

SUMMARY OF QUANTITIES

90% FED
10% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE								
				URBAN					(25-4)BR			
				(25-4)R	(25-4)R	SIGNALS LIGHTING	(25-4HVB-1)BY		(25-4)BR			
ROADWAY 0003	ROADWAY 0005	0021	SN 025-0111 (WB)	SN 025-0112 (EB)	SN 025-8648	SN 025-0002	SN 025-0019	SN 025-0062				
							0010	0040	0014	0014	0014	
54248510	CONCRETE COLLAR	CU YD	6	6								
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	611	611								
550A0160	STORM SEWERS, CLASS A, TYPE 1 36"	FOOT	172	172								
550A0410	STORM SEWERS, CLASS A, TYPE 2 24"	FOOT	6321	6321								
550A0450	STORM SEWERS, CLASS A, TYPE 2 36"	FOOT	3	3								
56106300	ADJUSTING WATER MAIN 6"	FOOT	900	900								
58700300	CONCRETE SEALER	SQ FT	16856				12181		2332	1304	1039	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	472				472					
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	20	20								
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	4								
60100905	PIPE DRAINS 4"	FOOT	1476	1476								
60100955	PIPE DRAINS 15"	FOOT	754	754								
60100965	PIPE DRAINS 18"	FOOT	38	38								
60100985	PIPE DRAINS 24"	FOOT	37	37								
60107600	PIPE UNDERDRAINS 4"	FOOT	15934	15934								

REVISIED 9-4-2013

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URBAN

CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	(25-4)R		(25-4HVB-1)BY			(25-4)BR		
				ROADWAY	ROADWAY	SIGNALS	SN 025-0111 (WB)	SN 025-8648	SN 025-0002	SN 025-0019	SN 025-0062
				0003	0005	LIGHTING 0021	0010	0040	0014	0014	0014
X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	21625	21625							
X7830076	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	11035	11035							
X7830078	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	2067	2067							
X8040500	RELOCATE ELECTRIC SERVICE	L SUM	1	1							
X8110522	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. STAINLESS STEEL	FOOT	40			40					
X8360120	LIGHT POLE FOUNDATION, SPECIAL	EACH	23			23					
X8410102	TEMPORARY LIGHTING SYSTEM	L SUM	1			1					
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	823			823					
X8730810	ELECTRIC CABLE IN CONDUIT, CONOGA - 30003	FOOT	1830	1830							
X8950130	MODIFY EXISTING LIGHTING CONTROLLER	EACH	1			1					
X8360103	LIGHT POLE FOUNDATION, INTERGRAL WITH BARRIER WALL	EACH	8			8					
XX006119	TRAFFIC CONTROL AND PROTECTION (DETOUR)	L SUM	1	0.5					0.5		
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	64					36	8	20	
Z0004552	APPROACH SLAB REMOVAL	SQ YD	843	843							

CITY

*SPECIALTY ITEM REVISIED 9-4-2013

FILE NAME : S:\project\408872\SP\Print\SummaryQuantity.dwg	USER NAME : *USER*	DESIGNED - ESW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMBINED SUMMARY OF QUANTITIES, NORTH TRI LEVEL	F.A.I RTE. 57/70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE : *SCALE*	CHECKED - BRM	REVISIED -	EFFINGHAM			1760	27			
PLOT DATE : *DATE*	DATE - 08-28-09	REVISIED -	CONTRACT NO. 74295							
SCALE: SHEET NO. 25 OF 27 SHEETS STA. TO STA.						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

*25-4)R & (25-4HVB-1)BY & (25-4)BR

SUMMARY OF QUANTITIES

90% FED
10% STATE

CONSTRUCTION CODE

URBAN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE								
				(25-4)R		(25-4)HB-1)BY			(25-4)BR			
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-0111 (WB) 0010	SN 025-8648 0040	SN 025-0002 0014	SN 025-0019 0014	SN 025-0062 0014	
Z0041895	POLYMER CONCRETE	CU FT	11				11					
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	435				435					
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1								
* Z0054505	ROCK FILL - REPLACEMENT	TON	232.7	63				169.7				
* Z0054517	ROCK FILL - FOUNDATION	TON	154.7					154.7				
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	2,514				1131	1,383				
Z0076502	TRAFFIC MANAGEMENT SYSTEM	CAL MO	30	30								
Z0076504	TRAFFIC MANAGEMENT SYSTEM INSTALLATION	L SUM	1	1								
Z0076600	TRAINEES	HR	2500	2500								
Z0076604	TRAINEES-TRAINING PROGRAM GRADUATE	HR	2500	2500								
* X0327272	MAINTENANCE OF EXISTING TRAFFIC CONTROL	CAL MO	30	30								
X0327613	REMOVE EXISTING WEATHER STATION	L SUM	1	1								
X5030353	CONCRETE WEARING SURFACE, 5 1/4"	SQ YD	1076				1076					
X5210245	HIGH LOAD MULTI-ROTATIONAL BEARINGS, GUIDED EXPANSION, 1150K	EACH	19				19					
X0327642	TEMPORARY RELOCATION OF POWER TRANSMISSION LINES	L SUM	1	1								

△ X0327642 TEMPORARY RELOCATION OF POWER TRANSMISSION LINES

0042

* SPECIALTY ITEM △ REVISED 9-4-2013

SUMMARY OF QUANTITIES

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-41R)		(25-4HVB-11BY)		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	423	423				
	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	1499	1499				
	TREE REMOVAL, ACRES	ACRE	8.25	8.25				
	EARTH EXCAVATION	CU YD	167155	167155				
	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	243.5	243.5				
	FURNISHED EXCAVATION	CU YD	226840	226840				
	TRENCH BACKFILL	CU YD	3413	3413				
	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	402540	402540				
	SEEDING, CLASS 2	ACRE	76	76				
	SEEDING, CLASS 3	ACRE	2	2				
	SEEDING, CLASS 7	ACRE	85	85				
	NITROGEN FERTILIZER NUTRIENT	POUND	6390	6390				
	PHOSPHORUS FERTILIZER NUTRIENT	POUND	6390	6390				
	POTASSIUM FERTILIZER NUTRIENT	POUND	6390	6390				
	AGRICULTURAL GROUND LIMESTONE	TON	4	4				
	MOWING	ACRE	77	77				
	MULCH, METHOD 2	ACRE	77	77				
	EROSION CONTROL BLANKET	SQ YD	2860	2860				
	EARTH EXCAVATION FOR EROSION CONTROL	CU YD	40	40				
	TEMPORARY DITCH CHECKS	FOOT	9131	9131				
	PERIMETER EROSION BARRIER	FOOT	28070	28070				
	INLET AND PIPE PROTECTION	EACH	102	102				
	AGGREGATE (EROSION CONTROL)	TON	13	13				
	STONE RIPRAP, CLASS A3	SQ YD	589	589				
	STONE RIPRAP, CLASS A4	SQ YD	6444	6444				
	STONE RIPRAP, CLASS A5	SQ YD	250	250				
	FILTER FABRIC	SQ YD	6694	6694				
	PROCESSING MODIFIED SOIL 12"	SQ YD	222209	222209				
	PROCESSING MODIFIED SOIL 24"	SQ YD	11179	11179				
	LIME	TON	5091.7	5091.7				
	SLAG-MODIFIED PORTLAND CEMENT	TON	845	845				
	STABILIZED SUB-BASE - HOT MIX ASPHALT, 4"	SQ YD	233004	233004				
	AGGREGATE BASE COURSE, TYPE B	TON	2760	2760				
	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2661	2661				
	AGGREGATE (PRIME COAT)	TON	54	54				
	LEVELING BINDER (MACHINE METHOD), N10S	TON	173	173				
	TEMPORARY RAMP	SQ YD	185	185				
	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	954	954				
	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80	TON	3063	3063				
	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	401	401				
	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N10S	TON	197	197				
	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	734	734				
	AGGREGATE (PRIME COAT)	TON	15	15				
	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	4728	4728				

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-41R)		(25-4HVB-11BY)		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	PORTLAND CEMENT CONCRETE PAVEMENT 9 3/4" (JOINTED)	SQ YD	23730	23730				
	PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED)	SQ YD	5703	5703				
	PORTLAND CEMENT CONCRETE PAVEMENT 12"	SQ YD	36812	36812				
	PAVEMENT FABRIC	SQ YD	47367	47367				
	PROTECTIVE COAT	SQ YD	87412	87412				
	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	325	325				
	CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 13"	SQ YD	181801	181801				
	PAVEMENT REINFORCEMENT	SQ YD	181801	181801				
	PROTECTIVE COAT	SQ YD	186169	186169				
	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	1120	1120				
	PAVEMENT REMOVAL	SQ YD	109941	109941				
	COMBINATION CURB & GUTTER REMOVAL	FOOT	1802	1802				
	SIDEWALK REMOVAL	SQ FT	1152	1152				
	MEDIAN REMOVAL PARTIAL DEPTH	SQ FT	17147	17147				
	PAVED DITCH REMOVAL	FOOT	1695	1695				
	PAVED SHOULDER REMOVAL	SQ YD	58718	58718				
	CLASS B PATCHES, TYPE IV, 12 INCH	SQ YD	87	87				
	CLASS B PATCHES, TYPE II, 16 INCH	SQ YD	67	67				
	CLASS B PATCHES, TYPE III, 16 INCH	SQ YD	32	32				
	DOWEL BARS 1 1/2"	EACH	260	260				
	PAVEMENT FABRIC	SQ YD	119	119				
	SAW CUTS	FOOT	721	721				
	TIE BARS 3/4"	EACH	25	25				
	AGGREGATE SHOULDERS, TYPE B	TON	5393	5393				
	AGGREGATE WEDGE SHOULDER, TYPE B	TON	157	157				
	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	1745	1745				
	HOT-MIX ASPHALT SHOULDERS	TON	1298	1298				
	PORTLAND CEMENT CONCRETE SHOULDERS 13"	SQ YD	10555	10555				
	REMOVAL OF EXISTING STRUCTURES	EACH	2	2				2
	CONCRETE REMOVAL	CU YD	85.2	12.7			72.5	
	CONCRETE HEADWALL REMOVAL	EACH	4	4				
	SLOPE WALL REMOVAL	SQ YD	2575	2575				
	PIPE CULVERT REMOVAL	FOOT	2396	2396				
	PROTECTIVE SHIELD	SQ YD	2104	2104				2104
	STRUCTURE EXCAVATION	CU YD	1801	1801				1801
	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS FOR STRUCTURES	CU YD	240.5	240.5			240.5	
	FLOOR DRAINS	EACH	92	92				92
	CONCRETE STRUCTURES	CU YD	1327.3	1327.3				1327.3
	CONCRETE SUPERSTRUCTURE	CU YD	2165.1	2165.1				2165.1
	BRIDGE DECK GROOVING	SQ YD	7165	7165				7165
	PROTECTIVE COAT	SQ YD	8367	8367				8367
	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1				1
	STUD SHEAR CONNECTORS	EACH	20908	20908				20908
	REINFORCEMENT BARS	POUND	63020	24550			38470	

REV 09/04/13

FILE NAME -	USER NAME - RUSER4	DESIGNED - ESW	REVISED -
5/19/2013 10:02:57 AM		DRAWN - ESW	REVISED -
		CHECKED - BRM	REVISED -
		DATE - 11-04-08	REVISED -

SCALE: 1" = 40'	SCALE: 1" = 40'
DATE: 9/4/2013	DATE: 11-04-08

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES, NORTH TRI LEVEL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-41R & (25-4HVB-11BY	EFFINGHAM	1760	34
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 74295	

SUMMARY OF QUANTITIES

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-4IR)		(25-4HVB-1)BY		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	REINFORCEMENT BARS, EPOXY COATED	POUND	813340	1150			2680	809510
	BAR SPLICERS	EACH	5466					5466
	MECHANICAL SPLICERS	EACH	806					806
	SLOPE WALL 4 INCH	SQ YD	3251					3251
	FURNISHING STEEL PILES HP14X89	FOOT	12270					12270
	DRIVING PILES	FOOT	12270					12270
	TEST PILE STEEL HP14X89	EACH	2					2
	NAME PLATES	EACH	2					2
	PREFORMED JOINT STRIP SEAL	FOOT	380					380
	ANCHOR BOLTS, 1"	EACH	76					76
	ANCHOR BOLTS, 1 1/4"	EACH	76					76
	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	1	1				
	EXPANSION BOLTS 3/4 INCH	EACH	78	26			52	
	CONCRETE BOX CULVERTS	CU YD	287.9	111			176.9	
	PRECAST CONCRETE BOX CULVERTS 8' X 6'	FOOT	131	131				
	PIPE CULVERTS, CLASS A, TYPE 1 15"	FOOT	52	52				
	PIPE CULVERTS, CLASS A, TYPE 1 24"	FOOT	20	20				
	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	104	104				
	PIPE CULVERTS, CLASS A, TYPE 2 15"	FOOT	75	75				
	PIPE CULVERTS, CLASS A, TYPE 2 24"	FOOT	85	85				
	PIPE CULVERTS, CLASS A, TYPE 4 24"	FOOT	178	178				
	PIPE CULVERTS, CLASS A, TYPE 4 78"	FOOT	98	98				
	PIPE CULVERTS, CLASS A 78" (JACKED)	FOOT	177	177				
	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	5	5				
	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	6	6				
	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	5	5				
	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 78"	EACH	1	1				
	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 24"	EACH	4	4				
	METAL END SECTIONS 15"	EACH	8	8				
	METAL END SECTIONS 18"	EACH	1	1				
	METAL END SECTIONS 24"	EACH	1	1				
	REINFORCED CONCRETE PIPE ELBOW 36"	EACH	3	3				
	CONCRETE COLLAR	CU YD	6	6				
	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	611	611				
	STORM SEWERS, CLASS A, TYPE 1 36"	FOOT	172	172				
	STORM SEWERS, CLASS A, TYPE 2 24"	FOOT	6321	6321				
	STORM SEWERS, CLASS A, TYPE 2 36"	FOOT	3	3				
	ADJUSTING WATER MAIN 6"	FOOT	900	900				
	CONCRETE SEALER	SQ FT	12181					12181
	GEOCOMPOSITE WALL DRAIN	SQ YD	472					472
	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	20	20				
	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	4				
	PIPE DRAINS 4"	FOOT	1476	1476				
	PIPE DRAINS 15"	FOOT	754	754				
	PIPE DRAINS 18"	FOOT	38	38				

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-4IR)		(25-4HVB-1)BY		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	PIPE DRAINS 24"	FOOT	37	37				
	PIPE UNDERDRAINS 4"	FOOT	15934	15934				
	PIPE UNDERDRAINS 6"	FOOT	59451	59451				
	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	350	350				
	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	1077	1077				
	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	4	4				
	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3	3				
	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	4	4				
	INLETS, TYPE A, TYPE 1 FRAME, CLOSED LID	EACH	2	2				
	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	4	4				
	INLETS, TYPE A, TYPE 8 GRATE	EACH	2	2				
	INLETS, TYPE B, TYPE 1 FRAME, CLOSED LID	EACH	3	3				
	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	2	2				
	MANHOLES TO BE RECONSTRUCTED WITH NEW TYPE 3 FRAME AND GRATE	EACH	1	1				
	DRAINAGE STRUCTURES, TYPE 5 WITH TWO TYPE 22 FRAME AND GRATES	EACH	27	27				
	REMOVING INLETS	EACH	16	16				
	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	231	231				
	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	2184	2184				
	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.06	FOOT	114	114				
	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	274	274				
	CONCRETE MEDIAN SURFACE, 6 INCH	SQ FT	1452	1452				
	CONCRETE THRUST BLOCKS	EACH	8	8				
	TYPE G INLET BOX, STANDARD 610001	EACH	1	1				
	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	8100	8100				
	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	17	17				
	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	13	13				
	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	20	20				
	GUARDRAIL REMOVAL	FOOT	11124	11124				
	CABLE ROAD GUARD REMOVAL	FOOT	3486	3486				
	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	1804	1804				
	DELINEATORS	EACH	477	477				
	CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT	FOOT	753	753				
	CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT	FOOT	6217	6217				
	CONCRETE BARRIER BASE	FOOT	7729	7729				
	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	93859	81158	12701			
	WOVEN WIRE FENCE, 4'	FOOT	3486	3486				
	PERMANENT SURVEY MARKERS, TYPE I	EACH	74	74				
	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	30	30				
	ENGINEER'S FIELD LABORATORY	CAL MO	30	30				
	MOBILIZATION	L SUM	0.9	0.9				
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2		2			
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1		1			
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1		1			
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1		1			

FILE NAME = S:\projects\1072517\1072517.dwg
 USER NAME = bntay
 PLOT SCALE = 100.0000 / 1.00
 PLOT DATE = 9/4/2013

DESIGNED - ESW
 DRAWN - ESW
 CHECKED - BRM
 DATE - 11-04-08
 REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES, NORTH TRI LEVEL

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

REV 09/04/13
 F.A.I. SECTION COUNTY TOTAL SHEETS SHEET NO.
 57/70 (25-4IR & (25-4HVB-1)BY EFFINGHAM 1760 35
 CONTRACT NO. 74295
 FED. ROAD DIST. NO. (ILLINOIS) FED. AID PROJECT

SUMMARY OF QUANTITIES

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-41R)		(25-4HVB-1)BY		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2017			2017		
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1467			1467		
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	3905			3905		
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	35			35		
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	591			591		
	TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	3			3		
	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1			1		
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1			1		
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1			1		
	CONCRETE FOUNDATION, TYPE A	FOOT	9			9		
	CONCRETE FOUNDATION, TYPE C	FOOT	3.5			3.5		
	CONCRETE FOUNDATION, TYPE D	EACH	1	1				
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10			10		
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	24			24		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 1-SECTION, POST MOUNTED	EACH	1			1		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2			2		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4			4		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2			2		
	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1			1		
	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1			1		
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12			12		
	INDUCTIVE LOOP DETECTOR	EACH	14			14		
	DETECTOR LOOP, TYPE I	FOOT	2182	1045		1137		
	LIGHT DETECTOR	EACH	3			3*		
	LIGHT DETECTOR AMPLIFIER	EACH	1			1*		
	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1			1		
	EVERGREEN, PINUS STROBUS (EASTERN WHITE PINE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	900	900				
	PIEZO AXLE SENSOR, CLASS II	FOOT	66	66				
	RODENT SHIELDS	EACH	129	129				
	BEDDING MATERIAL, SPECIAL	CU YD	213.3	213.3				
	TEMPORARY MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	5825	5825				
	CLASS SI CONCRETE (MISCELLANEOUS)	CU YD	188	188				
	DIRECTIONAL BORING	FOOT	250	250				
	TRAFFIC CONTROL SUPERVISOR	CAL DA	650	650				
	REMOVE AND RELAY END SECTIONS	EACH	4	4				
	PRELIMINARY TEST STRIP	EACH	1	1				
	WIDE FLANGE BEAM TERMINAL JOINT COMPLETE (SPECIAL)	EACH	5	5				
	TEMPORARY PAVEMENT REMOVAL	SQ YD	11546	11546				
	HOT-MIX ASPHALT REMOVAL, VARIABLE DEPTH	SQ YD	34044	34044				
	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	338	338				
	PAVEMENT REMOVAL (SPECIAL)	SQ YD	42443	42443				
	PARTIAL DEPTH PATCHING	TON	257	257				
	PARTIAL DEPTH REMOVAL (VARIABLE DEPTH)	SQ YD	3913	3913				
	REMOVE AND RE-INSTALL PIPE CULVERTS	FOOT	158	158				

