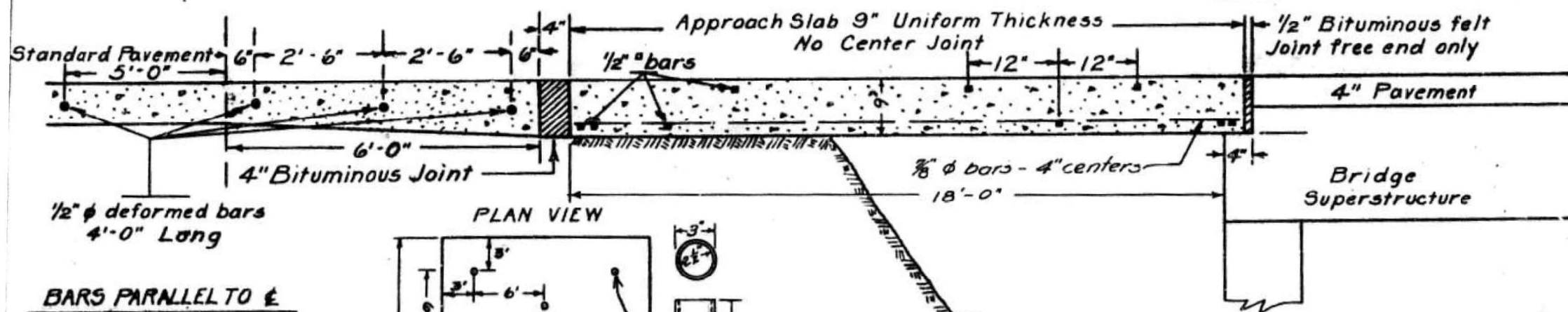
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY			
SCALE:	SHEET 3 OF 5 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	62
CONTRACT NO. 68801				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
85	B-102A	Mercer	51	50
ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			144	

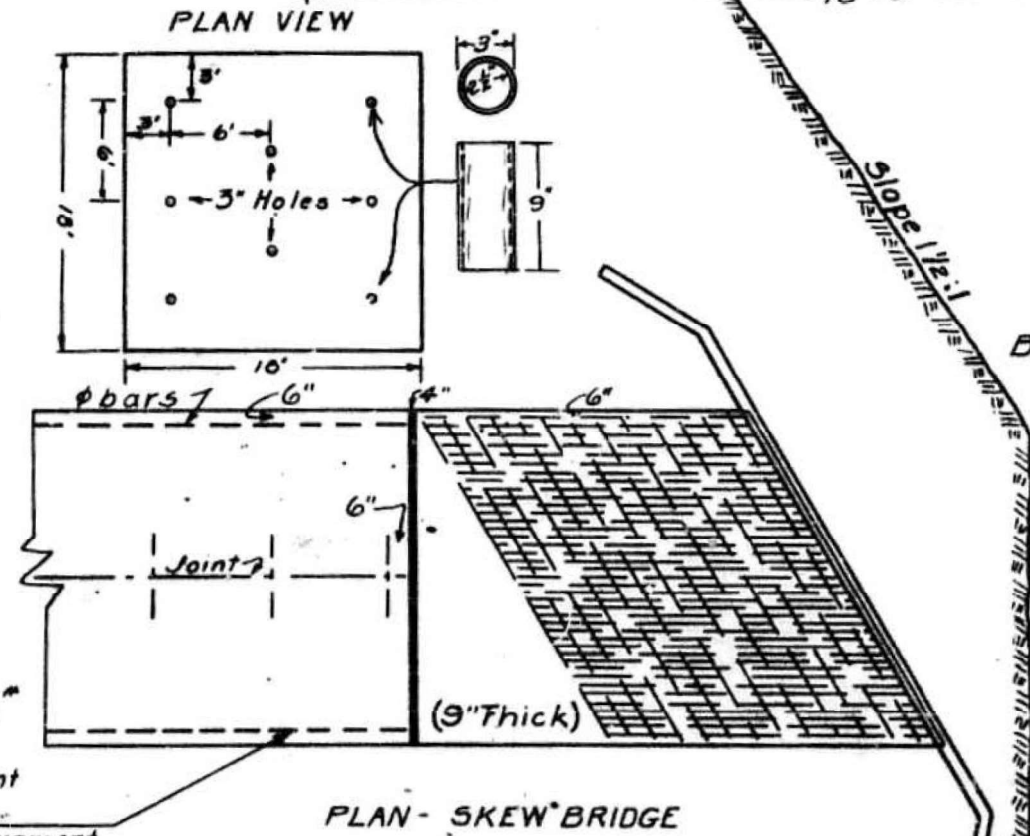


BARS PARALLEL TO E

Span	Size	Centers
7'-0"	1/2" φ	6"
8'-0"	1/2" φ	5"
9'-0"	1/2" φ	5"
10'-0"	3/8" φ	5"
11'-0"	3/8" φ	4"
12'-0"	3/4" φ	4"
13'-0"	3/4" φ	5"
14'-0"	3/4" φ	5"
15'-0"	3/4" φ	4"
16'-0"	3/4" φ	4"
17'-0"	1/2" φ	5"
18'-0"	3/8" φ	4"

104 bars 3/8" φ 18'-0" } 4430 #
42 bars 1/2" φ 17'-0" }

Note - For 9"-6"-9" Pavement
Use 3/4" φ bars
Note - For 9"-9"-7"-9"-9" Pavement
Use 1/8" φ bars



Note: The cost of constructing the pavement in accordance with the design at such points as are designated on the detail plans, including all extra materials except reinforcement bars, shall be included in the unit price bid for pavement. No extra compensation will be allowed except for reinforcement bars which will be paid for at the contract unit price for Reinforcement Bars.

Sta. 1076+48.33
Sta 1077+51.67
STATE BOND ISSUE
ROUTE 85
SECTION 102
MERCER COUNTY

**SPECIAL DETAILS
FOR
PAVEMENT AND CONSTRUCTION JOINT
ADJACENT TO BRIDGES STANDARD NO. 1203**

Jan. 1931 V.D.W.

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PLOT DATE = 8/15/2024	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY			
SCALE:	SHEET 4	OF 5 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	63
			CONTRACT NO. 68801	
ILLINOIS FED. AID PROJECT				

14.26

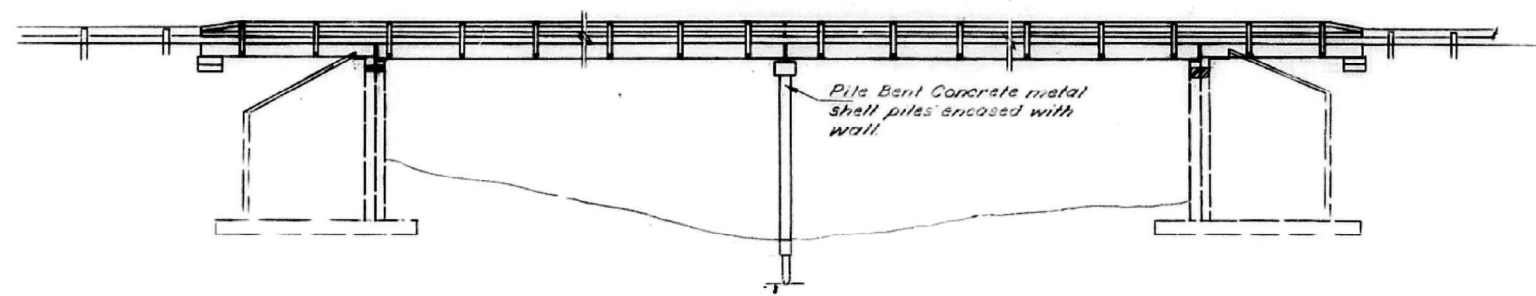
Built as Section 102 C, S.B.I. Rt. 85 1951
 Existing Structure:
 Closed Reinforced Conc. Abutments to
 remain in place and 100' span steel
 truss (21'-0" Roadway) Superstructure
 to be removed

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
102 BR	102 BR	MERCER	31	4
6 SHEETS				

GENERAL NOTES
 All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

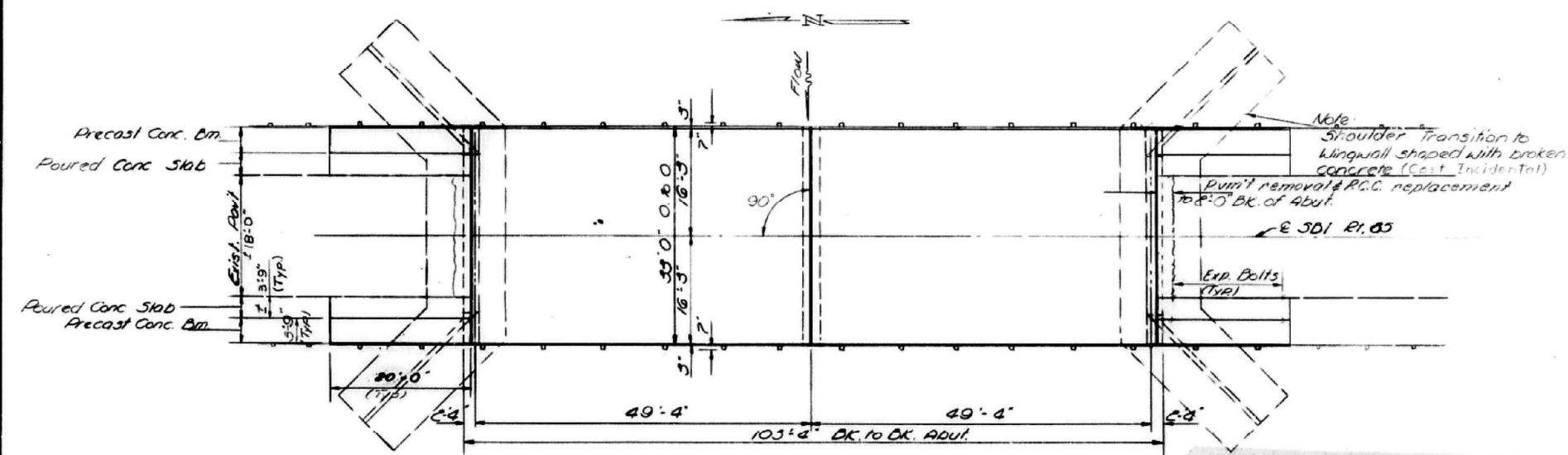
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
 An alternate strand pattern using Extra High Strength Prestressing strand (270 K.S.I.) is permitted.
 The Contractor shall drive one Metal Shell Test pile in a permanent location at the pier bent as directed by the Engineer before ordering the remainder of piles.
 Reference Grade Line is the profile of exist. roadway along E.S.B.I. Rt. 85. (Top of PCC Pavement)



ELEVATION

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Portland Cement Conc. P.V. (10')	Sq. Yds.	34		34
Pavement Fabric	Sq. Yds.	34		34
Removal of Existing Superstructure	Ea.			1
Concrete Removal	Cu. Yds.		15.0	15.0
Expansion Bolts (#4)	Ea.	52		52
Glass X Concrete	Cu. Yds.		74.3	74.3
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Steel Bailing Type N	Lin. Ft.	280		280
Reinforcement Bars	Lbs.		8190	8190
Pum't. Rem't. P.C.C. Replmt. Type II (10')	Sq. Yds.			8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	329		329
Metal Shell Piles (12")	Lin. Ft.			480
Test Piles (Metal Shell 12")	Ea.			1
Coal Tar Interlayer Protective Coat	Sq. Yds.			365



