

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	1
		ILLINOIS	CONTRACT NO. 64B26	

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

**PROPOSED
HIGHWAY PLANS
FAP 308 / ILLINOIS ROUTE 84
OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK
SECTION 103BR-3 & 104BR-1
BRIDGE REPLACEMENT & ROADWAY IMPROVEMENT
PROJECT NUMBER: BRF-NHF-0308(036)
JO DAVIESS COUNTY
C-92-001-11**

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- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
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- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING
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- 704001-06 TEMPORARY CONCRETE BARRIER
- 720011-01 METAL POSTS FOR SIGNS, MARKERS, & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS
- 780001-02 TYPICAL PAVEMENT MARKINGS
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- 10.4 HOT-MIX ASPHALT CONCRETE SHOULDER CURB
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- 21.1 ENTRANCES, SIDEROADS, AND MAILBOX RETURNS WITH 3' OR 10' HOT-MIX ASPHALT SHOULDERS
- 41.1 TYPICAL PAVEMENT MARKINGS
- 92.1 DETAILS OF PLANTING AND BRACING TREES

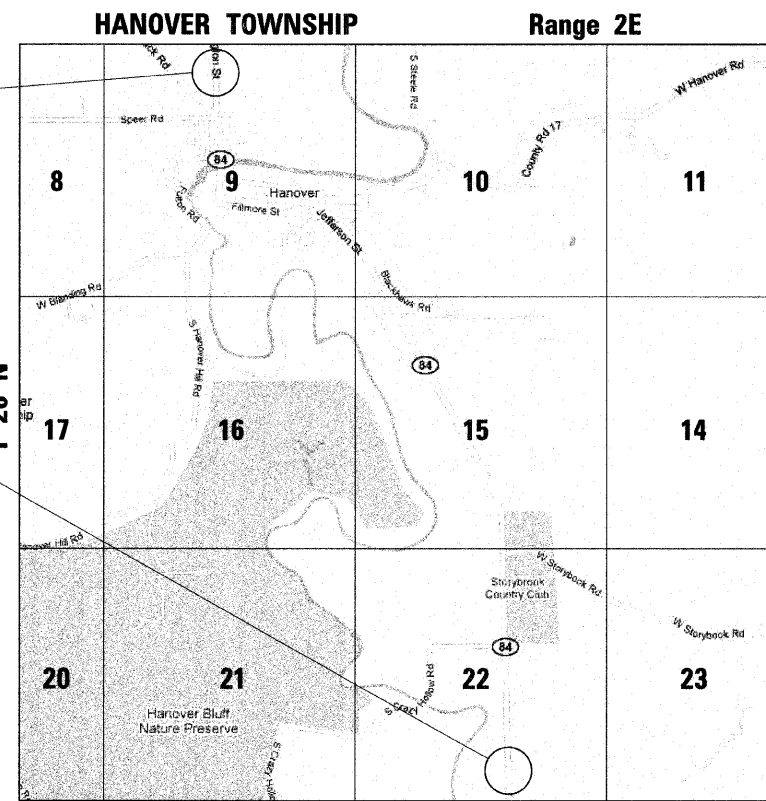
ALIGNMENT ON HORIZ. & VERTICAL CONTROL SHEET	HORIZONTAL	0 50' 100'
PLAN & PROFILE	HORIZONTAL	0 50' 100'
	VERTICAL	0 5' 10'
REMOVAL PLAN	HORIZONTAL	0 50' 100'
EROSION CONTROL PLAN	HORIZONTAL	0 50' 100'
MAINTENANCE OF TRAFFIC	HORIZONTAL	0 50' 100'
CROSS SECTIONS	HORIZONTAL	0 5' 10'
	VERTICAL	0 2.5' 5'

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

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

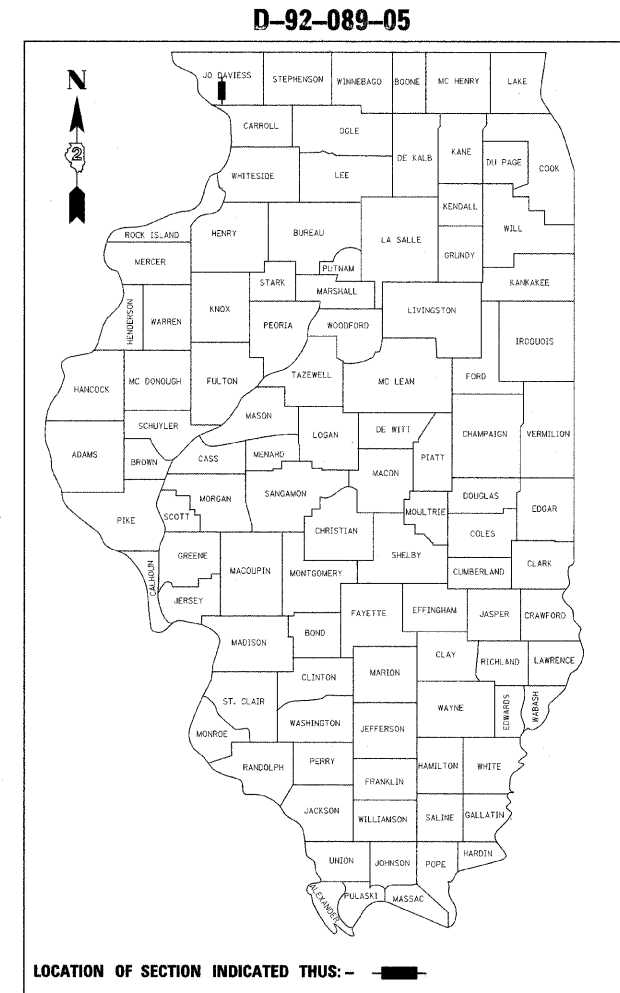
CONTRACT NO. 64B26

HANOVER TOWNSHIP SECTIONS (9,22)



LOCATION MAP

GROSS AND NET LENGTH OF IMPROVEMENT = 1,555.34 FT = 0.295 MILES



LOCATION OF SECTION INDICATED THUS: - ■ -



CONTACT:
RONALD J. SCHWENINGER, P.E.
(773) 339-0112



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

SUBMITTED Oct. 21, 2010

Ray F. Ryan
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 10 2010
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 10 2010
Christine M. Reed, Esq.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

Fred M. Lin 10-13-2010

FRED M. LIN, P.E.
ILLINOIS REGISTERED ENGINEER NO. 062-056704
REGISTRATION EXPIRES NOV. 30, 2011

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SENIOR SQUAD LEADER: SAMEER ABDULLAH (815) 284-5935, SQUAD LEADER: MADAN CHAND (815) 284-5359, PROJECT ENGINEER: MASOOD AHMAD, P.E.

GENERAL NOTES

See cross sections for special ditches and backslopes.

The removal of Bituminous Surfacing not on a rigid type base removed in conjunction with the base shall be removed as EARTH EXCAVATION. The removal of Bituminous Surfacing on a rigid type base removed in conjunction with the base shall be included in the contract unit price for PAVEMENT REMOVAL of the type specified.

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 2A or 4 shall be used. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used on all back slopes and areas behind the back slope, and beyond the toe of front slope on fill sections without ditches.

Fertilizer Nutrients shall be applied at the rate specified in Sections 250 and 252 of the Standard Specifications. This shall be included in the cost of the SEEDING or SODDING.

The following Mixture Requirements are applicable for this project:

Mixture Use(s):	SURFACE COURSE:	LEVELING BINDER:	HOT-MIX ASPHALT BINDER:	SHOULDER TOP LIFT:	SHOULDER LOWER LIFT:
PG:	PG 64-22	PG 64-22	PG 64-22	PG 58-22	PG 58-22
Design Air Voids	4.0 @ N50	4.0 @ N50	4.0 @ N50	3.0 @ N50	2.0 @ N50
Mixture Composition (Gradation Mixture)	IL 9.5mm OR IL 12.5mm	IL 9.5mm	IL 19.0mm	IL 9.5mm OR IL 12.5mm	BAM
Friction Aggregate	MIXTURE "C"	N/A	N/A	MIXTURE "C"	N/A
20 Year ESAL	1.9	1.9	1.9	1.9	N/A

The unit weight to calculate all HMA mixtures is 112 LB/SQ YD/IN thickness.

The Contractor will be required to furnish 5 1/2" high brass stencils as approved by the Engineer and install stationing at 250' intervals. Stationing shall be placed on both lanes of 2-lane highways. The stations shall be placed 6" inside the pavement marking edge so they can be read from shoulder. This work will be included in the cost of the final pavement surface.

A Nationwide 404 Permit has been issued for this project and the conditions of that permit must be adhered to.

The thickness for the Bridge Approach Pavement Connector (Flexible) shall be a minimum of 12". The material shall be 1 1/2" Bit. Conc. Surf. Cse., Mixture "C", N50, and the remaining thickness shall be Levelling Binder, N50. The work will be paid for at the contract unit price per Sq. Yd. for BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE).

The Contractor shall supply the Resident Engineer with the manufacturer's installation requirements for the type of Steel Plate Beam Guardrail Terminal Type 1 Special (Tangent).

One 16d galvanized nail shall be used to toe nail the wood block out to the wood post on all traffic Barrier Terminal Type 1 Specials.

Delineators shall be installed as shown in Standard 635001, except that the post shall be rotated 180° and only metal-backed delineators shall be permitted.

Right-of-way markers will be erected with the back face of the marker on the right-of-way line unless the new right-of-way line has been surveyed and pinned, in which instance the right-of-way markers will be erected 12 inches inside the new right-of-way line.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

JO-CARROLL ENERGY - ELECTRIC
NICOR GAS CO.
MEDIACOM

CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files ONLY. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact the District's Project Engineer to request these files.

SURVEY MARKERS

PERMANENT SURVEY MARKERS, TYPE II, shall be set at intervals of 1.6 km (1 mile) or as directed by the Engineer. Bridge or culvert projects shall have one survey marker placed near the structure. Estimated: 4 EACH.

All Borrow/Waste/Use sites must be approved by the Department prior to removing any material from the project or initiating any earth moving activities, including temporary stockpiling outside the limits of construction.

The existing hot-mix asphalt on private and commercial entrances shall be bladed off or milled and disposed of outside the project limits. This could be the entire entrance or tapered at the end depending on if the mainline is resurfaced or milled and resurfaced. The cost of the blading, milling, rolling, and disposal is included in the contract unit price for INCIDENTAL HOT-MIX ASPHALT SURFACING.

The drop off that occurs at entrance edges as a result of resurfacing of the entrance shall be corrected using aggregate base course material. This work shall be paid for by the SQ YD for Aggregate Base Course of the type specified in the plans.

The area to be primed shall be limited to that which can be covered with HMA the same day, unless otherwise permitted by the Engineer.

Reflective Crack Control shall be placed on the existing surface prior to any resurfacing, unless pavement is milled then it will be placed on the binder course.

To help avoid excess drop offs at the edge of pavement, the existing aggregate wedge or shoulder is to be pulled up and rolled to match the edge of pavement before placing any bituminous material. All costs associated with pulling up the shoulders shall be considered included in the contract unit price per TON for HOT MIX ASPHALT SURFACE COURSE of the type specified.

The new structure numbers will be S.N. 043-0078 (IL 84 over Tributary to Apple River) and S.N. 043-0079 (IL 84 over Duke Creek).

Reflector Markers Type B shall be installed on the top of bridge parapet walls. The markers shall be according to Standard 635011 and the color and spacing according to Standard 635006, except the minimum is 2 per side.

Culvert & bridge flows must be maintained throughout the project. Normal flow shall be allowed to pass at the rate it enters the jobsite. High flows shall be allowed to pass without causing damage to upstream properties.

The proposed pipes for entrances and side roads shall be placed in line with the existing or proposed ditch line.

Connecting bands for corrugated metal pipes shall be metal and shall be coated with the same material as the pipe sections. The connecting bands shall be a minimum of 18" wide.

If, during the grinding or resurfacing operations, the existing mailboxes become a hindrance, the Contractor shall be required to carefully remove and reinstall the mailboxes as directed by the Engineer. This work shall be included in the contract unit price for the INCIDENTAL HOT MIX ASPHALT SURFACING.

Delineators shall be placed at the ends of approach guardrail terminal sections, and at each headwall or end section of AR Culverts. This work will be paid for at the contract unit price each for DELINEATORS.

Pavement Marking shall be done according to Standard 780001, except as follows:

1. All words, such as ONLY, shall be 2.4 m (8 feet) high.
2. All non-freeway arrows shall be the large size.
3. The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as shown in the detail of Typical Lane and Edge Lines.

Permanent Survey Markers, Type II shall be cast-in-place as shown on District Standard 66.2. The bottom of the marker shall be 5'-0" below the ground surface.

The Contractor shall submit to the Engineer a description of location, elevation, and coordinates for each permanent survey marker. The horizontal and vertical coordinates must be derived by GPS and the elevation derived by a closed level circuit. The Engineer shall submit this information to the Survey Crew.

All temporary concrete barrier shall be anchored to the pavement with 6 anchors per section at the below listed locations:

- Sta. 161+75 to Sta. 169+75 (Tributary to Apple River)
- Sta. 333+56 to Sta. 339+30 (Duke Creek)

Tree planting layout shall be performed by the District Landscape Architect. Mulch shall be placed 4" thick and to the diameter around the tree as shown on District Standard 92.1. The mulch shall be hardwood wood chips placed on weed barrier fabric. This work shall be included in the cost of the tree.

The applicable portions of Article 105.07 of the Standard Specification shall apply except for the following: The Contractor shall be responsible to locate the vertical depths of the underground utilities which may interfere with construction operations. This work will not be measured or paid for separately, but shall be considered as included in the unit bid price for the item of construction involved.

Per SB 699 (90 day utility relocation law), once right-of-way is clear to award the project, a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Estimated date relocation complete = Award Date + 100 days.

The Contractor shall contact Kurt Glazier at 815-284-5478 2 weeks prior for the layout of no passing zones.

The Contractor shall contact Chuck Johnson at 815-244-2611 or 815-441-1900 prior to Supplemental Steel W-Beam removal for location where beams are to be delivered.

Bituminous and Aggregate prime coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the prime coats shall be included in the contract unit price per metric ton (ton) for LEVELING BINDER (MACHINE METHOD) of the type specified.

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	DRAWN - SEW	REVISED -		308	103BR-3 & 104BR-1	JO DAVIESS	126	2		
	PLOT DATE = #DATE#	CHECKED - FML	REVISED -		CONTRACT NO. 64B26						
	DATE - 10-15-2010	DATE - 10-15-2010	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

				SUMMARY OF QUANTITIES				L05E		LICE	
CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	80% FED 20% STATE				STRUCTURE 0011	ROADWAY 0004	STRUCTURE 0011	ROADWAY 0004
				NHS		BRRP					
				STRUCTURE 0011	ROADWAY 0004	STRUCTURE 0011	ROADWAY 0004				
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	348		118					230	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	132		90					42	
20200100	EARTH EXCAVATION	CU YD	767		586					181	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	50		25					25	
20300100	CHANNEL EXCAVATION	CU YD	3,509		594					2,915	
20400800	FURNISHED EXCAVATION	CU YD	2,000		500					1,500	
* 25000210	SEEDING, CLASS 2A	ACRE	1.25		0.50					0.75	
* 25000310	SEEDING, CLASS 4	ACRE	0.25		0.13					0.12	
*N/P 25000750	MOWING	ACRE	1.25		0.50					0.75	
* 25100630	EROSION CONTROL BLANKET	SQ YD	5,777		2,280					3,497	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	716		283					433	
28000315	AGGREGATE DITCH CHECKS	TON	11		7					4	
28000400	PERIMETER EROSION BARRIER	FOOT	1,422		764					658	
28000500	INLET AND PIPE PROTECTION	EACH	2		2						
28100109	STONE RIPRAP, CLASS A5	SQ YD	3,945	482	331	1,930				1,202	
28200200	FILTER FABRIC	SQ YD	3,945	482	331	1,930				1,202	
35102000	AGGREGATE BASE COURSE, TYPE B 8"	SQ YD	352		220					132	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	102		54					48	
40603680	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	477		69					408	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	286		116					170	
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	49		31					18	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	69		32					37	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	200		200						
44000100	PAVEMENT REMOVAL	SQ YD	514		343					171	
44000600	SIDEWALK REMOVAL	SQ FT	220		220						
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	1,935		804					1,131	
48203023	HOT-MIX ASPHALT SHOULDERS, 6 1/2"	SQ YD	1,501		607					894	
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1			1					
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1	1							
50200100	STRUCTURE EXCAVATION	CU YD	517	115		402					
50300225	CONCRETE STRUCTURES	CU YD	239.7	53.5		186.2					
50300255	CONCRETE SUPERSTRUCTURE	CU YD	474.9	187.1		287.8					
50300260	BRIDGE DECK GROOVING	SQ YD	1,030	374		656					

				SUMMARY OF QUANTITIES				L05E		LICE	
CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	80% FED 20% STATE				STRUCTURE 0011	ROADWAY 0004	STRUCTURE 0011	ROADWAY 0004
				NHS		BRRP					
				STRUCTURE 0011	ROADWAY 0004	STRUCTURE 0011	ROADWAY 0004				
50300280	CONCRETE ENCASEMENT	CU YD	14.2	4.8						9.4	
50300300	PROTECTIVE COAT	SQ YD	1,317	472						845	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1.00	0.25						0.75	
50500505	STUD SHEAR CONNECTORS	EACH	3,246	738						2,508	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	135,320	48,110						87,210	
50800515	BAR SPLICERS	EACH	1,317	488						829	
51201610	FURNISHING STEEL PILES HP12X63	FOOT	2,082	672						1,410	
51202305	DRIVING PILES	FOOT	2,082	672						1,410	
51203610	TEST PILE STEEL HP12X63	EACH	6	2						4	
51204650	PILE SHOES	EACH	42	14						28	
51500100	NAME PLATES	EACH	2	1						1	
52100520	ANCHOR BOLTS, 1"	EACH	72	24						48	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	133	62						71	
542D0217	PIPE CULVERTS, CLASS D, TYPE 1 12"	FOOT	44			44					
542D1057	PIPE CULVERTS, CLASS D, TYPE 2 12"	FOOT	40			40					
54215547	METAL END SECTIONS 12"	EACH	12			8				4	
60100945	PIPE DRAINS 12"	FOOT	300			105				195	
66101150	HOT-MIX ASPHALT ^{SHOULDER} CURB	FOOT	48			24				24	
60900115	TYPE B INLET BOX, STANDARD 609001	EACH	8			4				4	
60900515	CONCRETE THRUST BLOCKS	EACH	16			8				8	
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	537.5			137.5				400.0	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8			4				4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	8			4				4	
63200310	GUARDRAIL REMOVAL	FOOT	2,038			707				1,331	
63500105	DELINEATORS	EACH	8			6				2	
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	17			8				9	
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	4			2				2	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8			4				4	
67100100	MOBILIZATION	L SUM	1.0			0.5				0.5	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2			1				1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0			0.5				0.5	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1.0			0.5				0.5	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20			10				10	

SUMMARY OF QUANTITIES (CONT.)

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	L05E		LICE	
				80% FED 20% STATE			
				NHS		BRRP	
		STRUCTURE 0011	ROADWAY 0004	STRUCTURE 0011	ROADWAY 0004		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2		1		1
70106700	TEMPORARY RUMBLE STRIPS	EACH	9		3		6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1,000		500		500
70300220	TEMPORARY PAVEMENT MARKING-LINE 4"	FOOT	8,030		3,549		4,481
70300280	TEMPORARY PAVEMENT MARKING-LINE 24"	FOOT	50		26		24
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3,409		1,552		1,857
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,712.5		737.5		975.0
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,662.5		712.5		950.0
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	17,031		8,672		8,359
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	14		6		8
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3		1		2
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	21		8		13
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	16		8		8
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8		4		4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2,840		1,446		1,394
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	17		7		10
* A2006514	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	52		26		26
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	253	120		133	
X4400110	TEMPORARY PAVEMENT REMOVAL	SQ YD	756		223		533
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1,232		699		533
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1			1	
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1			1	
Z0001000	AGGREGATE FOR TEMPORARY CROSSING	TON	83		51		32
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	54	26		28	
Z0004552	APPROACH SLAB REMOVAL	SQ YD	367		140		227
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.0		0.5		0.5
Z0026407	TEMPORARY SHEET PILING	SQ FT	954	178		776	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4		2		2
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1				1
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4		2		2
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	284	132		152	
Z0062456	TEMPORARY PAVEMENT	SQ YD	756		223		533
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	217	217			

N/P - DENOTES NON-PARTICIPATING ITEM

* - DENOTES SPECIALTY ITEM

NHS FUNDING CATEGORY ASSOCIATED WITH PROPOSED S.N. 043-0079 IMPROVEMENT LOCATION.

BRRP FUNDING CATEGORY ASSOCIATED WITH PROPOSED S.N. 043-0078 IMPROVEMENT LOCATION.

FILE NAME =	USER NAME = costello	DESIGNED - SEW	REVISED -
C:\Documents and Settings\costello\De	ktop\IL 84\064826-sht-500.dgn	DRAWN - SEW	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED - FML	REVISED -
	PLOT DATE = Thu Oct 21 11:16:20 2010	DATE - 10-15-2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL-84 OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK

SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	4
CONTRACT NO. 64B26			ILLINOIS FED. AID PROJECT	

IL 84 SCHEDULE OF QUANTITIES

20100110 - TREE REMOVAL (6 TO 15 UNITS DIAMETER)

20100110 - TREE REMOVAL (6 TO 15 UNITS DIAMETER) (CONT.)