CODED NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				(25-41R)		(25-4HVB-1)BY		
				ROADWAY 0003	ROADWAY 0005	SIGNALS LIGHTING 0021	SN 025-8648 0040	BRIDGE SN 025-0111 (WB) SN 025-0112 (EB) 0010
	PRECAST BRIDGE APPROACH SLAB	SQ FT	9680					9680
	CONCRETE ANCHORS	EACH	22	22				
	PRECAST CONCRETE BOX CULVERTS 8' X 6' (SPECIAL)	FOOT	161	161				
	GRANULAR BACKFILL FOR STRUCTURES	CU YD	1077					1077
	FILLING INLETS, SPECIAL	EACH	4	4				
	CONCRETE MEDIAN, TYPE SM (DOWELLED)	SQ FT	17147	17147				
	GUARD POSTS REMOVAL	EACH	10	10				
	CONCRETE BARRIER WALL (SPECIAL)	FOOT	37	37				
	CONCRETE BARRIER, VARIABLE CROSS-SECTION 42" HEIGHT	FOOT	722	722				
	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	0.98	0.98				
	CHANGEABLE MESSAGE SIGN, SPECIAL	CAL MO	520	520				
	TRAFFIC CONTROL AND PROTECTION FOR ALTERNATE ROUTE SIGNING	CAL MO	30	30				
	PERFORMED THERMOPLASTIC PAVEMENT MARKING SHIELD	EACH	7	7				
	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS, NUMBERS AND SYMBOLS	SQ FT	1329	1329				
	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	112590	112590				
	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	21625	21625				
	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	11035	11035				
	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	2067	2067				
	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. STAINLESS STEEL	FOOT	40			40		
	LIGHT POLE FOUNDATION, SPECIAL	EACH	23			23		
	TEMPORARY LIGHTING SYSTEM	L SUM	1			1		
	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	823			823*		
	ELECTRIC CABLE IN CONDUIT, CONOGA - 30003	FOOT	1830	1830				
	MODIFY EXISTING LIGHTING CONTROLLER	EACH	1			1		
	LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL	EACH	8			8		
	TRAFFIC CONTROL AND PROTECTION (DETOUR)	L SUM	0.5	0.5				
	APPROACH SLAB REMOVAL	SQ YD	843	843				
	CONSTRUCTION LAYOUT	L SUM	1	1				
	DECK SLAB REPAIR (PARTIAL)	SQ YD	10					10
	DETOUR SIGNING	L SUM	1	1				
	DRAINAGE SYSTEM	L SUM	0.75					0.75
	TEMPORARY SHEET PILING	SQ FT	11924	8863				3061
	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	7165					7165
	MATERIAL TRANSFER DEVICE	TON	2640		2640			
	POLYMER CONCRETE	CU FT	11					11
	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	435					435
	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1				
	ROCK FILL - REPLACEMENT	TON	232.7	63				169.7
	ROCK FILL - FOUNDATION	TON	154.7					154.7
	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	2514	0				1383
	TRAFFIC MANAGEMENT SYSTEM	CAL MO	30	30				
	TRAFFIC MANAGEMENT SYSTEM INSTALLATION	L SUM	1	1				
	TRAINEES	HOURLY	2500	2500				
	TRAINEES - TRAINEE PROGRAM GRADUATE	HOURLY	2500	2500				

REV 09/04/13

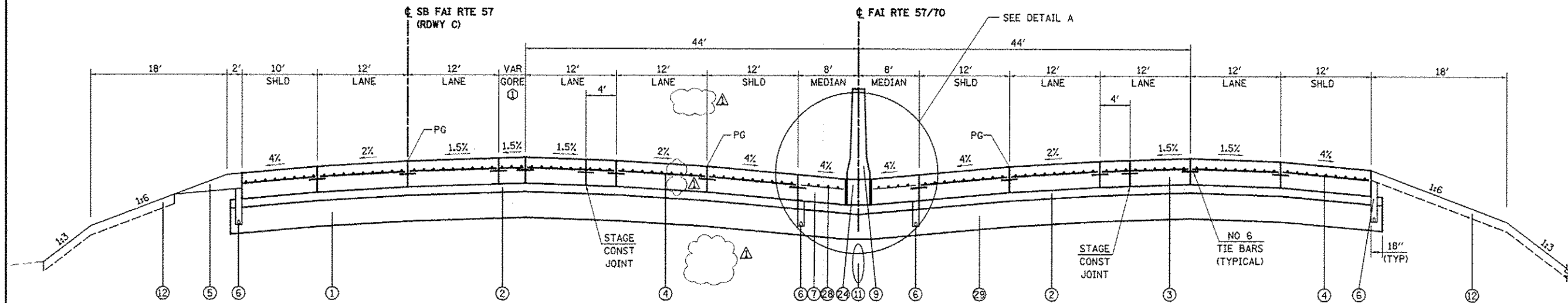
FILE NAME -	USER NAME - MUSER4	DESIGNED - ESW	REVISED -
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	PLOT SCALE - 1/8"=1'	CHECKED - BRM	REVISED -
	PLOT DATE - 9/4/2013	DATE - 11-04-08	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES, NORTH TRI LEVEL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-41R & 25-4HVB-1)BY	EFFINGHAM	1760	37
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 74295	



PROPOSED MAINLINE TANGENT SECTION

① GORE AREA, VARIES 1' TO 6'
 GORE AREA BEGINS, 1' STUB, LT STA 2328+51.68
 STA 2326+85.06 TO STA 2336+85.13 (FAI RTE 57/70)
 STATION EQUATION - STA 2326+85.06, FAI 57/70 = STA 40+90.00, SB FAI 57 (RDWY C)

LEGEND

- ① PROPOSED LIME MODIFIED SOIL 12" 24" (SEE SCHEDULE)
- ② PROPOSED STABILIZED SUB-BASE 4"
- ③ PROPOSED CONTINUOUSLY REINFORCED PCC PAVEMENT 13"
- ④ PROPOSED PAVEMENT REINFORCEMENT 13"
- ⑤ PROPOSED AGGREGATE SHOULDERS, TYPE B 6"
- ⑥ PROPOSED PIPE UNDERDRAINS 6"
- ⑦ PROPOSED PORTLAND CEMENT CONCRETE SHOULDERS 13"
- ⑧ PROPOSED COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
- ⑨ PROPOSED CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT
- ⑩ PROPOSED STEEL PLATE BEAM GUARD RAIL, TYPE A
- ⑪ PROPOSED STORM SEWERS, CLASS A
- ⑫ PROPOSED TOPSOIL 4"
- ⑬ PROPOSED PCC PAVEMENT 10" (JOINTED)
- ⑭ PROPOSED PCC PAVEMENT 9 3/4" (JOINTED)
- ⑮ PROPOSED COARSE AGGREGATE - COST INCLUDED IN PORTLAND CEMENT CONCRETE SHOULDERS 13"
- ⑯ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑰ PROPOSED AGGREGATE (PRIME COAT)
- ⑱ PROPOSED LEVELING BINDER (MACHINE METHOD), N105 VARIES 0" TO 6"
- ⑲ PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 & VARIES
- ⑳ PROPOSED HOT-MIX ASPHALT SHOULDERS, 2" & VARIES
- ㉑ PROPOSED CONCRETE MEDIAN, TYPE SM (DOWELLED)
- ㉒ PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4"
- ㉓ PROPOSED BRIDGE APPROACH SLAB
- ㉔ PROPOSED CONCRETE BARRIER BASE
- ㉕ PROPOSED PIPE UNDERDRAIN 4"
- ㉖ PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
- ㉗ PROPOSED HOT-MIX ASPHALT SHOULDERS, 8"
- ㉘ PROPOSED PAVEMENT FABRIC
- ㉙ SLAG MODIFIED CEMENT, 12"

SEE LEGEND NOS. ③-④ FOR PAVEMENT COMPOSITION OF SHOULDERS AND DRIVING LANES

NOTES
 PROPOSED SIDE SLOPES/DITCHES
 VARY - SEE CROSS SECTIONS

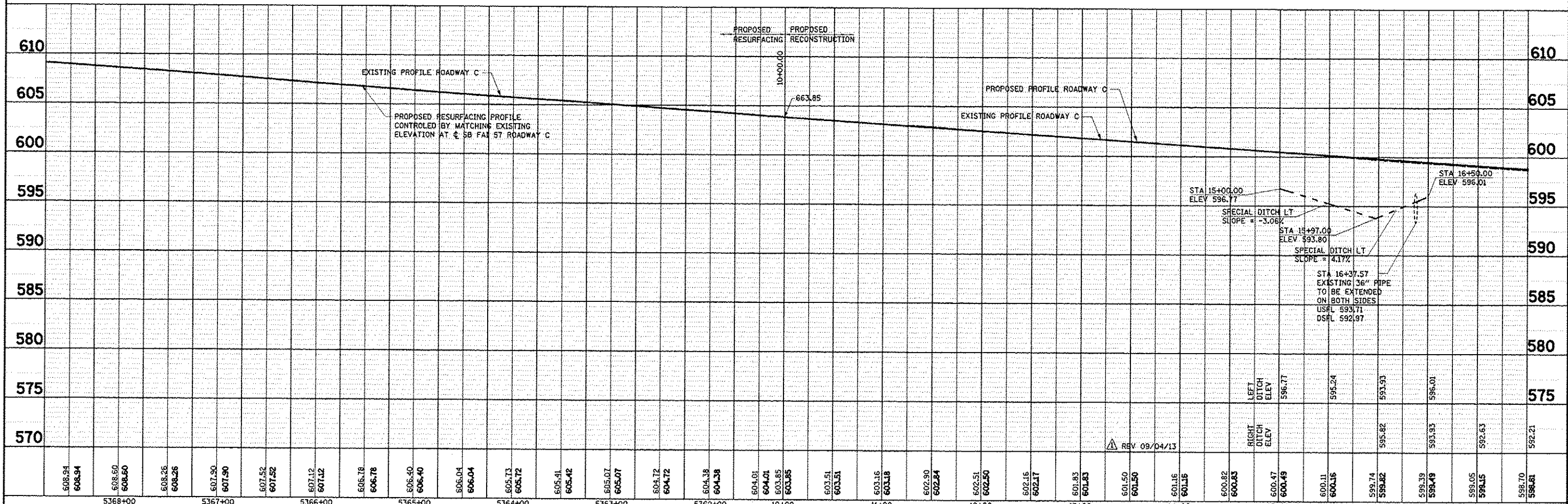
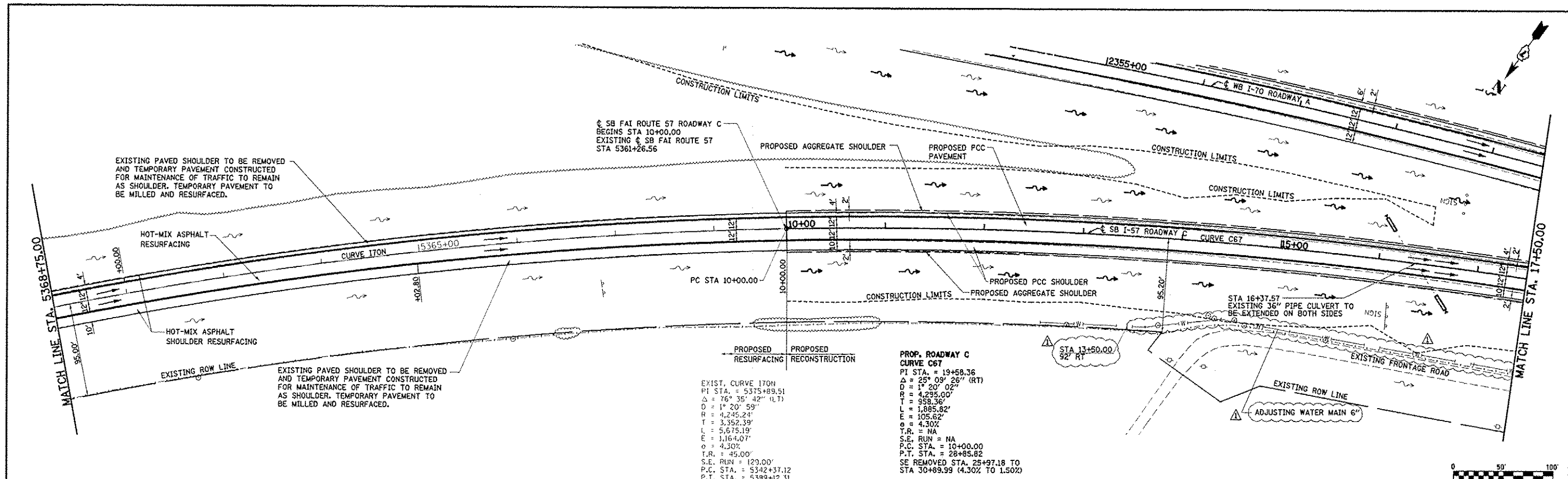
LIMITS OF PROPOSED TOPSOIL
 VARIES - SEE CROSS SECTIONS

REV 09/04/13

FILE NAME -	USER NAME - #USER#	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTIONS MAINLINE FAI ROUTES 57 / 70		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*FILE#		DRAWN - RCB	REVISED -				57/70	(25-41R)	EFFINGHAM	1760	55
	PLOT SCALE - #SCALE#	CHECKED - BRM	REVISED -		SCALE: 1"=50'	SHEET NO. 10 OF 35 SHEETS	STA.	TO STA.	CONTRACT NO. 74295		
	PLOT DATE - 9/3/2013	DATE - 01/22/09	REVISED -					FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

DATE	
BY	
REVISED	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

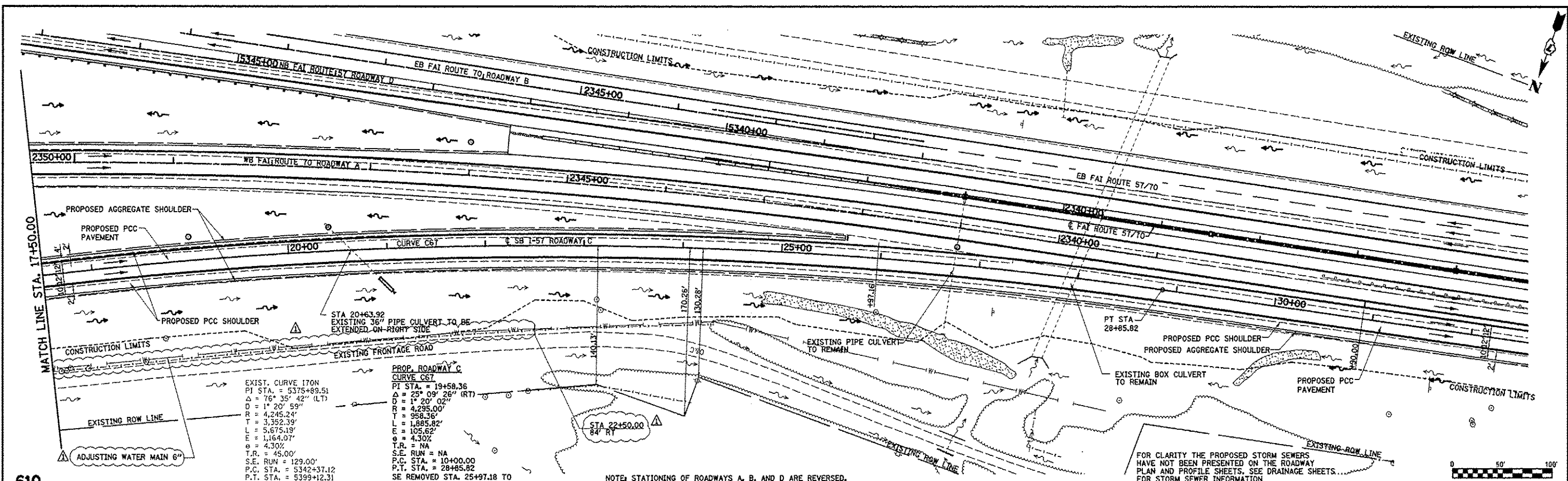
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BY	
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NO. 1	
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NO. 4	
NO. 5	
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NO. 7	
NO. 8	
NO. 9	
NO. 10	



FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS	PLAN AND PROFILE, NORTH TRI LEVEL ROADWAY C	F.A.1	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		JWS	9-4-2013	DEPARTMENT OF TRANSPORTATION		57/70	(25-4)R	EFFINGHAM	1760	130
		PDB			SCALE: 1"=50'	SHEET NO. 5 OF 18 SHEETS			CONTRACT NO. 74295	
		BRM			STA. 5368+75.00 TO STA. 17+50.00		ILLINOIS FED. AID PROJECT			
		DATE								

DATE	
BY	
REVISIONS	
PLAN	
NOTE BOOK	
NO.	
DATE	
BY	
REVISIONS	
PROFILE	
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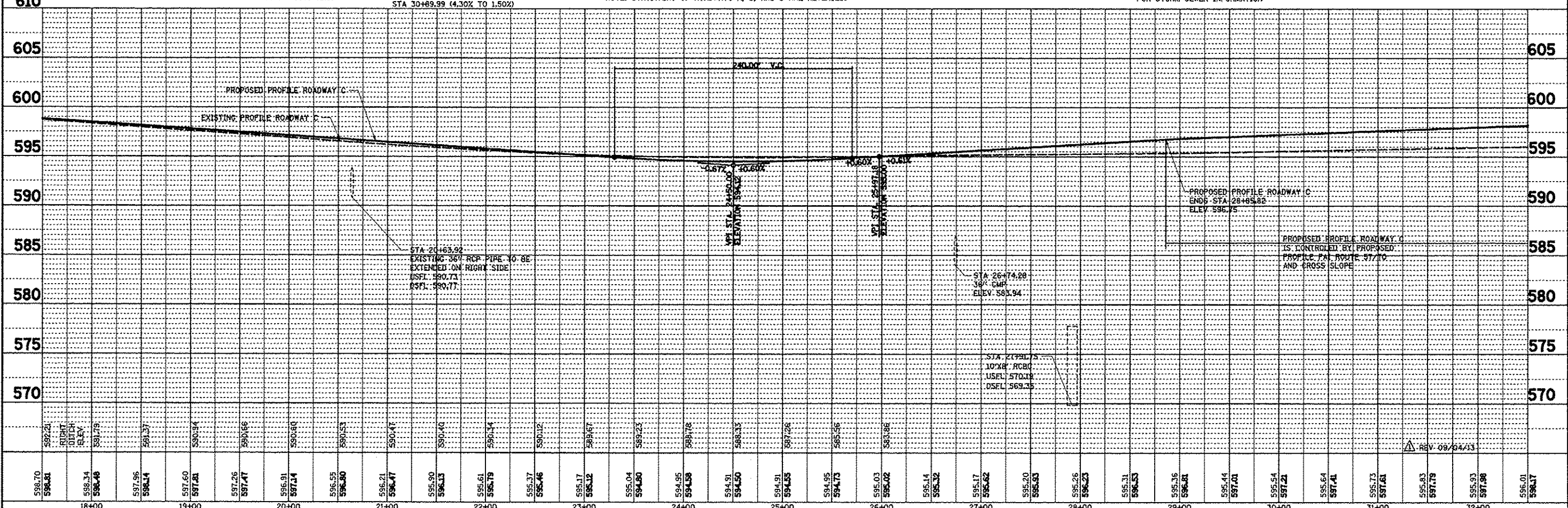
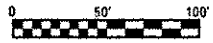


EXIST. CURVE 170N
 PI STA. = 5375+89.51
 Δ = 76° 35' 42" (LT)
 D = 1° 20' 59"
 T = 4,245.24'
 L = 3,352.39'
 R = 3,675.13'
 E = 1,164.07'
 S = 4.30%
 T.R. = 45.00'
 S.E. RUN = 129.00'
 P.C. STA. = 5342+37.12
 P.T. STA. = 5399+12.31

PROP. ROADWAY C
 CURVE C67
 PI STA. = 19+58.36
 Δ = 25° 09' 26" (RT)
 D = 1° 20' 02"
 R = 4,295.00'
 T = 958.36'
 L = 1,885.82'
 R = 105.52'
 E = 4.30%
 T.R. = NA
 S.E. RUN = NA
 P.C. STA. = 10+00.00
 P.T. STA. = 28+85.82
 SE REMOVED STA. 25+97.18 TO
 STA 30+89.99 (4.30% TO 1.50%)

NOTE: STATIONING OF ROADWAYS A, B, AND D ARE REVERSED.