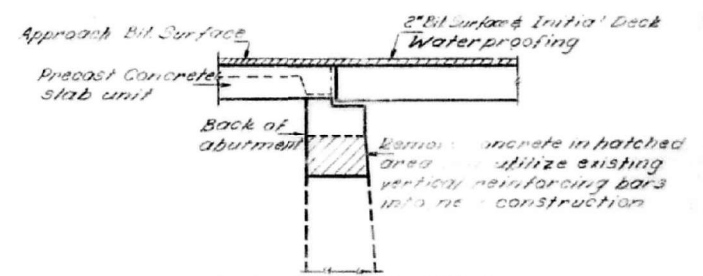
PLAN

PRECAST PRESTRESSED UNITS

- f_c = 5,000 psi
- f_{cl} = 4,000 psi
- f_s = 248,000 psi (Strands)
- f_{sl} = 173,600 psi (Strands)

FIELD UNITS

- f_c = 1000 psi (Exist. Abut.)
- f_c = 1400 psi (New)
- f_s = 20,000 psi
- f_e = 75 psi
- n = 10



SECTION THRU NEW ABUTMENT GAP

GENERAL PLAN & ELEVATION
 S.B.I. RT. 85 OVER NO. HEND. SPONGS
 S.B.I. RT. 85 SEC. 102 BR
 MERCER COUNTY
 STATION 1077+00

DESIGNED	H. McCull
CHECKED	A. Hummel
DRAWN	J. Kessler
CHECKED	A. Hummel

July 3 1989
 Carl E. Hummel
 EXAMINED
 PASSED
 APPROVED

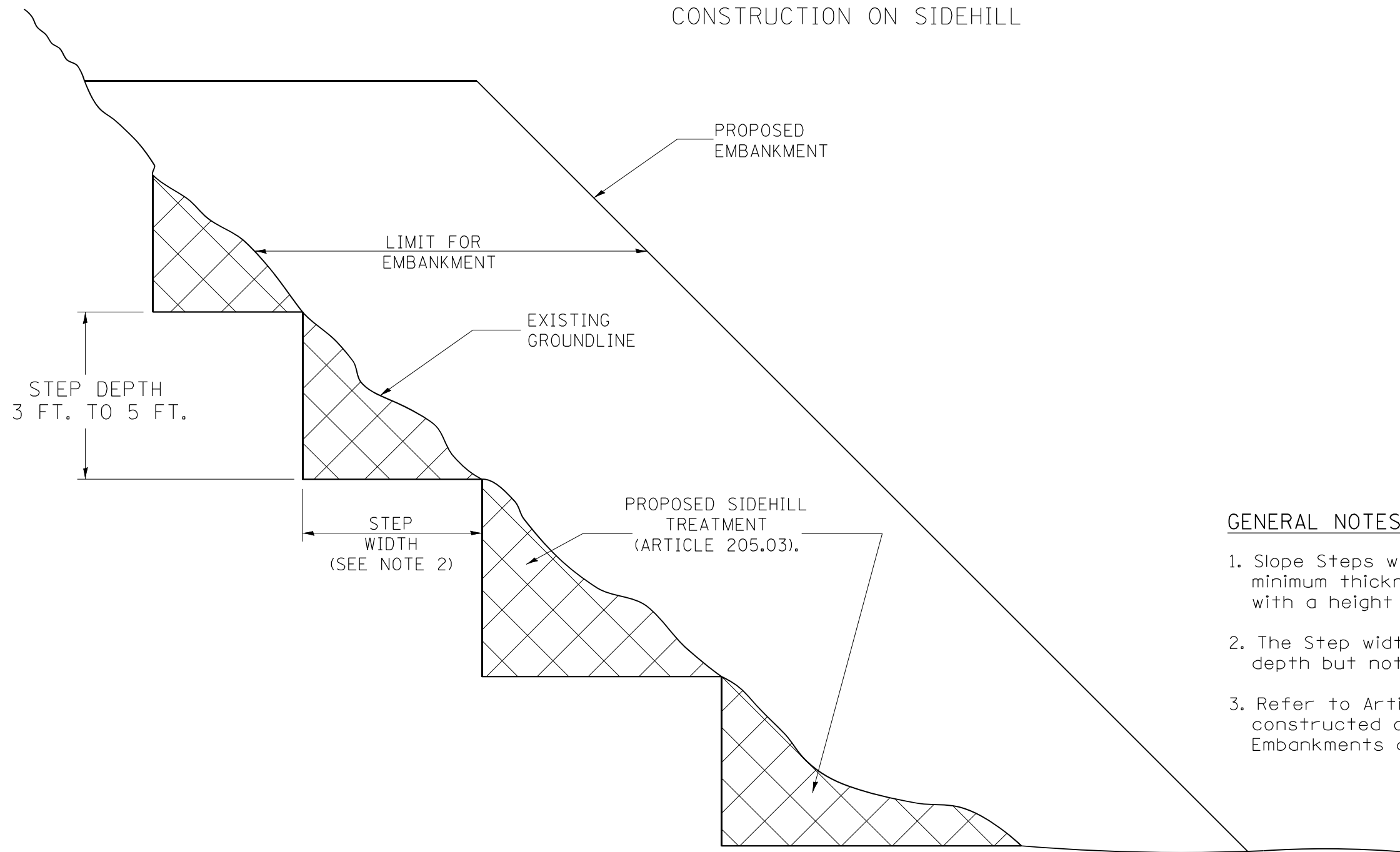
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 DRAWN: J. Kessler
 CHECKED: A. Hummel
 DATE: 8/15/2024

USER NAME = SUSERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FOR INFORMATION ONLY		F.A.P. RTE. 310	SECTION (102)BR-1	COUNTY MERCER	TOTAL SHEETS 77	SHEET NO. 64		
PLOT SCALE = 1:100	DRAWN -	REVISED -		SCALE:	SHEET 5	OF 5 SHEETS	STA.	TO STA.	CONTRACT NO. 68801			
PLOT DATE = 8/15/2024	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT								
	DATE -	REVISED -										

SLOPE STEPS DETAIL

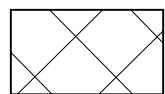
TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "sliver fills" and on all fills with a height of 10 feet or greater.
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.

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 BOX, REVISED GENERAL NOTES.	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.
5-30-18	MINOR CORRECTION	R.D.

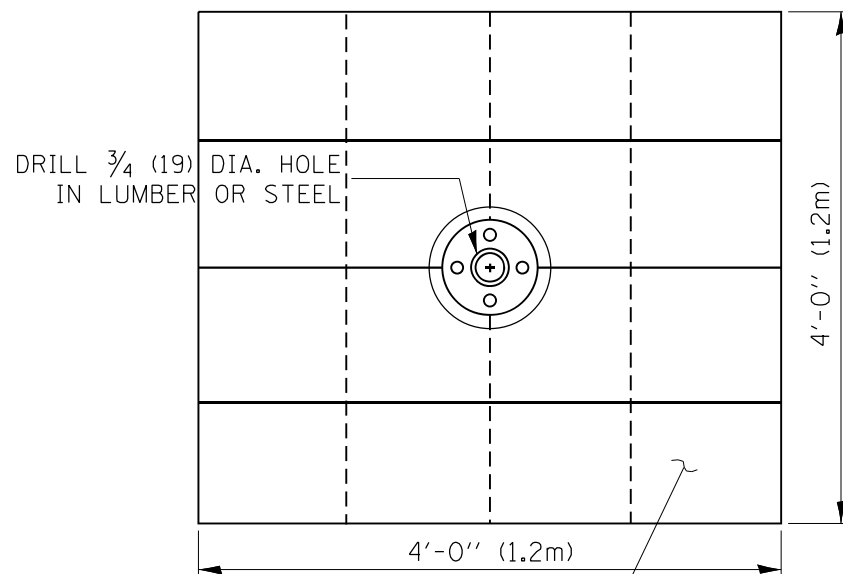
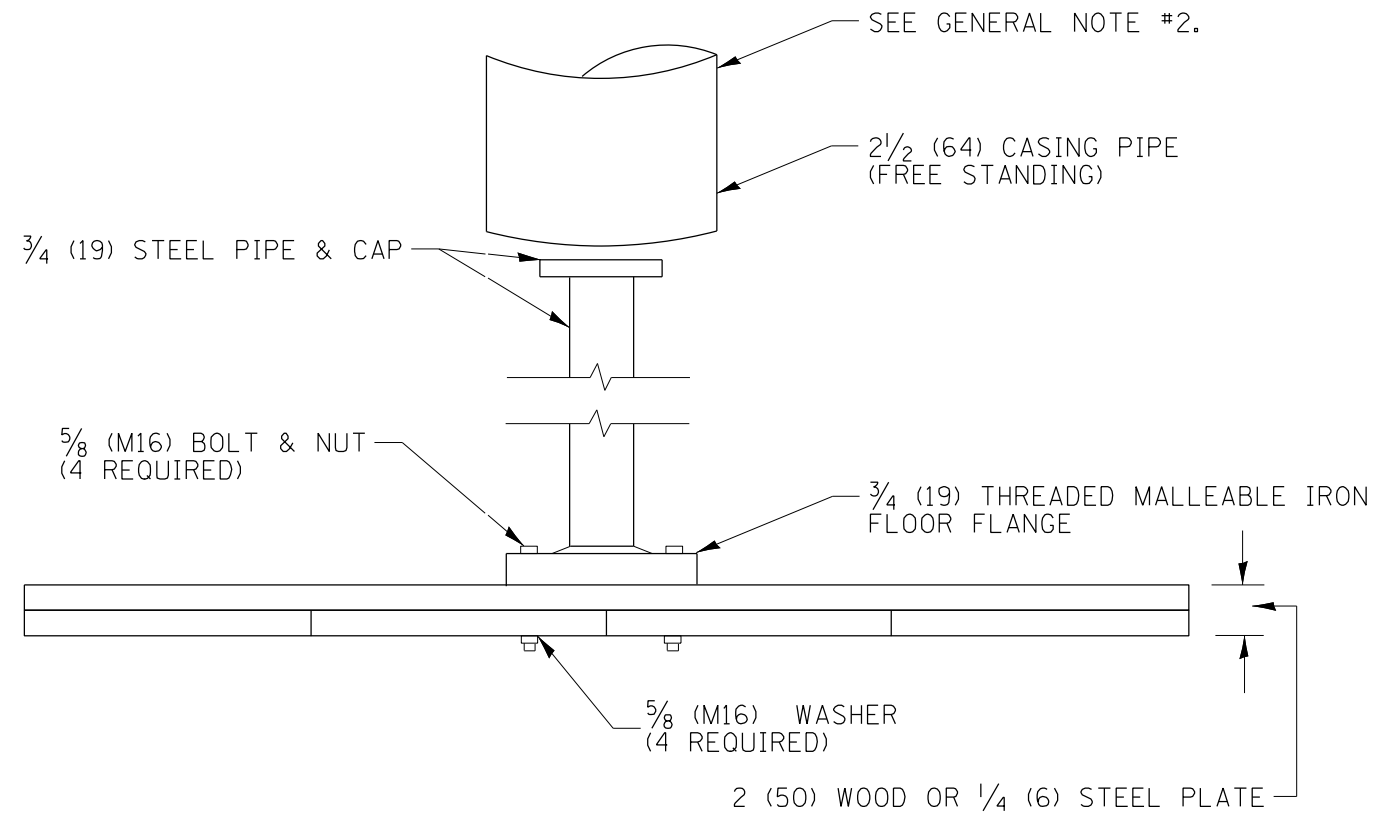
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SLOPE STEPS DETAIL