25000210 - SEEDING, CLASS 2A

LOCATION	UNIT	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 163+65	LT	6
STA. 163+79	LT	6
STA. 163+93	LT	8
STA. 164+03	LT	6
STA. 164+07	RT	6
STA. 164+10	RT	6
STA. 164+12	RT	6
STA. 164+14	LT	10
STA. 164+14	RT	8
STA. 164+19	LT	6
STA. 164+27	RT	6
STA. 164+30	RT	8
STA. 164+36	RT	6
STA. 164+62	LT	12
STA. 164+64	RT	6
STA. 164+80	RT	6
STA. 167+88	RT	6
STA. 164+96	RT	6
STA. 165+98	LT	6
STA. 166+00	LT	8
STA. 166+10	LT	6
STA. 166+21	LT	6
STA. 166+25	RT	6
STA. 166+29	RT	6
STA. 166+31	RT	6
STA. 166+42	LT	6
STA. 167+08	LT	6
STA. 167+11	LT	8
STA. 167+13	LT	6
STA. 167+16	LT	6
STA. 167+22	LT	6
STA. 167+44	LT	6
STA. 167+59	LT	12
STA. 167+61	LT	6

LOCATION	UNIT	REMARK
DUKE CREEK		
STA. 334+64	RT	15
STA. 334+92	RT	15
STA. 334+94	RT	15
STA. 334+98	RT	8
STA. 335+01	RT	10
STA. 336+08	RT	6
STA. 336+11	RT	6
STA. 336+17	RT	8
STA. 336+93	RT	6
STA. 336+97	RT	8
STA. 337+00	RT	6
STA. 337+31	RT	15
TOTAL		348

LOCATION	ACRE	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 161+77 - 162+53	RT	0.02
STA. 162+57 - 165+11	RT	0.17
STA. 162+00 - 164+71	LT	0.19
STA. 165+89 - 169+50	LT	0.19
STA. 166+29 - 169+50	RT	0.13
DUKE CREEK		
STA. 333+60 - 334+18	RT	0.00
STA. 334+35 - 336+17	RT	0.07
STA. 334+25 - 336+17	LT	0.06
STA. 336+68 - 339+05	LT	0.11
STA. 336+68 - 338+52	RT	0.09
STA. 338+71 - 339+05	RT	0.01
TOTAL		1.04

20100210 - TREE REMOVAL (OVER 15 UNITS DIAMETER)

LOCATION	UNIT	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 116+17	RT	24
STA. 116+50	RT	18
DUKE CREEK		
STA. 334+49	RT	24
STA. 334+75	RT	30
STA. 334+85	RT	18
STA. 335+26	RT	18
TOTAL		132

25000310 - SEEDING, CLASS 4

LOCATION	ACRE	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 162+58 - 164+08	RT	0.01
STA. 167+18 - 168+50	LT	0.02
DUKE CREEK		
STA. 333+50 - 334+26	RT	0.02
STA. 334+36 - 336+17	RT	0.06
STA. 334+83 - 336+17	LT	0.02
STA. 336+68 - 338+52	LT	0.01
STA. 336+68 - 338+50	RT	0.02
TOTAL		0.16

20201200 - REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

LOCATION	CU YD	REMARK
JOBSITE		
	50	
TOTAL	50	

FILE NAME =	USER NAME = #USER#	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES IL-84 OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - ST	REVISED -		308	103BR-3 & 104BR-1	JO DAVIESS	126	5			
		CHECKED - FML	REVISED -		SCALE: SHEET NO. 1 OF 9 SHEETS STA. TO STA.			CONTRACT NO. 64B26				
		DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

IL 84 SCHEDULE OF QUANTITIES

25000750 - MOWING

LOCATION	ACRE	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 161+77 - 162+53	RT 0.02	
STA. 162+57 - 165+11	RT 0.19	
STA. 162+00 - 164+71	LT 0.19	
STA. 165+89 - 169+50	LT 0.20	
STA. 166+29 - 169+50	RT 0.13	
DUKE CREEK		
STA. 333+50 - 334+26	RT 0.03	
STA. 334+35 - 336+17	RT 0.13	
STA. 334+25 - 336+17	LT 0.07	
STA. 336+68 - 339+05	LT 0.12	
STA. 336+68 - 338+52	RT 0.11	
STA. 338+71 - 339+05	RT 0.01	
TOTAL	1.19	

25100630 - EROSION CONTROL BLANKET

LOCATION	SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 161+77 - 162+53	RT 73.5	
STA. 162+57 - 165+11	RT 898.8	
STA. 162+00 - 164+71	LT 898.6	
STA. 165+89 - 169+50	LT 985.8	
STA. 166+29 - 169+50	RT 640.0	
DUKE CREEK		
STA. 333+50 - 334+26	RT 133.1	
STA. 334+35 - 336+17	RT 614.4	
STA. 334+25 - 336+17	LT 356.4	
STA. 336+68 - 339+05	LT 575.4	
STA. 336+68 - 338+52	RT 554.3	
STA. 338+71 - 339+05	RT 46.8	
TOTAL	5777	

28000250 - TEMPORARY EROSION CONTROL SEEDING

LOCATION	POUND	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 161+77 - 162+53	RT 9.1	
STA. 162+57 - 165+11	RT 111.4	
STA. 162+00 - 164+71	LT 111.4	
STA. 165+89 - 169+50	LT 122.2	
STA. 166+29 - 169+50	RT 79.3	
DUKE CREEK		
STA. 333+50 - 334+26	RT 16.5	
STA. 334+35 - 336+17	RT 76.2	
STA. 334+25 - 336+17	LT 44.2	
STA. 336+68 - 339+05	LT 71.3	
STA. 336+68 - 338+51	RT 68.7	
STA. 338+73 - 339+05	RT 5.8	
TOTAL	716	

28000400 - PERIMETER EROSION BARRIER

LOCATION	EQOI	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 161+77 - 162+53	RT 84.3	
STA. 162+50 - 164+50	LT 179.3	
STA. 162+66 - 164+00	RT 135.6	
STA. 166+50 - 168+00	RT 125.3	
STA. 167+19 - 168+50	RT 133.0	
DUKE CREEK		
STA. 333+50 - 334+26	RT 82.6	
STA. 334+38 - 336+17	RT 185.8	
STA. 335+00 - 336+17	LT 119.7	
STA. 336+68 - 338+50	LT 185.8	
STA. 336+68 - 338+52	RT 190.0	
TOTAL	1422	

28000315 - AGGREGATE DITCH CHECK

LOCATION	ION	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 162+76	RT 0.5	
STA. 163+32	RT 0.5	
STA. 163+98	RT 0.5	
STA. 164+47	RT 0.5	
STA. 167+16	LT 0.5	
STA. 167+66	LT 0.5	
STA. 168+16	LT 0.5	
STA. 168+66	LT 0.5	
DUKE CREEK		
STA. 333+95	RT 0.5	
STA. 334+56	RT 0.5	
STA. 335+02	LT 0.5	
STA. 335+05	RT 0.5	
STA. 335+48	LT 0.5	
STA. 335+56	RT 0.5	
STA. 335+88	LT 0.5	
STA. 336+01	RT 0.5	
STA. 337+01	LT 0.5	
STA. 337+02	RT 0.5	
STA. 337+56	RT 0.5	
STA. 337+57	LT 0.5	
STA. 338+04	RT 0.5	
STA. 338+16	LT 0.5	
TOTAL	11	

28000500 - INLET AND PIPE PROTECTION

LOCATION	EACH	REMARK
DUKE CREEK		
STA. 334+10	RT 1	
STA. 338+35	RT 1	
TOTAL	2	

IL 84 SCHEDULE OF QUANTITIES

28100109 - STONE RIPRAP, CLASS A5

LOCATION	SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER		
CHANNEL GRADING	1202	
DUKE CREEK		
CHANNEL GRADING	331	
TOTAL	1533	

28200200 - FILTER FABRIC

LOCATION	SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	1202	
DUKE CREEK		
JOBSITE	331	
TOTAL	1533	

35102000 - AGGREGATE BASE COURSE, TYPE B 8"

LOCATION	SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER		
Driveway @ Sta. 163+49	132	
DUKE CREEK		
Driveway @ Sta. 334+27	113	
Driveway @ Sta. 338+59	106	
TOTAL	352	

40600625 - LEVELING BINDER (MACHINE METHOD), N50

LOCATION	TON	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 162+00 - 163+23	29.8	
STA. 168+75 - 169+50	18.4	
DUKE CREEK		
STA. 334+25 - 335+60	24.3	
STA. 337+41 - 339+05	29.6	
TOTAL	102	

40603080 - HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

LOCATION	TON	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 162+23 - 164+45	145.9	
STA. 166+55 - 168+75	262.4	
DUKE CREEK		
STA. 335+60 - 335+81	24.5	
STA. 337+04 - 337+41	44.7	
TOTAL	477	

40603310 - HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50

LOCATION	TON	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 162+00 - 164+52	75.3	
STA. 166+48 - 169+50	94.4	
DUKE CREEK		
STA. 334+25 - 335+81	50.7	
STA. 337+04 - 339+05	65.0	
TOTAL	286	

40800050 - INCIDENTAL HOT-MIX ASPHALT SURFACING

LOCATION	TON	REMARK
TRIBUTARY TO APPLE RIVER		
Driveway @ Sta. 163+49	18	
DUKE CREEK		
Driveway @ Sta. 334+27	16	
Driveway @ Sta. 338+59	15	
TOTAL	49	

42001430 - BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER		
STA. 164+45 - 164+52	18.5	
STA. 166+48 - 166+55	18.5	
DUKE CREEK		
STA. 335+81 - 335+87	16.0	
STA. 336+98 - 337+04	16.0	
TOTAL	69	

42400200 - PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH

LOCATION	SQ_FT	REMARK
DUKE CREEK		
STA. 333+50 - 334+00 RT	200	
TOTAL	200	

FILE NAME =	USER NAME = coostellopg	DESIGNED - ST	REVISED -	STATE OF ILLINOIS	SCHEDULE OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C:\Documents and Settings\coostellopg\Desktop\IL 84\064B26-shr-Schedules.dgn		DRAWN - ST	REVISED -	DEPARTMENT OF TRANSPORTATION	IL-84 OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK	308	103BR-3 & 104BR-1	JO DAVIESS	126	7
		CHECKED - FML	REVISED -		SCALE:	SHEET NO. 3 OF 9 SHEETS		STA.	TO STA.	
		DATE - 10-15-2010	REVISED -				FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	
									CONTRACT NO. 64B26	

IL 84 SCHEDULE OF QUANTITIES

44000100 - PAVEMENT REMOVAL

LOCATION		SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 162+00 - 163+23	LT	11	
STA. 164+35 - 164+63	CL	68	
STA. 166+33 - 166+65	CL	83	
STA. 168+75 - 169+50	RT	9	
DUKE CREEK			
STA. 333+59 - 336+14	RT	289	
STA. 336+96 - 339+05	LT	54	
TOTAL		514	

X4401198 - HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

LOCATION		SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 162+00 - 163+23		331.2	
STA. 168+75 - 169+50		201.9	
DUKE CREEK			
STA. 334+25 - 335+41		306.9	
STA. 337+60 - 339+05		391.7	
TOTAL		1232	

44000600 - SIDEWALK REMOVAL

LOCATION		SQ_FT	REMARK
DUKE CREEK			
STA. 333+50 - 333+98	RT	220	
TOTAL		220	
DUKE CREEK			
STA. 334+12 - 334+56	RT	44	
TOTAL		44	

542D0217 - PIPE CULVERTS, CLASS D, TYPE 1 12"

LOCATION		FOOT	REMARK
DUKE CREEK			
STA. 334+12 - 334+56	RT	44	
TOTAL		44	

Z0004552 - APPROACH SLAB REMOVAL

LOCATION		SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 164+63 - 165+03		113.6	
STA. 165+93 - 166+33		113.3	
DUKE CREEK			
STA. 336+14 - 336+33		69.6	
STA. 336+77 - 336+97		69.6	
TOTAL		367	

44300200 - STRIP REFLECTIVE CRACK CONTROL TREATMENT

LOCATION		FOOT	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 161+77 - 164+59	RT	282	
STA. 162+00 - 164+45	LT	245	
STA. 166+41 - 169+50	LT	309	
STA. 166+55 - 169+50	RT	295	
DUKE CREEK			
STA. 333+59 - 335+87	RT	227	
STA. 334+25 - 335+87	LT	162	
STA. 336+98 - 339+05	RT	208	
STA. 336+98 - 339+05	LT	208	
TOTAL		1935	

542D1057 - PIPE CULVERTS, CLASS D, TYPE 2 12"

LOCATION		FOOT	REMARK
DUKE CREEK			
STA. 338+37 - 338+78	RT	40	
TOTAL		40	

48203023 - HOT-MIX ASPHALT SHOULDERS, 6 1/2"

LOCATION		SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 162+00 - 164+72	LT	209	
STA. 162+67 - 164+93	RT	175	
STA. 166+07 - 169+50	LT	275	
STA. 166+28 - 169+50	RT	234	
DUKE CREEK			
STA. 334+25 - 336+02	LT	155	
STA. 334+45 - 336+02	RT	127	
STA. 336+83 - 339+05	LT	185	
STA. 336+83 - 338+38	RT	133	
STA. 338+79 - 339+05	RT	7	
TOTAL		1501	

54215547 - METAL END SECTIONS 12"

LOCATION		EACH	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 164+39	LT	1	
STA. 164+56	RT	1	
STA. 166+44	LT	1	
STA. 166+61	RT	1	
DUKE CREEK			
STA. 334+10	RT	1	
STA. 334+58	RT	1	
STA. 335+82	RT	1	
STA. 335+82	LT	1	
STA. 337+02	RT	1	
STA. 337+02	LT	1	
STA. 338+35	RT	1	
STA. 338+80	RT	1	
TOTAL		12	

IL 84 SCHEDULE OF QUANTITIES

<p>60100945 - PIPE DRAINS 12"</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">FOOT</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 164+39</td> <td>LT 55</td> <td></td> </tr> <tr> <td>STA. 164+56</td> <td>RT 50</td> <td></td> </tr> <tr> <td>STA. 166+44</td> <td>LT 50</td> <td></td> </tr> <tr> <td>STA. 166+61</td> <td>RT 40</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+82</td> <td>RT 25</td> <td></td> </tr> <tr> <td>STA. 335+82</td> <td>LT 20</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>RT 30</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>LT 30</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">300</td> <td></td> </tr> </tbody> </table>	LOCATION	FOOT	REMARK	TRIBUTARY TO APPLE RIVER			STA. 164+39	LT 55		STA. 164+56	RT 50		STA. 166+44	LT 50		STA. 166+61	RT 40		DUKE CREEK			STA. 335+82	RT 25		STA. 335+82	LT 20		STA. 337+02	RT 30		STA. 337+02	LT 30		TOTAL	300		<p>60900115 - TYPE B INLET BOX, STANDARD 609001</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">EACH</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 164+39</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 164+56</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 166+44</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 166+61</td> <td>RT 1</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+82</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 335+82</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>LT 1</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">8</td> <td></td> </tr> </tbody> </table>	LOCATION	EACH	REMARK	TRIBUTARY TO APPLE RIVER			STA. 164+39	LT 1		STA. 164+56	RT 1		STA. 166+44	LT 1		STA. 166+61	RT 1		DUKE CREEK			STA. 335+82	RT 1		STA. 335+82	LT 1		STA. 337+02	RT 1		STA. 337+02	LT 1		TOTAL	8		<p>63000001 - STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">FOOT</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 163+33 - 164+33</td> <td>RT 100.0</td> <td></td> </tr> <tr> <td>STA. 163+40 - 164+15</td> <td>LT 75.0</td> <td></td> </tr> <tr> <td>STA. 166+67 - 168+17</td> <td>RT 150.0</td> <td></td> </tr> <tr> <td>STA. 166+85 - 167+60</td> <td>LT 75.0</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+08 - 335+58</td> <td>RT 50.0</td> <td></td> </tr> <tr> <td>STA. 335+46 - 335+58</td> <td>LT 12.5</td> <td></td> </tr> <tr> <td>STA. 337+26 - 337+38</td> <td>RT 12.5</td> <td></td> </tr> <tr> <td>STA. 337+26 - 337+88</td> <td>LT 62.5</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">537.5</td> <td></td> </tr> </tbody> </table>	LOCATION	FOOT	REMARK	TRIBUTARY TO APPLE RIVER			STA. 163+33 - 164+33	RT 100.0		STA. 163+40 - 164+15	LT 75.0		STA. 166+67 - 168+17	RT 150.0		STA. 166+85 - 167+60	LT 75.0		DUKE CREEK			STA. 335+08 - 335+58	RT 50.0		STA. 335+46 - 335+58	LT 12.5		STA. 337+26 - 337+38	RT 12.5		STA. 337+26 - 337+88	LT 62.5		TOTAL	537.5	
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STA. 337+26 - 337+38	RT 12.5																																																																																																													
STA. 337+26 - 337+88	LT 62.5																																																																																																													
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<p>60610417 - HOT-MIX ASPHALT CURB</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">FOOT</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 164+37 - 164+43</td> <td>LT 6</td> <td></td> </tr> <tr> <td>STA. 164+56 - 164+62</td> <td>RT 6</td> <td></td> </tr> <tr> <td>STA. 166+38 - 166+44</td> <td>LT 6</td> <td></td> </tr> <tr> <td>STA. 166+57 - 166+63</td> <td>RT 6</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+81 - 335+87</td> <td>RT 6</td> <td></td> </tr> <tr> <td>STA. 335+81 - 335+87</td> <td>LT 6</td> <td></td> </tr> <tr> <td>STA. 336+98 - 337+04</td> <td>RT 6</td> <td></td> </tr> <tr> <td>STA. 336+98 - 337+04</td> <td>LT 6</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">48</td> <td></td> </tr> </tbody> </table>	LOCATION	FOOT	REMARK	TRIBUTARY TO APPLE RIVER			STA. 164+37 - 164+43	LT 6		STA. 164+56 - 164+62	RT 6		STA. 166+38 - 166+44	LT 6		STA. 166+57 - 166+63	RT 6		DUKE CREEK			STA. 335+81 - 335+87	RT 6		STA. 335+81 - 335+87	LT 6		STA. 336+98 - 337+04	RT 6		STA. 336+98 - 337+04	LT 6		TOTAL	48		<p>60900515 - CONCRETE THRUST BLOCKS</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">EACH</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 164+39</td> <td>LT 2</td> <td></td> </tr> <tr> <td>STA. 164+56</td> <td>RT 2</td> <td></td> </tr> <tr> <td>STA. 166+44</td> <td>LT 2</td> <td></td> </tr> <tr> <td>STA. 166+61</td> <td>RT 2</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+82</td> <td>RT 2</td> <td></td> </tr> <tr> <td>STA. 335+82</td> <td>LT 2</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>RT 2</td> <td></td> </tr> <tr> <td>STA. 337+02</td> <td>LT 2</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">16</td> <td></td> </tr> </tbody> </table>	LOCATION	EACH	REMARK	TRIBUTARY TO APPLE RIVER			STA. 164+39	LT 2		STA. 164+56	RT 2		STA. 166+44	LT 2		STA. 166+61	RT 2		DUKE CREEK			STA. 335+82	RT 2		STA. 335+82	LT 2		STA. 337+02	RT 2		STA. 337+02	LT 2		TOTAL	16		<p>63100085 - TRAFFIC BARRIER TERMINAL, TYPE 6</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: left;">EACH</th> <th style="text-align: left;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">TRIBUTARY TO APPLE RIVER</td> </tr> <tr> <td>STA. 164+15 - 164+58</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 164+33 - 164+77</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 166+23 - 166+67</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 166+42 - 166+85</td> <td>RT 1</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">DUKE CREEK</td> </tr> <tr> <td>STA. 335+58 - 336+02</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 335+58 - 336+02</td> <td>LT 1</td> <td></td> </tr> <tr> <td>STA. 336+83 - 337+26</td> <td>RT 1</td> <td></td> </tr> <tr> <td>STA. 336+83 - 337+26</td> <td>LT 1</td> <td></td> </tr> <tr> <td style="text-align: right;">TOTAL</td> <td style="border-top: 1px solid black;">8</td> <td></td> </tr> </tbody> </table>	LOCATION	EACH	REMARK	TRIBUTARY TO APPLE RIVER			STA. 164+15 - 164+58	LT 1		STA. 164+33 - 164+77	RT 1		STA. 166+23 - 166+67	LT 1		STA. 166+42 - 166+85	RT 1		DUKE CREEK			STA. 335+58 - 336+02	RT 1		STA. 335+58 - 336+02	LT 1		STA. 336+83 - 337+26	RT 1		STA. 336+83 - 337+26	LT 1		TOTAL	8	
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IL 84 SCHEDULE OF QUANTITIES

63100167 - TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

63500105 - DELINEATORS

66700305 - PERMANENT SURVEY MARKERS, TYPE II

LOCATION		EACH	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 162+83 - 163+33	RT	1	
STA. 162+90 - 163+40	LT	1	
STA. 167+60 - 168+10	RT	1	
STA. 168+17 - 168+67	LT	1	
DUKE CREEK			
STA. 334+58 - 335+08	RT	1	
STA. 334+96 - 335+08	LT	1	
STA. 337+38 - 337+88	RT	1	
STA. 337+88 - 338+38	LT	1	
TOTAL		8	

LOCATION		EACH	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 162+83	RT	1	
STA. 168+67	LT	1	
DUKE CREEK			
STA. 334+58	RT	1	
STA. 334+12	RT	1	
STA. 334+56	RT	1	
STA. 338+37	RT	1	
STA. 338+38	LT	1	
STA. 338+78	RT	1	
TOTAL		8	

LOCATION	EACH	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	2	
DUKE CREEK		
JOBSITE	2	
TOTAL	4	

67000400 - ENGINEER'S FIELD OFFICE, TYPE A

LOCATION	CAL MO	REMARK
JOBSITE	8	
TOTAL	8	

66600105 - FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION		EACH	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 161+00	LT	1	
STA. 162+00	LT	1	
STA. 162+00	RT	1	
STA. 164+00	LT	1	
STA. 164+00	RT	1	
STA. 166+00	LT	1	
STA. 168+00	LT	1	
STA. 169+00	LT	1	
STA. 169+00	RT	1	
DUKE CREEK			
STA. 334+00	LT	1	
STA. 334+00	RT	1	
STA. 335+00	LT	1	
STA. 335+00	RT	1	
STA. 338+00	LT	1	
STA. 338+00	RT	1	
STA. 339+00	LT	1	
STA. 339+00	RT	1	
TOTAL		17	

67100100 - MOBILIZATION

LOCATION	L SUM	REMARK
JOBSITE	1	
TOTAL	1	

63200310 - GUARDRAIL REMOVAL

LOCATION		EQOT	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 160+22 - 164+82	LT	460.4	
STA. 162+71 - 165+03	RT	231.8	
STA. 165+94 - 168+24	RT	230.2	
STA. 166+14 - 170+22	LT	408.2	
DUKE CREEK			
STA. 334+13 - 336+15	LT	202.0	
STA. 334+50 - 336+14	RT	163.9	
STA. 336+96 - 338+98	LT	202.0	
STA. 336+96 - 338+35	RT	139.4	
TOTAL		2037.8	