FOR CLARITY THE PROPOSED STORM SEWERS
 HAVE NOT BEEN PRESENTED ON THE ROADWAY
 PLAN AND PROFILE SHEETS. SEE DRAINAGE SHEETS.
 FOR STORM SEWER INFORMATION



588.70 588.81	588.34 588.48	587.96 588.14	587.60 587.81	587.26 587.47	586.91 587.14	586.55 586.80	586.21 586.47	585.90 586.13	585.61 585.79	585.37 585.46	585.17 585.12	584.94 584.80	584.95 584.98	584.91 584.85	584.95 584.73	585.03 585.02	585.14 585.32	585.17 585.62	585.20 585.63	585.26 586.23	585.31 586.53	585.36 586.81	585.44 587.01	585.54 587.21	585.64 587.41	585.73 587.61	585.83 587.79	585.93 587.98	586.01 588.17
18+00		19+00		20+00		21+00		22+00		23+00		24+00		25+00		26+00		27+00		28+00		29+00		30+00		31+00		32+00	

FILE NAME =	USER NAME = bctay	DESIGNED - JWS	REVISED - 9-4-2013
PROJECT = 03-00012-01-70-dgnw Trk+VPP-HR-0110.dgn		DRAWN - PDB	REVISED -
		CHECKED - BRM	REVISED -
		DATE - 6-5-08	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE, NORTH TRI LEVEL ROADWAY C
 SCALE: 1"=50'
 SHEET NO. 4 OF 18 SHEETS
 STA. 17+50.00 TO STA. 2380+00.00

F.A.I. RTE. 57/70	SECTION 25-4R	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 131
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74295				

Bench Mark: Chiseled square on raised concrete median at center of US 45 approximately 140'-0" North of I-57/70 centerline. US Route 45 Sta. 60+10. Elev. 592.07.

Existing Structure: S.N. 025-0013 (WB) & 025-0014 (EB), built in 1960 and widened in 1994, are each five spans consisting of one two span unit and one three span unit. Each superstructure is a reinforced concrete deck 63'-2" out to out and is supported on steel stringers. All of the spans are noncomposite except for the fourth spans. The back to back of abutment length of each structure is 355'-8". The superstructure is supported by spill through abutments and reinforced concrete hammer head piers. Existing Structure shall be removed and replaced. Construction shall be staged so that two lanes remain open at all times.

Weather Station to be Salvaged.

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

73" Web ϕ Girder (Composite, Full Length)

Bridge Parapet Mounted Lighting

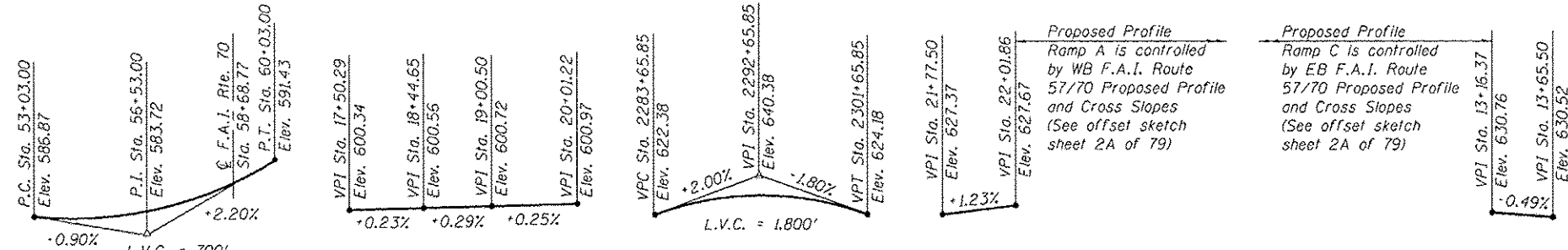
±58'-2" Limits of Protective Shield

±91'-8" Limits of Protective Shield

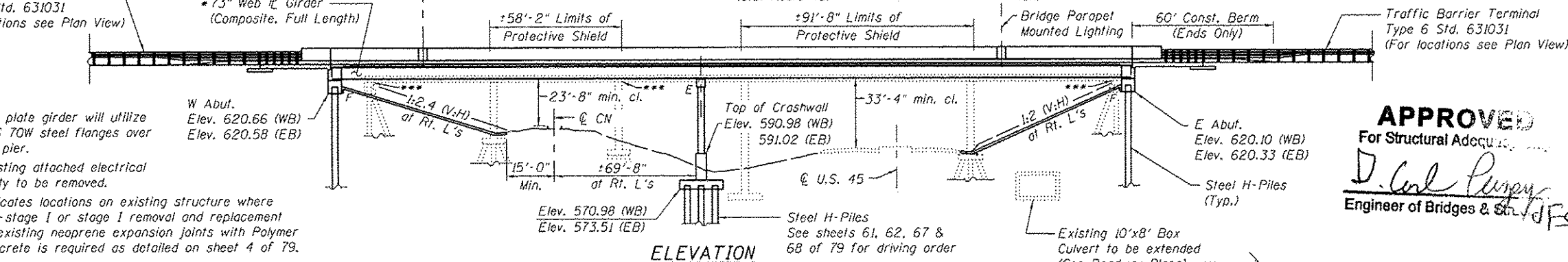
60' Const. Berm (Ends Only)

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

- The plate girder will utilize HPS TOW steel flanges over the pier.
- Existing attached electrical utility to be removed.
- Indicates locations on existing structure where pre-stage I or stage I removal and replacement of existing neoprene expansion joints with Polymer Concrete is required as detailed on sheet 4 of 79.
- The profile grades & bridge deck shown are the final elevations after grinding.



EXISTING PROFILE GRADE (U.S. Route 45)
PROFILE GRADE (CN)
PROFILE GRADE (F.A.I. Route 57/70 EB & WB)
PROFILE GRADE (Ramp A)
PROFILE GRADE (Ramp C)



ELEVATION

APPROVED
 For Structural Adqu...
J. Carl Purpy
 Engineer of Bridges & Structures

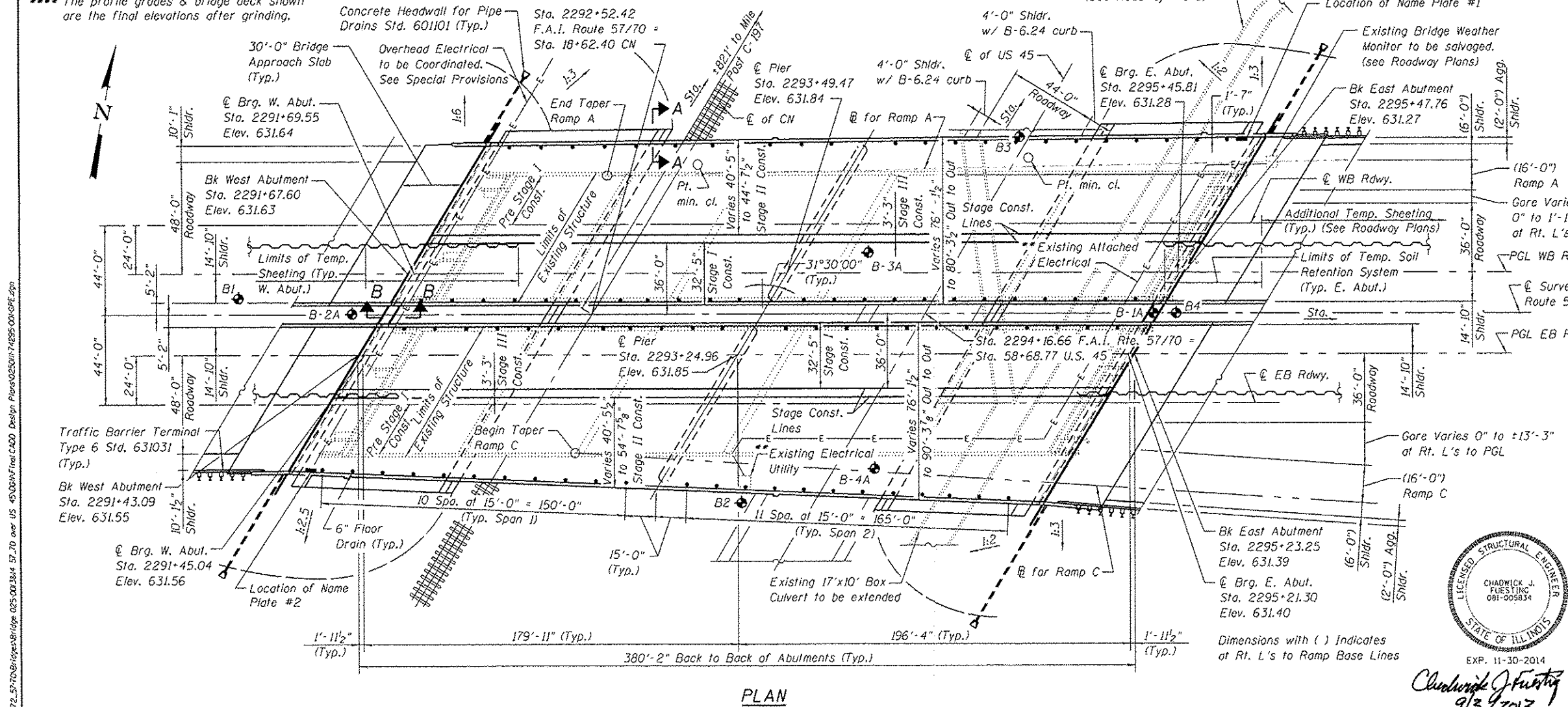
SEISMIC DATA
 Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.150
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.350
 Soil Site Class = C

DESIGN SPECIFICATIONS
 2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interim

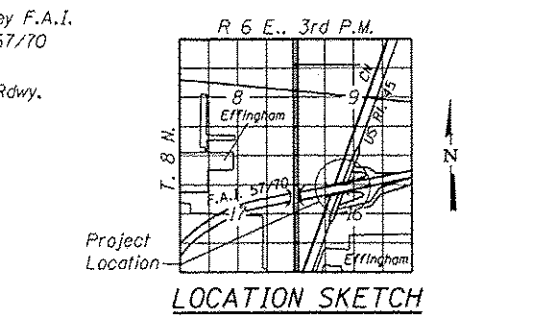
LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
 f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 50,000 psi (M270 Grade 50)
 f_y = 70,000 psi (M270 Grade HPS 70W)

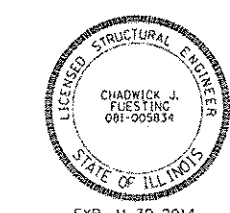
Notes:
 Borings marked with A were drilled in 1989. For Section A-A see Sheet 2A of 79. A closed drainage system will be required (Not shown for clarity). Up to 1/4" will be ground off the bridge deck and the bridge approach slabs. For offset sketch of Ramps see sheet 2A of 79. See Sheet 2A of 79 for Section B-B.



PLAN



GENERAL PLAN & ELEVATION
F.A.I. ROUTE 57/70 E.B. AND W.B.
OVER CN & U.S. RTE. 45
SECTION (25-4HVB-1)BY
EFFINGHAM COUNTY
STATION 2294+16.66
SN 025-0111 (WB) & 025-0112 (EB)



Chadwick J. Fuesting
 9/3/2013

FILE NAME = 025011-74295-001-GPE.dgn	USER NAME = bse/bel	DESIGNED - BB	REVISION 9/02/2013 CJF	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.I. RTE. 57/70	SECTION 125-4HVB-1BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 535
DESIGNED BY: BENJAMIN LOGGERSHELL & ASSOCIATES, INC. 3044 DRIFT HAVEN RD. BLOOMINGDALE, IL 61710-1000 FAX (815) 381-4444	ILLINOIS DESIGN FIRM NUMBER 184,001670	CHECKED - ACS	REVISION		SHEET NO. 1 OF 79 SHEETS	CONTRACT NO. 74295		ILLINOIS FED. AID PROJECT	
PLLOT SCALE: 1" = 10'-0"	PLLOT DATE: 8/25/13 AM 9/3/2013	DRAWN - WJS	REVISION						
		CHECKED - CJF	REVISION						

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8" φ, holes 5/8" φ, unless otherwise noted.

Calculated weight of Structural Steel = 522,720 lbs. (Grade 70W)
2,413,070 lbs. (Grade 50)
2,920 lbs. (Grade 36)

No field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated. If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surface and the bottom of the bottom flange of fascia beams, masked off connection surfaces, field installed fasteners and damaged area shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Stage Removal of the existing piers shall be executed with the use of defined saw cuts. The use of drilling or other means of pier splitting shall not be allowed. The Contractor's Structural Assessment Report for Means and Methods shall define the removal line appropriately and provide a method that employs the use of saw cutting.

Pre-Stage I Construction and Partial Depth Deck Slab Repair that may occur during Pre-Stage I or Stage I Construction shall be conducted during Non-Peak hours of traffic according to the "Keeping Roads Open" Special Provision.

The existing piers shall remain in place during Stage I Construction. The Contractor may substitute a temporary support system to facilitate construction. The use of a temporary system shall be executed according to the General Bridge Specifications Standard Assessment Report for Contractors means and methods.

The Contractor is advised that the existing structure contains a pier that is in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An Existing Structure Information Package is available upon request as noted in the Special Provisions.

The Contractor shall retain the services of an Engineering Firm, prequalified in the IDOT consultant selection category of Highway Bridges (Advanced Typical), for preparation of the Structural Assessment Report. Contractor's pre-approval shall not be applicable for the project. See Special Provisions.

Current Ratings on File for Existing Structure

Inventory: HS 24.4

Operating: HS 27.4

Live Load Restrictions: No

Inventory and Operating Ratings are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. The Ratings are not necessarily representative of capacities to support the Contractor's equipment.

Concrete Sealer shall be applied to the designated areas of the pier.

INDEX OF SHEETS

SHEET NO.	TITLE	SHEET NO.	TITLE
1.	General Plan and Elevation	44.-47.	West Precast Bridge Approach Slab Details (EB)
2.-2A.	General Data	48.-51.	East Precast Bridge Approach Slab Details (EB)
3.	Footing Layout	52.	Framing Plan (WB)
4.,4A.,4B.-5.	Stage Construction Details	53.	Framing Plan (EB)
6.	Modified Temporary Concrete Barrier for Stage Construction	53A.	Steel Dead Load Deflection
7.-11.	Top of Slab Elevations (WB)	54.-57.	Structural Steel Details
12.-17.	Top of Slab Elevations (EB)	58.	West Abutment (WB)
18.-19.	Westbound Approach Slab Elevations	59.	East Abutment (WB)
20.-21.	Eastbound Approach Slab Elevations	60.	Abutment Details (WB)
22.-23.	Superstructure (WB)	61.-62.	Pier (WB)
24.-25.	Superstructure Details (WB)	63.	West Abutment (EB)
26.	Drainage System (WB)	64.	East Abutment (EB)
27.-28.	Superstructure (EB)	65.	Abutment Details (EB)
29.-30.	Superstructure Details (EB)	66.-67.	Pier (EB)
31.	Drainage System (EB)	68.	Bar Splicer Details
32.-33.	Integral Abutment Diaphragm Details (WB)	69.	Slipforming Parapet
34.-35.	Integral Abutment Diaphragm Details (EB)	70.	HP Pile Details
36.-39.	West Precast Bridge Approach Slab Details (WB)	71.-79	Boring Logs
40.-43.	East Precast Bridge Approach Slab Details (WB)		

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq. Yd.	8367	-	8367
Removal of Existing Structures	Each	2	-	2
Protective Shield	Sq. Yd.	2104	-	2104
Structure Excavation	Cu. Yd.	-	1801	1801
Floor Drains	Each	92	-	92
Concrete Structures	Cu. Yd.	-	1327.3	1327.3
Concrete Superstructures	Cu. Yd.	2165.1	-	2165.1
Bridge Deck Grooving	Sq. Yd.	7165	-	7165
Furnishing & Erecting Structural Steel	L Sum	1	-	1
Stud Shear Connectors	Each	20,908	-	20,908
Reinforcement Bars, Epoxy Coated	Pound	623,670	185,840	809,510
Bar Splicers	Each	5228	238	5466
Mechanical Splicers	Each	-	806	806
Slope Wall 4 inch	Sq. Yd.	-	3251	3251
Furnishing Steel Piles HP14x89	Foot	-	12,270	12,270
Driving Piles	Foot	-	12,270	12,270
Test Pile Steel HP14x89	Each	-	2	2
Name Plates	Each	2	-	2
Preformed Joint Strip Seal	Foot	380	-	380
Anchor Bolts, 1"	Each	76	-	76
Anchor Bolts, 1 1/4"	Each	76	-	76
Concrete Sealer	Sq. Ft.	-	12,181	12,181
Geocomposite Wall Drain	Sq. Yd.	-	472	472
Granular Backfill for Structures	Cu. Yd.	-	1077	1077
Drainage System	L Sum	0.75	-	0.75
Temporary Sheet Piling	Sq. Ft.	-	3061	3061
Diamond Grinding (Bridge Section)	Sq. Yd.	7165	-	7165
Pipe Underdrains for Structures 4"	Foot	-	435	435
Temporary Soil Retention System	Sq. Ft.	-	1131	1131
High Load Multi-Rotation Bearings, Guided Expansion, 1150K	Each	19	-	19
Precast Bridge Approach Slab	Sq. Ft.	9680	-	9680
Concrete Wearing Surface, 5"	Sq. Yd.	1076	-	1076
Polymer Concrete	Cu. Ft.	11	-	11
Deck Slab Repair (Partial)	Sq. Yd.	10	-	10

* See sheet 4 of 79 for Pre-Stage I Construction.