NOT TO SCALE

CADD STD. 205001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	65
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68801	



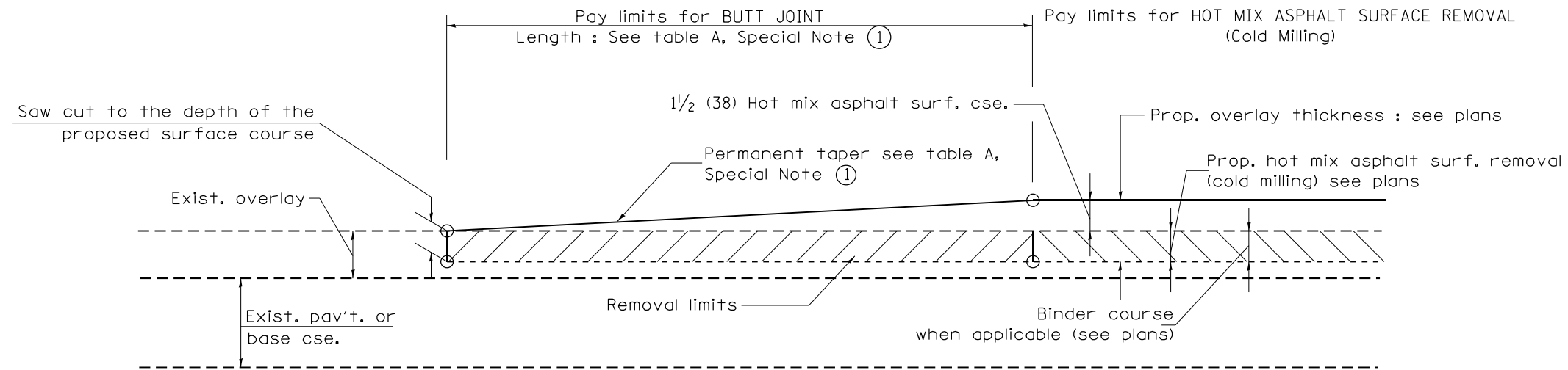
SOUND LUMBER - 1(25) x 12(300) NAILED TOGETHER OR 1/4(6) THICK BY 4'(1.2m) SQUARE STEEL PLATE

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	RENUM. L-5.04, NEW REVISION BOX, REVISED NOTES, REVISED TITLE BOX	T.P.	8-23-01	UPDATE FOR NEW SPEC.	M.A.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SETTLEMENT PLATFORM	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4-14-99	ADDED "CASING PIPE" REQUIREMENT	J.A.	10-16-06	REVISED TO 2007 SPEC.	M.A.			310	(102)BR-1	MERCER	77	66
5-19-99	CORRECTIONS TO CASING PIPE	J.A.						CONTRACT NO. 68801				
							NOT TO SCALE	CADD STD. 205101-D4		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		



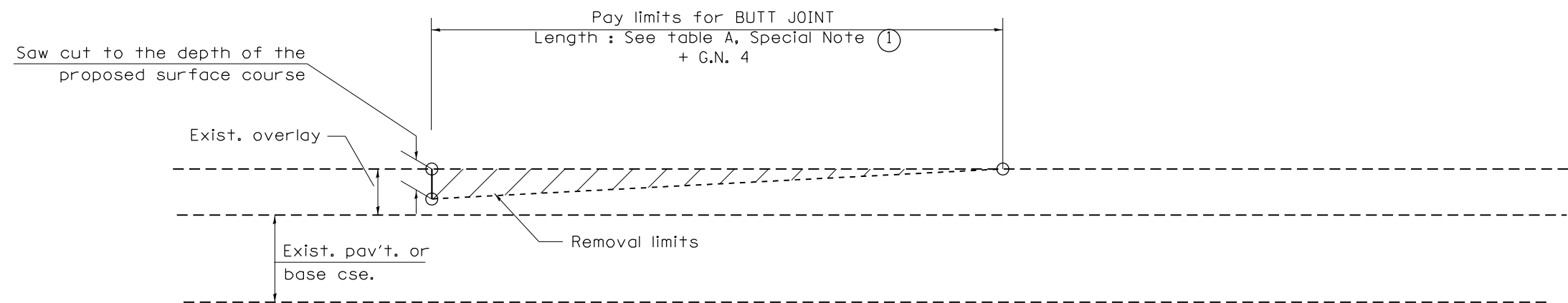
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

**TABLE A
TAPER RATES**

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	BUTT JOINT TAPER RATE	1:480	1:240
②	TEMPORARY RAMP TAPER RATE	1:80	1:40

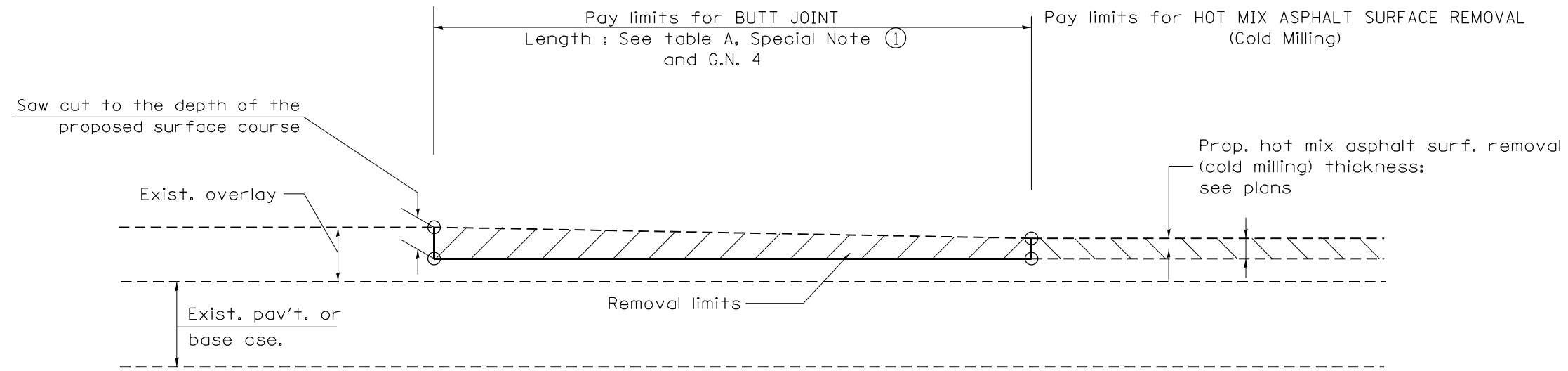
GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. 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.
3. 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.
4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.
5. Temporary ramps are paid for separately and not included in the cost of the butt joints.

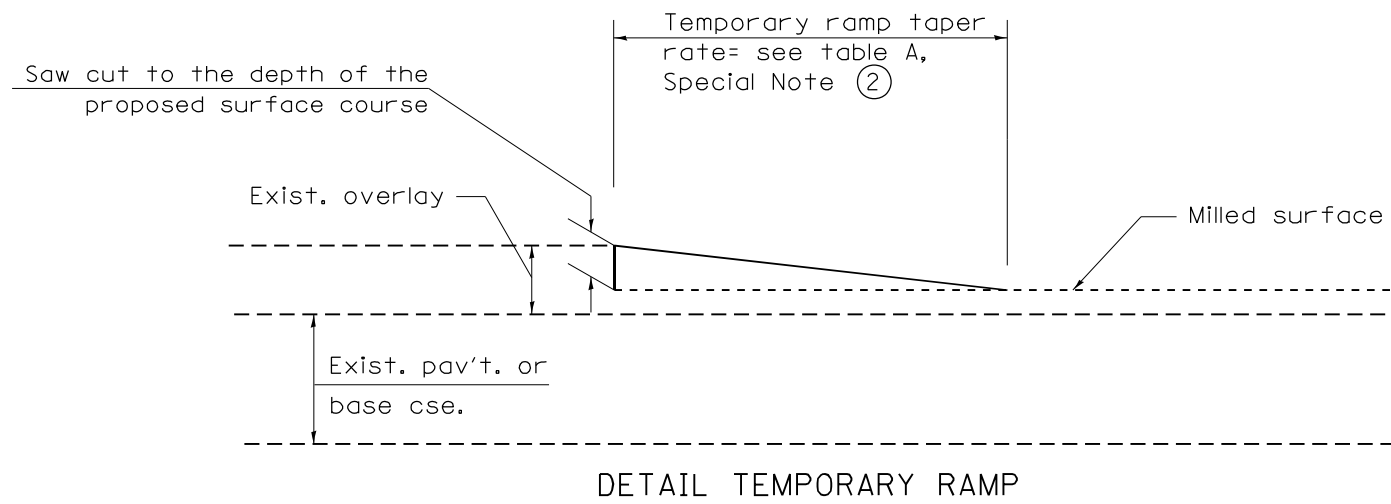


CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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

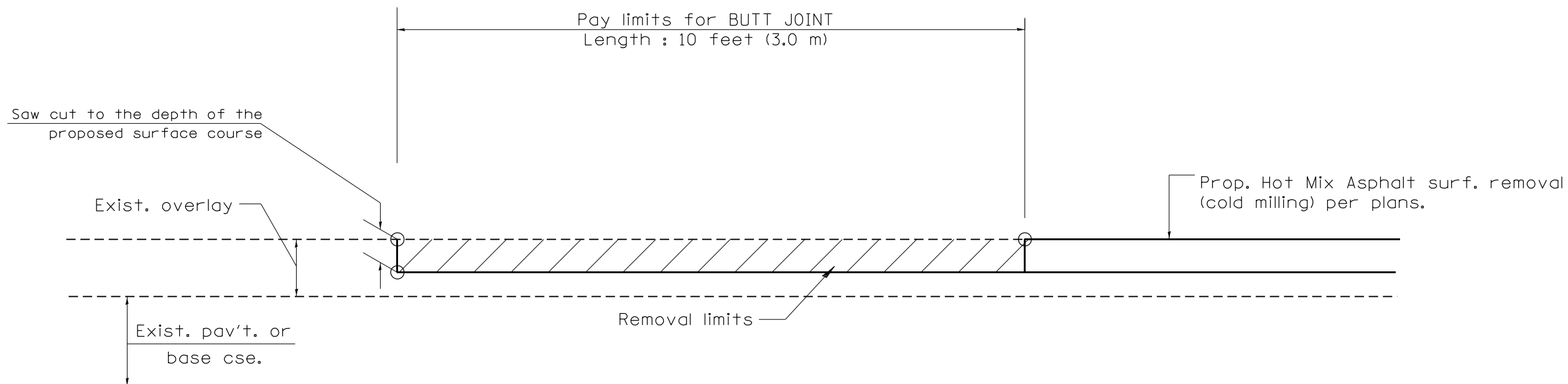


**CASE 3 : HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**



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

				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BUTT JOINTS		SHT. 2 OF 3 CADD STD. 406101-D4	
				NOT TO SCALE				CONTRACT NO. 68801	
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
310	(102)BR-1	MERCER	77	68					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT							