70100405 - TRAFFIC CONTROL AND PROTECTION, STANDARD 701321

LOCATION	EACH	REMARK
JOBSITE	2	
TOTAL	2	

70100450 - TRAFFIC CONTROL AND PROTECTION, STANDARD 701201

LOCATION	L SUM	REMARK
JOBSITE	1	
TOTAL	1	

FILE NAME =	USER NAME = #USER#	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES IL-84 OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - ST	REVISED -		SCALE:	SHEET NO. 6 OF 9 SHEETS	STA.	TO STA.	308	103BR-3 & 104BR-1	JO DAVIESS	126	10
	PLOT SCALE = #SCALE#	CHECKED - FML	REVISED -		CONTRACT NO. 64B26								
	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT								

IL 84 SCHEDULE OF QUANTITIES

70100500 - TRAFFIC CONTROL AND PROTECTION, STANDARD 701326

LOCATION	L	SUM	REMARK
JOBSITE		1	
TOTAL		1	

70103815 - TRAFFIC CONTROL SURVEILLANCE

LOCATION	CAL	DAY	REMARK
TRIBUTARY TO APPLE RIVER			
JOBSITE		10	
DUKE CREEK			
JOBSITE		10	
TOTAL		20	

70106500 - TEMPORARY BRIDGE TRAFFIC SIGNALS

LOCATION	EACH	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	1	
DUKE CREEK		
JOBSITE	1	
TOTAL	2	

70106700 - TEMPORARY RUMBLE STRIP

LOCATION	EACH	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	6	ONE PER APPROACH PER STAGE
DUKE CREEK		
JOBSITE	3	
TOTAL	9	

70300100 - SHORT-TERM PAVEMENT MARKING

LOCATION	EQOT	REMARK
JOBSITE	1000	
TOTAL	1000	

70300220 - TEMPORARY PAVEMENT MARKING LINE 4"

LOCATION	EQOT	REMARK
TRIBUTARY TO APPLE RIVER		
STAGE 1		
STA. 159+51 - 172+26	1276.1	
STA. 160+65 - 170+58	993.4	
STAGE 2		
STA. 159+40 - 171+90	1252.0	
STA. 161+04 - 170+63	959.2	
DUKE CREEK		
STAGE 1		
STA. 331+49 - 341+77	1029.6	
STA. 332+69 - 340+07	737.4	
STAGE 2		
STA. 330+93 - 341+41	1049.6	
STA. 332+73 - 340+05	732.1	
TOTAL	8030	

70301000 - WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION	SQ FT	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	330	PAY ITEM 70300100
	1478.7	PAY ITEM 70300220
	48.4	PAY ITEM 70300280
DUKE CREEK		
JOBSITE	330	PAY ITEM 70300100
	1171.2	PAY ITEM 70300220
	51.1	PAY ITEM 70300280
TOTAL	3409	

70300280 - TEMPORARY PAVEMENT MARKING LINE 24"

LOCATION	EQOT	REMARK
STAGE 1		
TRIBUTARY TO APPLE RIVER		
STA. 159+04	RT	11.8
STA. 172+42	LT	12.4
DUKE CREEK		
STA. 331+38	RT	12.6
STA. 341+48	LT	12.9
TOTAL		50

70400100 - TEMPORARY CONCRETE BARRIER

LOCATION	EQOT	REMARK
TRIBUTARY TO APPLE RIVER		
STAGE 1		
STA. 160+75 - 170+48	LT	975.0
DUKE CREEK		
STAGE 1		
STA. 333+73 - 339+06	LT	712.5
STAGE 2		
STA. 332+56 - 339+92	LT	25
TOTAL		1712.5

70400200 - RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION	EQOT	REMARK
STAGE 2		
TRIBUTARY TO APPLE RIVER		
STA. 163+00 - 170+20	LT - RT	950
DUKE CREEK		
STA. 335+00 - 339+00	LT	712.5
TOTAL		1662.5

IL 84 SCHEDULE OF QUANTITIES

X4400110 - TEMPORARY PAVEMENT REMOVAL

LOCATION		SQ_YD	REMARK
TRIBUTARY TO APPLE RIVER			
STA. 161+23 - 164+88	RT	236	
STA. 166+25 - 170+57	RT	192	
DUKE CREEK			
STA. 336+97 - 339+69	RT	159	
		TOTAL	587

Z0030250 - IMPACT ATTENUATORS, TEMPORARY
(NON- REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	2	
DUKE CREEK		
JOBSITE	2	
		TOTAL
		4

Z0030350 - IMPACT ATTENUATORS, RELOCATE
(NON- REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH	REMARK
TRIBUTARY TO APPLE RIVER		
JOBSITE	1	
DUKE CREEK		
JOBSITE	2	
		TOTAL
		3

Z0001000 - AGGREGATE FOR TEMPORARY CROSSING

LOCATION	ION	REMARK
TRIBUTARY TO APPLE RIVER		
Driveway @ Sta. 163+49	32	
DUKE CREEK		
Driveway @ Sta. 334+27	23	
Driveway @ Sta. 338+59	28	
		TOTAL
		83

Z0013798 - CONSTRUCTION LAYOUT

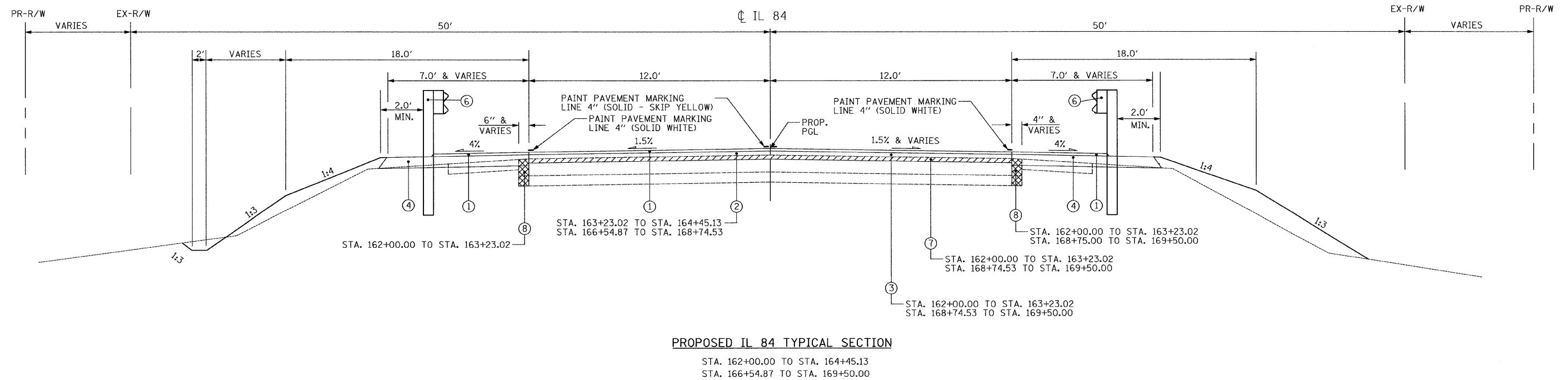
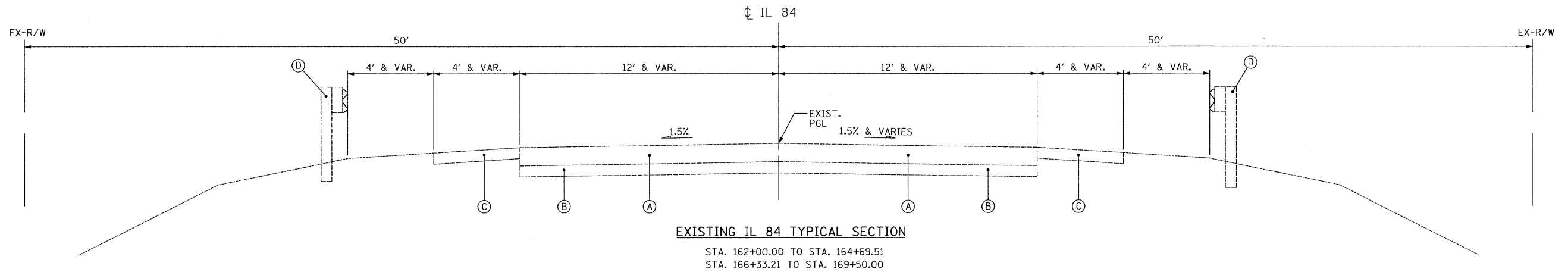
LOCATION	SUM	REMARK
JOBSITE		
	1	
		TOTAL
		1

EARTHWORK

LOCATION	PRESTAGE TEMP. PAV'T			EARTH EXCAVATION			CHANNEL EXCAVATION			FURNISHED EXCAVATION WASTE (+) SHORTAGE (-)
	20200100 EARTH EXCAVATION	EMBANKMENT	EARTH EXCAVATION ADJ. FOR SHRINKAGE	20200100 EARTH EXCAVATION	EMBANKMENT	EARTH EXCAVATION ADJ. FOR SHRINKAGE	20300100 CHANNEL EXCAVATION	EMBANKMENT	CHANNEL EXCAVATION ADJ. FOR SHRINKAGE	
TRIBUTARY TO APPLE RIVER	96	14	72	85	1813	63	2915	0	2186	+496
DUKE CREEK	24	3	18	562	437	421	594	11	446	+435

NOTE: AN ESTIMATED QUANTITY OF 2000 CU. YD. FOR FURNISHED EXCAVATION IS INCLUDED IN THE PLANS, AND SHALL BE UTILIZED ONLY AS DIRECTED BY THE ENGINEER, SHOULD IT BE DETERMINED THAT THE PROPOSED CHANNEL EXCAVATION IS NOT SUITABLE FOR USE AS FILL MATERIAL.

FILE NAME = ...ND64B26-sht-Schedules.dgn	USER NAME = Plotted by Scott Wilkinson	DESIGNED - ST	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES IL-84 OVER TRIBUTARY TO APPLE RIVER & DUKE CREEK			F.A.P. RTE. 30B	SECTION 103BR-3 & 104BR-1	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 13
		DRAWN - ST	REVISIONS -		SCALE:	SHEET NO. 9 OF 9 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
		CHECKED - FML	REVISIONS -									
		DATE - 10-15-2010	REVISIONS -									



LEGEND

EXISTING CONDITIONS

- (A) EXISTING HMA TRAVELED WAY, 10"
- (B) EXISTING CONCRETE, 6"
- (C) EXISTING AGGREGATE SHOULDER, 6"
- (D) EXISTING GUARDRAIL

PROPOSED CONDITIONS

- (1) 1 1/2" - HMA SURFACE COURSE, MIX "C", N50
- (2) VARIES 2 1/4" (MIN.) - HMA BINDER COURSE, IL-19.0, N50
- (3) VARIES 1" - 2 1/4" - LEVELING BINDER (MACHINE METHOD), N50
- (4) HMA SHOULDER, 6 1/2"
- (5) BRIDGE APPROACH SLAB

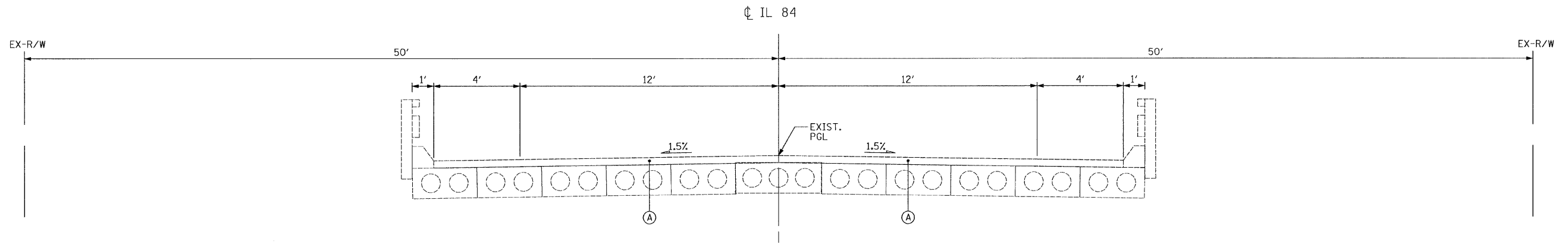
- (6) STEEL PLATE BEAM GUARDRAIL, TYPE A

- (7) HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH (HATCHED AREA)

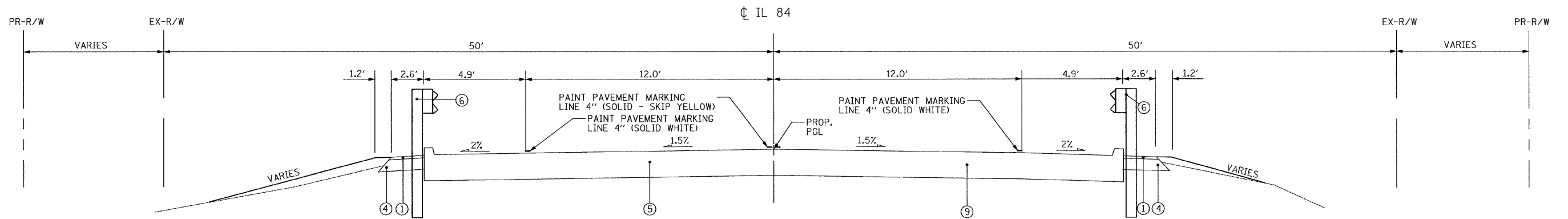
- (8) PAVEMENT REMOVAL

- (9) APPROACH SLAB REMOVAL

FILE NAME =	USER NAME = #USER#	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS IL 84 OVER TRIBUTARY TO APPLE RIVER			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN - ST	REVISED -		SCALE: N.T.S.	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	308	103BR-3 & 104BR-1	JO DAVIESS	126	14
	PLOT SCALE = #SCALE#	CHECKED - FML	REVISED -		CONTRACT NO. 64B26								
	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								



EXISTING IL 84 TYPICAL SECTION
 STA. 164+93.06 TO STA. 166+02.94



PROPOSED IL 84 TYPICAL SECTION
 STA. 164+52.06 TO STA. 164+82.06
 STA. 166+17.94 TO STA. 166+47.94
 (BRIDGE APPROACH SLAB)

LEGEND

EXISTING CONDITIONS

- (A) EXISTING HMA TRAVELED WAY
- (B) EXISTING CONCRETE
- (C) EXISTING AGGREGATE SHOULDER
- (D) EXISTING GUARDRAIL

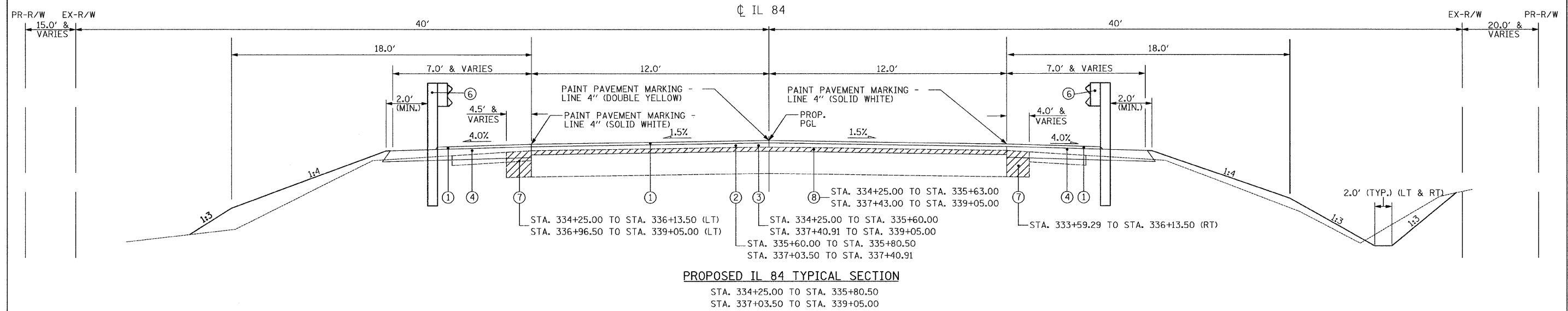
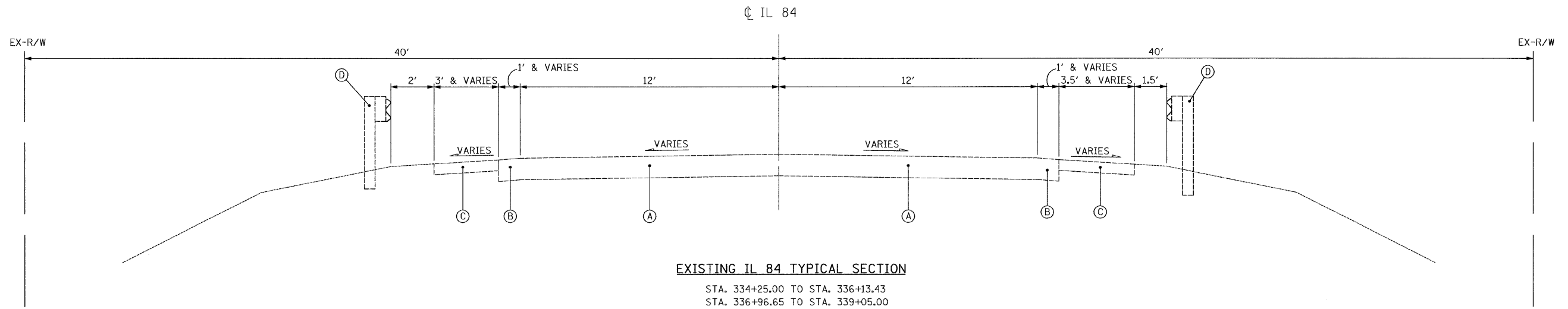
PROPOSED CONDITIONS

- (1) 1 1/2" - HMA SURFACE COURSE, MIX "C", N50
- (2) VARIES 2 1/4" (MIN.) - HMA BINDER COURSE, IL-19.0, N50
- (3) VARIES 1" - 2 1/4" - LEVELING BINDER (MACHINE METHOD), N50
- (4) HMA SHOULDER, 6 1/2"
- (5) BRIDGE APPROACH SLAB

- (6) STEEL PLATE BEAM GUARDRAIL, TYPE A

- (7) HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH (HATCHED AREA)
- (8) PAVEMENT REMOVAL
- (9) APPROACH SLAB REMOVAL

FILE NAME =	USER NAME = #USER#	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS IL 84 OVER TRIBUTARY TO APPLE RIVER			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - ST	REVISED -		SCALE: N.T.S.	SHEET NO. 2 OF 2 SHEETS	STA. TO STA.	308	103BR-3 & 104BR-1	JO DAVIESS	126	15
		CHECKED - FML	REVISED -		CONTRACT NO. 64B26							
		DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



LEGEND

EXISTING CONDITIONS

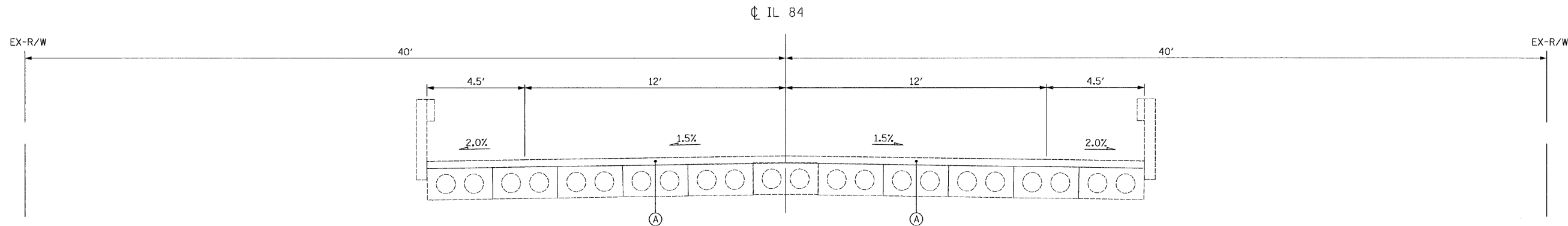
- (A) EXISTING FULL-DEPTH HMA PAVEMENT (TRAVELED WAY)
- (B) EXISTING FULL-DEPTH HMA PAVEMENT (SHOULDER)
- (C) EXISTING AGGREGATE SHOULDER
- (D) EXISTING GUARDRAIL

PROPOSED CONDITIONS

- (1) 1 1/2" - HMA SURFACE COURSE, MIX "C", N50
- (2) VARIES 2 1/4" (MIN.) - HMA BINDER COURSE, IL-19.0, N50
- (3) VARIES 1" - 2 1/4" - LEVELING BINDER (MACHINE METHOD), N50
- (4) HMA SHOULDER, 6 1/2"
- (5) BRIDGE APPROACH SLAB

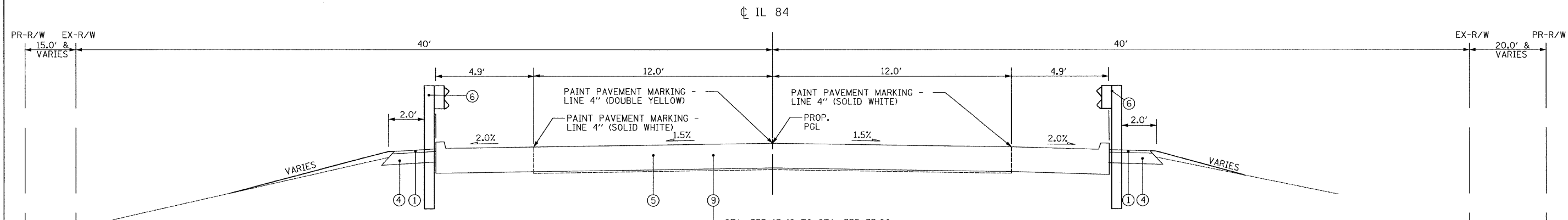
- (6) STEEL PLATE BEAM GUARDRAIL, TYPE A
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- (8) HOT-MIX ASPHALT SURFACE REMOVAL
- (9) APPROACH SLAB REMOVAL

FILE NAME =	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS IL 84 OVER DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN - SEW	REVISED -		SCALE: N.T.S.	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	308	103BR-3 & 104BR-1	JO DAVIESS	126	16
	PLOT SCALE = #SCALE#	CHECKED - FML	REVISED -		CONTRACT NO. 64B26								
	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								



EXISTING IL 84 TYPICAL SECTION

STA. 336+32.99 TO STA. 336+76.97



PROPOSED IL 84 TYPICAL SECTION

STA. 335+13.49 TO STA. 335+33.00
 STA. 336+76.97 TO STA. 336+96.43
 STA. 335+86.50 TO STA. 336+16.50
 STA. 336+67.50 TO STA. 336+97.50
 (BRIDGE APPROACH SLAB)