FILE NAME : 02501174295-002-General Data.dwg	USER NAME : owelz	DESIGNED - BB	REVISED 9/02/2013 CJF
MEMORANDUM : LORRAINE & ASSOCIATES, INC. 3040 ORCHARD MAYFIELD, ILLINOIS 60151 PHONE (630) 583-8800 FAX (630) 583-8801	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED
	PLOT SCALE :	DRAWN - WJS	REVISED
	PLOT DATE : 7:57:46 AM 9/4/2013	CHECKED - CJF	REVISED

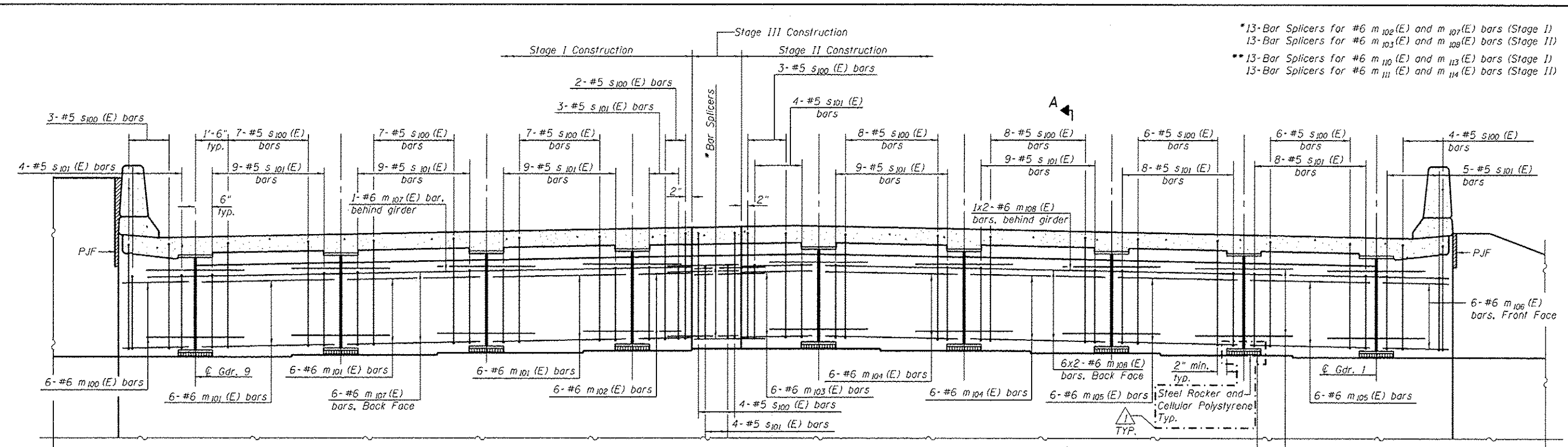
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 025-0111 (WB) & 025-0112 (EB)**

SHEET NO. 2 OF 79 SHEETS

F.A.I. RTE. 57/70	SECTION (25-4HWB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 536
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74295	

*13-Bar Splicers for #6 m₁₀₂(E) and m₁₀₇(E) bars (Stage I)
 13-Bar Splicers for #6 m₁₀₃(E) and m₁₀₈(E) bars (Stage II)
 **13-Bar Splicers for #6 m₁₁₀(E) and m₁₁₃(E) bars (Stage I)
 13-Bar Splicers for #6 m₁₁₁(E) and m₁₁₄(E) bars (Stage II)

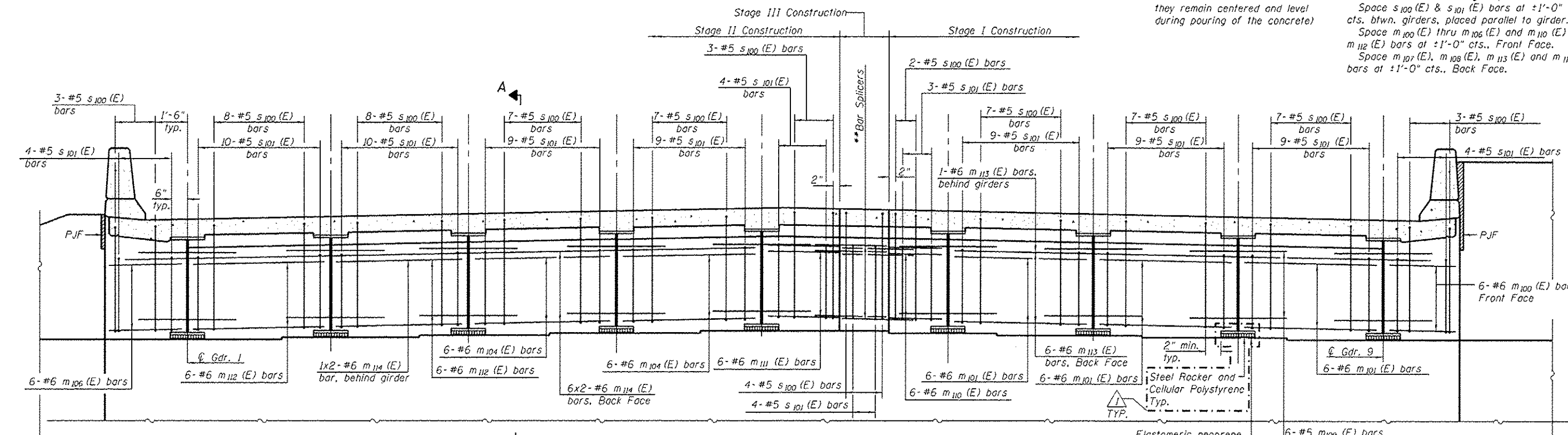


MINIMUM BAR LAP
 #6 bar = 3'-4"

DIAPHRAGM ELEVATION AT WEST ABUTMENT

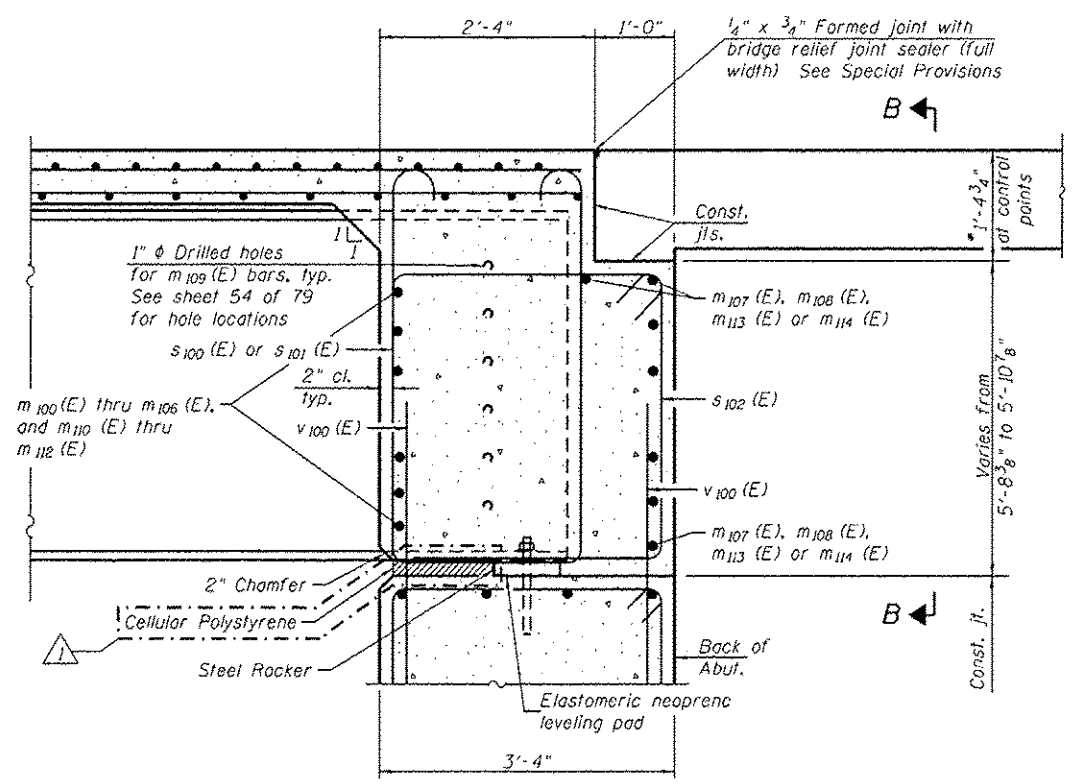
6-#5 m₁₀₉(E) bars.
 Typ. thru Each Beam.
 (Secure bars such that they remain centered and level during pouring of the concrete)

Notes:
 Dimensions taken perpendicular to Beams.
 For Section A-A see sheet 33 of 79.
 Bars indicated thus 1x2-#6 etc. indicates 1 line of bars with 2 lengths per line.
 Space s₁₀₀(E) & s₁₀₁(E) bars at ±1'-0" cts. b/wn. girders, placed parallel to girder.
 Space m₁₀₀(E) thru m₁₀₆(E) and m₁₁₀(E) thru m₁₁₂(E) bars at ±1'-0" cts., Front Face.
 Space m₁₀₇(E), m₁₀₈(E), m₁₁₃(E) and m₁₁₄(E) bars at ±1'-0" cts., Back Face.

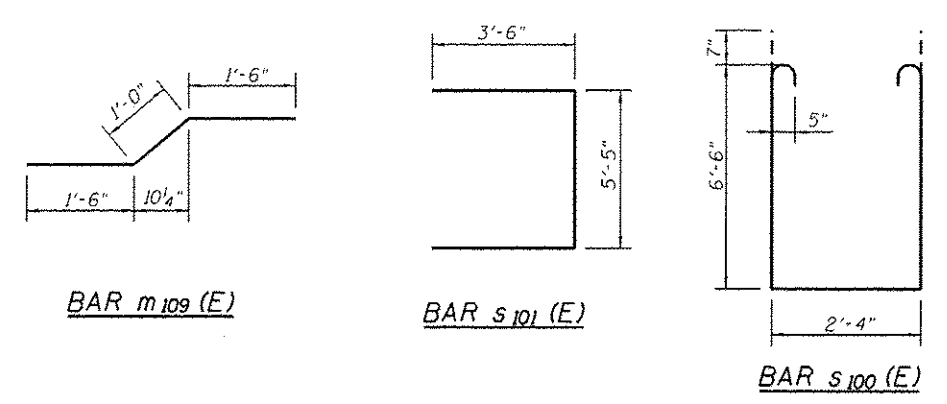


DIAPHRAGM ELEVATION AT EAST ABUTMENT

6-#5 m₁₀₉(E) bars.
 Typ. thru Each Beam.
 (Secure bars such that they remain centered and level during pouring of the concrete)



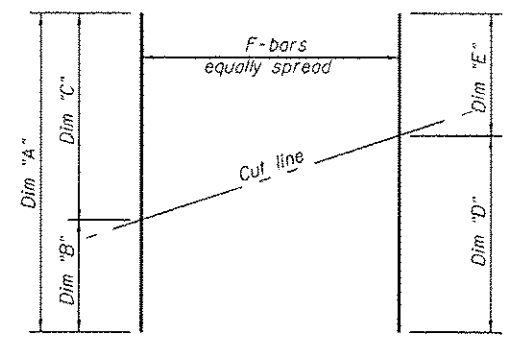
SECTION A-A
(at Rt. L's)



BAR m109 (E)

BAR s101 (E)

BAR s100 (E)



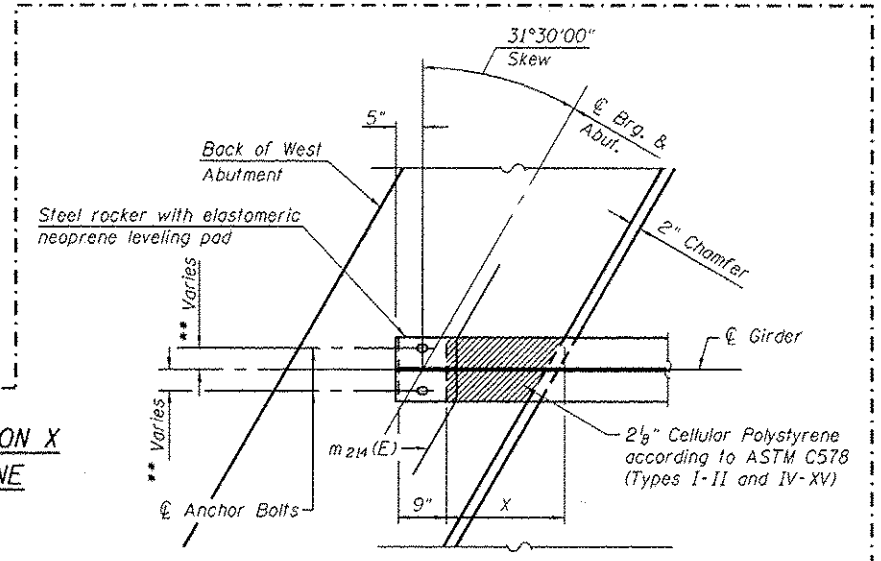
FIELD CUTTING DIAGRAM

Order bars full length. Cut as shown and use remainder of bar as specified.

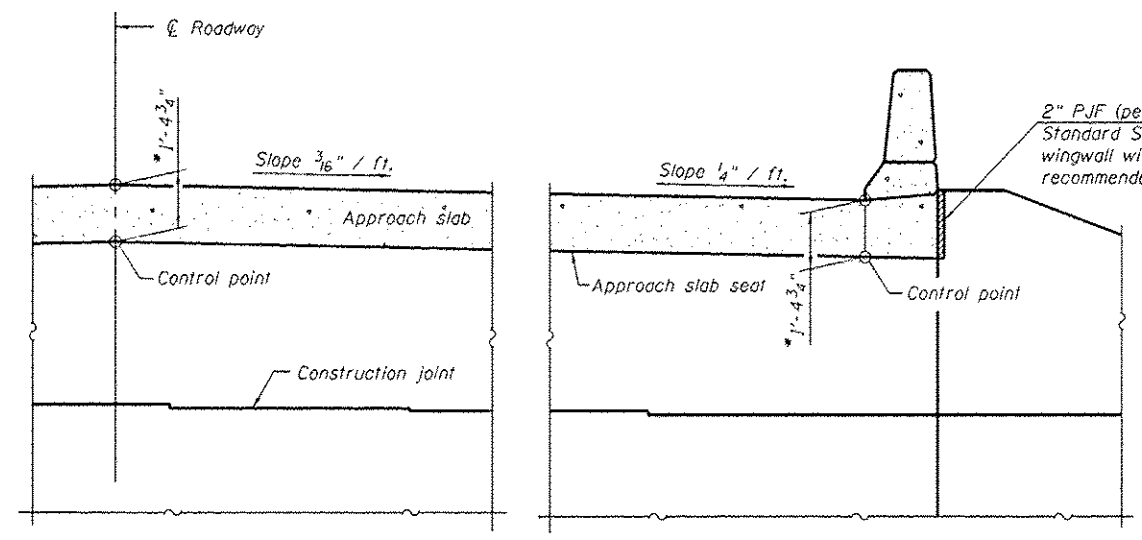
BAR	A	B	C	D	E	F
#6-Ø100 (E)	32'-2"	1'-0"	31'-2"	31'-2"	1'-0"	38
#6-Ø102 (E)	33'-9"	2'-7"	31'-2"	31'-2"	2'-7"	22
#6-Ø105 (E)	40'-0"	20'-5"	19'-7"	39'-2"	10"	24
#6-Ø107 (E)	46'-2"	23'-6"	22'-8"	43'-9"	2'-5"	26
#6-Ø108 (E)	40'-7"	20'-8"	19'-11"	38'-8"	1'-11"	14
#6-Ø110 (E)	47'-5"	24'-4"	23'-1"	43'-4"	4'-1"	15

WESTBOUND BRIDGE DIMENSION X FOR CELLULAR POLYSTYRENE

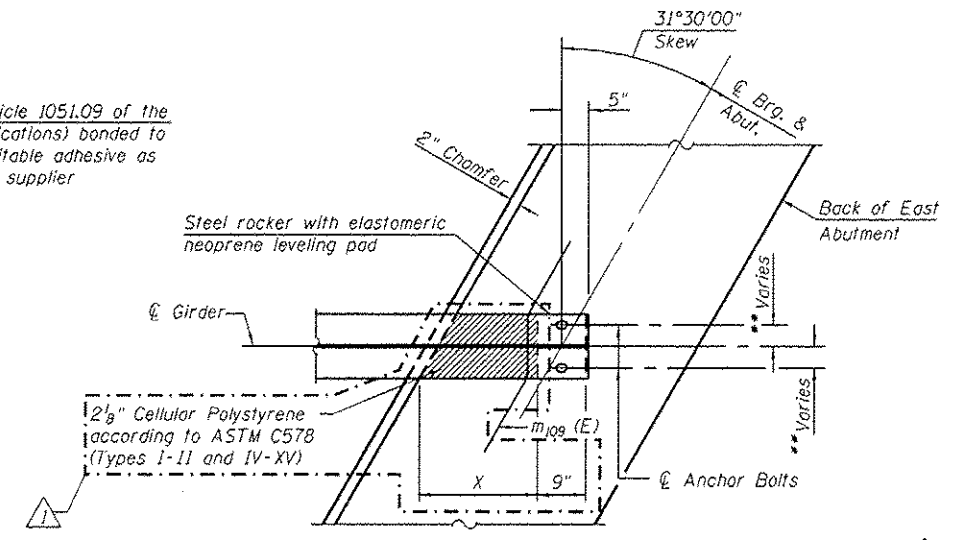
GIRDERS	W. ABUT.	E. ABUT.
1	1'-11 ³ / ₈ "	1'-11 ⁵ / ₈ "
2	1'-11 ¹ / ₈ "	1'-11 ¹ / ₂ "
3 thru 9	1'-11 ¹ / ₈ "	1'-11 ³ / ₈ "



PARTIAL PLAN AT WEST ABUTMENT
(Showing bottom flange of girder)



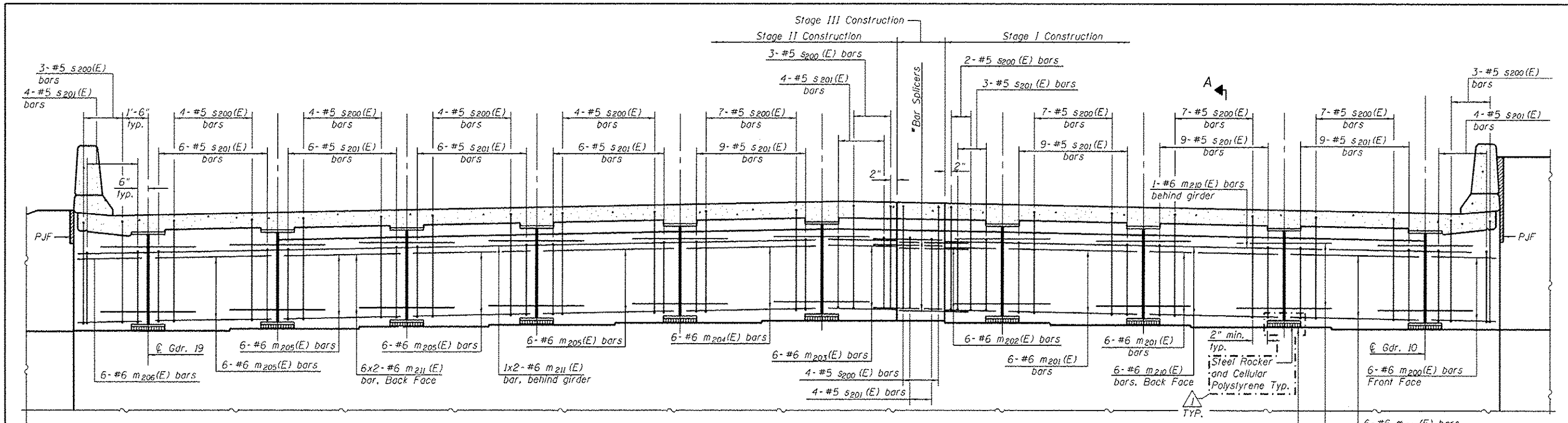
SECTION B-B



PARTIAL PLAN AT EAST ABUTMENT
(Showing bottom flange of girder)
(West Abutment Similar)

* Prior to Grinding
** See sheet 55 of 79 for dimension

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 25 of 79.
Concrete in diaphragm is included with Concrete Superstructure on sheet 25 of 79.
For details of bar m109 (E) see sheet 25 of 79.
The s100 (E) and s102 (E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet 56 of 79.
For details of Precast Bridge Approach Slab connection to Abutment Diaphragm, see sheet 37 and 41 of 79.
Cost of cellular polystyrene included with concrete Structures. See sheet 32 of 79 for additional placement details.