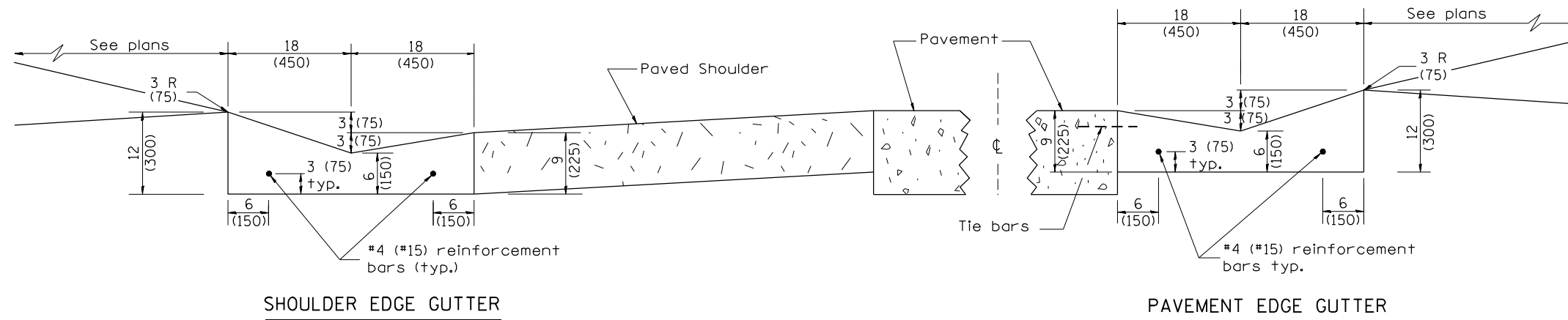


**CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**

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

		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BUTT JOINTS		SHT. 3 OF 3 CADD STD. 406101-D4	
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	
						CONTRACT NO. 68801	
						TOTAL SHEETS 77 SHEET NO. 69	
						COUNTY MERCER	
						SECTION (102)BR-1	
						F.A.P. RTE. 310	

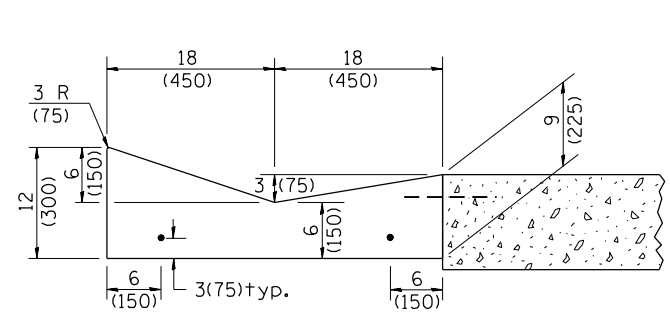
NOT TO SCALE



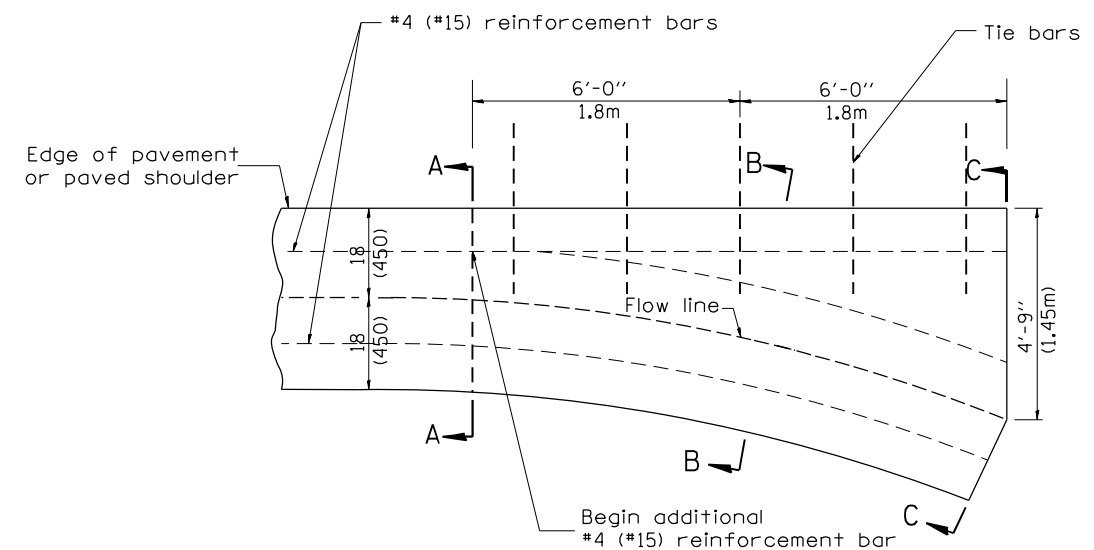
SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

CONCRETE GUTTER, TYPE A, (SPECIAL)

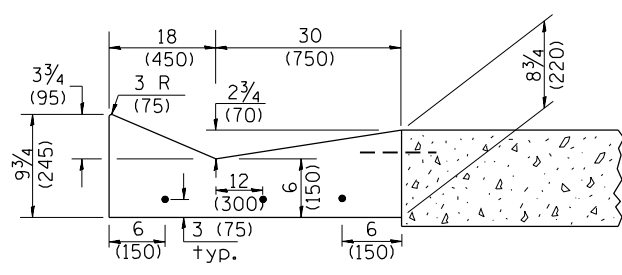


SECTION A-A

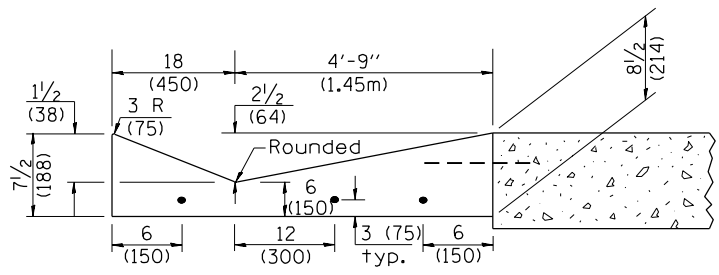


PLAN

QUANTITY
Section C-C to A-A= 1.2 cu. yd.
(0.92 m³) concrete.



SECTION B-B



SECTION C-C

INLET

GENERAL NOTES:

1. CONCRETE GUTTER, TYPE A, (SPECIAL) shall conform to the applicable portions of Section 606.
2. Tie bars shall be No. 6x24 (No. 19x600) at 36" (900mm) centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 58 lbs/100 sq.ft. (2.83 kg/m²).

QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

NO.	DATE	DESCRIPTION	BY
01-01-97		RENUM. A-1.02, NEW REVISION BOX, ELIMINATED	T.P.
11-16-07		EXPANSION ANCHOR TIES	M.A.
02-28-02		ENTRANCE TYPICALS REVISED	M.A.
10-16-06		REVISED TO 2007 SPEC.	M.A.
01-10-07		REVISED QUANTITY	M.A.
11-16-07		REVISED QUANTITY	M.A.
02-15-11		CHANGED MODIFIED TO SPECIAL	R.D.
01-31-18		REVISED TIE BAR SIZE & SPACING	R.D.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE GUTTER, TYPE A, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

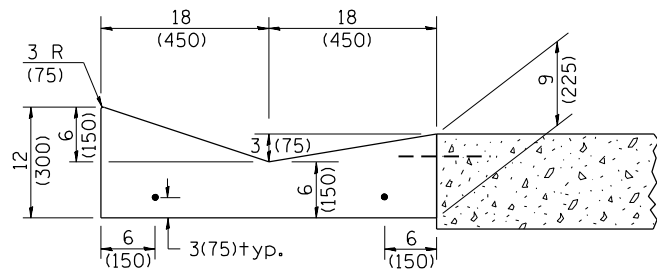
NOT TO SCALE

SHT. 1 OF 3
CADD STD. 606101-D4

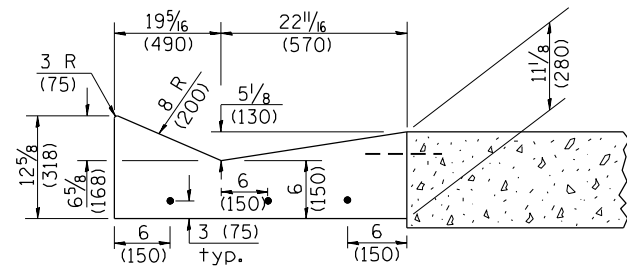
All dimensions are in inches (millimeters) unless otherwise noted.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	70

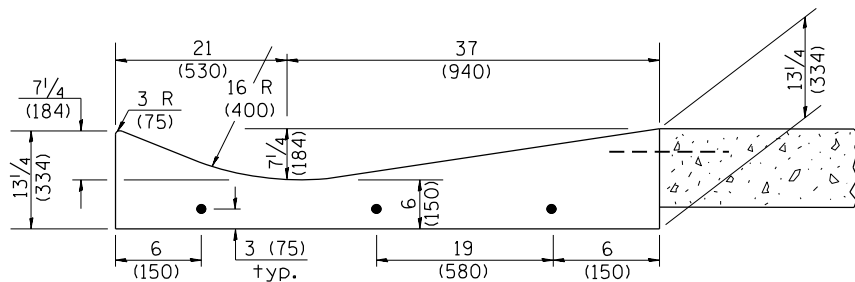
CONTRACT NO. 68801
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