LEGEND

EXISTING CONDITIONS

- (A) EXISTING FULL-DEPTH HMA PAVEMENT (TRAVELED WAY)
- (B) EXISTING FULL-DEPTH HMA PAVEMENT (SHOULDER)
- (C) EXISTING AGGREGATE SHOULDER
- (D) EXISTING GUARDRAIL

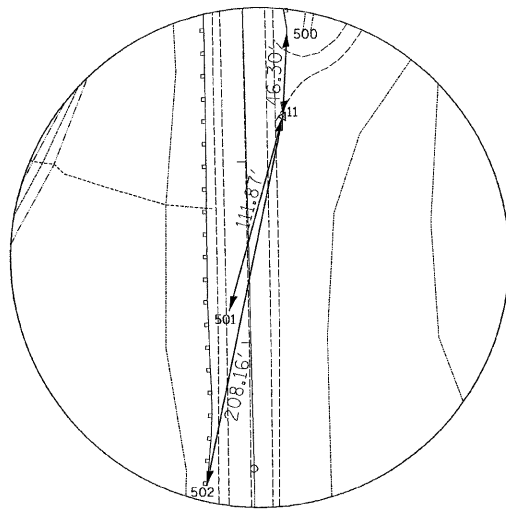
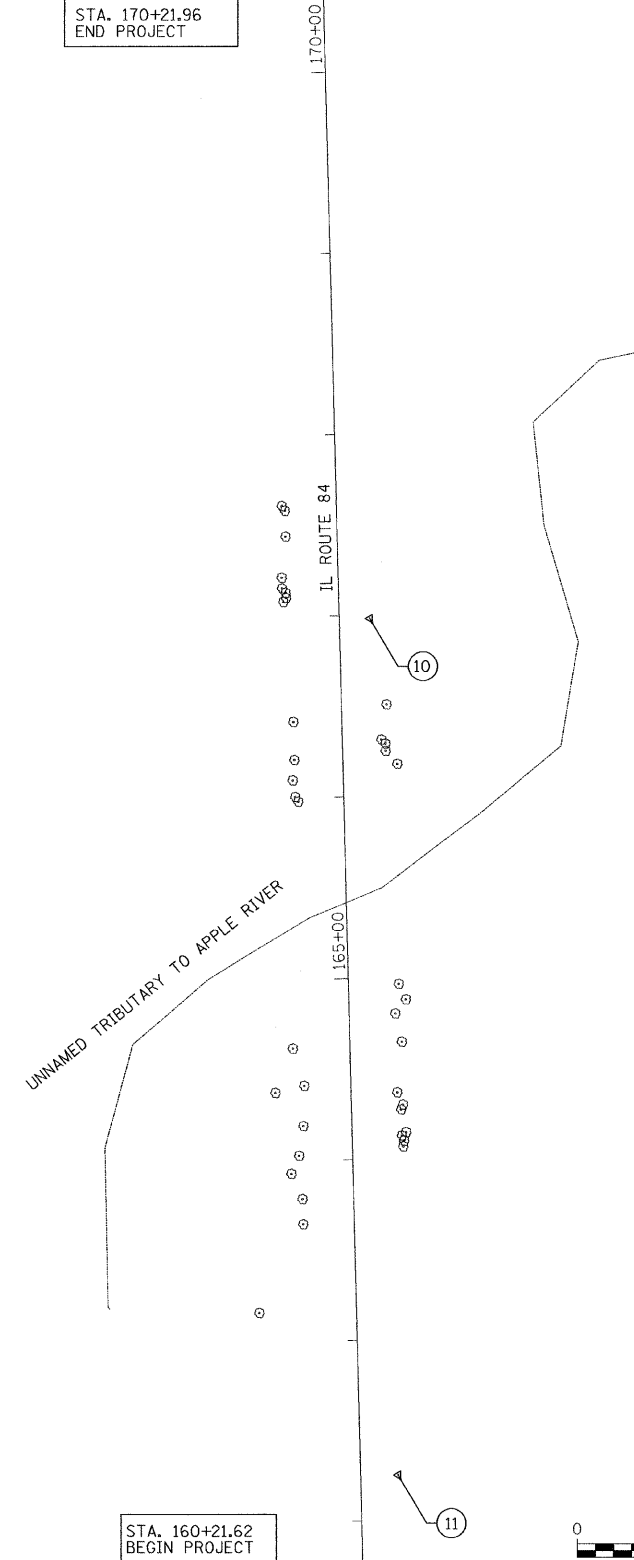
PROPOSED CONDITIONS

- (1) 1 1/2" - HMA SURFACE COURSE, MIX "C", N50
- (2) VARIES 2 1/4" (MIN.) - HMA BINDER COURSE, IL-19.0, N50
- (3) VARIES 1" - 2 1/4" - LEVELING BINDER (MACHINE METHOD), N50
- (4) HMA SHOULDER, 6 1/2"
- (5) BRIDGE APPROACH SLAB
- (6) STEEL PLATE BEAM GUARDRAIL, TYPE A
- (7) PAVEMENT REMOVAL
- (8) HOT-MIX ASPHALT SURFACE REMOVAL
- (9) APPROACH SLAB REMOVAL

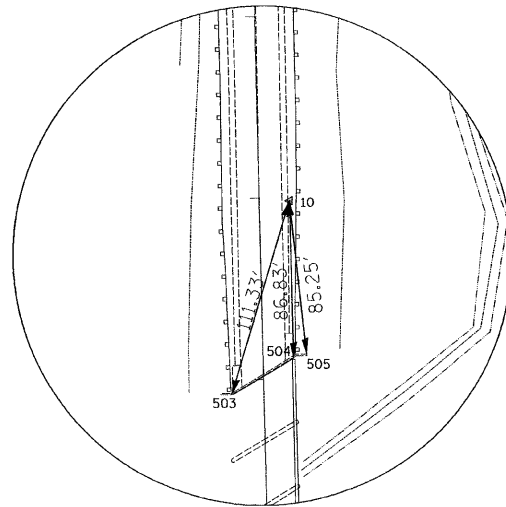
FILE NAME =	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS IL 84 OVER DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN - SEW	REVISED -		SCALE: N.T.S.	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	308	103BR-3 & 104BR-1	JO DAVIESS	126	17
	PLOT SCALE = #SCALE#	CHECKED - FML	REVISED -										
	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			CONTRACT NO. 64B26

EXISTING HORIZONTAL & VERTICAL CONTROL

STA. 170+21.96
END PROJECT



HORIZONTAL CONTROL POINT NO. 11



HORIZONTAL CONTROL POINT NO. 10

Chain JO_IL84_S contains:
1363 1352

Beginning chain JO_IL84_S description

Point 1363 N 2,023,541.7873 E 2,270,433.7654 Sta 160+30.7414

Course from 1363 to 1352 358° 34' 30.3553" Dist 5,762.1013

Point 1352 N 2,029,302.1068 E 2,270,290.4812 Sta 217+92.8427

Ending chain JO_IL84_S description

BENCH MARK

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
410	2024102.8225	2270402.3110	608.5477	JO_IL84_S	165+92.39	17.49 LT	PLUG AT APPLE RIVER TRIB.

HORIZONTAL CONTROL POINTS

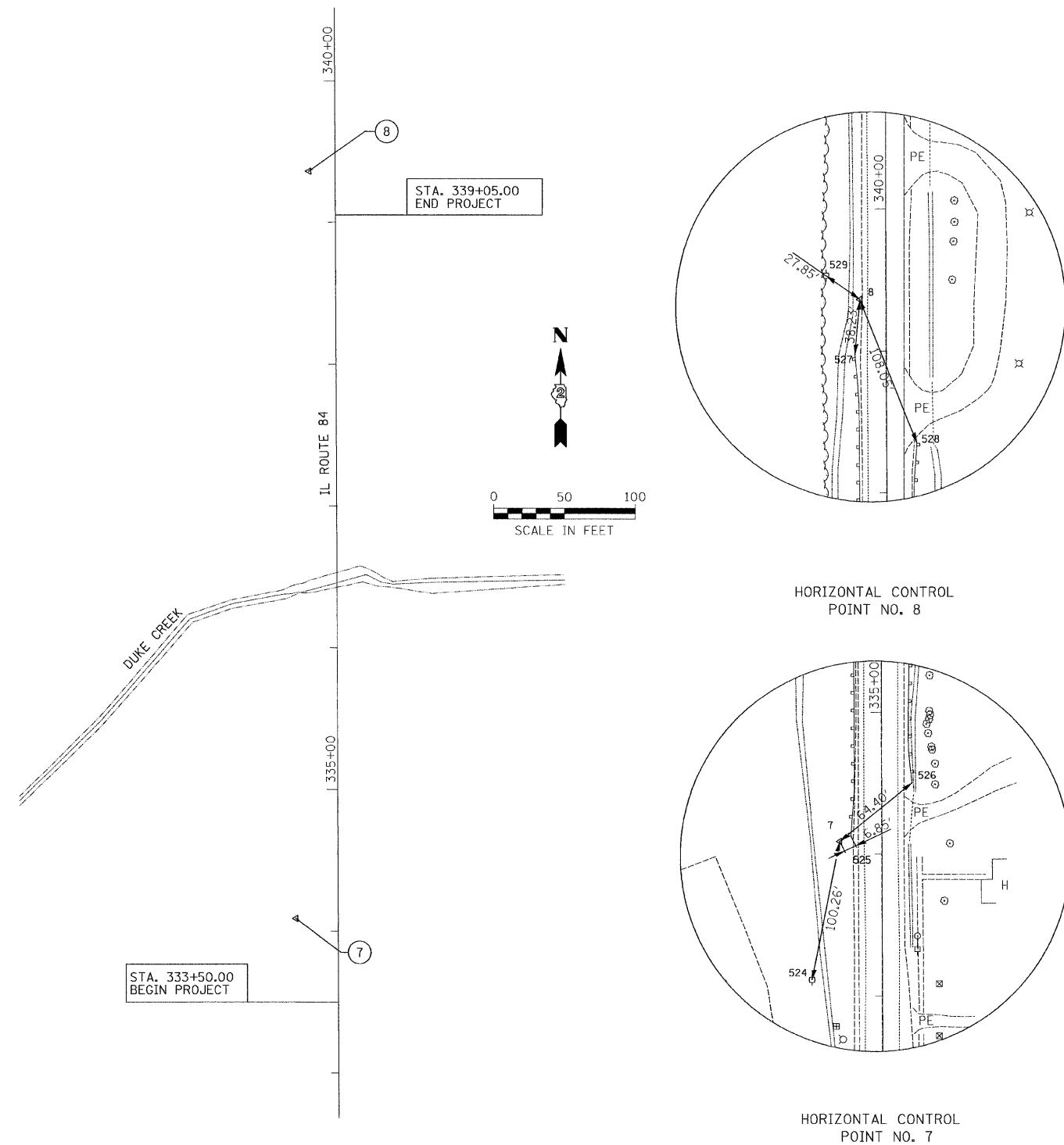
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
10	2024209.4091	2270434.0841	608.4521	JO_IL84_S	166+98.15	16.92 RT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
11	2023736.2741	2270449.7436	608.1272	JO_IL84_S	162+24.77	20.81 RT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT

REFERENCE TIES

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
500	2023782.5256	2270451.9221	607.8000	JO_IL84_S	162+70.95	24.14 RT	STEEL PLATE BEAM GUARDRAIL
501	2023628.3952	2270420.1222	608.4792	JO_IL84_S	161+17.66	11.49 LT	PAVEMENT STATION NUMBER 130+00
502	2023532.4054	2270407.6707	606.8841	JO_IL84_S	160+21.90	26.30 LT	STEEL PLATE BEAM GUARDRAIL
503	2024102.4708	2270403.1087	608.3439	JO_IL84_S	165+92.01	16.70 LT	BRIDGE DECK
504	2024122.6087	2270436.1915	608.4063	JO_IL84_S	166+11.32	16.87 RT	BRIDGE DECK
505	2024124.6697	2270443.3423	606.6270	JO_IL84_S	166+13.21	24.07 RT	TOP OF WINGWALL

FILE NAME =	USER NAME = #USER*	DESIGNED - CV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING HORIZONTAL AND VERTICAL CONTROL IL 84 OVER TRIBUTARY TO APPLE RIVER	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL*	PLOT SCALE = #SCALE*	DRAWN - CV	REVISED -			308	103BR-3 & 104BR-1	JO DAVIESS	126	18	
	PLOT DATE = #DATE*	CHECKED - ST	REVISED -			CONTRACT NO. 64B26					
		DATE - 10-15-2010	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 160+00 TO STA. 172+00				

EXISTING HORIZONTAL & VERTICAL CONTROL



Chain JO_IL84_N contains:
1293 1282

Beginning chain JO_IL84_N description

Point 1293 N 2,037,772.0405 E 2,264,444.1770 Sta 330+95.7445

Course from 1293 to 1282 359° 46' 18.9603" Dist 8,654.3518

Point 1282 N 2,046,426.3237 E 2,264,409.7283 Sta 417+50.0963

Ending chain JO_IL84_N description

BENCH MARK

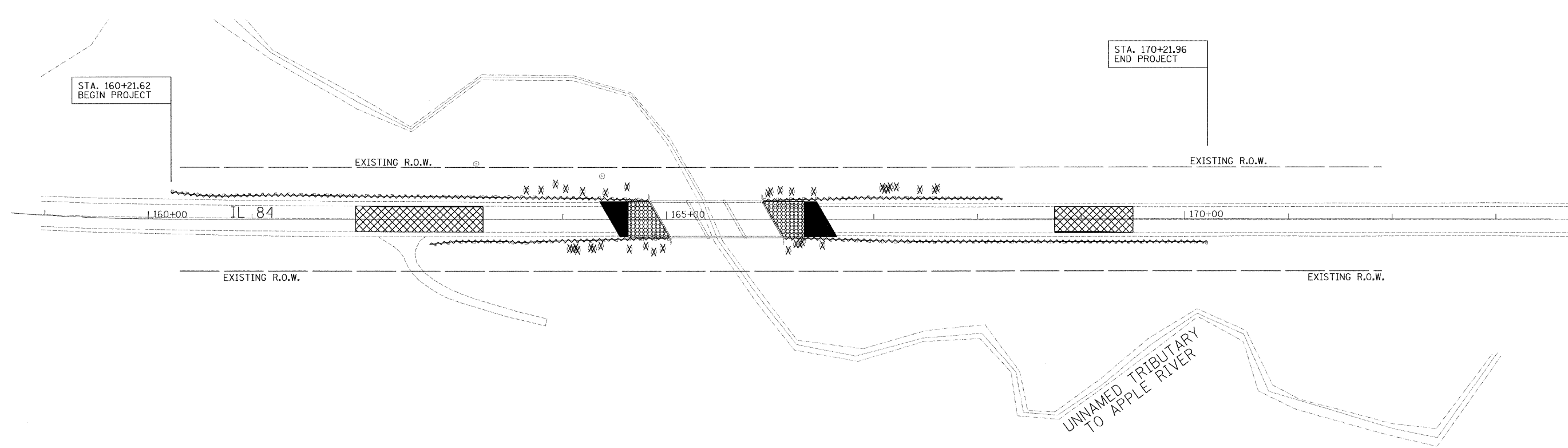
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
407	2038310.0771	2264424.9274	629.5858	JO_IL84_N	336+33.86	17.11 LT	TOP OF ABUTMENT AT DUKE CREEK

HORIZONTAL CONTROL POINTS






POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
7	2038085.8602	2264413.0916	627.7504	JO_IL84_N	334+09.69	29.84 LT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
8	2038612.9322	2264422.2874	631.4107	JO_IL84_N	339+36.72	18.54 LT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT

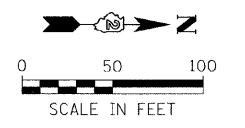
REFERENCE TIES

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
524	2037987.5290	2264393.5009	627.0952	JO_IL84_N	333+11.43	49.82 LT	POWER POLE
525	2038087.4003	2264419.7693	628.6965	JO_IL84_N	334+11.20	23.15 LT	STEEL PLATE BEAM GUARDRAIL
526	2038125.0815	2264464.1673	628.9473	JO_IL84_N	334+48.70	21.40 RT	STEEL PLATE BEAM GUARDRAIL
527	2038574.9105	2264418.3278	630.4315	JO_IL84_N	338+98.71	22.65 LT	STEEL PLATE BEAM GUARDRAIL
528	2038512.7474	2264462.7601	630.0320	JO_IL84_N	338+36.37	21.53 RT	STEEL PLATE BEAM GUARDRAIL
529	2038628.1970	2264398.9933	631.3818	JO_IL84_N	339+52.07	41.78 LT	POWER POLE

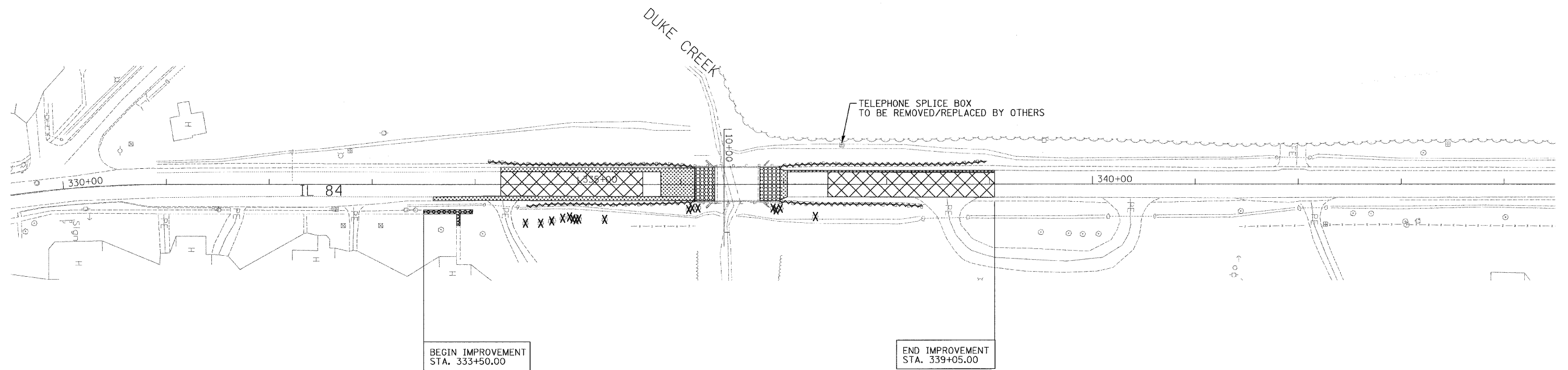


LEGEND







-  PAVEMENT REMOVAL
-  HMA SURFACE REMOVAL
-  APPROACH SLAB REMOVAL
-  GUARDRAIL REMOVAL
-  TREE REMOVAL

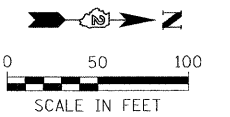


FILE NAME =	USER NAME = #USER*	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLAN IL 84 OVER TRIBUTARY TO APPLE RIVER			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL*		DRAWN - ST	REVISED -		308	103BR-3 & 104BR-1	JO DAVIESS	126	20			
	PLOT SCALE = #SCALE*	CHECKED - FML	REVISED -		SCALE: 1" = 50' SHEET NO. 1 OF 1 SHEETS STA. 159+00 TO STA. 173+00			CONTRACT NO. 64B26				
	PLOT DATE = #DATE*	DATE - 10-15-2010	REVISED -		ILLINOIS FED. AID PROJECT							

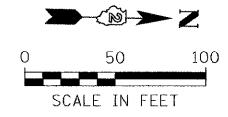


LEGEND FOR REMOVAL ITEMS:

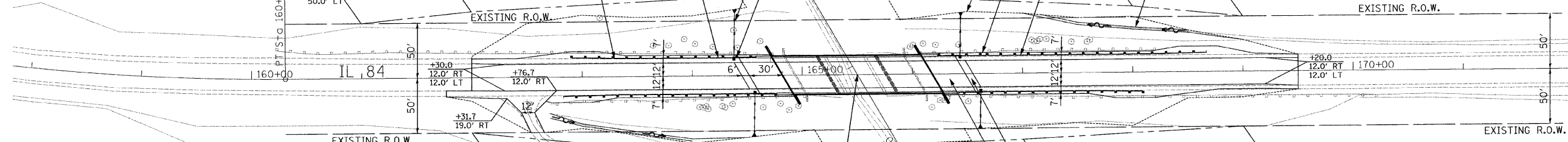
-  APPROACH SLAB REMOVAL
-  PAVEMENT REMOVAL
-  HMA SURFACE REMOVAL
-  GUARD RAIL REMOVAL
-  SIDEWALK REMOVAL
-  TREE REMOVAL



FILE NAME =	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLAN IL-84 OVER DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - SEW	REVISED -		308	103BR-3 & 104BR-1	JO DAVIESS	126	21			
	PLOT SCALE = #SCALE#	CHECKED - FML	REVISED -		CONTRACT NO. 64B26							
	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -		ILLINOIS FED. AID PROJECT							
				SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 330+00 TO STA. 344+00						



EXIST. CURVE 1360
 PI STA. = 158+49.08
 $\Delta = 9^{\circ} 56' 37''$ (LT)
 $D = 2^{\circ} 43' 48''$
 $R = 2,098.76'$
 $T = 182.58'$
 $L = 364.24'$
 $E = 7.93'$
 $e = \dots$
 $T.R. = \dots$
 $S.E. RUN = \dots$
 P.C. STA. = 156+66.50
 P.T. STA. = 160+30.74