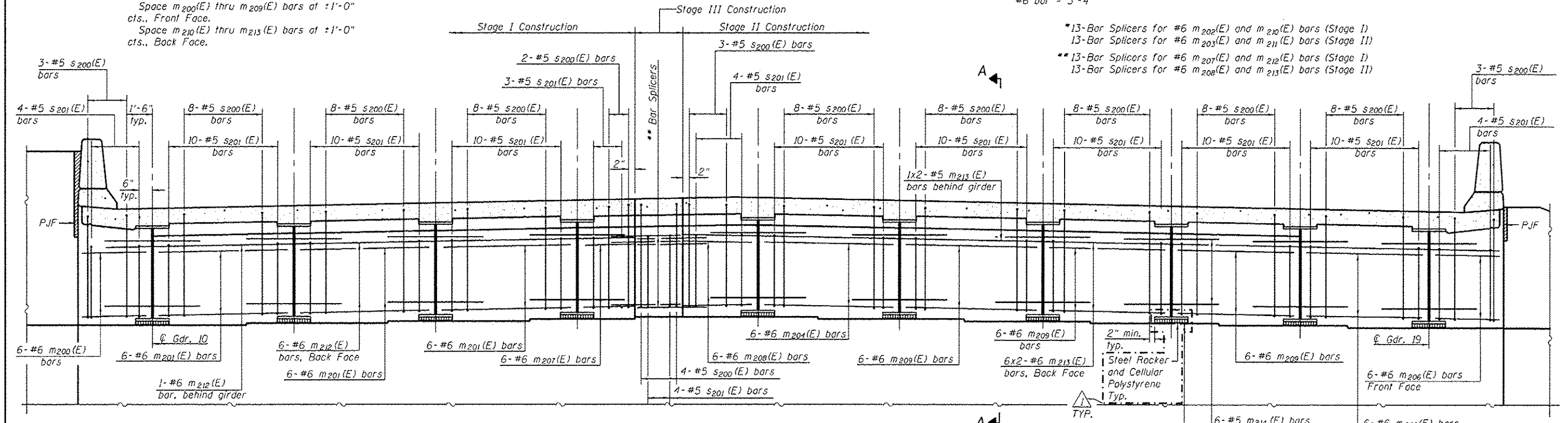


DIAPHRAGM ELEVATION AT WEST ABUTMENT

Notes:
 Dimensions taken perpendicular to Beams.
 For Section A-A see sheet 35 of 79.
 Bars indicated thus 1x2-#6 etc. indicates 1 line of bars with 2 lengths per line.
 Space s200(E) & s201(E) bars at ±1'-0" cts. b/wn. girders, placed parallel to girder.
 Space m200(E) thru m209(E) bars at ±1'-0" cts., Front Face.
 Space m210(E) thru m213(E) bars at ±1'-0" cts., Back Face.

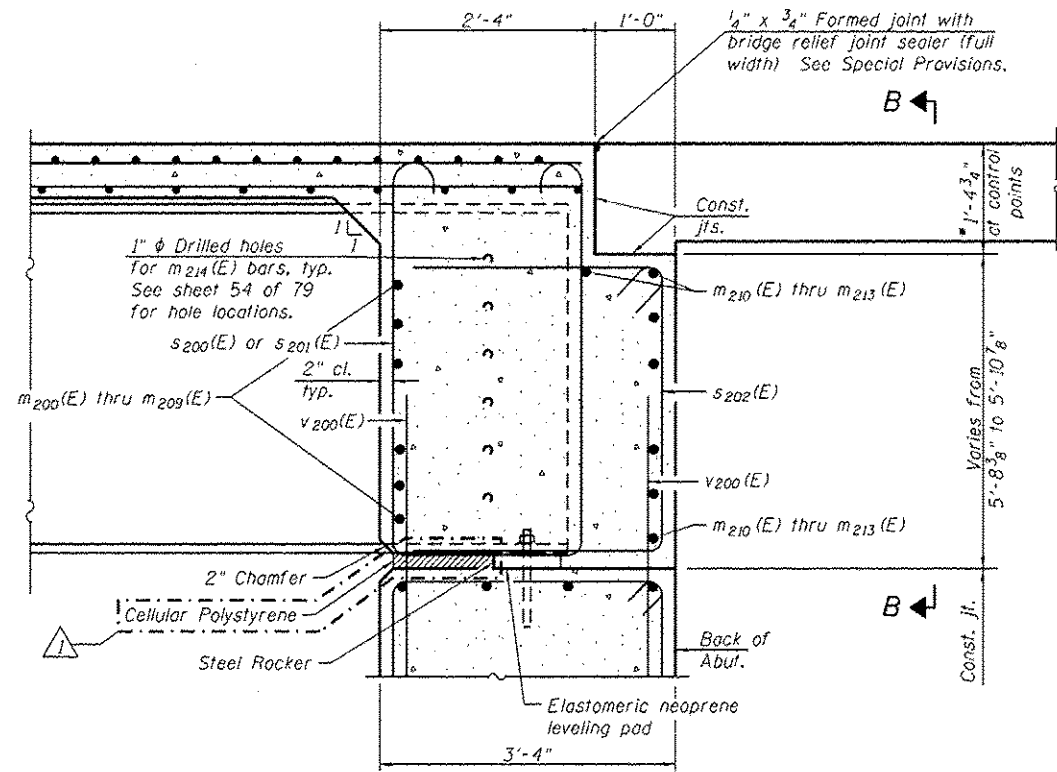
MINIMUM BAR LAP
 #6 bar = 3'-4"

- * 13-Bar Splicers for #6 m202(E) and m210(E) bars (Stage I)
- 13-Bar Splicers for #6 m203(E) and m211(E) bars (Stage II)
- ** 13-Bar Splicers for #6 m207(E) and m214(E) bars (Stage I)
- 13-Bar Splicers for #6 m208(E) and m213(E) bars (Stage II)



DIAPHRAGM ELEVATION AT EAST ABUTMENT

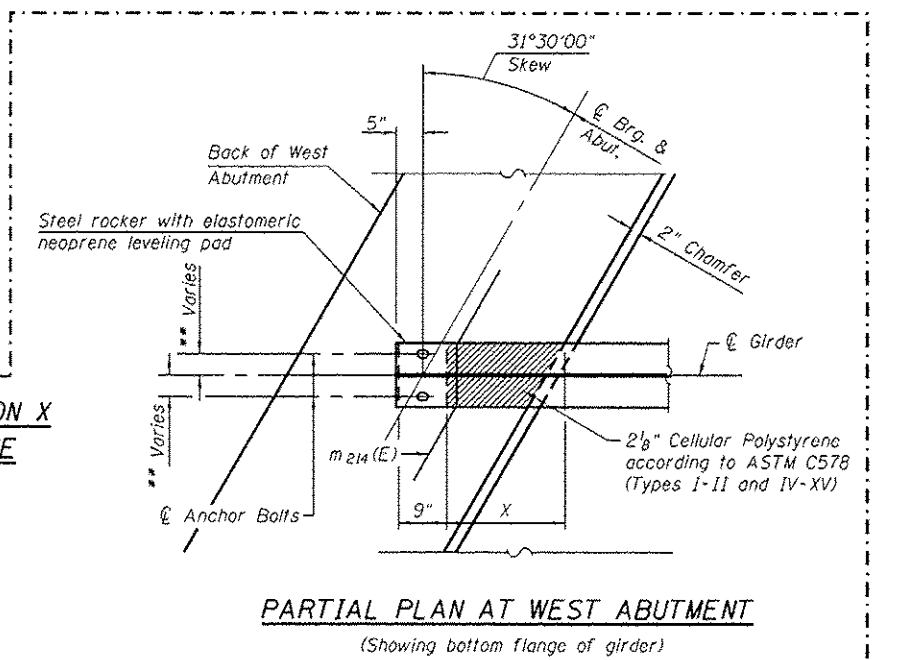
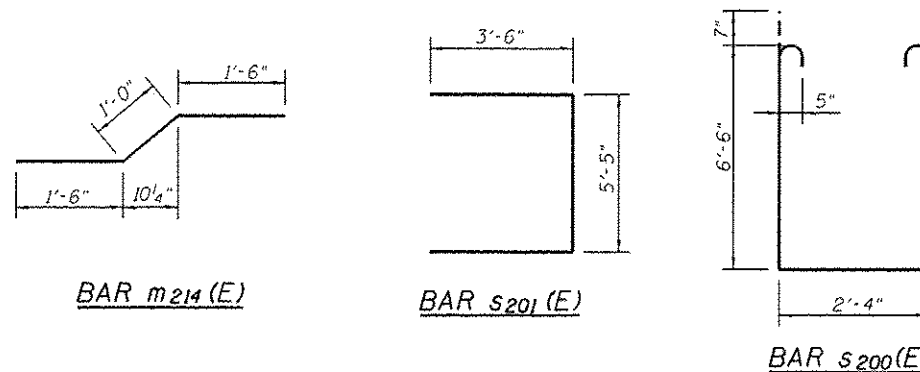
6-#5 m214(E) bars, typ. thru Each Beam. (Secure bars such that they remain centered and level during pouring of the concrete.)



SECTION A-A
(at Rt. L's)

EASTBOUND BRIDGE DIMENSION X FOR CELLULAR POLYSTYRENE

GIRDERS	W. ABUT.	E. ABUT.
10 thru 14	1'-11 1/8"	1'-11 3/8"
15	1'-11"	1'-11 3/8"
16	1'-10 1/8"	1'-10 3/4"
17	1'-10 1/2"	1'-10 1/2"
18	1'-11 1/8"	1'-10 3/8"
19	1'-10"	1'-10 1/4"

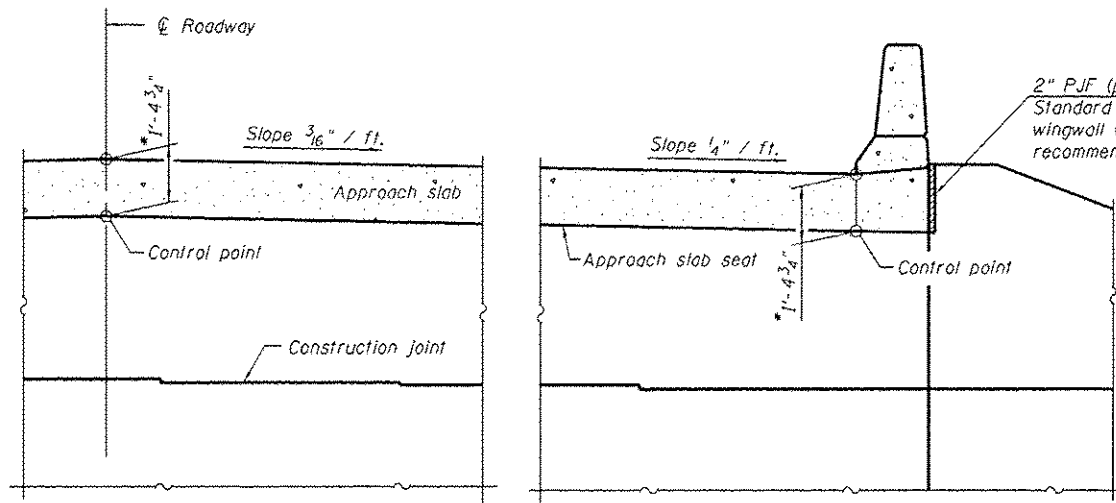


PARTIAL PLAN AT WEST ABUTMENT
(Showing bottom flange of girder)

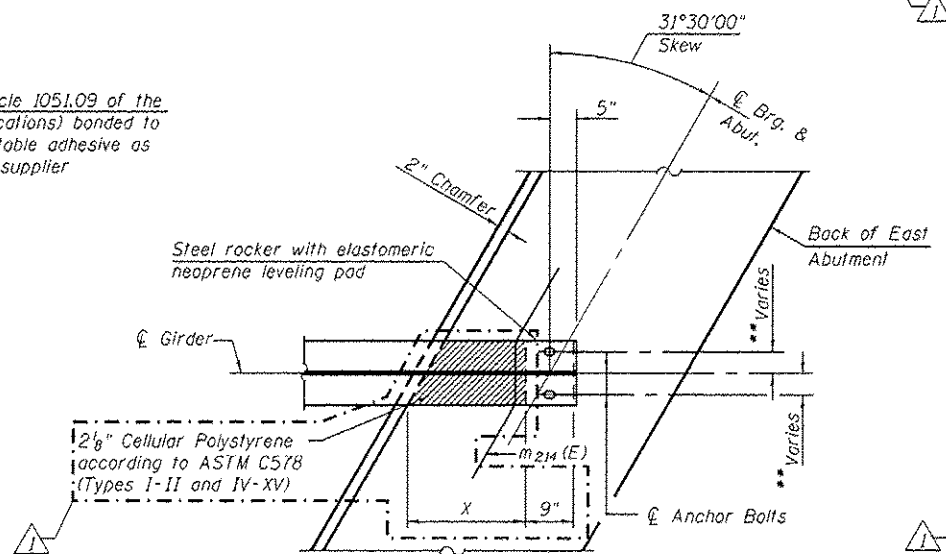
FIELD CUTTING DIAGRAM

Order bars full length. Cut as shown and use remainder of bar as specified.

BAR	A	B	C	D	E	F
#6-a200(E)	32'-2"	1'-0"	31'-2"	31'-2"	1'-0"	38
#6-a202(E)	33'-9"	2'-7"	31'-2"	31'-2"	2'-7"	22
#6-a205(E)	42'-11"	21'-10 1/2"	21'-0 1/2"	40'-3"	2'-8"	23
#6-a207(E)	55'-9"	28'-4"	27'-5"	53'-7"	2'-2"	32
#6-a208(E)	41'-9"	21'-7"	20'-2"	39'-8"	2'-1"	14
#6-a210(E)	55'-2"	28'-4"	26'-10"	52'-9"	2'-5"	19



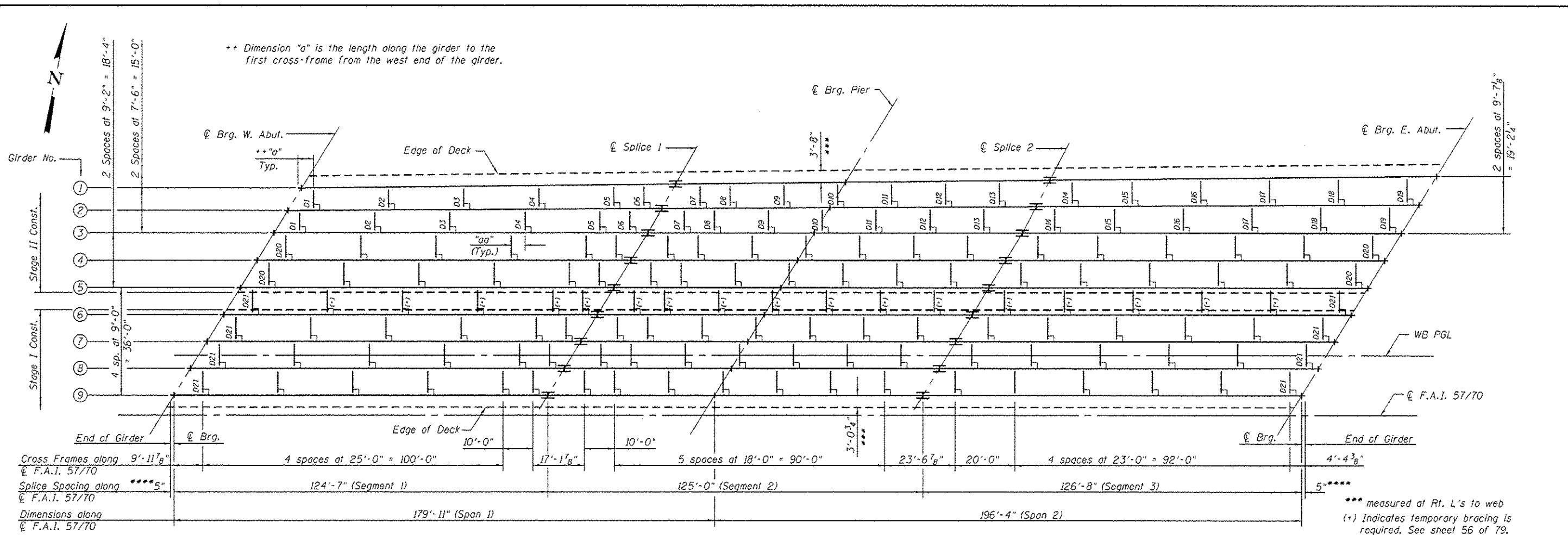
SECTION B-B



PARTIAL PLAN AT EAST ABUTMENT
(Showing bottom flange of girder)

* Prior to Grinding
** See sheet 55 of 79 for dimension.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 30 of 79.
Concrete in diaphragm is included with Concrete Superstructure on sheet 30 of 79.
For details of bar m214(E) see sheet 30 of 79.
The s200(E) and s202(E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet 56 of 79.
For details of Precast Bridge Approach Slab connection to Abutment Diaphragm, see sheet 45 and 49 of 79.
Cost of cellular polystyrene included with concrete Structures. See sheet 34 of 79 for additional placement details.