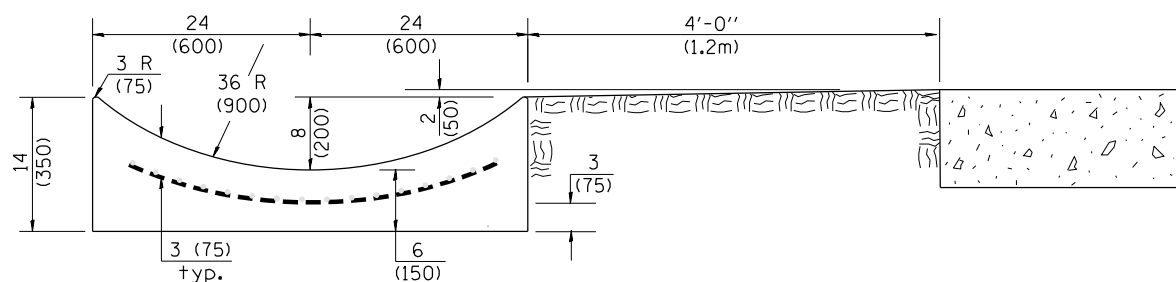
SECTION A-A



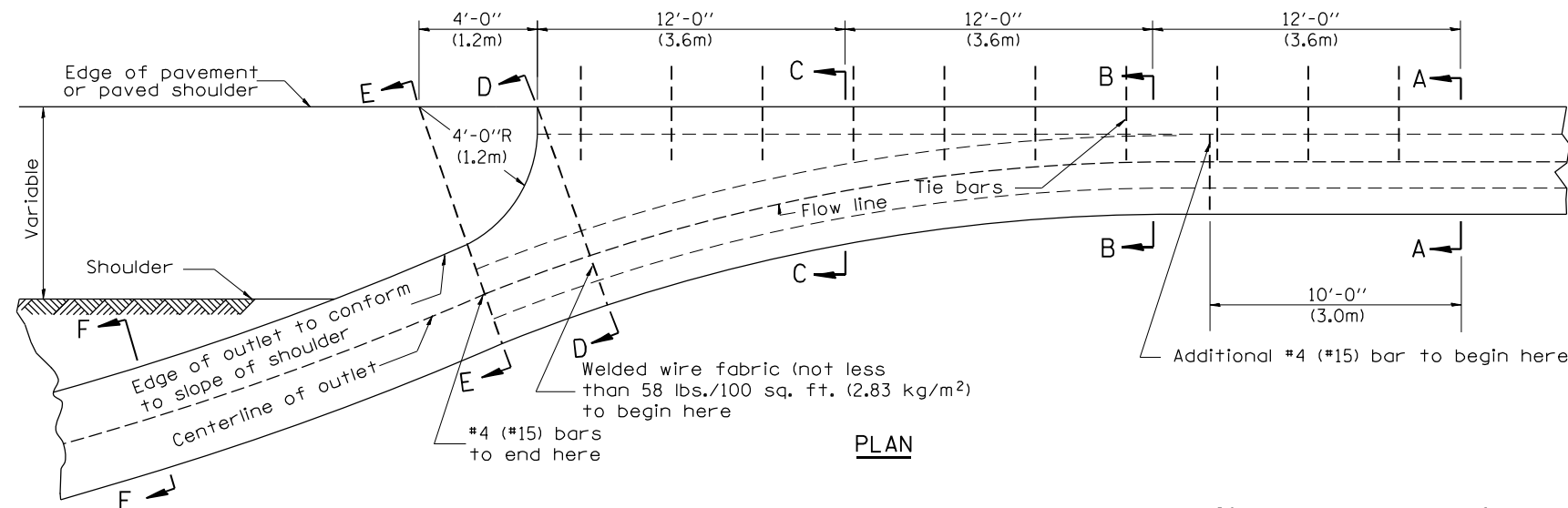
SECTION B-B



SECTION C-C



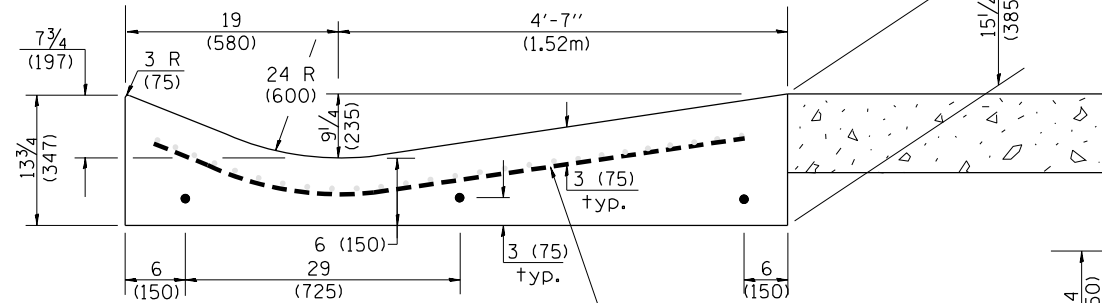
SECTION E-E



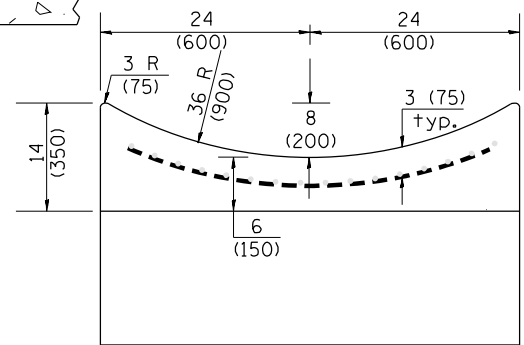
PLAN

QUANTITY
 Section A-A to E-E = 4.5 cu. yd. (3.36 m³) concrete.
 Section E-E to F-F = 0.10 cu. yd./ft. (0.26 m³/m) concrete.

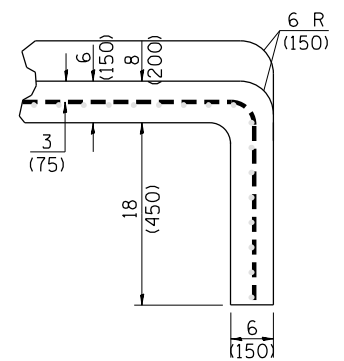
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8 m) for each 1% increase in grade. A quantity adjustment is required.



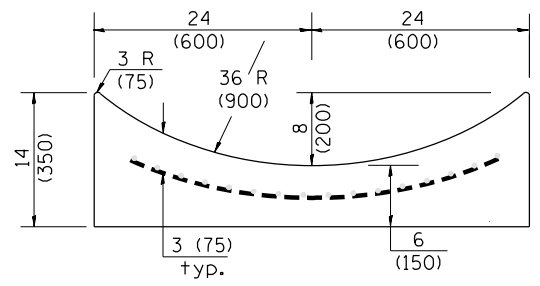
SECTION D-D



SECTION F-F



SECTIONS AT END OF OUTLET
(CURTAIN WALL)

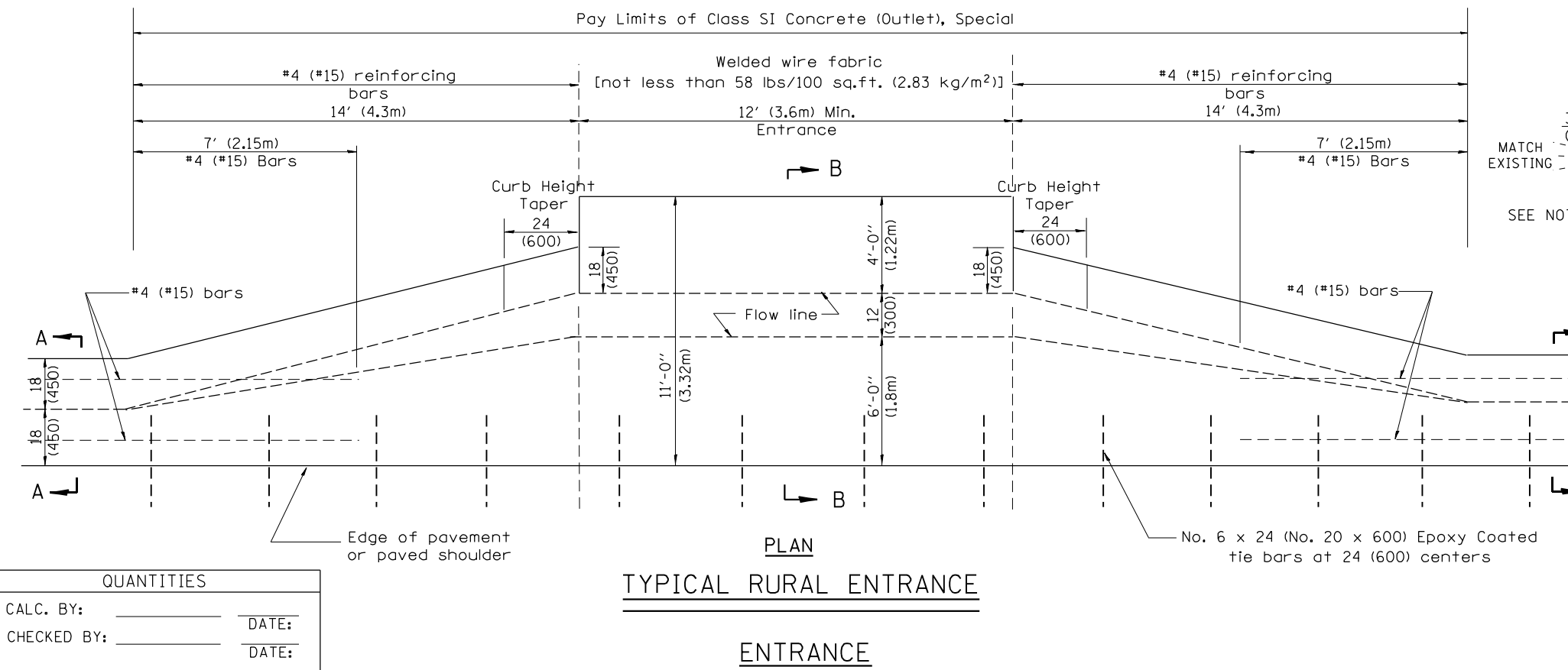
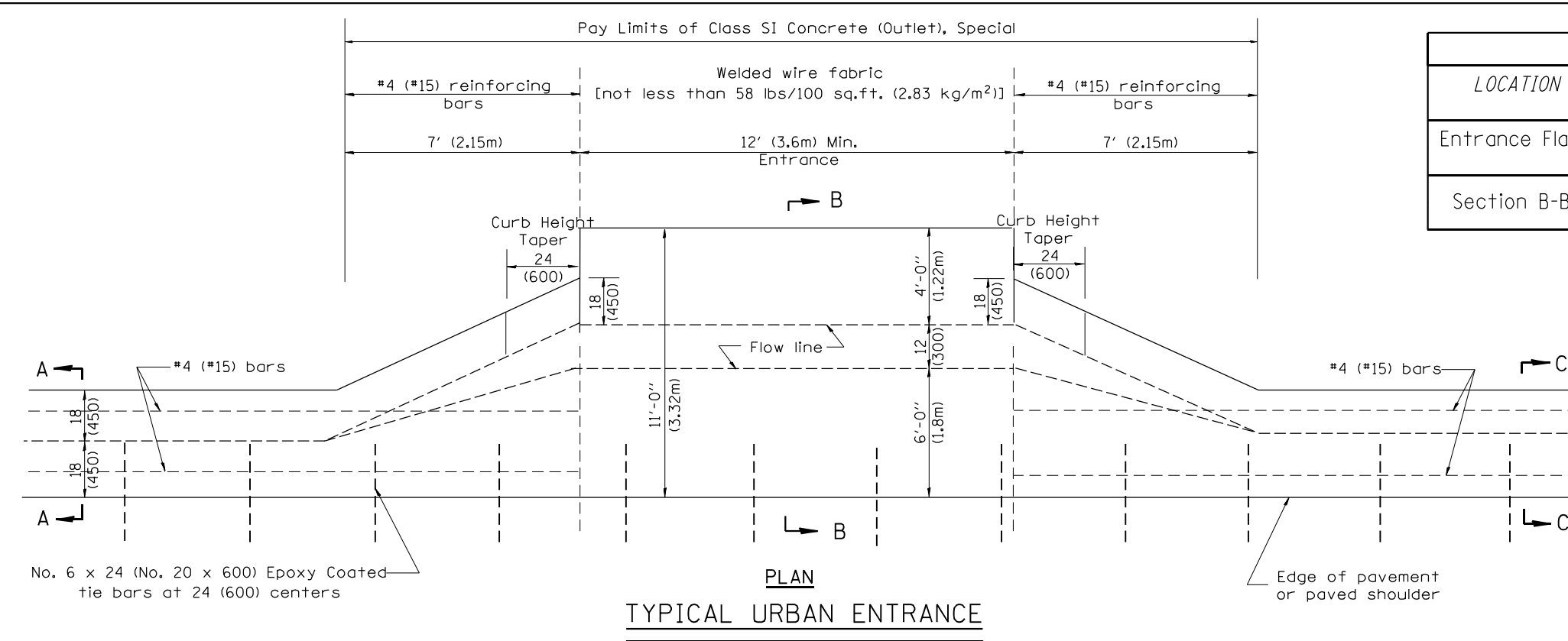


QUANTITY
 Curtain Wall = 0.1 cu. yd. (0.08 m³) concrete.