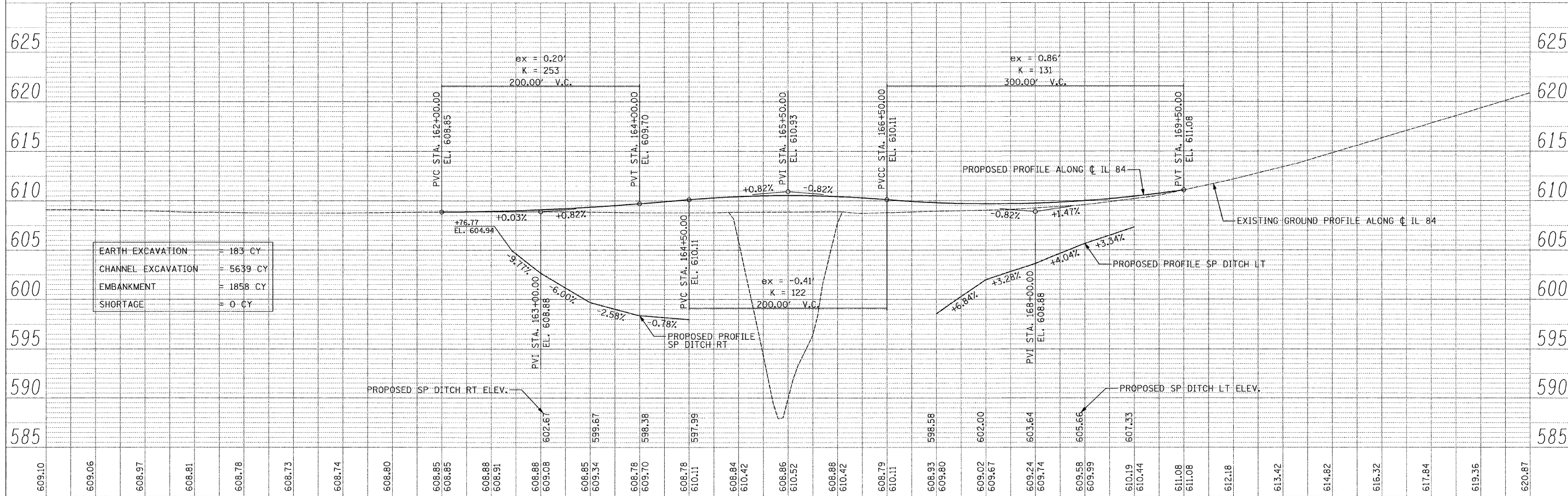
- PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A**
 163+33.15, TO 164+33.15, RT
 163+39.68, TO 164+14.68, LT
 166+66.85, TO 168+16.85, LT
 166+85.32, TO 167+60.32, RT
- PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT**
 162+83.15, TO 163+33.15, RT
 162+89.68, TO 163+39.68, LT
 167+60.32, TO 168+10.32, RT
 168+16.85, TO 168+66.85, LT
- PROPOSED TRAFFIC BARRIER TERMINAL TYPE 6**
 164+14.68, TO 164+58.43, LT
 164+33.15, TO 164+76.90, RT
 166+23.10, TO 166+66.85, LT
 166+41.57, TO 166+85.32, RT

PR. S.N. 043-0078 ϕ IL 84 -
 STA. 165+50.00 = ϕ TRIB. STA. 00+91.11

HOT-MIX ASPHALT CURB
 164+36.58 TO 164+42.58 LT
 164+55.54 TO 164+61.54 RT
 166+38.46 TO 166+44.46 LT
 166+57.42 TO 166+63.42 RT
 (TO BE PLACED ADJACENT TO APPROACH SLAB)

DATE	BY	
	DATE	
PLAN	SURVEYED	
	ALIGNED	
NOTE BOOK NO.	RT. OF WAY CHECKED	
	PROP. FILE NAME	

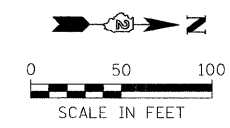
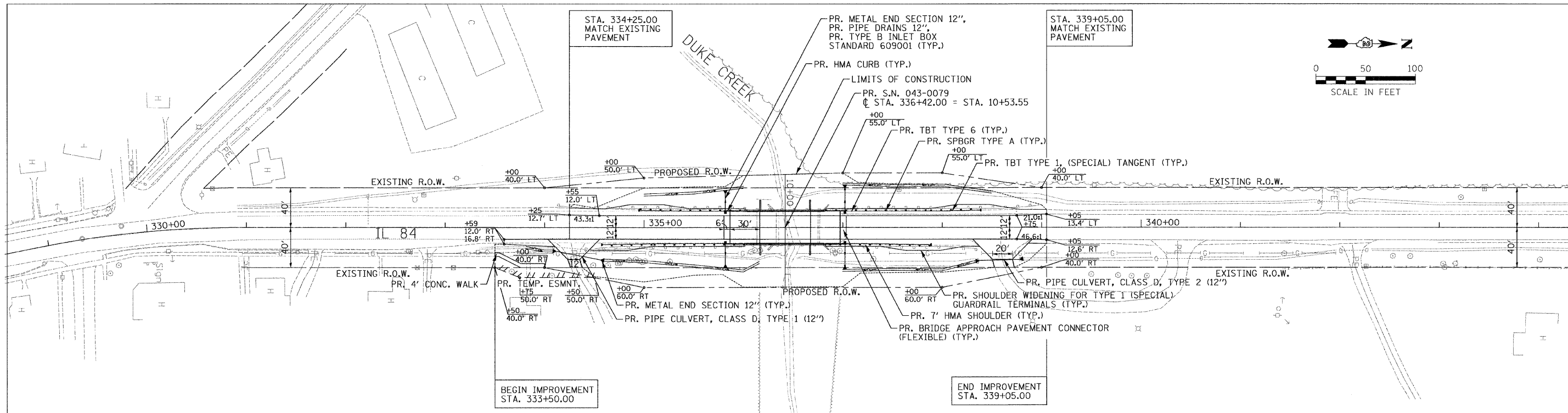
DATE	BY	
	DATE	
PROFILE	SURVEYED	
	GRADES CHECKED	
NOTE BOOK NO.	WAL. NOTED	
	STRUCTURE NOTATIONS CHFD	



FILE NAME =	USER NAME = #USER#	DESIGNED - ST	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE IL 84 OVER TRIBUTARY TO APPLE RIVER		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - ST	REVISED -		308	103BR-3 & 104BR-1	JO DAVIESS	126	22			
		CHECKED - FML	REVISED -		SCALE: 1" = 50'		SHEET NO. 1 OF 1 SHEETS		STA. 161+76.73 TO STA. 169+50.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 64B26
		PLOT DATE = #DATE#	REVISED -									

PLAN	SURVEYED	DATE
	ALIGNED	
	NOTED	
	CHECKED	
	BY	
	NO.	
	FILE NAME	

PROFILE	SURVEYED	DATE
	GRADES	
	NOTED	
	CHECKED	
	BY	
	NO.	
	FILE NAME	



PR. TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)
 STA. 334+95.85, TO STA. 335+45.85, LT
 STA. 337+88.15, TO STA. 338+38.15, LT
 STA. 334+58.35, TO STA. 335+08.35, RT
 STA. 337+38.15, TO STA. 337+88.15, RT

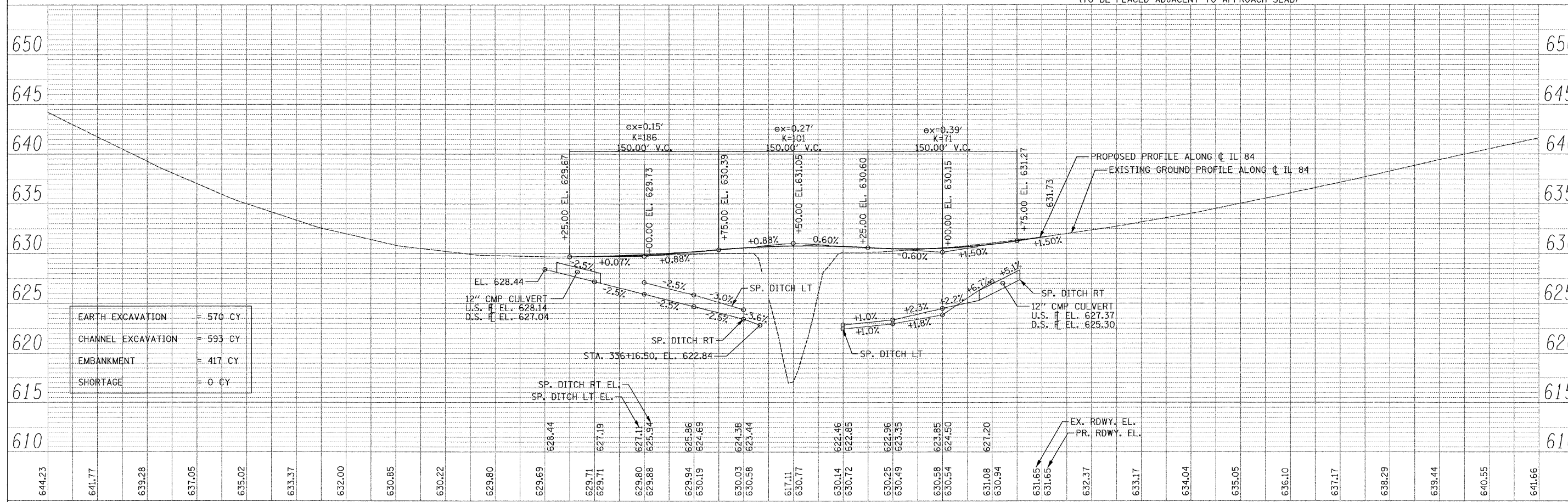
PR. STEEL PLATE BEAM GUARD RAIL, TYPE A
 STA. 335+45.85, TO STA. 335+58.35, LT
 STA. 337+25.65, TO STA. 337+88.15, LT
 STA. 335+08.35, TO STA. 335+58.35, RT
 STA. 337+25.65, TO STA. 337+38.15, RT

PR. TRAFFIC BARRIER TERMINAL, TYPE 6
 STA. 335+58.35, TO STA. 336+01.50, LT
 STA. 336+82.50, TO STA. 337+25.65, LT
 STA. 335+58.35, TO STA. 336+01.50, RT
 STA. 336+82.50, TO STA. 337+25.65, RT

PR. 4' WIDE CONCRETE SIDEWALK
 STA. 333+50.00, 25.0' - 29.0' RT
 STA. 333+54.00, 25.0' - 29.0' RT
 STA. 333+76.00, 36.0' - 40.0' RT
 STA. 334+00.00, 36.0' - 40.0' RT

HOT-MIX ASPHALT CURB
 STA. 335+80.50 TO STA. 335+86.50 RT
 STA. 335+80.50 TO STA. 335+86.50 LT
 STA. 336+97.50 TO STA. 337+03.50 RT
 STA. 336+97.50 TO STA. 337+03.50 LT
 (TO BE PLACED ADJACENT TO APPROACH SLAB)











PR. PIPE CULVERT, CLASS D, TYPE 1, 12"
 STA. 334+12.00, 24.1' RT TO STA. 334+56.00, 32.1' RT
 PR. PIPE CULVERT, CLASS D, TYPE 2, 12"
 STA. 338+37.00, 33.1' RT TO STA. 338+78.00, 32.2' RT



EARTH EXCAVATION	= 570 CY
CHANNEL EXCAVATION	= 593 CY
EMBANKMENT	= 417 CY
SHORTAGE	= 0 CY

FILE NAME =	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE IL 84 OVER DUKE CREEK		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - SEW	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 333+50.00 TO STA. 339+15.00	308	103BR-3 & 104BR-1	JO DAVIESS	126	23
		CHECKED - FML	REVISED -		CONTRACT NO. 64B26							
		DATE - 10-15-2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

LEGEND

-  WORK AREA
-  IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW)
-  TYPE III BARRICADE
-  TEMPORARY CONCRETE BARRIER
-  DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT (PER HWY. STD. 701321-10)
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

PRESTAGE CONSTRUCTION:

1. CONSTRUCT TEMPORARY PAVEMENT ON SHOULDER FROM STA. 160+55 TO STA. 164+88 RT AND STA. 166+25 TO STA. 170+66 RT IN ACCORDANCE WITH HIGHWAY STANDARD 701326 AND AS SHOWN IN THE PLANS.

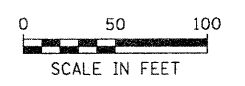
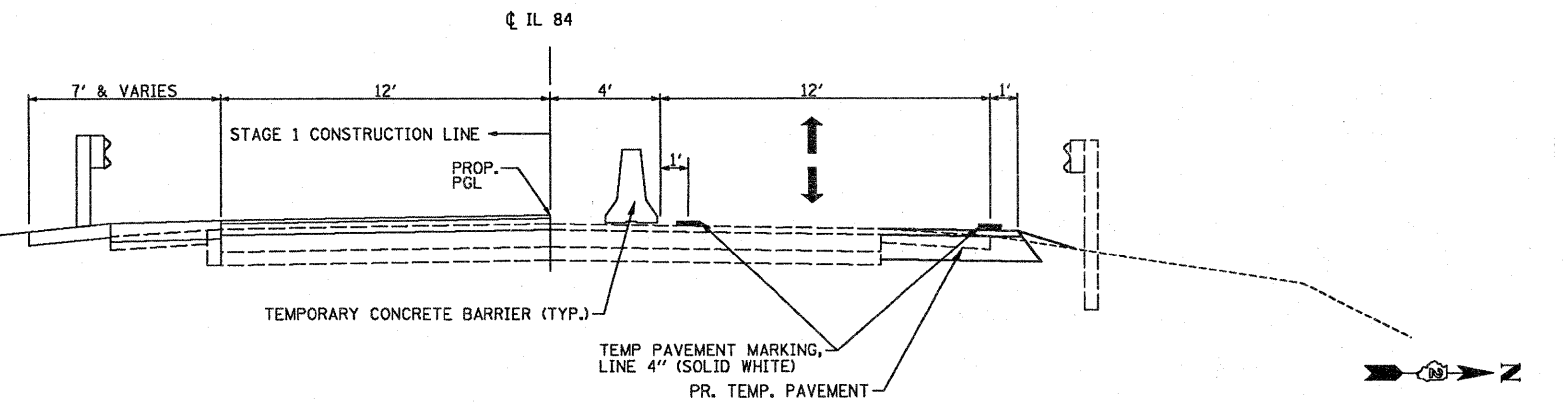
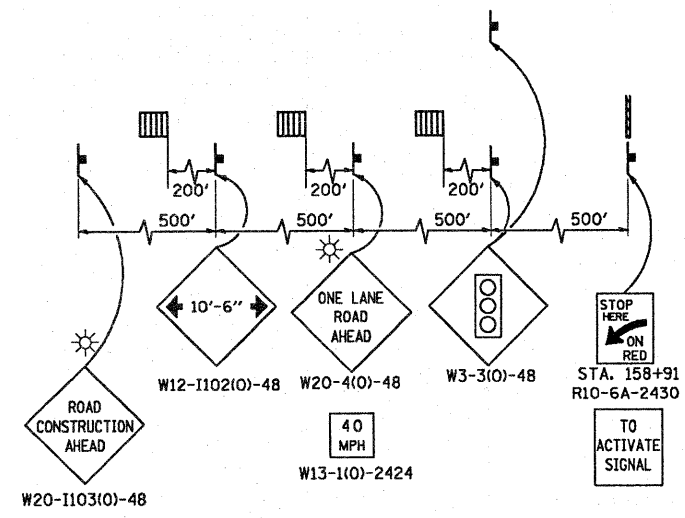
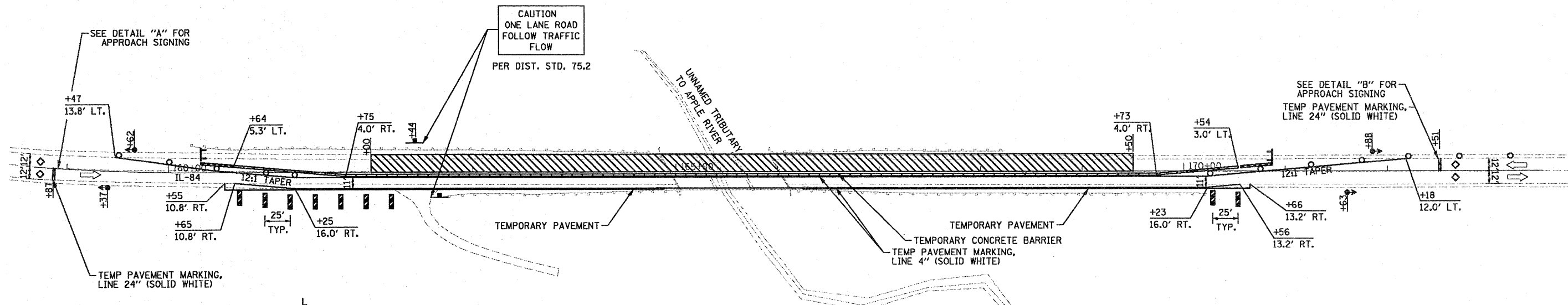
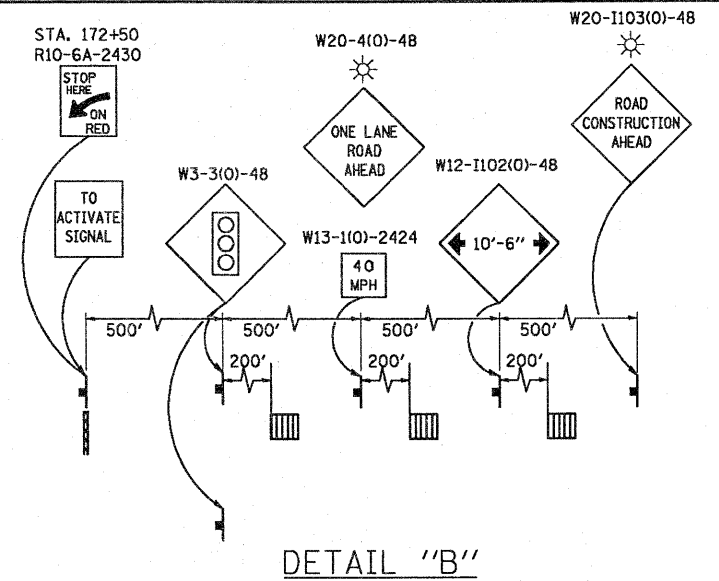
STAGE I CONSTRUCTION

1. REMOVE CONFLICTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS.
2. CLOSE WEST HALF OF IL-84 IN ACCORDANCE WITH HIGHWAY STANDARD 701321 AND AS SHOWN IN THE PLANS.
3. PERFORM WEST HALF STRUCTURAL AND APPROACH ROADWAY RECONSTRUCTION AS SHOWN IN THE PLANS.
4. CONSTRUCT TEMPORARY PAVEMENT ON SHOULDER FROM STA. 160+91 TO STA. 162+00 LT AND STA. 169+20 TO STA. 170+73 LT.

NOTES:











1. SEE HIGHWAY STANDARD 701321 FOR PLACEMENT OF DEVICES, INFORMATION, ETC.
2. ACCESS TO BE MAINTAINED TO DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

SEQUENCE OF OPERATIONS						
PHASE	A	B	C	D	E	F
NORTHBOUND	G	Y	R	R	R	R
SOUTHBOUND	R	R	R	R	G	Y



FILE NAME = ...D464b26-sh1-staging1.dgn	USER NAME = Plotted by Scott Wilkinson	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PLAN - STAGE 1 IL-84 OVER TRIBUTARY TO APPLE RIVER	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1/8" = 100' / IN.	DRAWN - SEW	REVISED -			308	103BR-3 & 104BR-1	JO DAVIESS	126	24	
	PLOT DATE = 12/1/2010	CHECKED - FML	REVISED -			CONTRACT NO. 64B26					
	DATE = 10-15-2010	DATE - 10-15-2010	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS		STA. 159+00 TO STA. 173+00			

LEGEND

-  WORK AREA
-  IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW)
-  TYPE III BARRICADE
-  TEMPORARY CONCRETE BARRIER
-  DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT (PER HWY. STD. 701321-10)
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

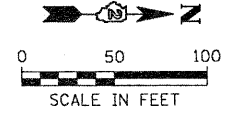
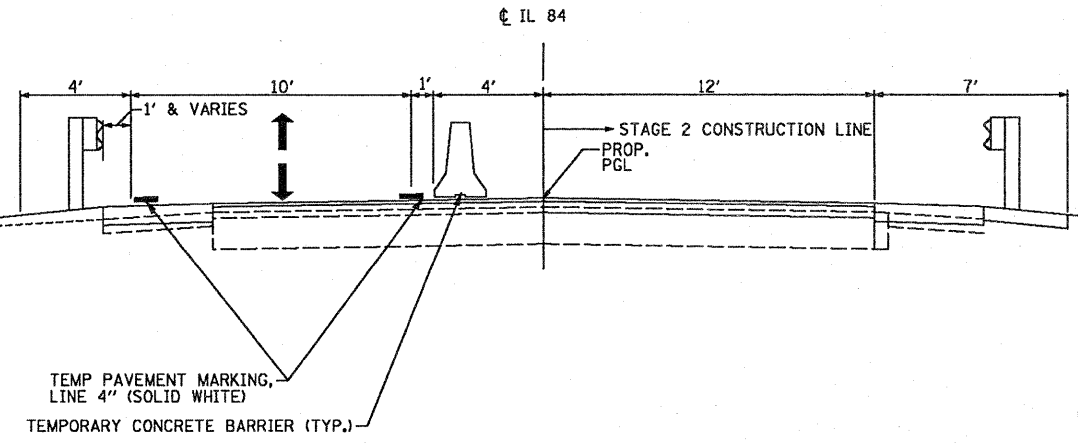
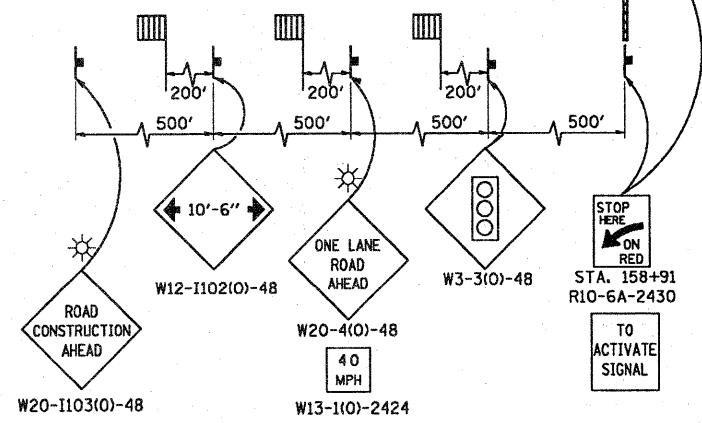
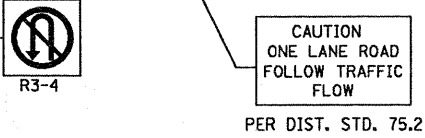
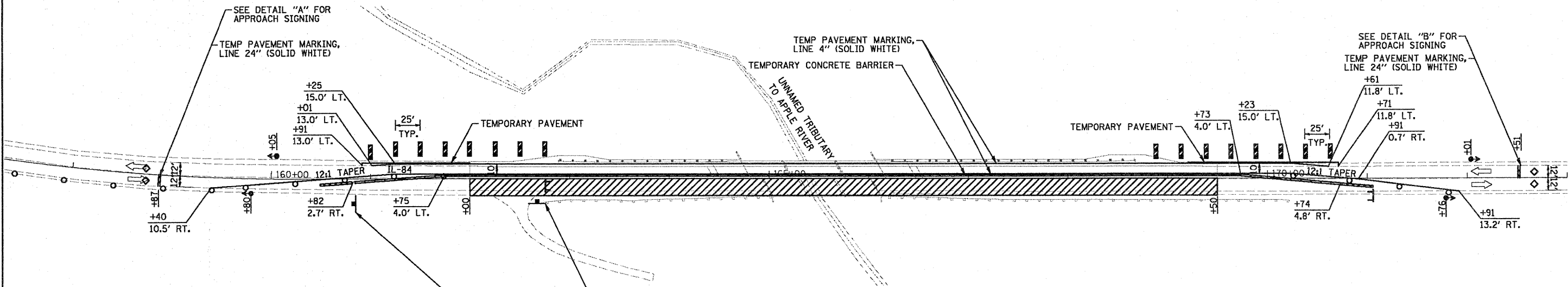
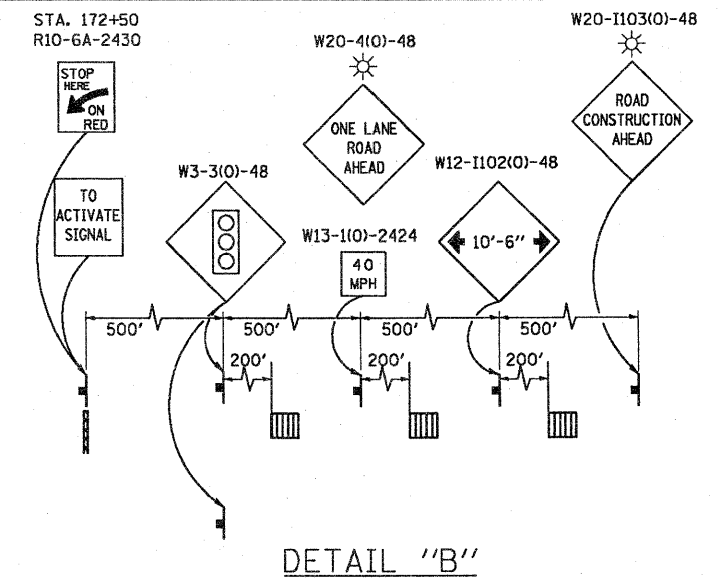
STAGE II CONSTRUCTION

1. CLOSE EAST HALF OF IL-84 IN ACCORDANCE WITH HIGHWAY STANDARD 701321 AND AS SHOWN IN THE PLANS.
2. PERFORM EAST HALF STRUCTURAL AND APPROACH ROADWAY RECONSTRUCTION AS SHOWN IN THE PLANS.
3. APPLY PERMANENT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS UNDER HIGHWAY STANDARD 701311.