FRAMING PLAN

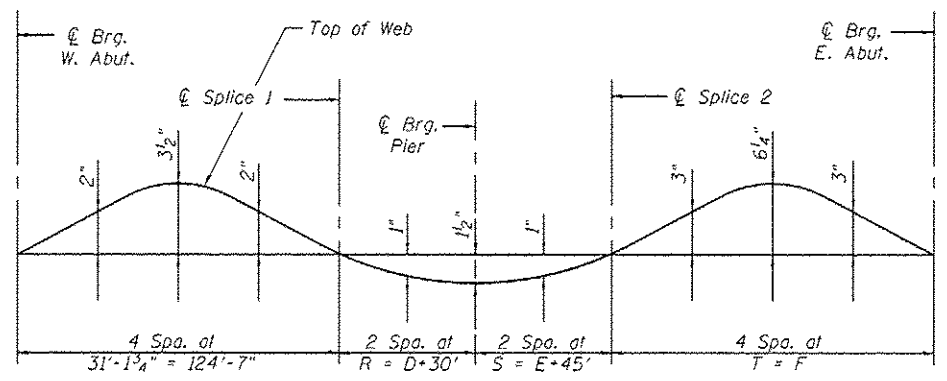
**** TOP OF WEB ELEVATIONS**

Location	@ Brg. W. Abut.	@ Splice 1	@ Brg. Pier	@ Splice 2	@ Brg. E. Abut.
Girder 1	630.74	630.81	630.68	630.79	630.01
Girder 2	630.88	630.98	630.86	630.99	630.23
Girder 3	630.99	631.10	630.99	631.13	630.41
Girder 4	631.16	631.28	631.16	631.27	630.58
Girder 5	631.21	631.38	631.26	631.38	630.71
Girder 6	631.05	631.24	631.12	631.25	630.60
Girder 7	630.90	631.11	630.99	631.11	630.49
Girder 8	630.72	630.94	630.83	630.96	630.35
Girder 9	630.51	630.76	630.64	630.77	630.19

** "For Fabrication Only"



Notes:
 All web and flanges of the girders, bearing stiffeners, web and flange splice plates and bearing plates shall be AASHTO Grade 50 unless noted otherwise.
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
 For Girder Dimension Tables, see sheet 54 of 79.
 For cross frame details and dimensions, see sheet 55 of 79.



CAMBER DIAGRAM

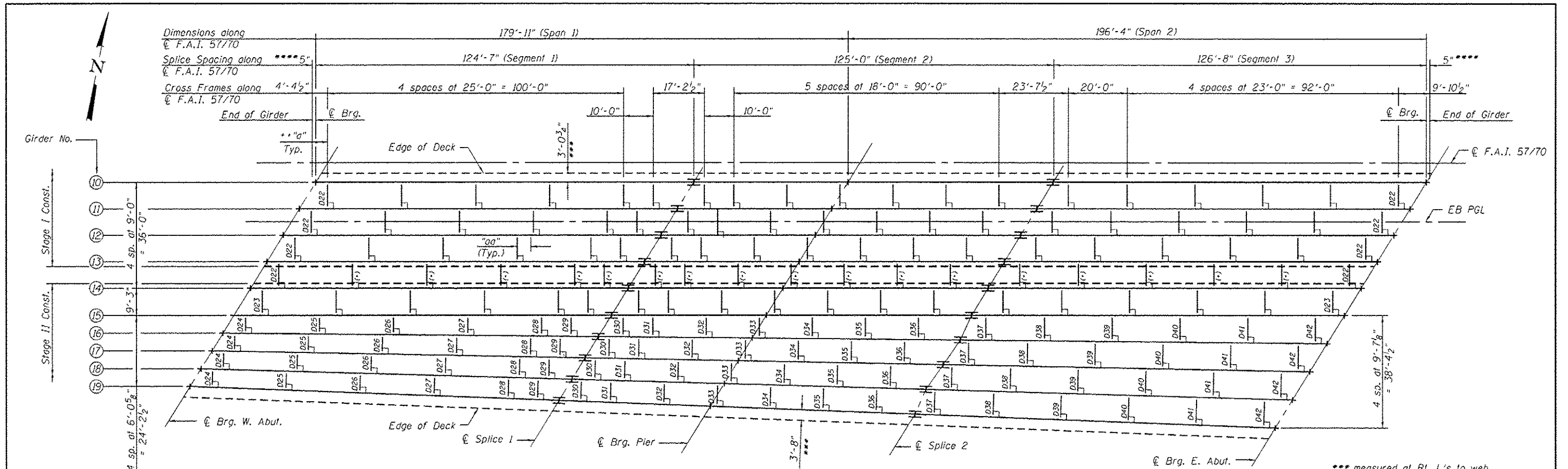
*** DIMENSION "aa"**

* measured along web.

Girder	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
2	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"		
3	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"		
4																				5'-7 3/8"	
5																					5'-6 1/8"
6																					5'-6 1/8"
7																					5'-6 1/8"
8																					5'-6 1/8"

DIMENSION "a"

Girder	Dimension "a"
1	4'-4 5/8"
2-4	4'-4 1/2"
5-8	4'-5 5/8"
9	9'-11 7/8"



** Dimension "a" is the length along the girder to the first cross-frame from the west end of the girder.

*** measured at RL, L's to web
 (*) Indicates temporary bracing is required. See sheet 56 of 79.
 **** See End Girder Detail, sheet 55 of 79.

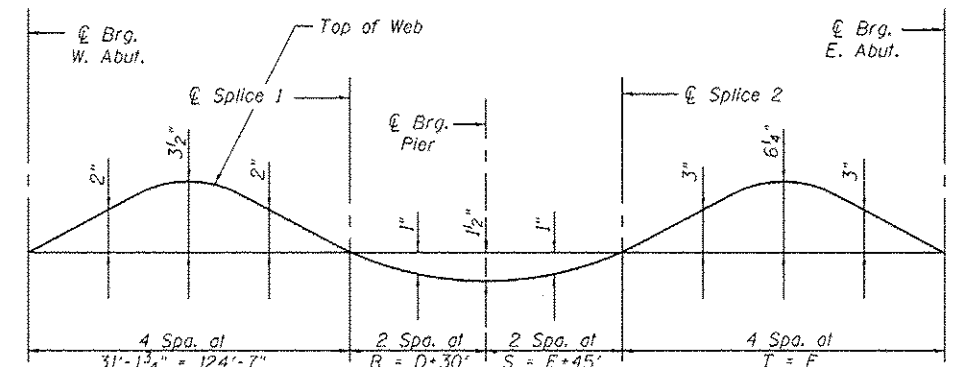
**** TOP OF WEB ELEVATIONS**

Location	℄ Brg. W. Abut.	℄ Splice 1	℄ Brg. Pier	℄ Splice 2	℄ Brg. E. Abut.
Girder 10	630.48	630.74	630.65	630.81	630.23
Girder 11	630.65	630.92	630.84	631.01	630.44
Girder 12	630.80	631.08	631.00	631.18	630.63
Girder 13	630.92	631.19	631.15	631.38	630.75
Girder 14	631.04	631.36	631.29	631.47	630.96
Girder 15	630.91	631.21	631.19	631.43	630.87
Girder 16	630.80	631.06	631.05	631.32	630.71
Girder 17	630.69	630.94	630.93	631.20	630.57
Girder 18	630.57	630.79	630.79	631.06	630.44
Girder 19	630.43	630.65	630.60	630.82	630.36

** "For Fabrication Only"

FRAMING PLAN

Notes:
 All web and flanges of the girders, bearing stiffeners, web and flange splice plates, and bearing plates shall be AASHTO M270, Grade 50, unless noted otherwise.
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
 For Girder Dimension Tables, see sheet 54 of 79.
 For cross frame details and dimensions, see sheet 55 of 79.



CAMBER DIAGRAM

*** DIMENSION "aa"**

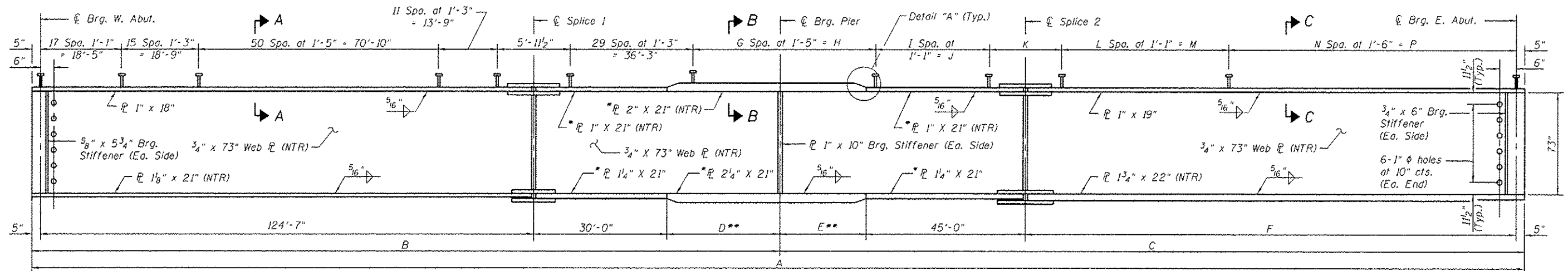
* measured along web.

Girder	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42	
11	5'-6 1/8"																					
12	5'-6 1/8"																					
13	5'-6 1/8"																					
14	****																					
15		5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"
16			3'-8 5/8"	3'-8 5/8"	3'-8 5/8"	3'-8 3/4"	3'-8 3/4"	3'-8 3/4"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 3/8"
17			3'-8"	3'-8"	3'-8"	3'-8"	3'-8"	3'-8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/2"
18			3'-7 1/4"	3'-7 1/4"	3'-7 1/4"	3'-7 1/4"	3'-7 3/8"	3'-7 3/8"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	5'-7"	5'-7"	5'-7"	5'-7"	5'-7"	5'-7"	5'-7 1/8"

**** Along Girder 14, dimension "a-a" varies 5'-6 1/8" in Segment 1, 5'-7 1/8" in Segment 2 and 5'-8" in Segment 3

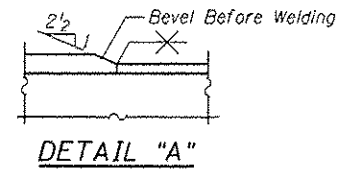
DIMENSION "a"

Girder	Dimension "a"
10-15	4'-4 1/2"
16	4'-4 3/8"
17	4'-4 1/4"
18	4'-4"
19	7'-10 1/2"



Notes:
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.
 For Framing Plan, see sheets 52 & 53 of 79.
 All webs and flanges of the girders, bearing stiffeners, web and flange splice plates, and bearing plates shall be AASHTO M270 Grade 50 unless noted otherwise.
 All splice plates except filler plate shall be designated as "NTR".

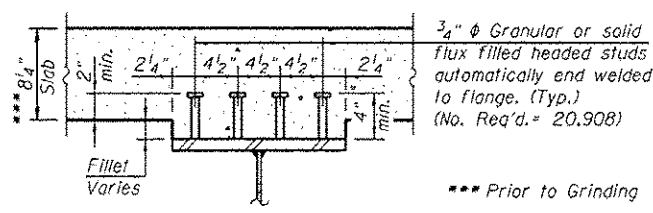
GIRDER ELEVATION



* Indicates plates are made of M270 HPS Grade 70W steel.
 ** Same for top and bottom flanges

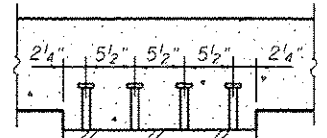
GIRDER DIMENSION TABLE

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S	T
1	379'-8 ⁵ / ₈ "	181'-6 ⁷ / ₈ "	198'-1 ¹ / ₄ "	26'-6 ⁷ / ₈ "	23'-5 ¹ / ₈ "	129'-3 ¹ / ₈ "	54	76'-6"	6	6'-6"	5'-1 ⁵ / ₈ "	27	29'-3"	65	97'-6"	28'-3 ⁷ / ₁₆ "	34'-2 ⁹ / ₁₆ "	32'-3 ³ / ₄ "
2	378'-4 ¹ / ₂ "	180'-11 ¹ / ₂ "	197'-5"	25'-11 ¹ / ₂ "	24'-0 ¹ / ₂ "	127'-11 ¹ / ₂ "	53	75'-1"	7	7'-7"	5'-3"	26	28'-2"	65	97'-6"	27'-11 ¹ / ₂ "	34'-6 ¹ / ₄ "	31'-11 ¹ / ₈ "
3	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
4	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
5	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
6	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
7	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
8	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
9	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
10	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
11	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
12	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
13	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
14	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
15	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
16	374'-11 ¹ / ₄ "	179'-3 ³ / ₈ "	195'-7 ¹ / ₂ "	24'-3 ³ / ₄ "	25'-7 ¹ / ₂ "	124'-7"	51	72'-3"	10	10'-10"	4'-7 ³ / ₄ "	23	24'-11"	65	97'-6"	27'-1 ⁷ / ₈ "	35'-3 ³ / ₄ "	31'-1 ³ / ₄ "
17	372'-9 ⁷ / ₈ "	178'-3 ⁵ / ₈ "	194'-6 ¹ / ₄ "	23'-3 ¹ / ₂ "	24'-6 ¹ / ₄ "	124'-7"	50	70'-10"	9	9'-9"	5'-5 ³ / ₈ "	24	26'-0"	64	96'-0"	26'-7 ³ / ₄ "	34'-9 ¹ / ₈ "	31'-1 ³ / ₄ "
18	370'-8 ³ / ₄ "	177'-3 ¹ / ₂ "	193'-5 ¹ / ₄ "	22'-3 ⁵ / ₈ "	23'-5 ¹ / ₄ "	124'-7"	49	69'-5"	9	9'-9"	4'-9 ¹ / ₄ "	24	26'-0"	64	96'-0"	26'-1 ¹ / ₁₆ "	34'-2 ⁵ / ₈ "	31'-1 ³ / ₄ "
19	368'-8 ¹ / ₄ "	176'-3 ¹ / ₈ "	192'-4 ¹ / ₈ "	21'-3 ¹ / ₈ "	22'-4 ³ / ₈ "	124'-7"	48	68'-0"	8	8'-8"	5'-7 ⁵ / ₈ "	25	27'-1"	63	94'-6"	25'-7 ⁵ / ₁₆ "	33'-8 ³ / ₁₆ "	31'-1 ³ / ₄ "

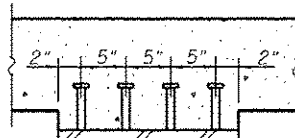


SECTION A-A

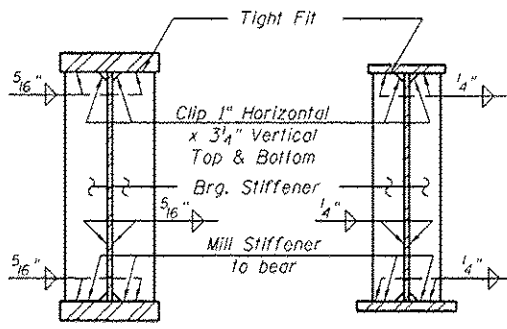
*** Prior to Grinding



SECTION B-B

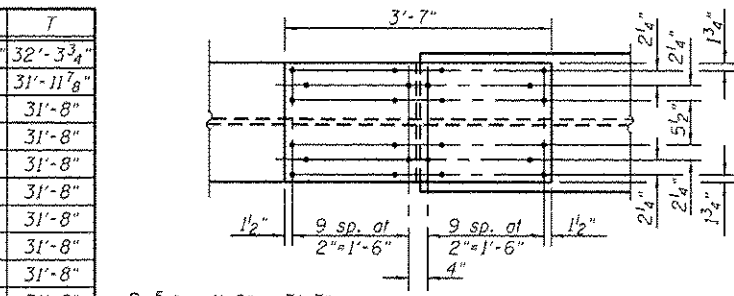


SECTION C-C

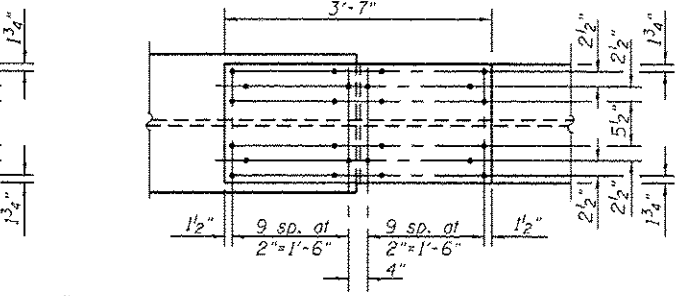


SECTION AT PIER

SECTION AT ABUTMENT



FIELD SPLICE No. 1 DETAIL



FIELD SPLICE No. 2 DETAIL

CROSS FRAME DIMENSIONS (a)

BAY	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
Girder 1-2	6"	6"	6"	6"	6"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6 1/8"	6 1/8"		
Girder 2-3	6 3/16"	6 3/16"	6 3/16"	6 3/8"	6 3/16"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 3/16"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 1/4"		
Girder 3-4																				6"	
Girder 4-5																				6"	
Girder 5-6																					6"
Girder 6-7																					6"
Girder 7-8																					6"
Girder 8-9																					6"

BAY	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42
Girder 10-11	6"																				
Girder 11-12	6"																				
Girder 12-13	6"																				
Girder 13-14	6"																				
Girder 14-15		6"																			
Girder 15-16			6"	6"	6"	6"	6"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6"	6"	6 1/8"
Girder 16-17			6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 5/16"	6 1/4"	6 5/16"	6 3/8"	6 1/4"	6 5/16"	6 5/16"	6 3/8"	6 1/4"	6 5/16"	6 1/4"	6 3/8"	6 1/8"
Girder 17-18			6 7/16"	6 1/8"	6 1/2"	6 1/2"	6 1/2"	6 9/16"	6 1/2"	6 9/16"	6 3/8"	6 1/2"	6 9/16"	6 9/16"	6 1/2"	6 1/2"	6 5/8"	6 1/2"	6 9/16"	6 1/8"	6 3/4"
Girder 18-19			6 5/8"	6 1/8"	6 1/8"	6 3/4"	6 13/16"	6 1/8"	6 1/8"	6 13/16"	6 3/8"	6 13/16"	6 1/8"	6 13/16"	6 3/4"	6 13/16"	6 1/8"	6 3/8"	6 5/8"	6 13/16"	7 1/16"

CROSS FRAME DIMENSIONS (b)

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
6'-6"	6'-7 1/2"	6'-9"	6'-10 5/8"	7'-0 3/8"	7'-1 1/4"	7'-2 1/2"	7'-3"	7'-4 1/4"	7'-5 1/2"	7'-6 3/4"	7'-7 3/4"	7'-9"	7'-10 3/4"	8'-0"	8'-1 1/2"	8'-3"	8'-4 1/2"	8'-6"	8'-2"	8'-0"
D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42
8'-0"	8'-3"	5'-1 1/2"	5'-4 1/8"	5'-6 3/4"	5'-9 3/8"	6'-0"	6'-2"	6'-4"	6'-5"	6'-7"	6'-9 1/4"	6'-11 1/4"	7'-1 1/4"	7'-3 1/4"	7'-6"	7'-8 1/4"	7'-10 3/4"	8'-1 1/2"	8'-4"	8'-6 1/2"

INTERIOR GIRDER MOMENT TABLE (For Girder Line 4 WB)

	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴) 80956	150013	99291
$I_c(n)$	(in ⁴) 177266	-	224293
$I_c(3n)$	(in ⁴) 129197	-	159632
$I_c(cr)$	(in ⁴) -	168588	-
S_s	(in ³) 2284	4017	3133
$S_c(n)$	(in ³) 3065	-	4122
$S_c(3n)$	(in ³) 2768	-	3740
$S_c(cr)$	(in ³) -	4191	-
DC1	(k/ft) 1.32	1.45	1.34
MDC1	(k) 2506	6766	3672
DC2	(k/ft) 0.17	0.17	0.17
MDC2	(k) 342	824	471
DW	(k/ft) 0.45	0.45	0.45
M _{DW}	(k) 891	2143	1224
$M_k \cdot I_M$	(k) 3175	3714	3595
M_u (Strength I)	(k) 10453	19202	13306
$\phi_r M_n$	(k) 14966	-	19220
f_s DC1	(ksi) 13.17	20.21	14.06
f_s DC2	(ksi) 1.48	2.37	1.51
f_s DW	(ksi) 3.86	6.14	3.93
f_s ($\phi \cdot I_M$)	(ksi) 12.43	10.63	10.47
f_s (Service II)	(ksi) 34.67	42.54	33.11
$0.95R_n F_y$	(ksi) 47.50	65.84	47.50
f_s (Total Strength I)	(ksi) -	56.04	-
$\phi_r F_n$	(ksi) -	62.39	-
V_r	(k) 81.6	70.4	81.4

INTERIOR GIRDER REACTION TABLE (For Girder Line 4 WB)

	W. Abut.	Pier	E. Abut.
RDC1	(k) 78.71	339.63	101.81
RDC2	(k) 11.12	41.07	12.93
R _{DW}	(k) 28.91	106.83	35.18
$R_k \cdot I_M$	(k) 138.83	292.93	143.66
R _{Total}	(k) 257.57	780.46	293.58

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

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.).