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

OUTLET

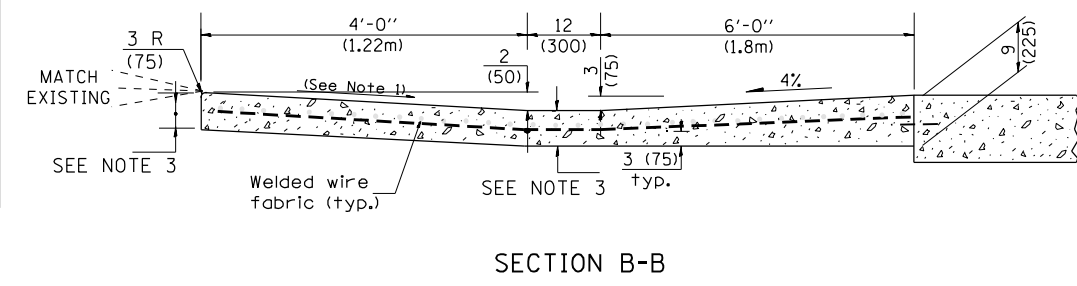
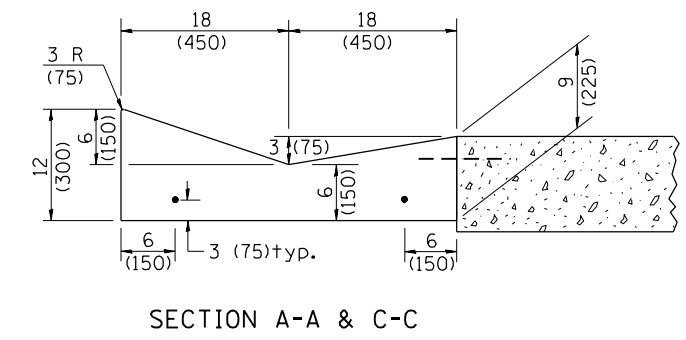
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	71
CONTRACT NO. 68801				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:

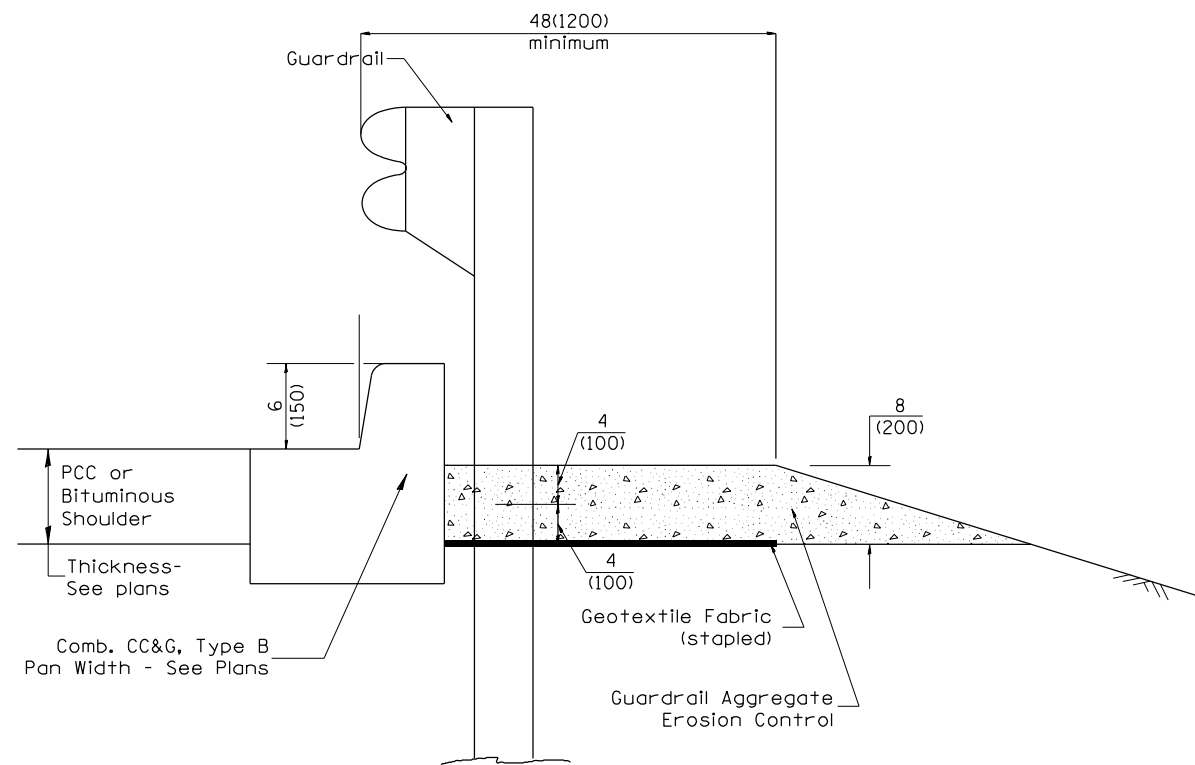
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

QUANTITY CALCULATION			
LOCATION	LENGTH	NON-COMMERCIAL 6 (150)	COMMERCIAL ENTRANCE 8 (200)
Entrance Flare	7 Ft (2.15 m) Urban 14 Ft (4.30 m) Rural	0.15 Cu Yd / Ft (0.37 Cu M / M)	0.18 Cu Yd / Ft (0.45 Cu M / M)
Section B-B	See Plans	0.23 Cu Yd / Ft (0.57 Cu M / M)	0.28 Cu Yd / Ft (0.70 Cu M / M)

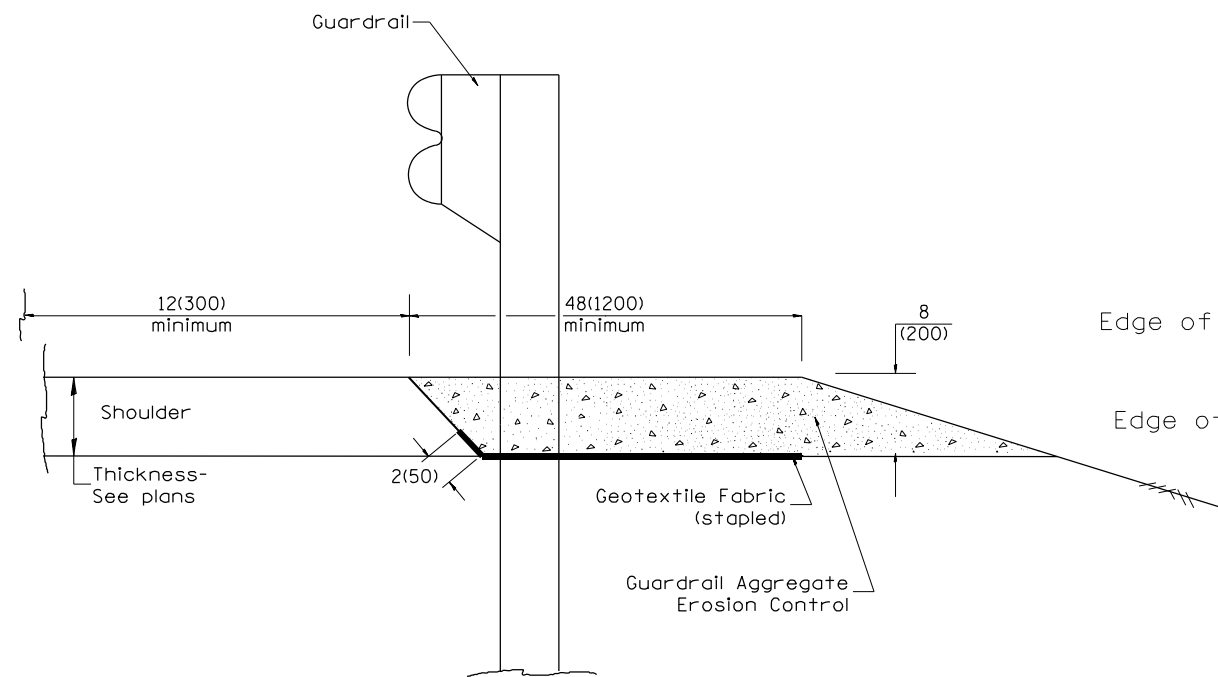


- GENERAL NOTES
- Slope may be increased from 4% (min.) to 6% (max.) in order to match the existing.
 - The cross-slope is to be constructed as given in the plans from back turnout to where driveway matches existing.
 - For Non-Commercial Entrances the driveway thickness shall be 6 (150). For Commercial Entrances the driveway thickness shall be 8 (200).

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



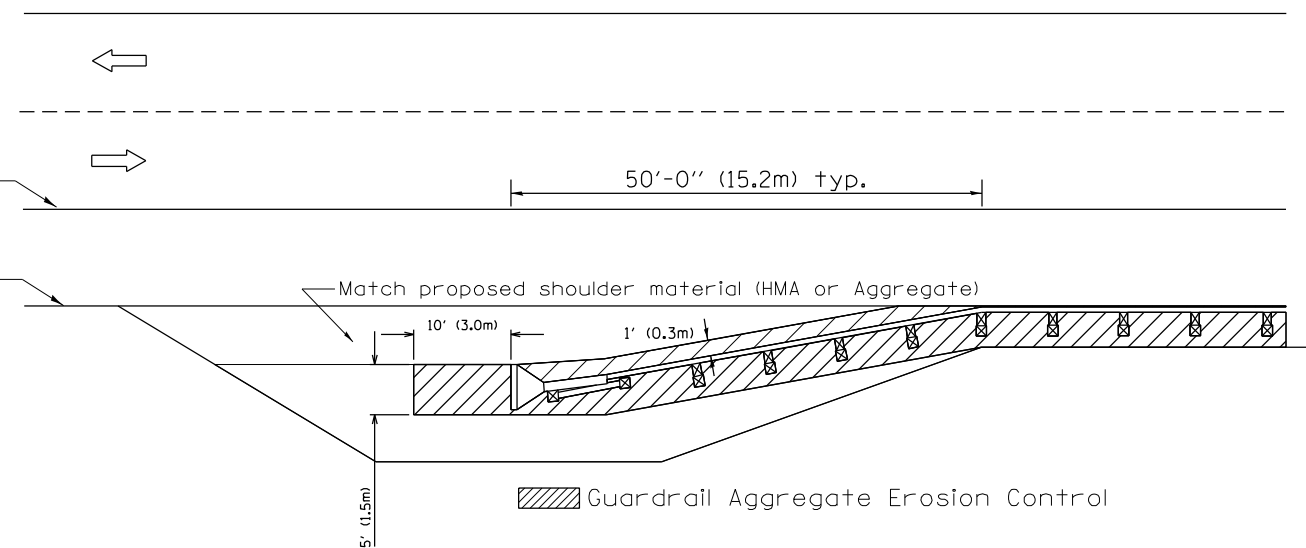
TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER



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.