NOTES:

1. SEE HIGHWAY STANDARD 701321 FOR PLACEMENT OF DEVICES, INFORMATION, ETC.
2. ACCESS TO BE MAINTAINED TO DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

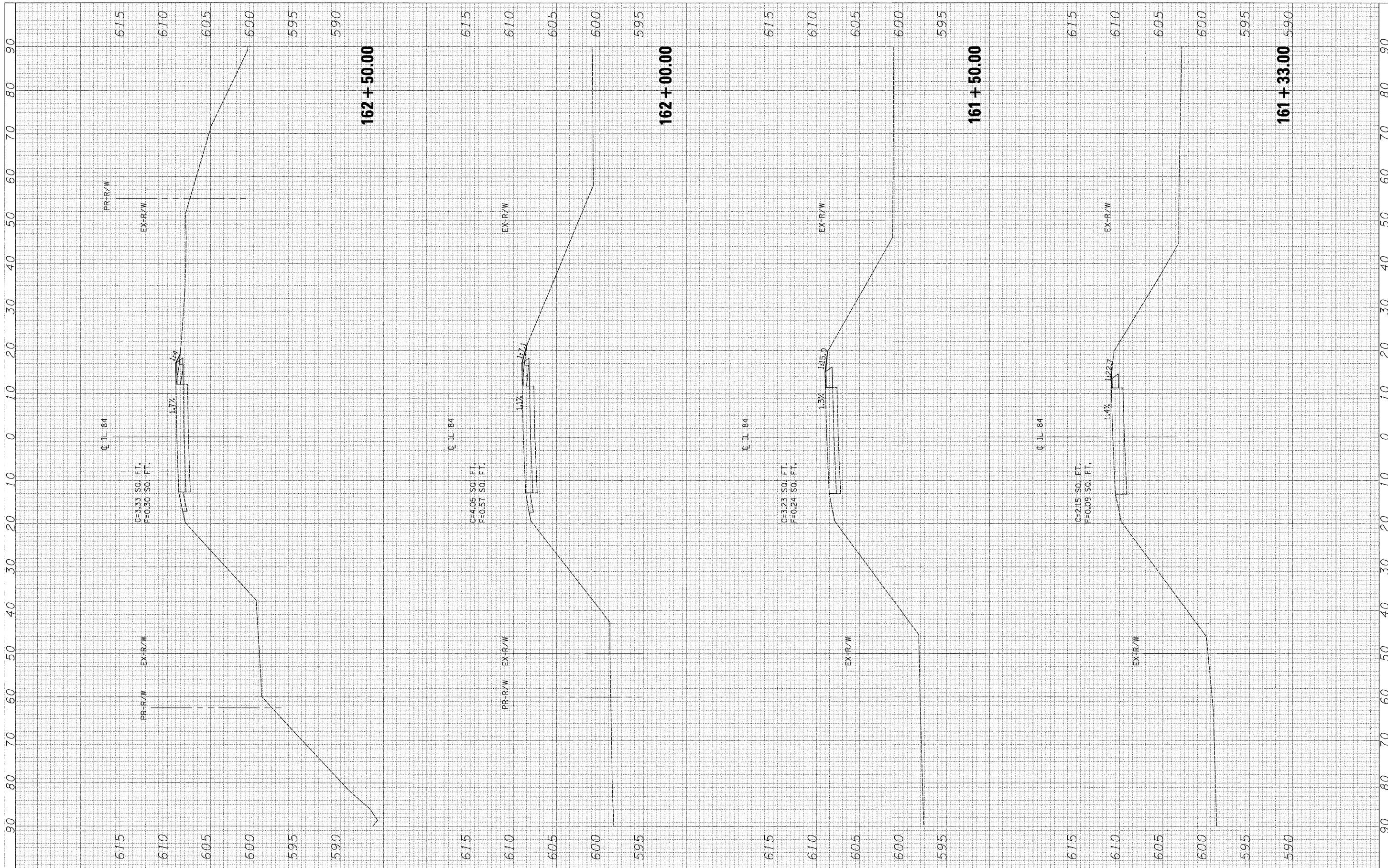
SEQUENCE OF OPERATIONS					
PHASE	A	B	C	D	E
INTERVAL	1	2	3	4	5
NORTHBOUND	G	Y	R	R	R
SOUTHBOUND	R	R	R	G	Y



FILE NAME = ...N0464b26-sht-staging2.dgn	USER NAME = Plotted by Scott Wilkinson	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PLAN - STAGE 2 IL-84 OVER TRIBUTARY TO APPLE RIVER			F.A.P. RTE. 308	SECTION 103BR-3 & 104BR-1	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 25
	PLOT SCALE = 1/8" = 10' / IN.	DRAWN - SEW	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 159+00 TO STA. 173+00	CONTRACT NO. 64B26		ILLINOIS FED. AID PROJECT		
	PLOT DATE = 12/1/2010	CHECKED - FML	REVISED -									
		DATE - 10-15-2010	REVISED -									

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

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



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PLOT DATE = #DATE*

DESIGNED SEW
DRAWN SEW
CHECKED FML
DATE 10-15-2010

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

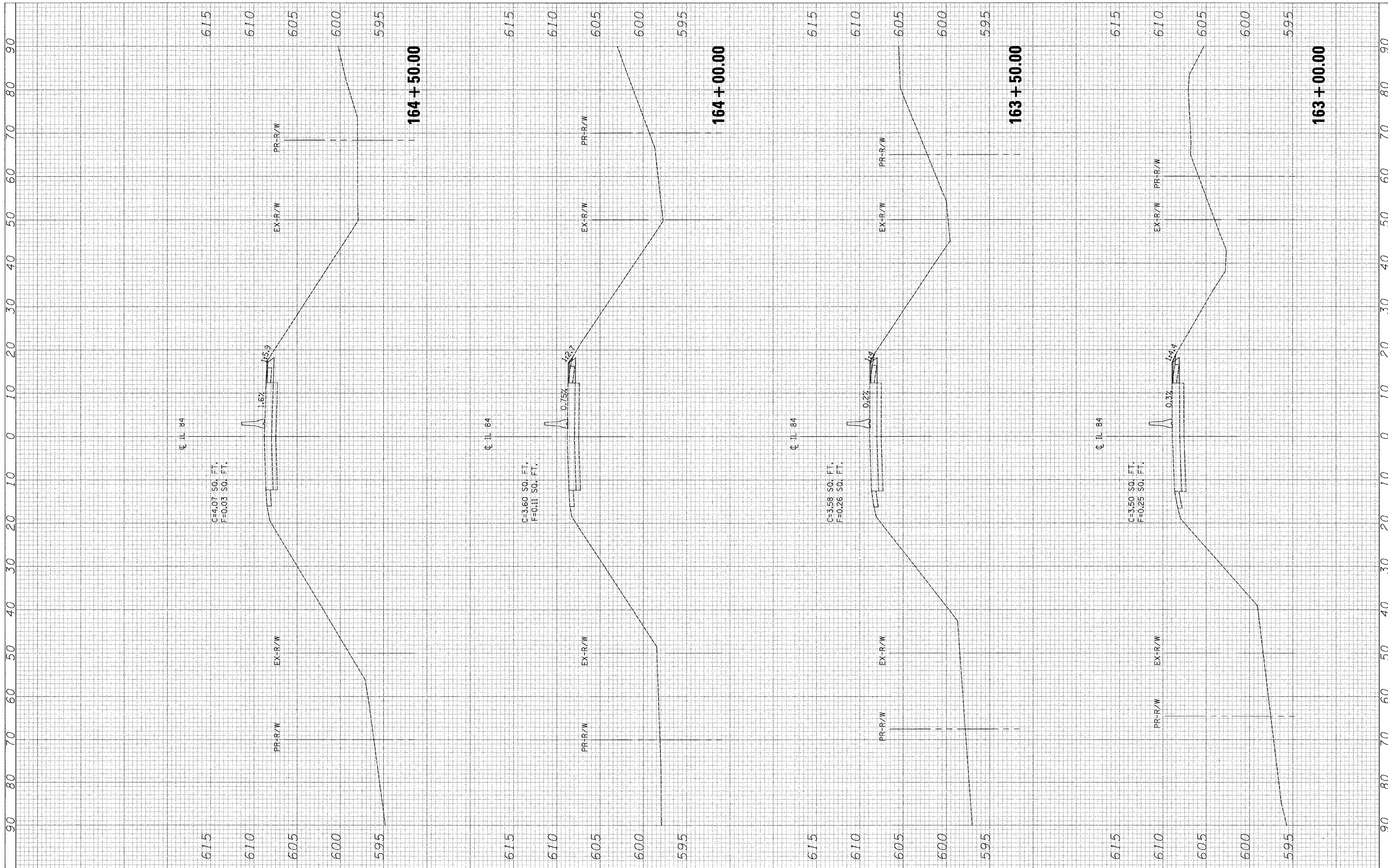
**MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER UNNAMED TRIBUTARY TO APPLE RIVER**

SCALE: 1"=10'H, 5'V SHEET NO. 1 OF 5 SHEETS STA. 616+33.00 TO STA. 162+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	26
CONTRACT NO. 64B26				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.		



FILE NAME =
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USER NAME = *USER*	DESIGNED SEW	REVISED -
	DRAWN SEW	REVISED -
PLOT SCALE = *SCALE*	CHECKED FML	REVISED -
PLOT DATE = *DATE*	DATE 10-15-2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

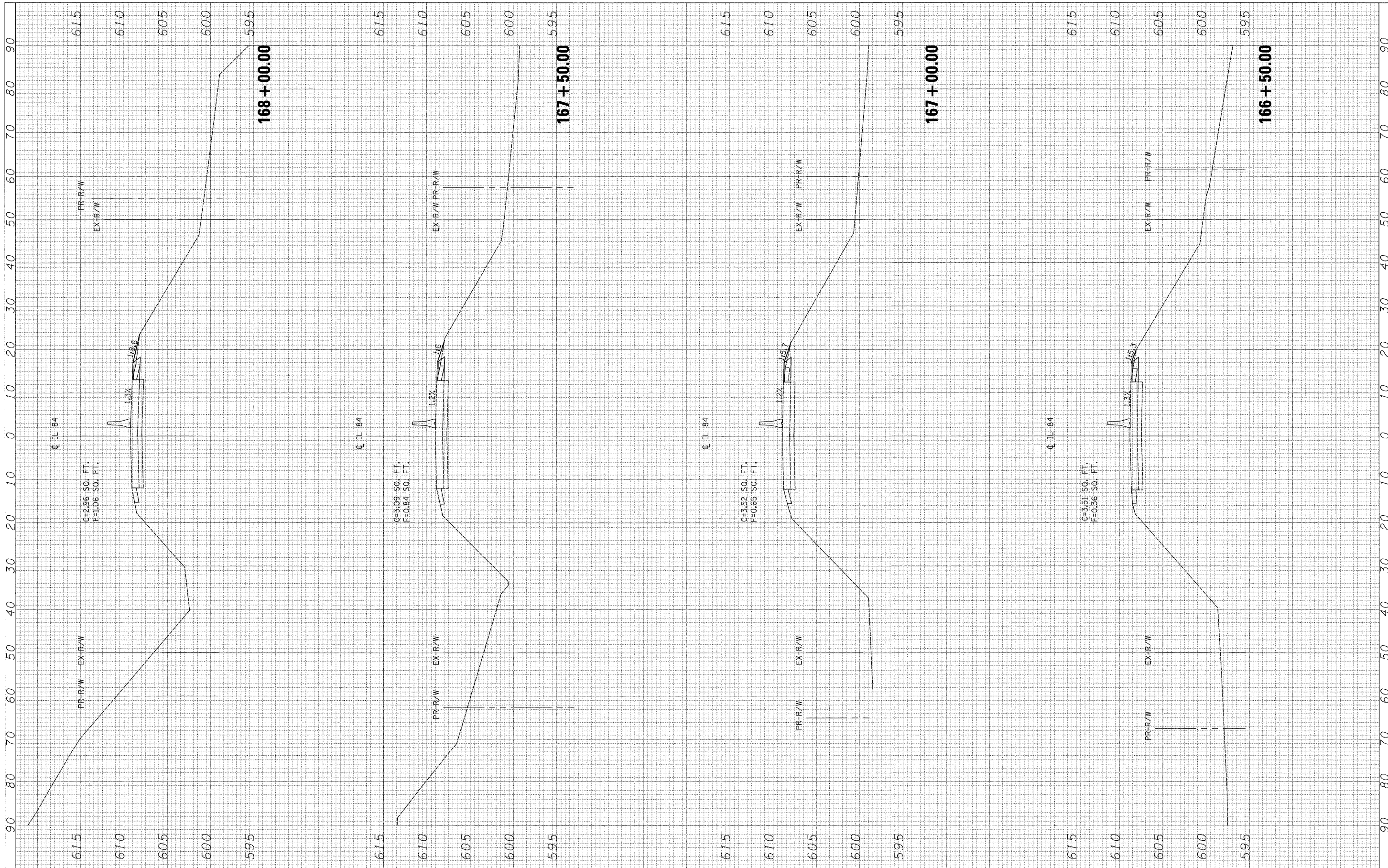
**MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER UNNAMED TRIBUTARY TO APPLE RIVER**

SCALE: 1"=10'H, 5'V SHEET NO. 2 OF 5 SHEETS STA. 163+00.00 TO STA. 164+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	27
CONTRACT NO. 64B26				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

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

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



FILE NAME =
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PLOT SCALE = *SCALE*
PLOT DATE = *DATE*

DESIGNED SEW
DRAWN SEW
CHECKED FML
DATE 10-15-2010

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER UNNAMED TRIBUTARY TO APPLE RIVER

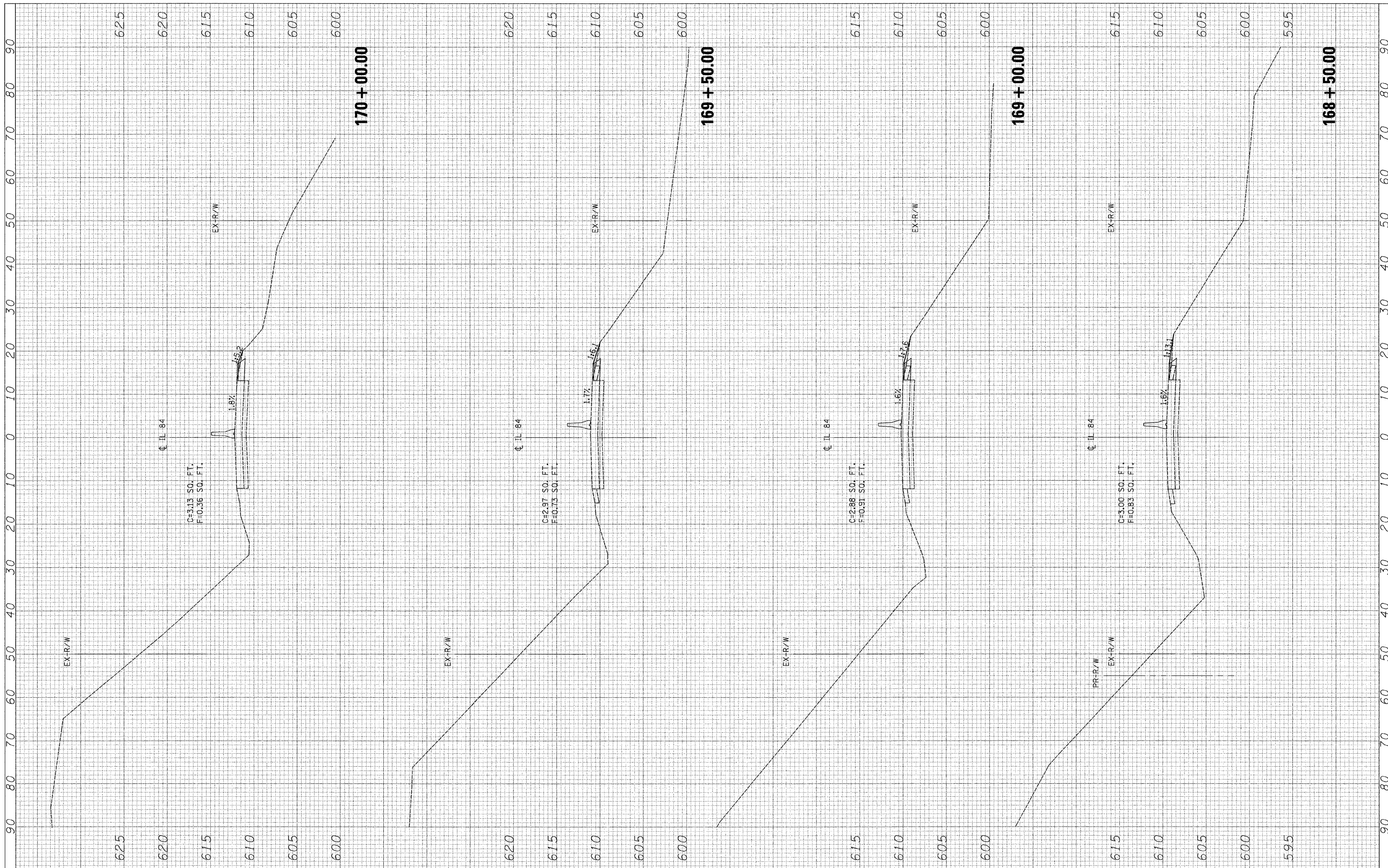
SCALE: 1"=10'H, 5'V SHEET NO. 3 OF 5 SHEETS STA. 166+50.00 TO STA. 168+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	28
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 64B26

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

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



FILE NAME = *FILEL*

USER NAME = *USER*

DESIGNED SEW

DRAWN SEW

CHECKED FML

DATE 10-15-2010

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

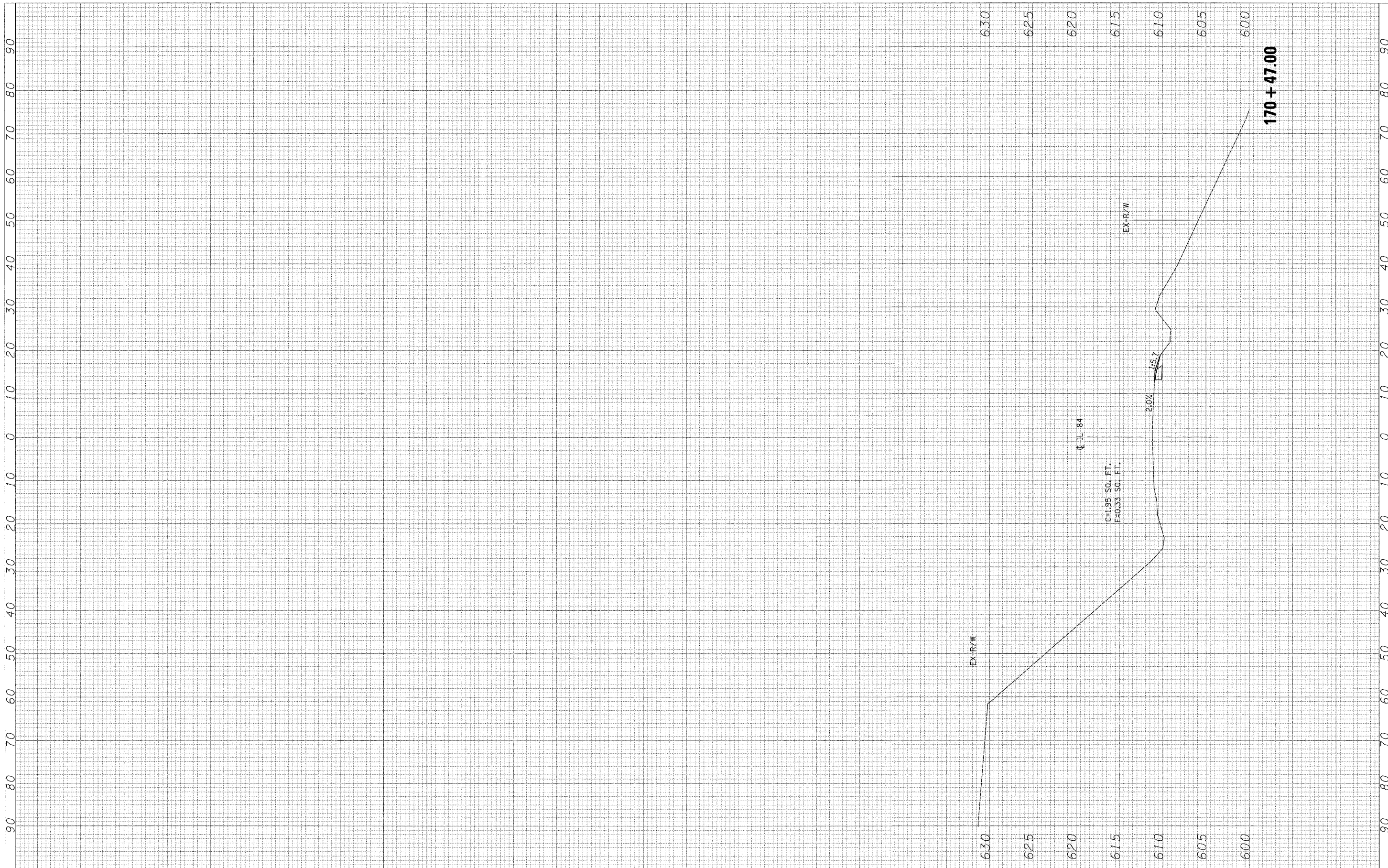
MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER UNNAMED TRIBUTARY TO APPLE RIVER

SCALE: 1"=10'H, 5'V SHEET NO. 4 OF 5 SHEETS STA. 168+50.00 TO STA. 170+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	29
CONTRACT NO. 64B26				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

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

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



FILE NAME =
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USER NAME = #USER#	DESIGNED SEW	REVISED -
PLOT SCALE = #SCALE#	DRAWN SEW	REVISED -
PLOT DATE = #DATE#	CHECKED FML	REVISED -
	DATE 10-15-2010	REVISED -











**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER UNNAMED TRIBUTARY TO APPLE RIVER**

SCALE: 1"=10'H, 5'V SHEET NO. 5 OF 5 SHEETS STA. 170+47.00 TO STA. 170+47.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	30
CONTRACT NO. 64B26				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

LEGEND

-  WORK AREA
-  IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW)
-  TYPE III BARRICADE
-  TEMPORARY CONCRETE BARRIER
-  DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT (PER HWY. STD. 701321-10)
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

PRESTAGE CONSTRUCTION:

1. CONSTRUCT TEMPORARY PAVEMENT ON SHOULDER FROM STA. 336+97 TO STA. 340+65 RT IN ACCORDANCE WITH HIGHWAY STANDARD 701326 AND AS SHOWN IN THE PLANS.