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

$M_k \cdot I_M$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

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

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k \cdot I_M$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

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

M_{DC1} / S_c

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

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

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

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

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

$M_k \cdot I_M / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

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

$f_{SDC1} + f_{SDC2} + f_{SDW} + 1.3 f_s (\phi \cdot I_M)$

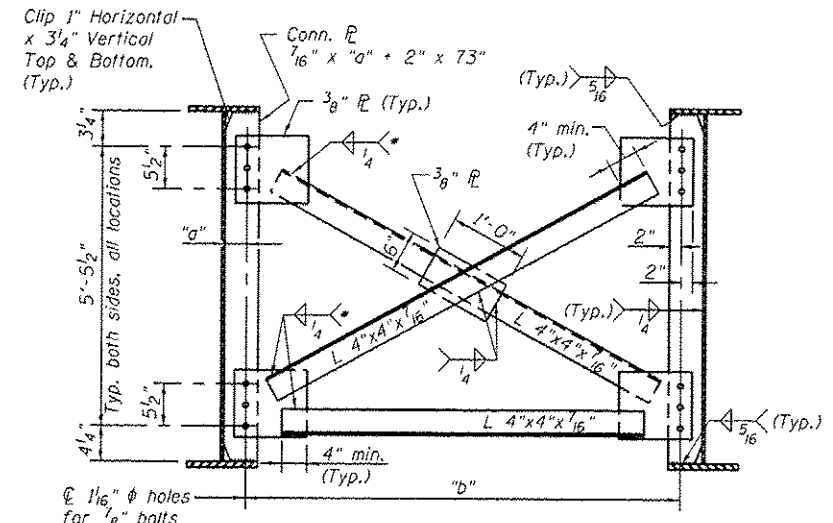
$0.95R_n F_y$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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

$1.25 (f_{SDC1} + f_{SDC2}) + 1.5 f_{SDW} + 1.75 f_s (\phi \cdot I_M)$

$\phi_r F_n$: Non-compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_r : Maximum factored shear range in span computed according to Article 6.10.10.

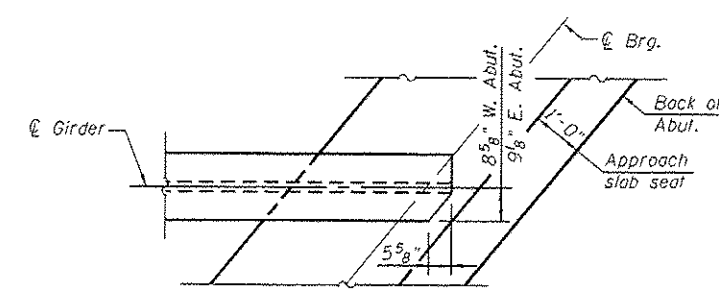


TYPICAL INTERIOR CROSS FRAME

(2 ea. D1-D19, 38-D20, 76-D21 for SN 025-0111 (WB))
(76-D22, 19-D23, 4 ea. D24-D42 for SN 025-0112 (EB))

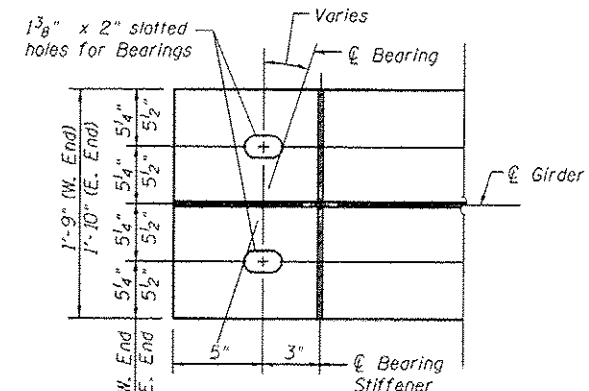
* Fillet weld angles along 3 sides of one face of gusset plate

Notes:
Two hardened washers required for each set of oversized holes.
All cross frames between girders shall be installed with erection pins and bolts according to the erection plan approved by the Engineer. Individual cross frames of supports may be temporarily disconnected to install bearing anchor rods.
All cross frames shall be Grade 50!

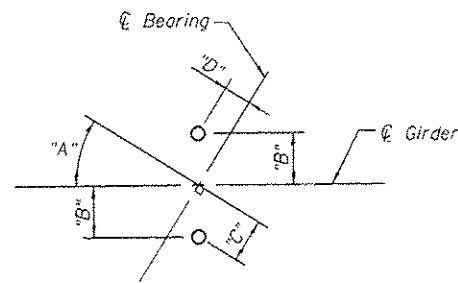


END GIRDER TOP FLANGE CLIP DETAIL

(Showing top flange of steel beam at integral abutment)



END GIRDER DETAIL



ABUTMENT ANCHOR BOLT LOCATION DETAIL

****SHIM PLATES REQUIRED**

W. Abut. Girder 4 - 0⁵/₈" shim \bar{E}

Notes:

Two ⁵/₈" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The horizontal dimension "E" between holes in the cross frame connection plate and L4"x4" angle shall be measured in the field. The holes in the L3"x3" angle shall be field drilled based on this dimension.

Stop fillet weld from connection plate to flange ¹/₄" from end of connection plate.

Bolts connecting temporary bracing on existing girders shall be ³/₄" ϕ bolts in ⁵/₈" ϕ holes.

Cost of Stage I and Stage II Temporary Interior Crossframes included with Furnishing and Erecting Structural Steel.

All temporary bracing shall be Grade 50.

All steel plates shall be Grade 50.

Rocker Plate
2" x 9" x 1'-9" (W. Abut.)
2" x 9" x 1'-10" (E. Abut.)

** Shim plate
M270 Gr. ≥ 36 min.

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

\bar{E} 1" ϕ x 12" Anchor Bolts
ASTM A307 Grade C with 2¹/₄" x 2¹/₄" x ⁵/₁₆" \bar{E} washer under nut. 1³/₈" x 2" slotted hole in flange. ¹/₂" ϕ holes in bearing plate. See End Girder Details on sheet 55 of 79.

ELEVATION

SECTION A-A

FIXED BEARING AT ABUTMENTS

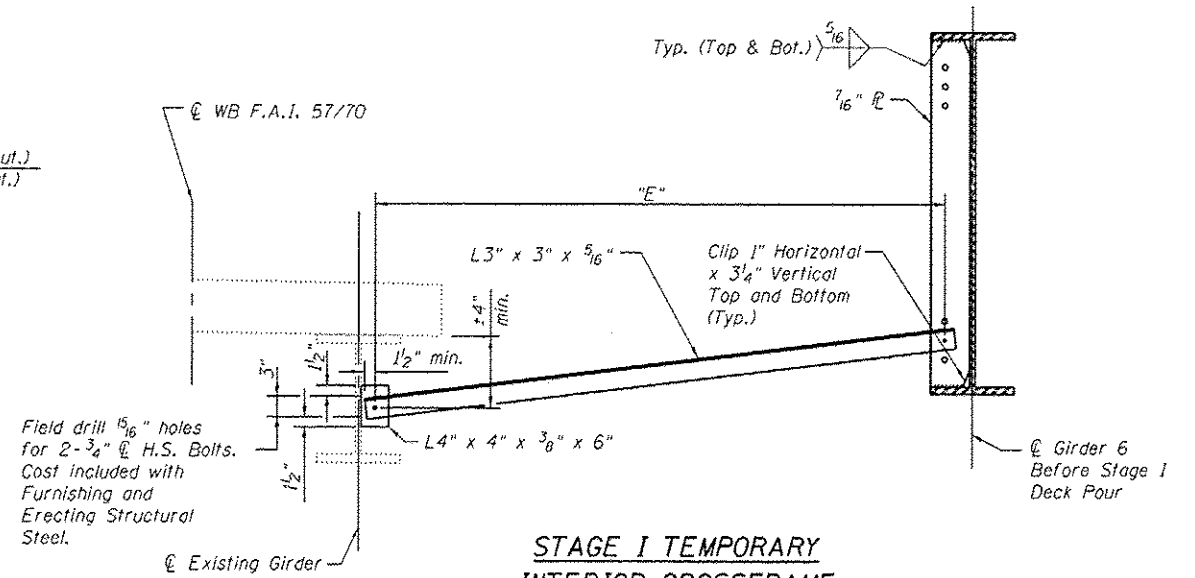
(19 Required at West Abutment)
(19 Required at East Abutment)

WESTBOUND STRUCTURE 025-0111

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)
West Abutment	1	32°08'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	2	31°49'04"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	3	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	4	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	5	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	6	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	7	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	8	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	9	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
East Abutment	1	32°08'00"	5 ¹ / ₂ "	4 ⁵ / ₈ "	2 ⁷ / ₈ "
East Abutment	2	31°49'04"	5 ¹ / ₂ "	4 ⁵ / ₈ "	2 ⁷ / ₈ "
East Abutment	3	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	4	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	5	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	6	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	7	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	8	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	9	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "

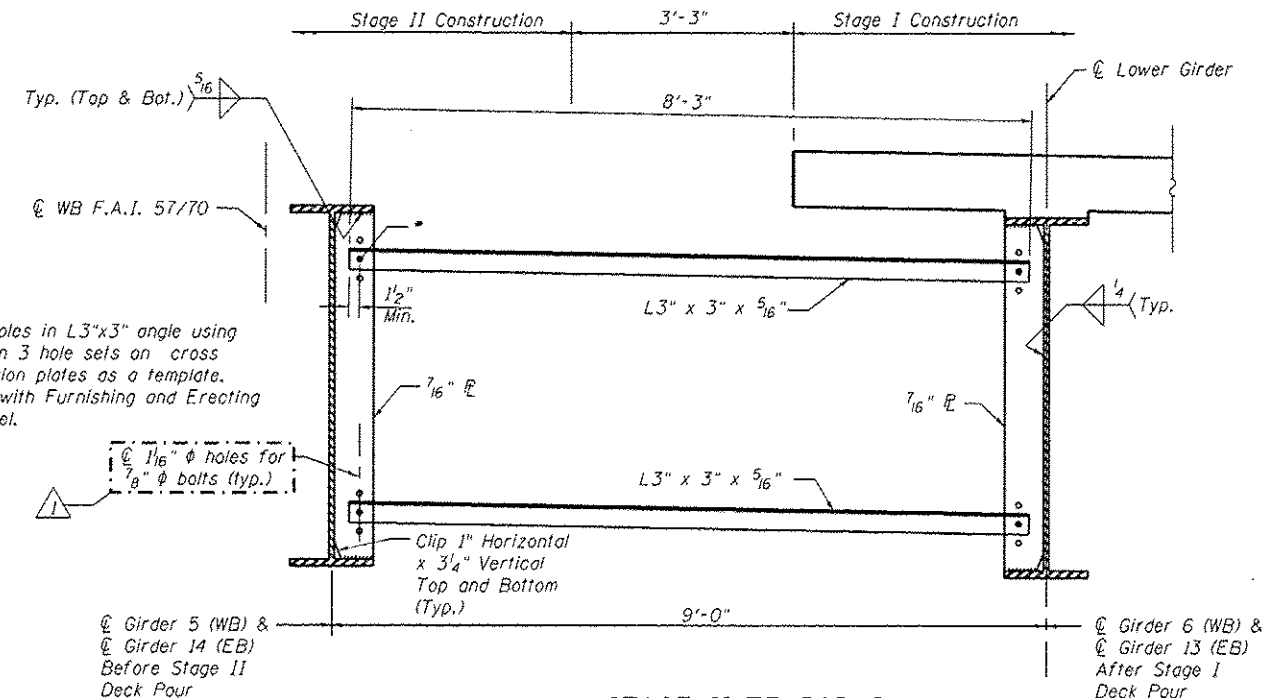
EASTBOUND STRUCTURE 025-0112

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)
West Abutment	10	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	11	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	12	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	13	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	14	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	15	31°30'00"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	16	30°57'29"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	17	30°24'35"	5 ¹ / ₂ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	18	29°51'19"	5 ¹ / ₂ "	3 ¹ / ₂ "	1 ⁷ / ₈ "
West Abutment	19	29°17'41"	5 ¹ / ₂ "	2 ⁵ / ₈ "	4 ⁵ / ₈ "
East Abutment	10	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	11	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	12	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	13	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	14	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	15	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	16	30°57'29"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	17	30°24'35"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "
East Abutment	18	29°51'19"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "
East Abutment	19	29°17'41"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "



STAGE I TEMPORARY INTERIOR CROSSFRAME

(38 Required)
(SN 025-0111 shown)
(SN 025-0112, Girder 13 similar)



STAGE II TEMPORARY INTERIOR CROSSFRAME

(38 Required)
(SN 025-0111 (WB) looking East)
(SN 025-0112 (EB) looking West)

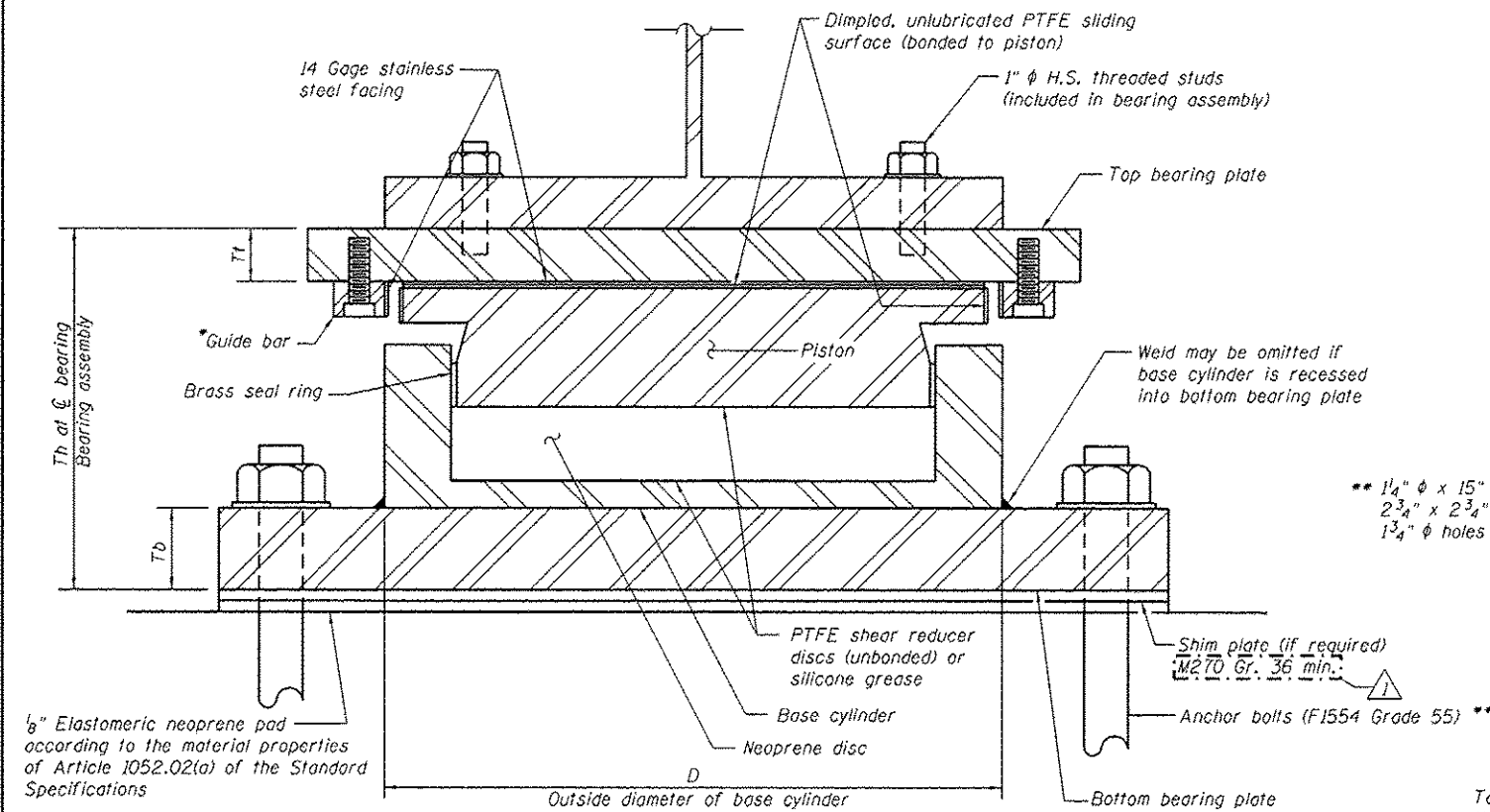
TEMPORARY INTERIOR CROSSFRAME INSTALLATION PROCEDURE

1. Install Stage I temporary Interior Crossframe before Stage I deck pour.
2. Remove Stage I temporary Interior Crossframe prior to Stage II removal.
3. Install Stage II temporary Interior Crossframe before Stage II deck pour.
4. Remove Stage II temporary Interior Crossframe prior to Stage III closure pour.
5. Install permanent Crossframes Prior to Stage III closure pour.