03-07-11	ADDED DETAIL SHOWING PLAN VIEW	R.D.	5-30-18	CHANGE B CURB TO CC&G	R.D.
08-10-12	REVISED CURB "B" AND AGGREGATE	R.D.	07-16-19	SPELLING CORRECTIONS	R.D.
07-15-15	ADDRESSED SHOULDER INLET CURB	R.D.			
01-26-17	REVISED	R.D.			

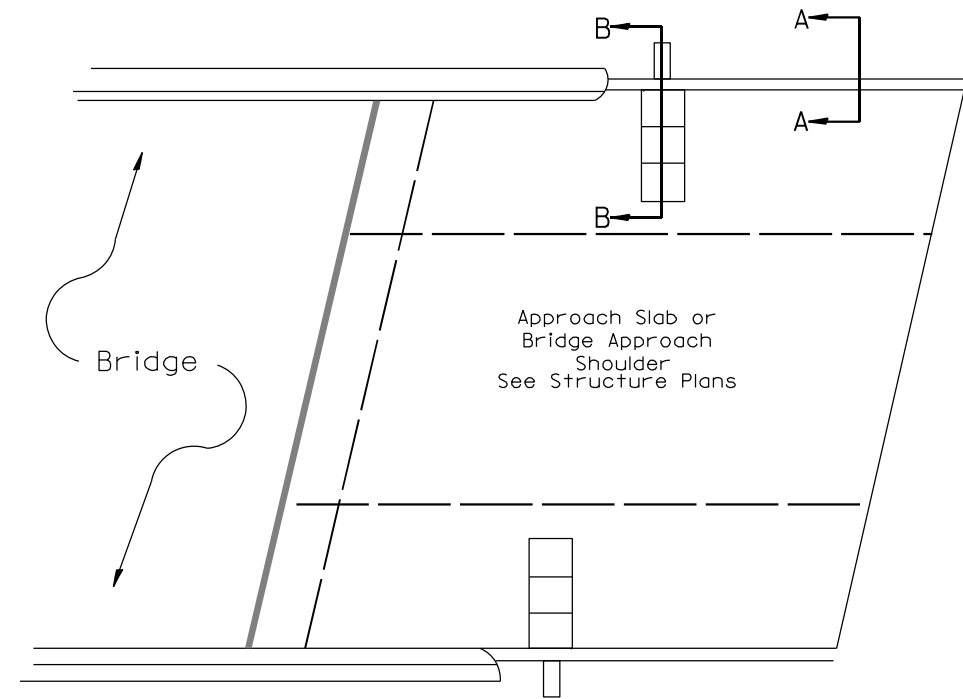
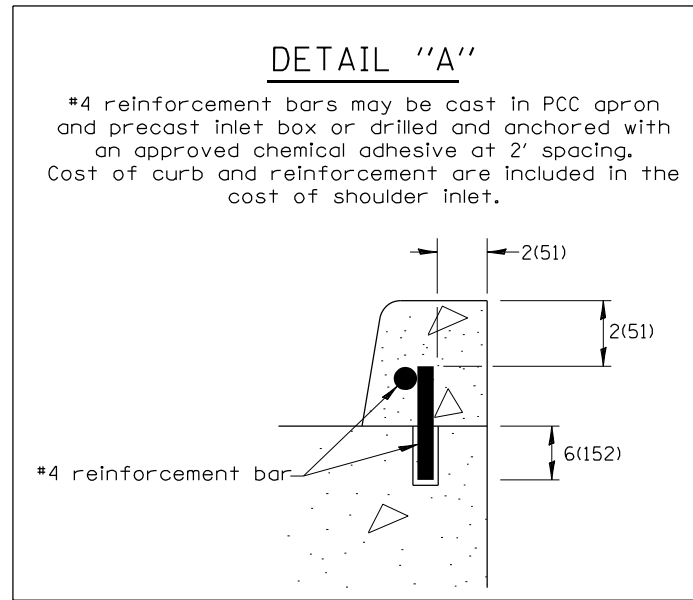
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

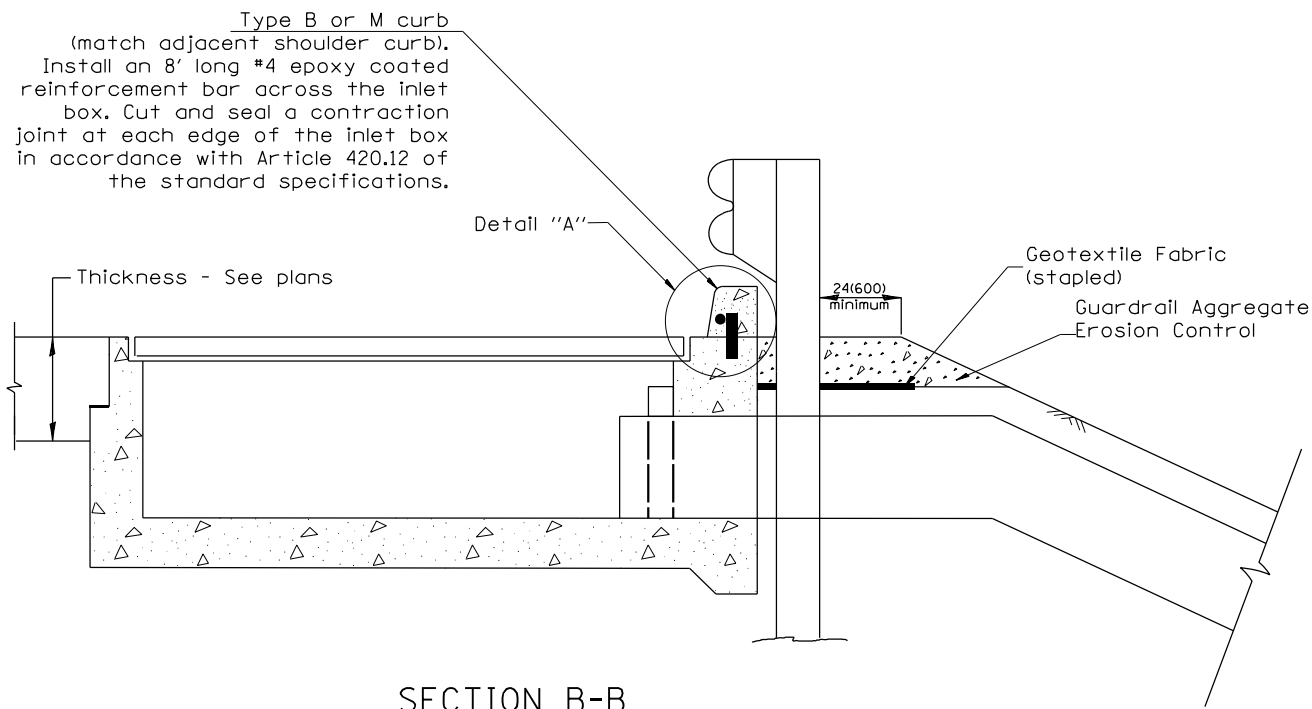
GUARDRAIL EROSION CONTROL TREATMENTS

SHT. 1 OF 2
CADD STD. 630101-D4

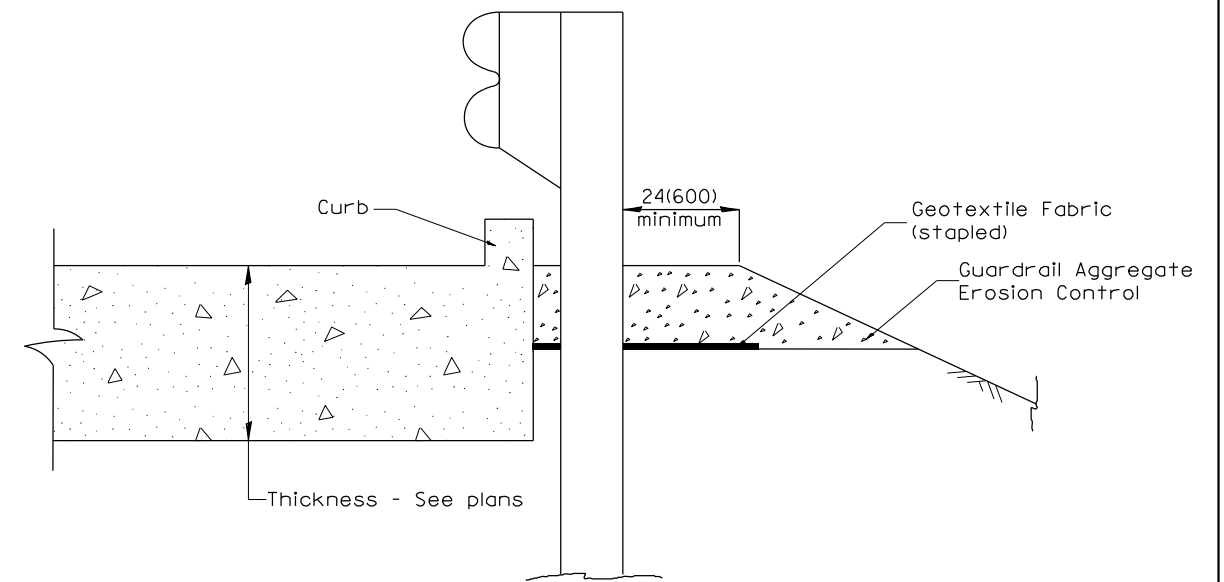
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	73
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68801	



PLAN VIEW
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B
TYPICAL SECTION AT INLETS
TYPE E, F & G (HIGHWAY STANDARD 610001)



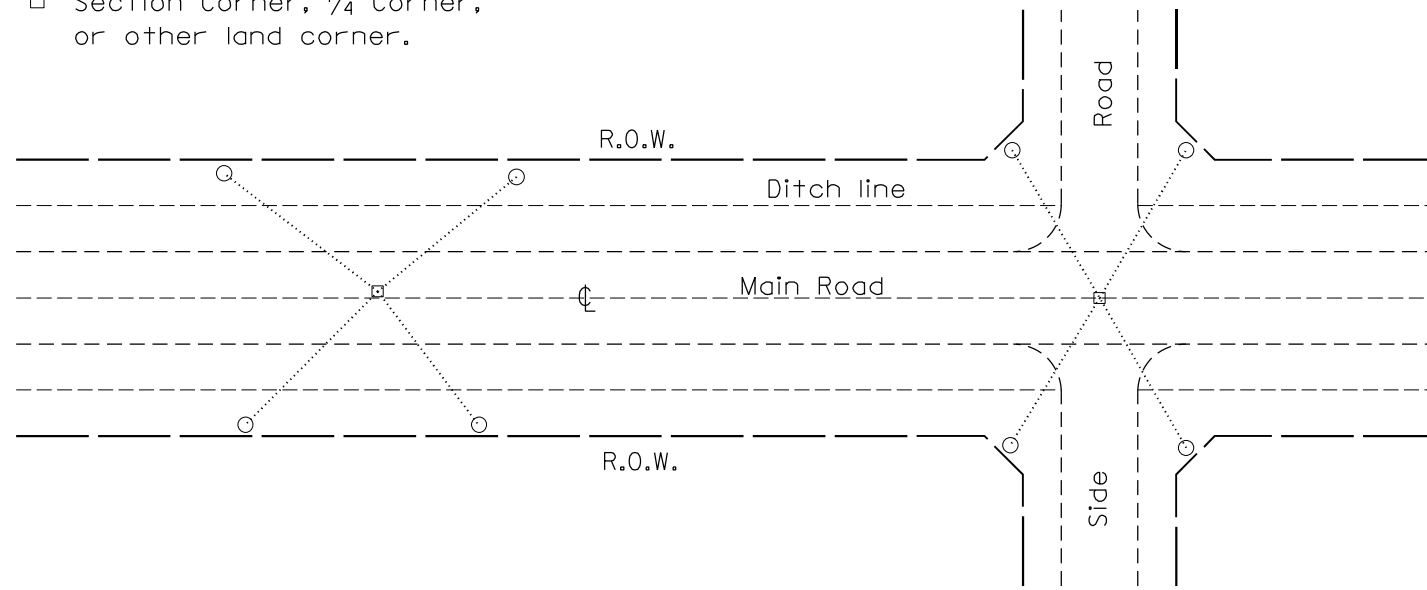
SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				GUARDRAIL EROSION CONTROL TREATMENTS				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				NOT TO SCALE				310	(102)BR-1	MERCER	77	74
				SHT. 2 OF 2 CADD STD. 630101-D4				CONTRACT NO. 68801				
								FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PERMANENT SURVEY TIES