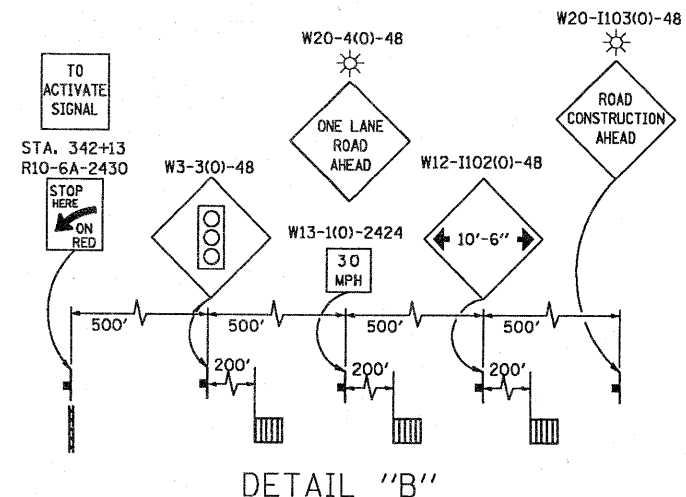
STAGE I CONSTRUCTION:

1. REMOVE CONFLICTING EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS.
2. CLOSE WEST HALF OF IL-84 IN ACCORDANCE WITH HIGHWAY STANDARD 701321 AND AS SHOWN IN THE PLANS.
3. PERFORM WEST HALF STRUCTURAL AND APPROACH ROADWAY RECONSTRUCTION AS SHOWN IN THE PLANS.
4. CONSTRUCT TEMPORARY PAVEMENT ON SHOULDER FROM STA. 339+05 TO STA. 340+24 LT.

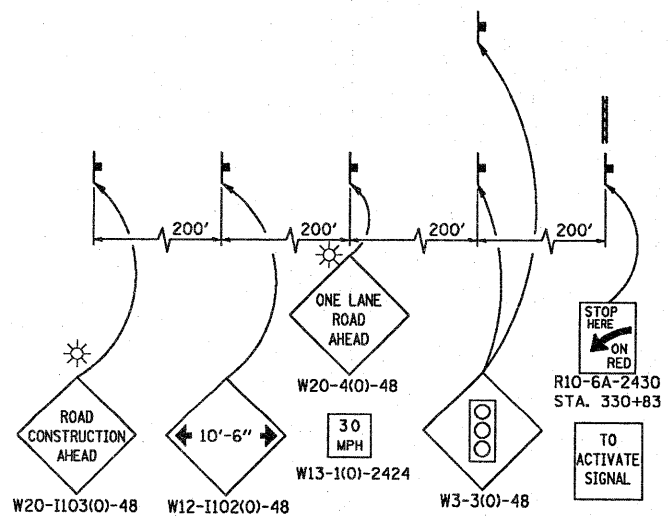
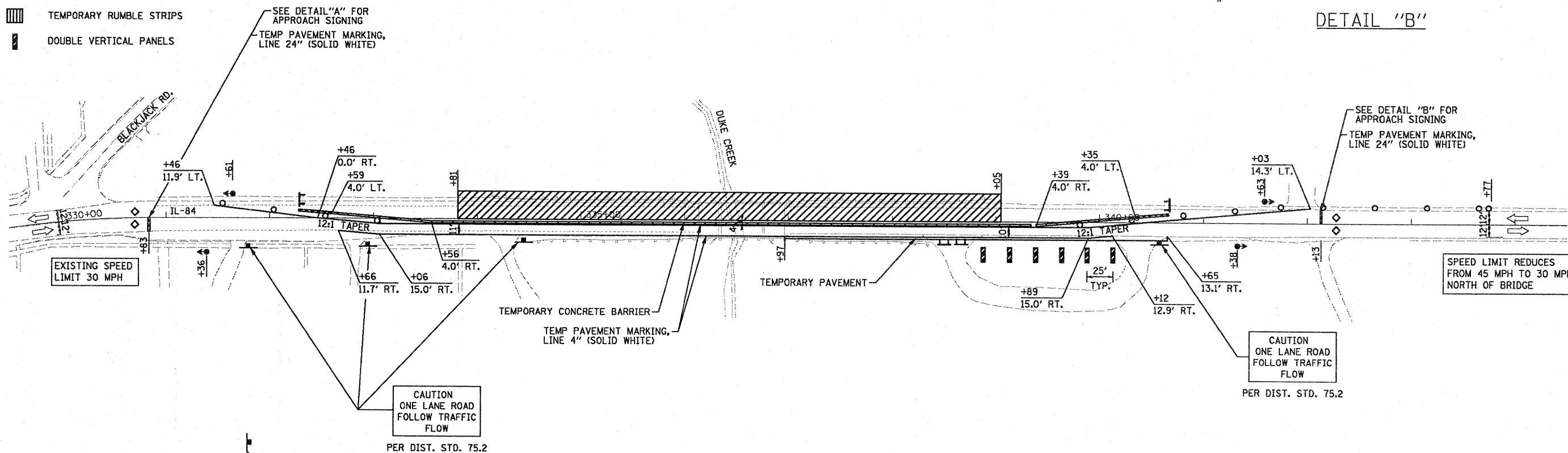
NOTES:

1. SEE HIGHWAY STANDARD 701321 FOR PLACEMENT OF DEVICES, INFORMATION, ETC.
2. ACCESS TO BE MAINTAINED TO DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

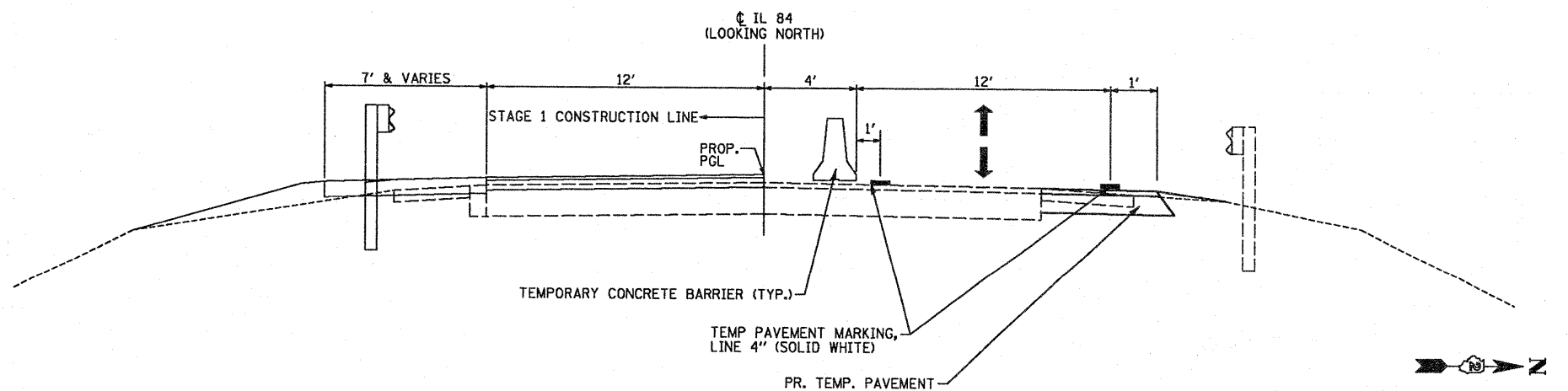
SEQUENCE OF OPERATIONS					
PHASE	A	B	C	D	E
INTERVAL 1	2	3	4	5	6
NORTHBOUND	G	Y	R	R	R
SOUTHBOUND	R	R	R	G	Y



DETAIL "B"













DETAIL "A"



FILE NAME = ...ND264b26-shr-staging.dgn	USER NAME = Plotted by Scott Wilkinson	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PLAN - STAGE 1 IL-84 OVER DUKE CREEK		F.A.P. RTE. 308	SECTION 103BR-3 & 104BR-1	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 31	
PLT SCALE = 1/8" = 10' / IN.	PLT DATE = 12/1/2010	DRAWN - SEW	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 330+00 TO STA. 343+00	CONTRACT NO. 64B26		ILLINOIS FED. AID PROJECT		
		CHECKED - FML	REVISED -									
		DATE - 10-15-2010	REVISED -									

LEGEND

-  WORK AREA
-  IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW)
-  TYPE III BARRICADE
-  TEMPORARY CONCRETE BARRIER
-  DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT (PER HWY. STD. 701321-10)
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

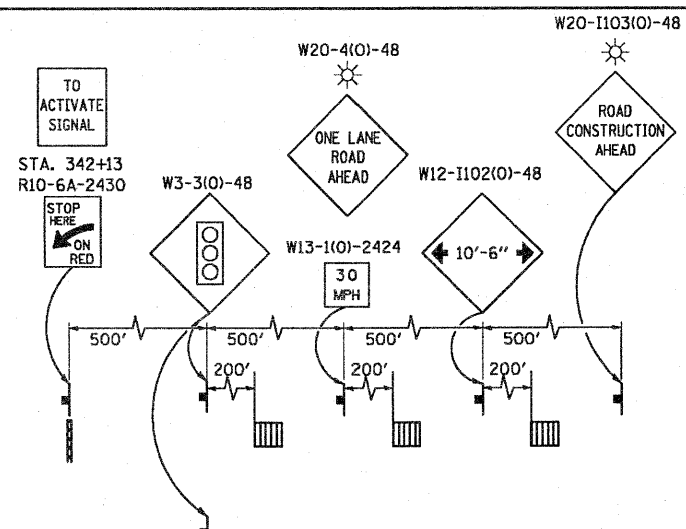
STAGE II CONSTRUCTION:

1. CLOSE EAST HALF OF IL-84 IN ACCORDANCE WITH HIGHWAY STANDARD 701321 AND AS SHOWN IN THE PLANS.
2. PERFORM EAST HALF STRUCTURAL AND APPROACH ROADWAY RECONSTRUCTION AS SHOWN IN THE PLANS.
3. APPLY PERMANENT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS UNDER HIGHWAY STANDARD 701311.

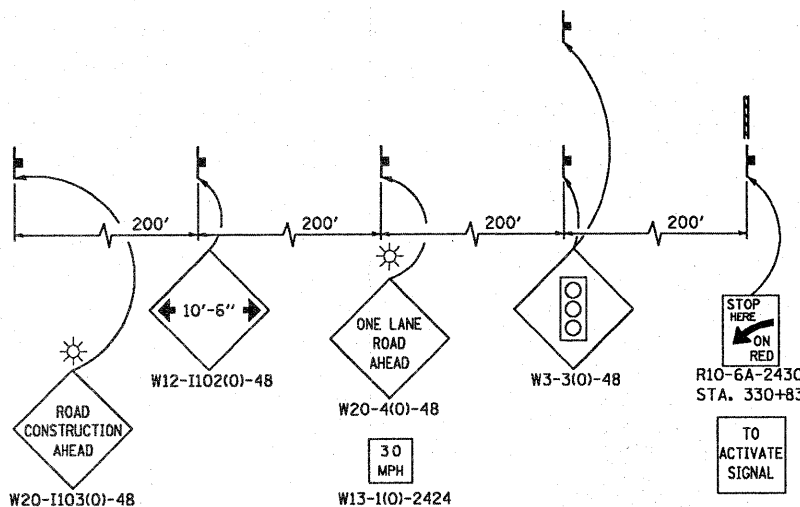
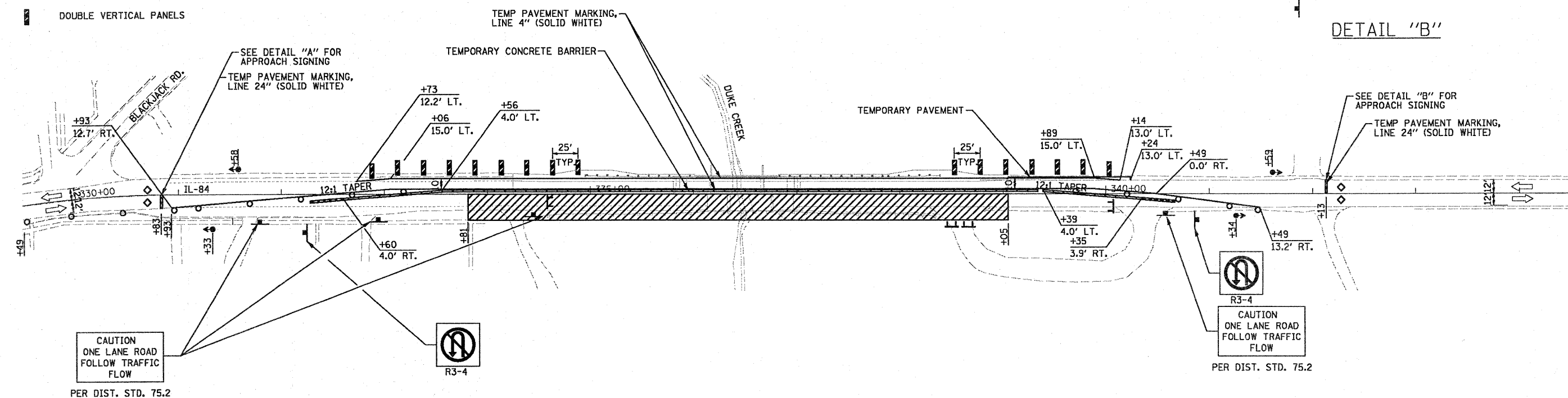
NOTES:

1. SEE HIGHWAY STANDARD 701321 FOR PLACEMENT OF OTHER DEVICES, INFORMATION, ETC.
2. ACCESS TO BE MAINTAINED TO DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

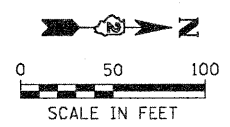
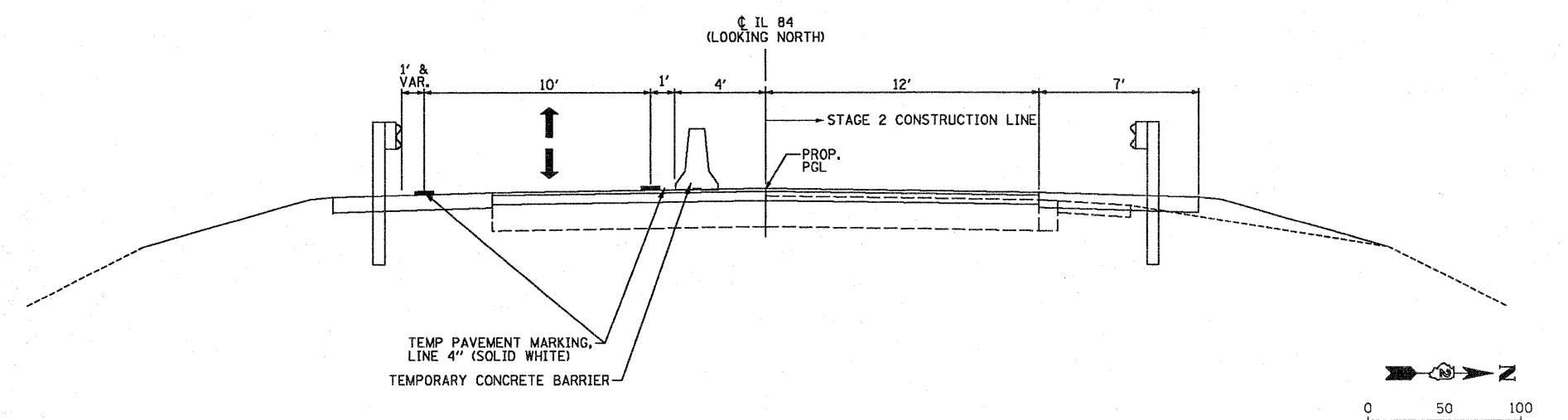
SEQUENCE OF OPERATIONS					
PHASE	A	B	C	D	E
INTERVAL	1	2	3	4	5
NORTHBOUND	G	Y	R	R	R
SOUTHBOUND	R	R	R	G	Y



DETAIL "B"



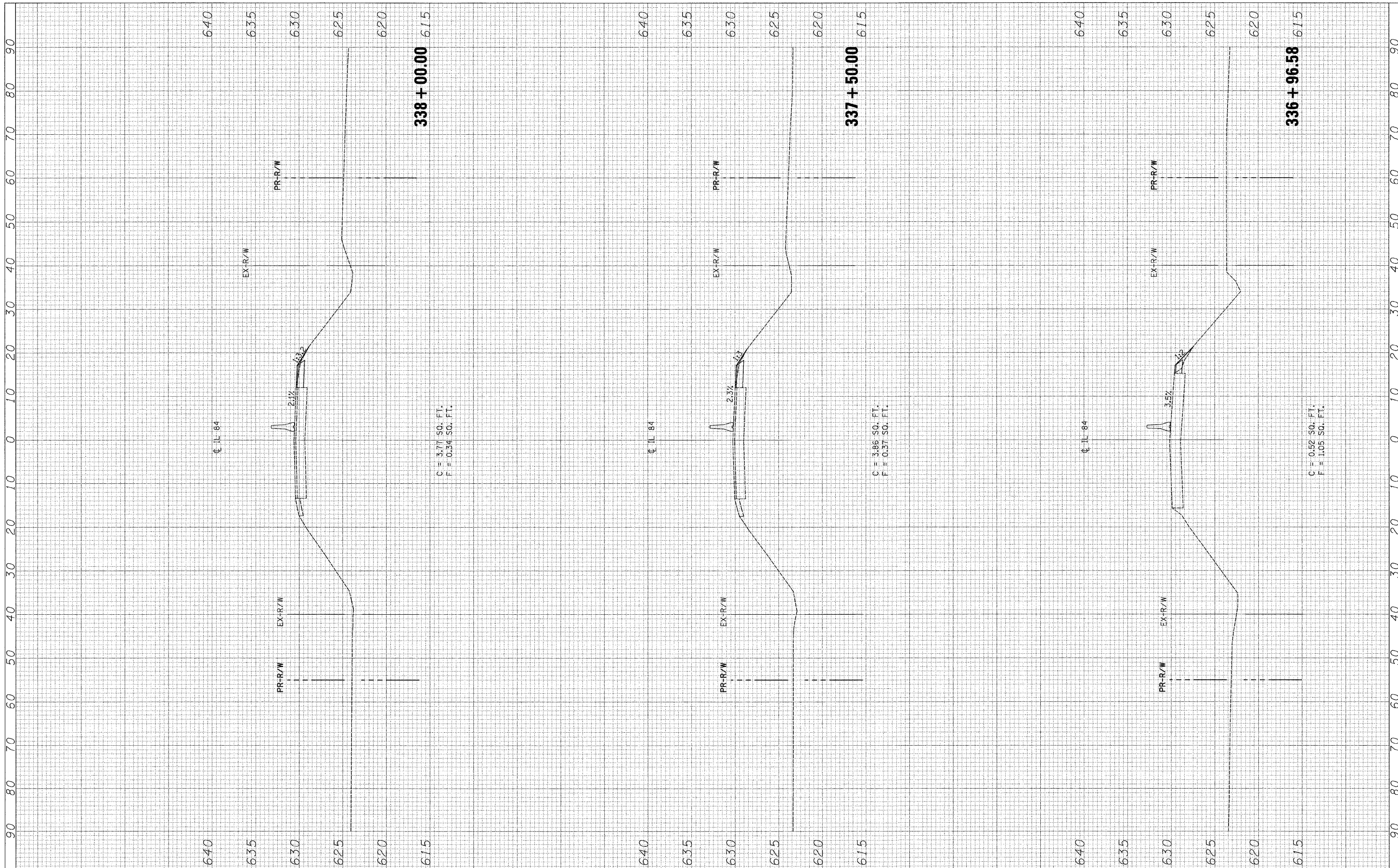
DETAIL "A"