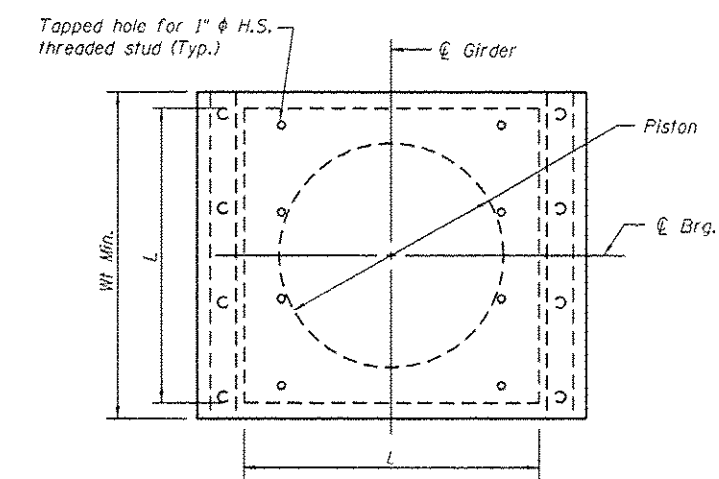
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1" ϕ	Each	76

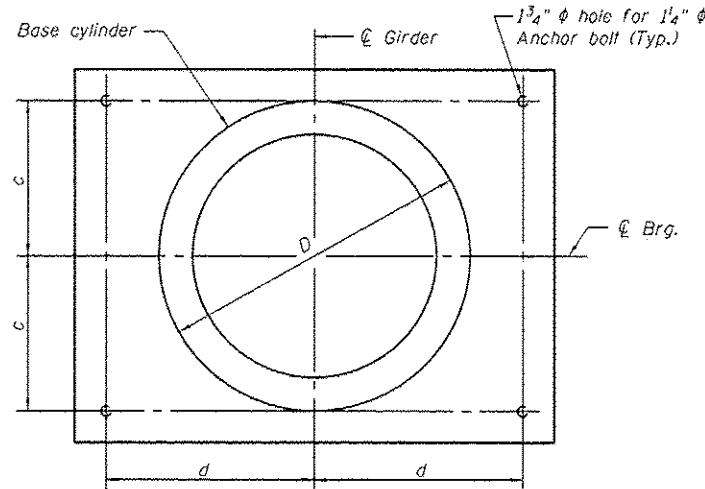
* As alternate to bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



GUIDED EXPANSION POT BEARING
(Pier)

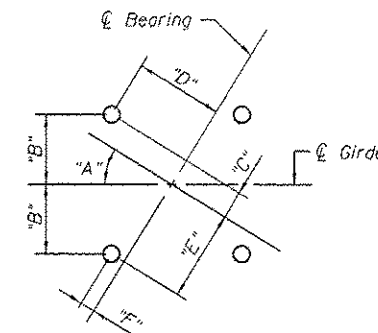


TOP BEARING PLATE AND PISTON PLAN



BOTTOM BEARING PLATE AND BASE CYLINDER PLAN

REVISED 9-4-2013



PIER ANCHOR BOLT LOCATION DETAIL

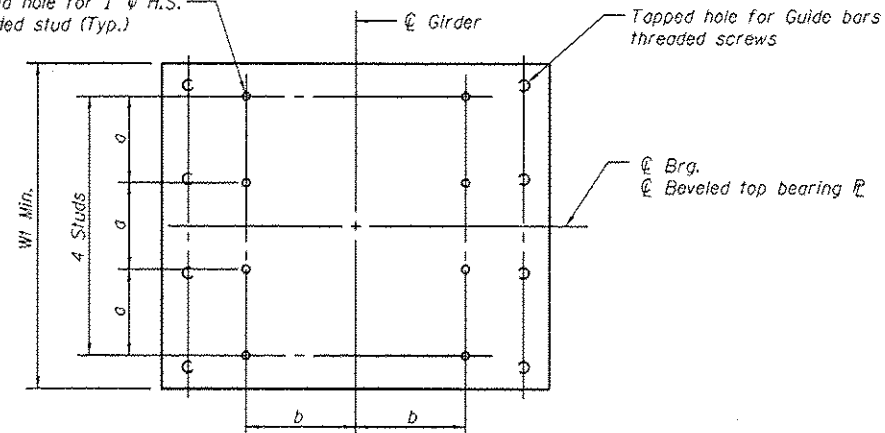
WESTBOUND STRUCTURE 025-0111

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	"F" (in.)
Pier 1	1	32°08'00"	12 7/8"	5 3/8"	1'-3 5/8"	1'-4 3/8"	2"
Pier 2	2	31°49'04"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2"
Pier 3	3	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 4	4	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 5	5	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 6	6	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 7	7	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 8	8	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 9	9	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"

EASTBOUND STRUCTURE 025-0112

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	"F" (in.)
Pier 10	10	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 11	11	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 12	12	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 13	13	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 14	14	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 15	15	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 16	16	30°57'29"	12 7/8"	5 3/4"	1'-3 1/2"	1'-4 3/8"	2 1/4"
Pier 17	17	30°24'35"	12 7/8"	5 7/8"	1'-3 1/2"	1'-4 3/8"	2 3/8"
Pier 18	18	29°51'19"	12 7/8"	6"	1'-3 3/8"	1'-4 3/8"	2 5/8"
Pier 19	19	29°17'41"	12 7/8"	6 1/8"	1'-3 3/8"	1'-4 1/4"	2 3/4"

Tapped hole for 1" H.S. threaded stud (Typ.)



TOP BEARING PLATE PLAN

DIMENSIONS (IN)

Dimension	Pier
D	1'-11 3/4"
L	1'-9"
Tb	2 1/4"
Th	11 3/4"
Tt	1 7/8"
Wt	2'-2"
a	6"
b	5 1/4"
c	10 3/8"
d	1'-0 7/8"

DESIGN DATA

Data	Pier
Vertical Design Load (kips) (strength)	1130
Vertical Design Load (kips) (service)	770
Horizontal Design Load (kips) (strength)	150
Total Required Movement (in)	4
Maximum Factored Ultimate Strength Design Rotation, θ_u (Radians)	0.0065

Notes:
The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50.
Two "b" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.
The anchor bolt sizes and grades shown constitute a calculated seismic fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.
Bearing dimensions and details shown are for a pot type HLMR bearing. Disc type HLMR bearing dimensions and details will vary.
All structural steel and exposed surfaces of bearings shall be painted as specified in Section 506 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotation Bearings, Guided Expansion 1150K	Each	19
Anchor Bolts, 1 1/4" ϕ	Each	76

FILE NAME: 025011-74295-05F-Structural Steel
DRAWN: WJS
CHECKED: C/JF
DESIGNED: BB
REVISIONS:
1. DESIGNED - BB
2. CHECKED - ACS
3. DRAWN - WJS
4. CHECKED - C/JF

DESIGNED - BB
CHECKED - ACS
DRAWN - WJS
CHECKED - C/JF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 025-0111 & 025-0112

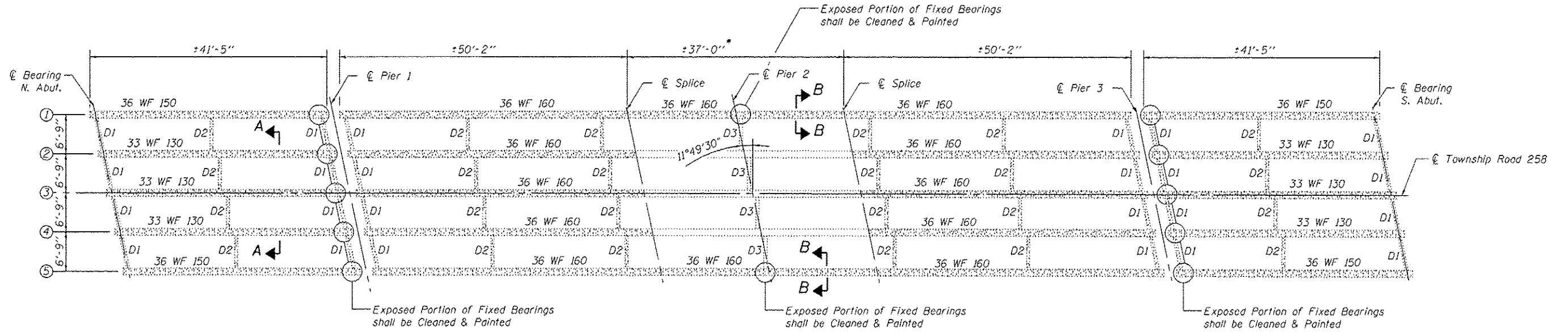
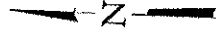
F.A.I. SECTION COUNTY TOTAL SHEET
RTE. (25-4HVB-1)BY EFFINGHAM 1760 592
57/70 CONTRACT NO. 74295
ILLINOIS FED. AID PROJECT


SUMMARY OF QUANTITIES

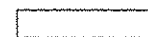
CODED NO	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				BRIDGE 025-0002 0014	BRIDGE 025-0019 0014	BRIDGE 025-0062 0014	
	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	1013.6	434	579.6		
	POROUS GRANULAR EMBANKMENT	CU YD	1013.6	434	579.6		
	PORTLAND CEMENT CONCRETE PAVEMENT 12"	SQ YD	442	442			
	PAVEMENT FABRIC	SQ YD	442	442			
	PROTECTIVE COAT	SQ YD	442	442			
	PAVED SHOULDER REMOVAL	SQ YD	442	442			
	AGGREGATE WEDGE SHOULDER, TYPE B	TON	137			137	
	CONCRETE REMOVAL	CU YD	90.7	48.1	42.6		
	SLOPE WALL REMOVAL	SQ YD	1353.6	571	768	14.6	
	PROTECTIVE SHIELD	SQ YD	450	286	164		
	STRUCTURE EXCAVATION	CU YD	37.7	19	9.1	9.6	
	CONCRETE STRUCTURES	CU YD	113.8	48.5	39.8	25.5	
	RUBBED FINISH	SQ FT	377	172	205		
	CONCRETE SUPERSTRUCTURE	CU YD	127.6	48.2	79.4		
	BRIDGE DECK GROOVING	SQ YD	764	693	71		
	PROTECTIVE COAT	SQ YD	325.3	133.2	192.1		
	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	24530	9390	9720	5420	
	REINFORCEMENT BARS, EPOXY COATED	POUND	34390	12480	18210	3700	
	BAR SPLICERS	EACH	117	68	35	14	
	STEEL RAILING, TYPE 2399	FOOT	450			450	
	SLOPE WALL 4 INCH	SQ YD	1524.4	650.6	863.8	10	
	PREFORMED JOINT STRIP SEAL	FOOT	409.5	221	188.5		
	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	46	18	8	20	
	ANCHOR BOLTS, 5/8"	EACH	16		16		
	ANCHOR BOLTS, 1"	EACH	152	72		80	
	ANCHOR BOLTS, 1 1/4"	EACH	32		32		
	CONCRETE SEALER	SQ FT	4675	2332	1304	1039	
	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	200			200	
	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4			4	
	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4			4	
	GUARDRAIL REMOVAL	FOOT	409			409	
	MOBILIZATION	L SUM	0.1			0.1	
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1			1	
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1			1	
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1			1	
	TRAFFIC CONTROL SURVEILLANCE	CAL DA	7	1	1	5	
	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1			1	
	TEMPORARY CONCRETE BARRIER	FOOT	228	228			
	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	228	228			
	GUARDRAIL MARKERS, TYPE A	EACH	4			4	
	GUARDRAIL MARKERS, TYPE B	EACH	6			6	
	TERMINAL MARKER - DIRECT APPLIED	EACH	4			4	
	SEISMIC RESTRAINER	EACH	38	12	16	10	
	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	0.02	0.01	0.01		

CODED NO	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				BRIDGE 025-0002 0014	BRIDGE 025-0019 0014	BRIDGE 025-0062 0014	
	TRAFFIC CONTROL AND PROTECTION (DETOUR)	L SUM	0.5		0.5		
	JACK AND REMOVE EXISTING BEARINGS	EACH	64	36	8	20	
	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1			1	
	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1			1	
	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE OVERLAY, 2 1/2"	SQ YD	658	658			
	BRIDGE DECK SCARIFICATION 2 1/2"	SQ YD	658	658			
	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	383	178	205		
	CONCRETE REMOVAL (SPECIAL)	SQ YD	13.9	10	3.9		
	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	27	27			
	DRAINAGE SYSTEM	L SUM	0.25		0.25		

REV 09/04/13

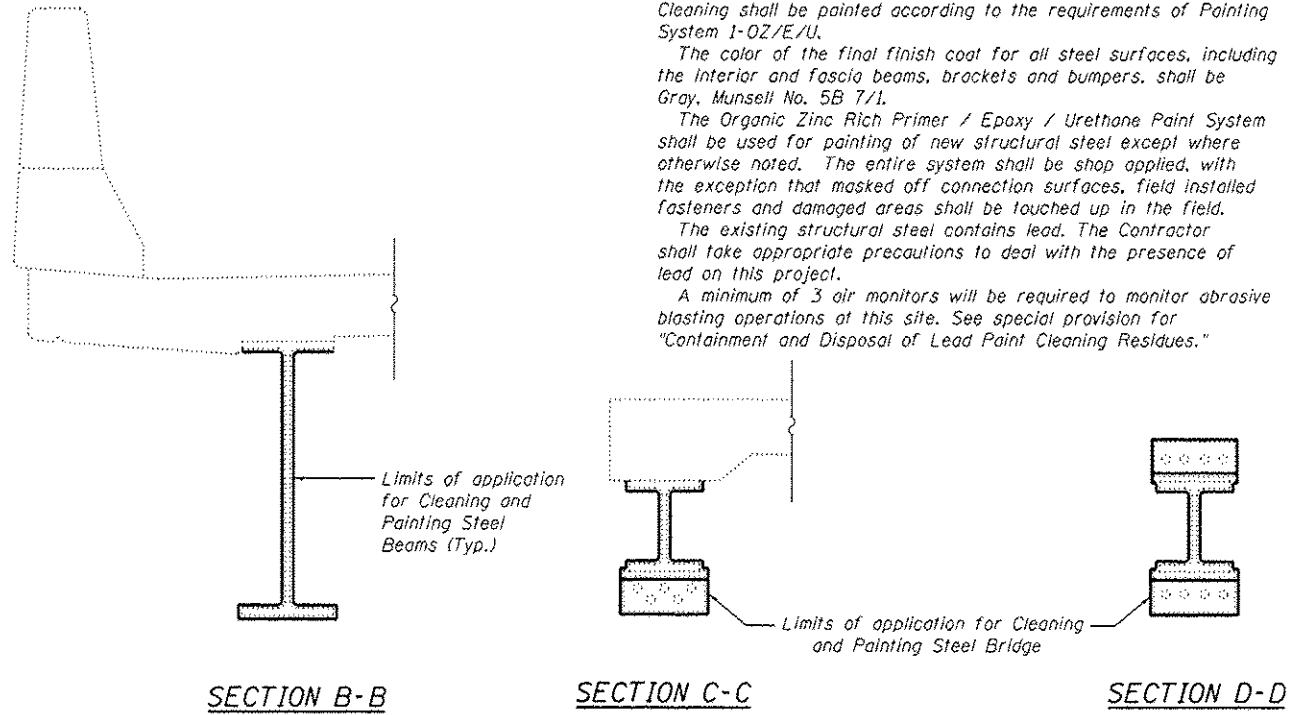
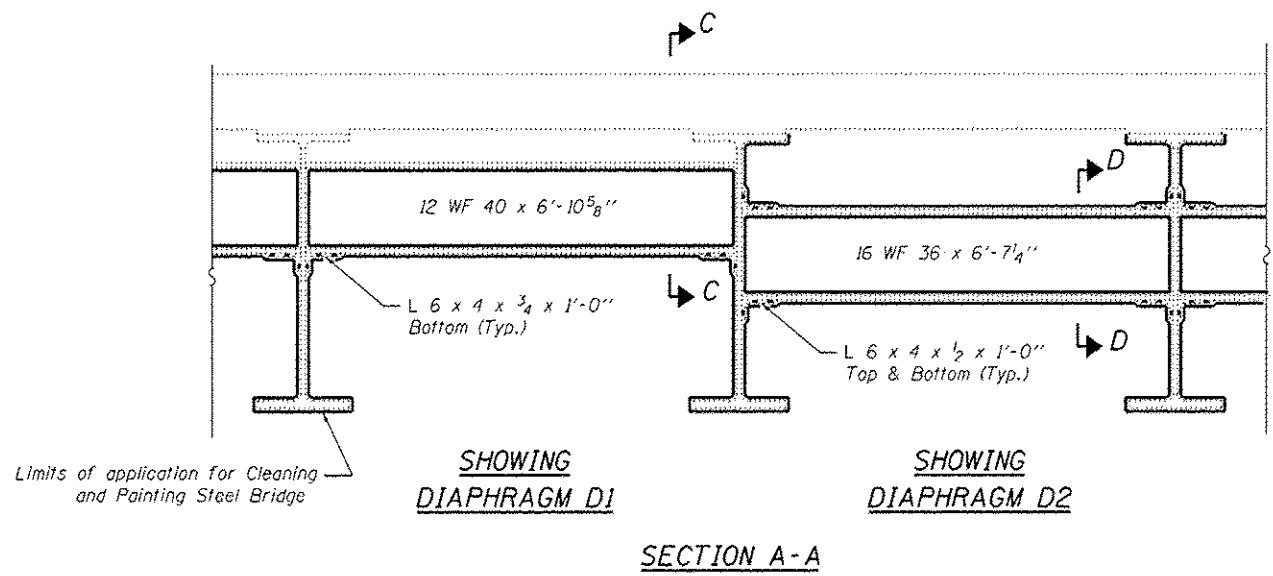


 Locations where Cleaning and Painting Steel Bridge are Required on all exposed surfaces. See Section A-A for limits of application.


 Locations where no Cleaning and Painting is Required. (Reconstructed in 2008, Contract No. 74311)

* Beams 2, 3 & 4 and Diaphragms D3 shall be protected during painting to prevent over spray.

Notes:
 Cleaning and Painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures." All structural steel, including beams, bearings and diaphragms shall be cleaned by SSPC-SP10 Near White Metal Blast Cleaning. Fascia beams, in their entirety, shall be cleaned by SSPC-SP10 Near White Metal Blast Cleaning.
 The designated areas cleaned per SSPC-SP10 Near White Blast Cleaning shall be painted according to the requirements of Painting System 1-02/E/U.
 The color of the final finish coat for all steel surfaces, including the interior and fascia beams, brackets and bumpers, shall be Gray, Munsell No. 5B 7/1.
 The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field.
 The existing structural steel contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 A minimum of 3 air monitors will be required to monitor abrasive blasting operations at this site. See special provision for "Containment and Disposal of Lead Paint Cleaning Residues."



S:\projects\03-00072-ST-70-Bridge\Bridg 025-0062 TR over ST-70\DWG\Incl CAD\ Design-Phase\0250062-74295-020.dgn

FILE NAME : 0250062-74295-020.dgn	USER NAME :	DESIGNED - B.B.	REVISED  CJF 9/2/13
		CHECKED - A.C.S.	REVISED -
		DRAWN - B.B.	REVISED -
		CHECKED - C.J.F.	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAINT DETAILS
 STRUCTURE NO. 025-0062

SHEET NO. 20 OF 20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(25-4HB-2)	EFFINGHAM	1760	1760
CONTRACT NO. 74295				

ILLINOIS FED. AID PROJECT