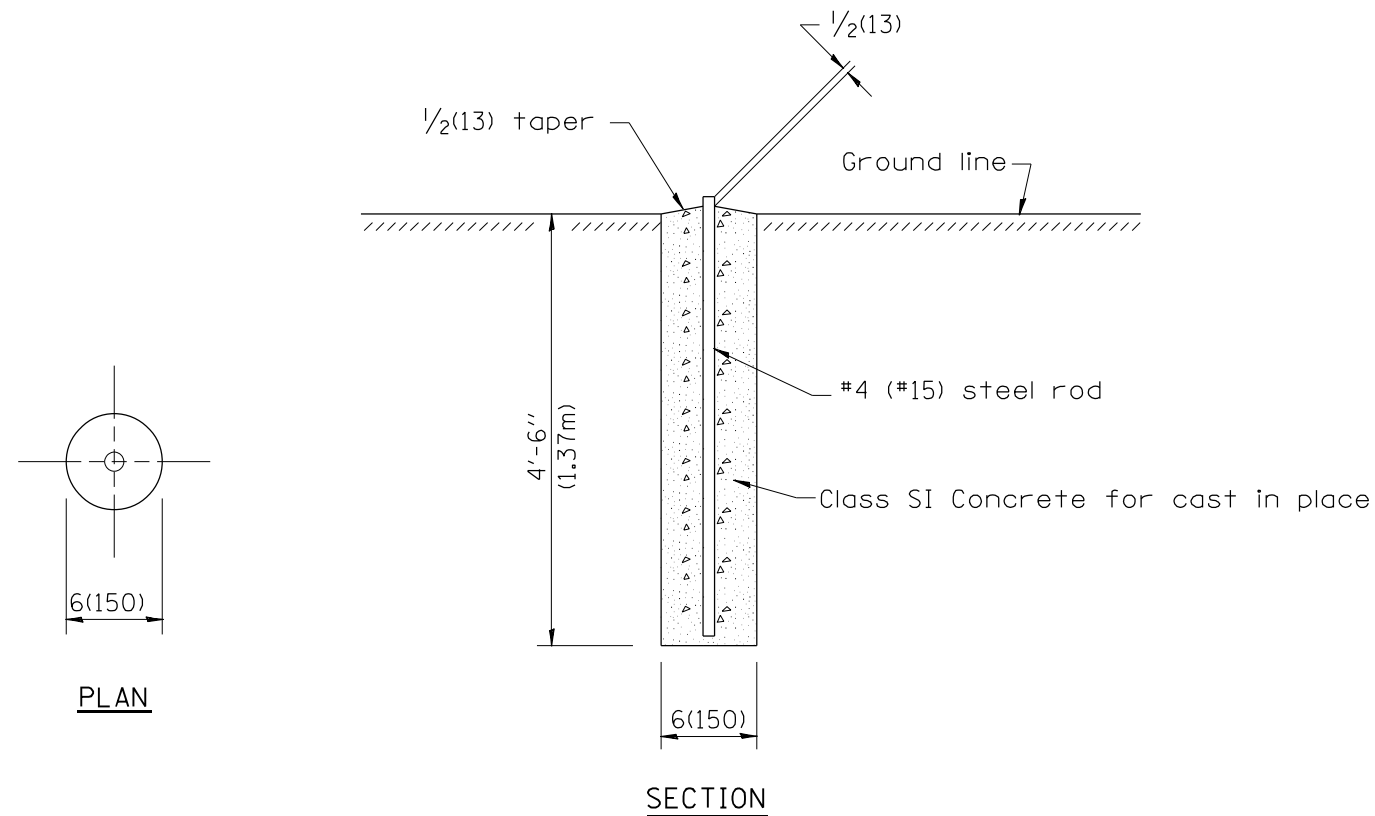
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



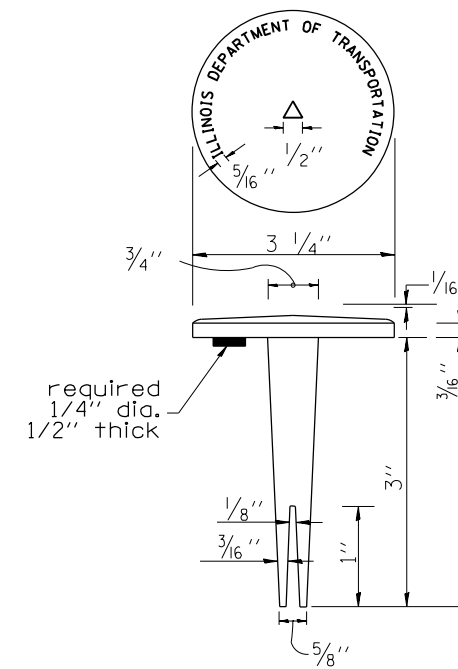
TYPICAL APPLICATION

GENERAL NOTES

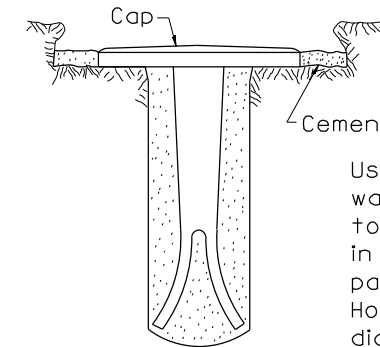
1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall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



PERMANENT SURVEY MARKERS

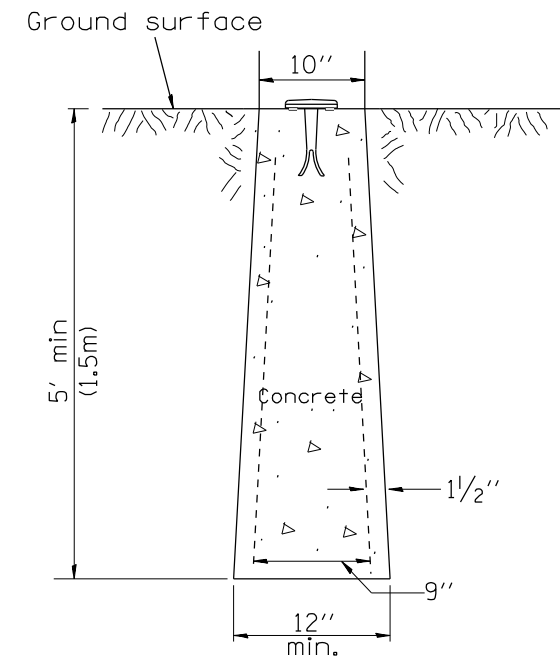


BRASS TABLET



Tablet constructed in rock ledge or concrete.

TYPE I



**TYPE II
CAST-IN-PLACE MARKER**

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.

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

01-01-97	RENUM. D-3.01, NEW REVISION BOX, REVISED	T.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.	08-21-13	CHANGED MIN. DIAMETER	R.D.
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.	08-25-15	REVISED MATERIAL	R.D.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

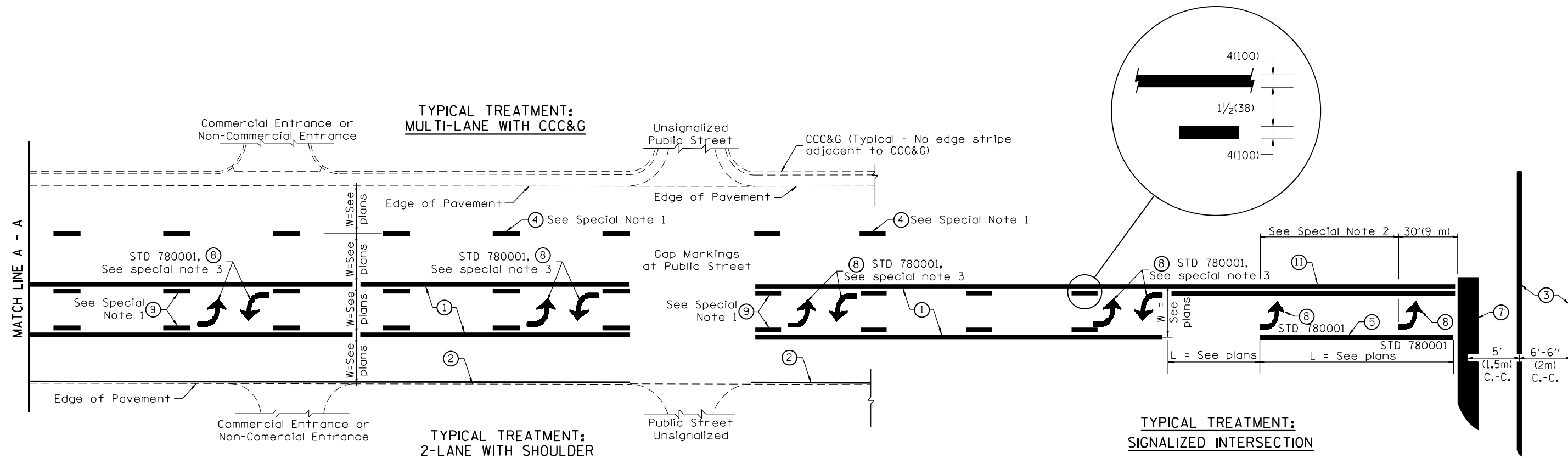
**PERMANENT SURVEY TIE &
PERMANENT SURVEY MARKERS TY.I - TY.II**

NOT TO SCALE

11 13

CADD STD. 667101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	75
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68801	



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

TYPICAL PAVEMENT MARKING LEGEND

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

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

SPECIAL NOTES

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

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
Through Arrow= 14.8 sq. ft.
Large Left or Right Arrow= 21.9 sq. ft.
2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
Wrong Way Arrow= 29.5 sq. ft.
Railroad Crossing Symbol= 69.8 sq. ft.
(For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.	07-16-19	SPELLING CORRECTIONS	R.D.
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

TYPICAL PAVEMENT MARKINGS

SHT. 1 OF 2
CADD STD. 780001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102)BR-1	MERCER	77	76
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68801	