FILE NAME = ...ND264b26-shr-staging2.dgn	USER NAME = Plotted by Scott Wilkinson	DESIGNED - SEW	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PLAN - STAGE 2 IL-84 OVER DUKE CREEK			F.A.P. RTE. 308	SECTION 103BR-3 & 104BR-1	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 32
	PLOT SCALE = 1/8" = 100' / IN.	DRAWN - SEW	REVISIONS -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 330+00 TO STA. 343+00	CONTRACT NO. 64B26		ILLINOIS FED. AID PROJECT		
	PLOT DATE = 12/1/2010	CHECKED - FML	REVISIONS -									
		DATE - 10-15-2010	REVISIONS -									

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

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



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PLOT SCALE = *SCALE*

PLOT DATE = *DATE*

DESIGNED - SEW	REVISED -
DRAWN - SEW	REVISED -
CHECKED - FML	REVISED -
DATE - 10-15-2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

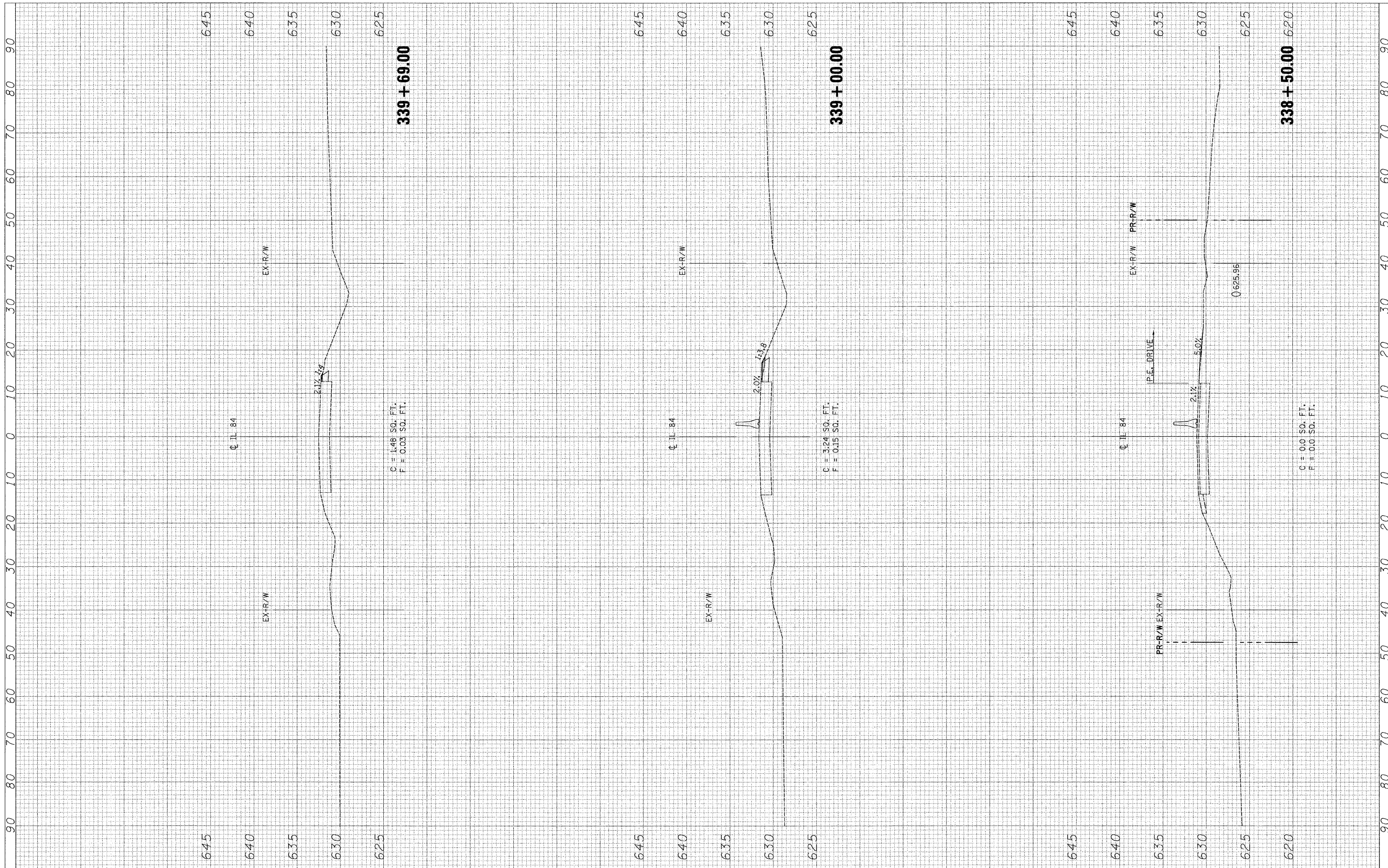
**MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER DUKE CREEK**

SCALE: 1"=10'H, 5'V SHEET NO. 1 OF 2 SHEETS STA. 336+96.58 TO STA. 338+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	33
CONTRACT NO. 64B26				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

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

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



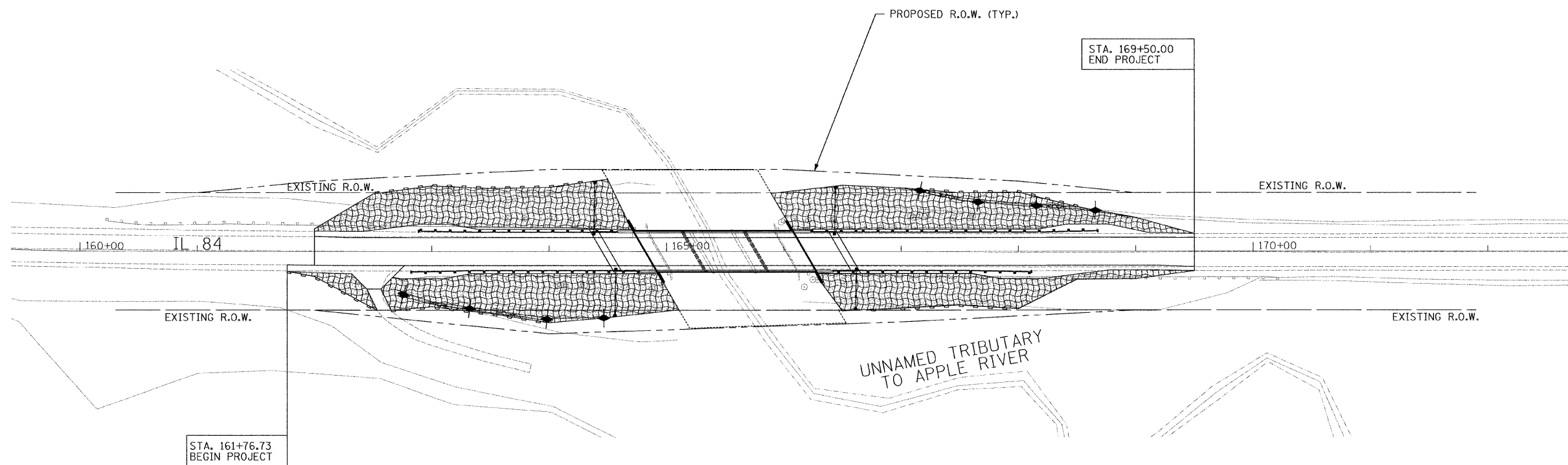
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	PLOT SCALE = #SCALE*	CHECKED - FML	REVISED -
	PLOT DATE = #DATE*	DATE - 10-15-2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - CROSS SECTIONS
IL 84 OVER DUKE CREEK
SCALE: 1"=10'H, 5'V SHEET NO. 2 OF 2 SHEETS
STA. 338+50.00 TO STA. 339+58.84

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-3 & 104BR-1	JO DAVIESS	126	34
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

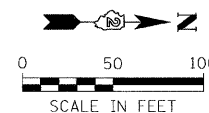
CONTRACT NO. 64B26



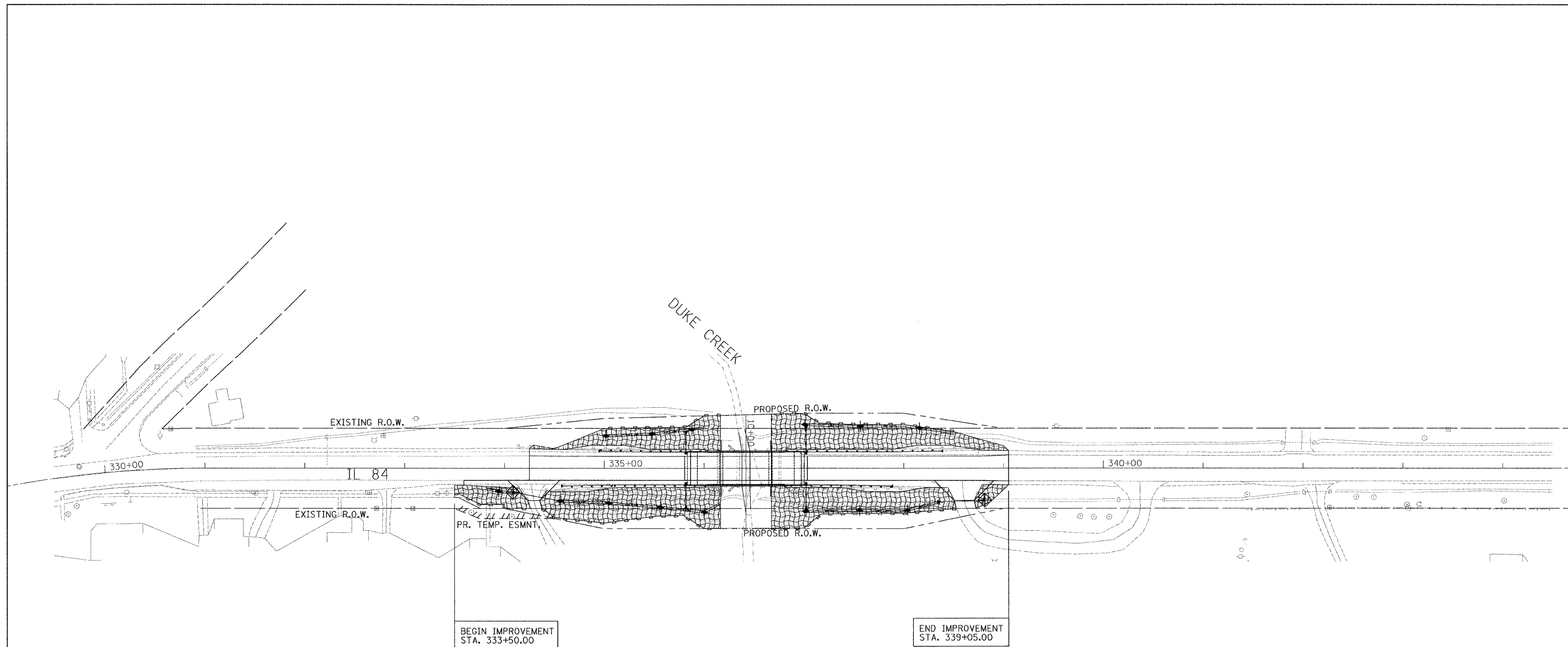
LEGEND

- ◆ AGGREGATE DITCH CHECK
- PERIMETER EROSION BARRIER
- ▨ EROSION CONTROL BLANKET WITH SEEDING:
CLASS 2A ON FORESLOPES AND DITCH BOTTOMS
CLASS 4 ON BACKSLOPES

NOTE: DITCH CHECKS TO BE SPACED 50 FEET (TYP)







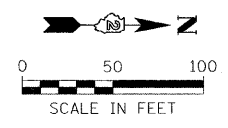
FILE NAME =	USER NAME = #USER#	DESIGNED - CRV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLAN IL 84 OVER TRIBUTARY TO APPLE RIVER			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - CRV	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 159+00 TO STA. 173+00	308	103BR-3 & 104BR-1	JO DAVIESS	126	35
		CHECKED - FML	REVISED -		CONTRACT NO. 64B26							
		DATE - 10-15-2010	REVISED -		ILLINOIS FED. AID PROJECT							



NOTE: DITCH CHECKS TO BE SPACED 50 FEET (TYP)

LEGEND

-  AGGREGATE DITCH CHECK
-  PERIMETER EROSION BARRIER
-  EROSION CONTROL BLANKET WITH SEEDING:
CLASS 2A ON FORESLOPES AND DITCH BOTTOMS
CLASS 4 ON BACKSLOPES
-  INLET & PIPE PROTECTION



FILE NAME =	USER NAME = #USER#	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLAN IL-84 OVER DUKE CREEK			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = #DATE#	DATE - 10-15-2010	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA. 330+00 TO STA. 344+00					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

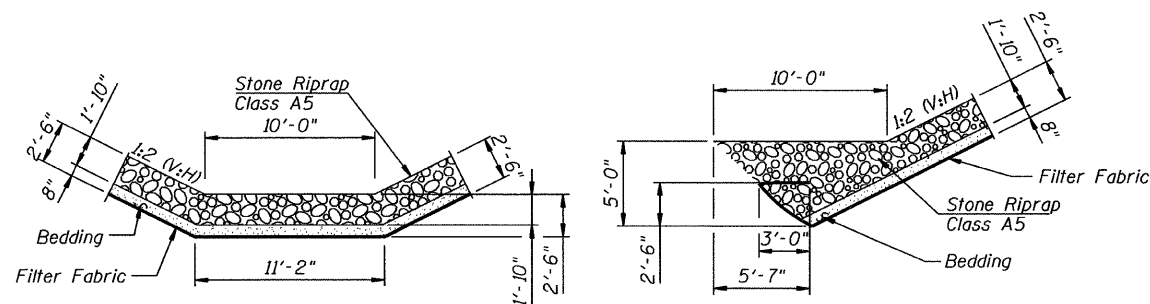
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	CU YD	-	133	133
Stone Riprap, Class A5	SQ YD	-	1,930	1,930
Filter Fabric	SQ YD	-	1,930	1,930
Removal of Existing Structures No. 1	EACH	-	-	1
Structure Excavation	CU YD	-	402	402
Concrete Structures	CU YD	24.1	162.1	186.2
Concrete Superstructure	CU YD	287.8	-	287.8
Bridge Deck Grooving	SQ YD	656	-	656
Concrete Encasement	CU YD	-	9.4	9.4
Protective Coat	SQ YD	845	-	845
Furnishing & Erecting Structural Steel	L. SUM	0.75	-	0.75
Stud Shear Connectors	EACH	2,508	-	2,508
Reinforcement Bars, Epoxy Coated	POUND	70,230	16,980	87,210
Bar Splicers	EACH	713	116	829
Furnishing Steel Piles HP12x63	FOOT	-	1,410	1,410
Driving Piles	FOOT	-	1,410	1,410
Test Pile Steel HP12x63	EACH	-	4	4
Pile Shoes	EACH	-	28	28
Temporary Sheet Piling	SQ FT	-	776	776
Name Plates	EACH	1	-	1
Anchor Bolts, 1"	EACH	48	-	48
Geocomposite Wall Drain	SQ YD	-	71	71
Pipe Underdrains for Structures 4"	FOOT	-	152	152
Underwater Structure Excavation Protection - Location 1	EACH	-	1	1
Underwater Structure Excavation Protection - Location 2	EACH	-	1	1
Asbestos Bearing Pad Removal	EACH	28	-	28

INDEX OF SHEETS

- SA1. GENERAL PLAN & ELEVATION
- SA2. GENERAL DATA
- SA3. CONSTRUCTION STAGING & TEMPORARY SHEET PILING
- SA4. TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- SA5. TOP OF DECK SLAB ELEVATIONS I
- SA6. TOP OF DECK SLAB ELEVATIONS II
- SA7. TOP OF SOUTH APPROACH SLAB ELEVATIONS
- SA8. TOP OF NORTH APPROACH SLAB ELEVATIONS
- SA9. DECK PLAN & CROSS SECTION
- SA10. PARAPET & DECK DETAILS
- SA11. DIAPHRAGMS AT ABUTMENTS
- SA12. BRIDGE APPROACH SLAB
- SA13. BRIDGE APPROACH SLAB DETAILS
- SA14. FRAMING PLAN & DIAPHRAGMS
- SA15. BEAM ELEVATION & TABLES
- SA16. BEARINGS
- SA17. ABUTMENTS
- SA18. PIERS
- SA19. HP PILES
- SA20. BAR SPLICER ASSEMBLY DETAILS
- SA21. CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURE
- SA22. BORING LOGS I
- SA23. BORING LOGS II
- SA24. ROCK CORE LOG
- SA25. BORING LOGS III

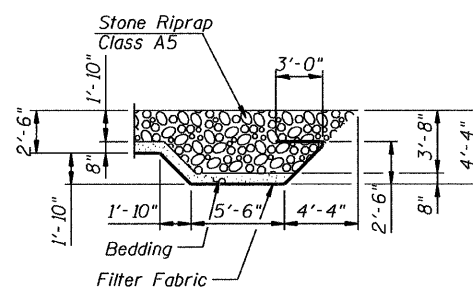
GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts are 7/8" diameter in 1/16" diameter holes unless otherwise noted.
- Calculated weight of Structural Steel = 78,110 lbs.
- All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designed 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.
- Structural steel shall be only painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The Contractor is advised that the existing structure contains members that are 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.
- Slipforming of the Parapets is not allowed.

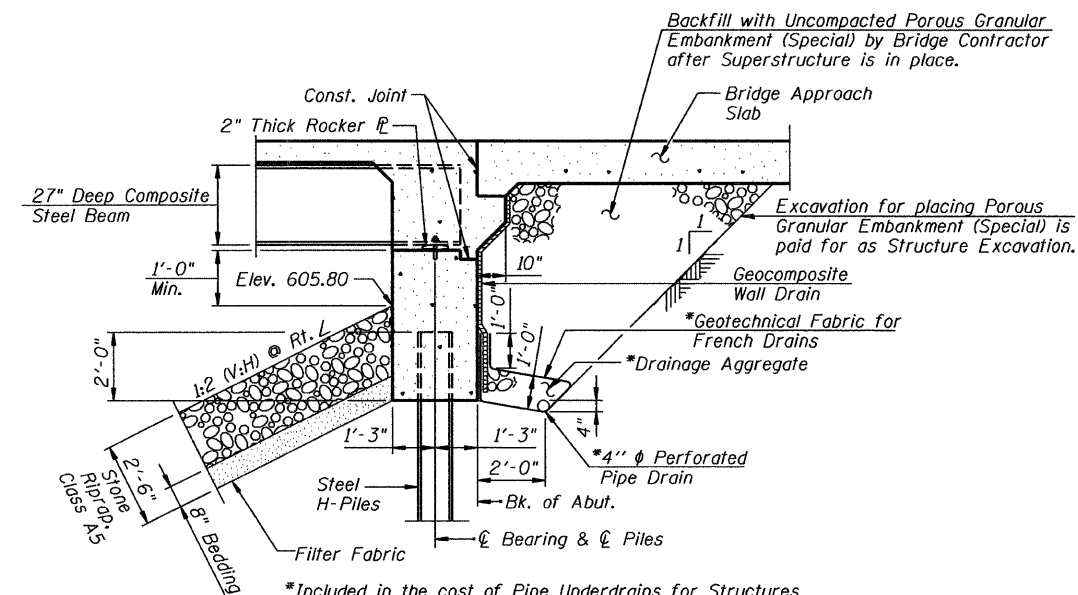


SECTION X-X

SECTION Y-Y

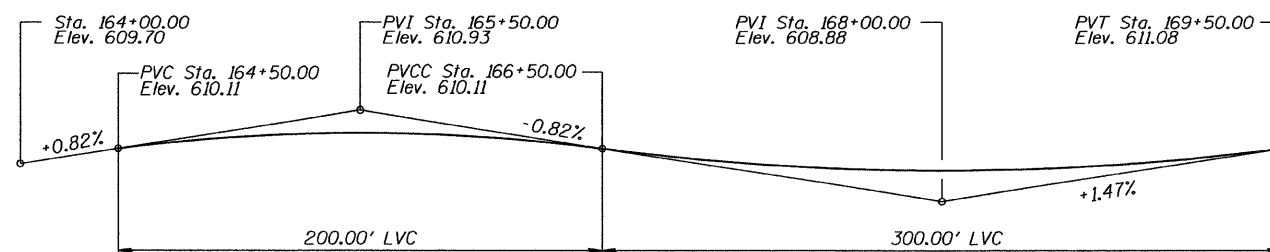


SECTION Z-Z



SECTION THRU INTEGRAL ABUTMENT

(Horiz. Dimensions. ● Rt. L's to ℄ of Bearing)



PROFILE GRADE LINE: ILLINOIS RTE. 84
Along ℄ Roadway

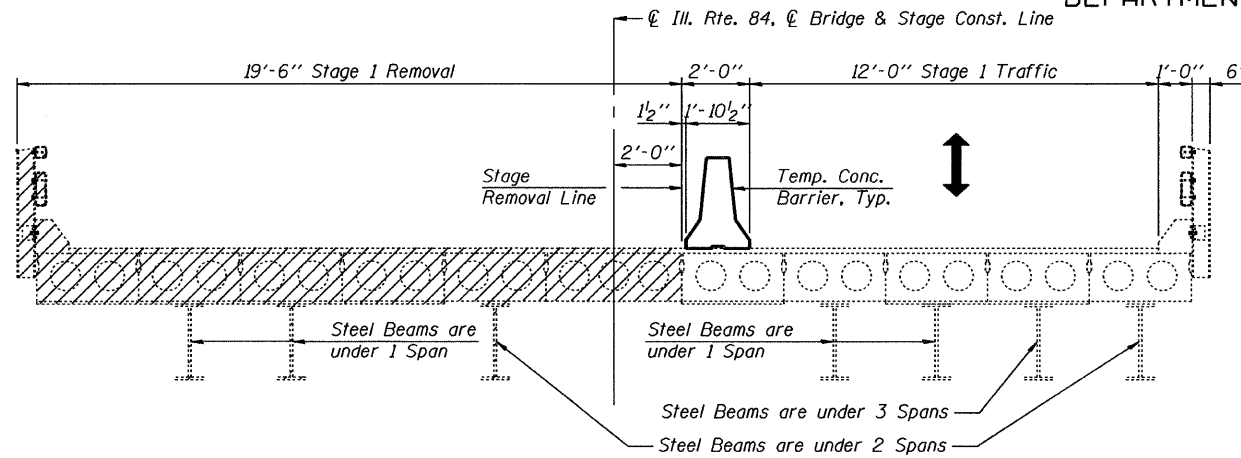
DESIGNED	J.J.G.
CHECKED	J.A.Z.
DRAWN	E.E.J.
CHECKED	J.J.G.

GENERAL DATA					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA2 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	38
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		

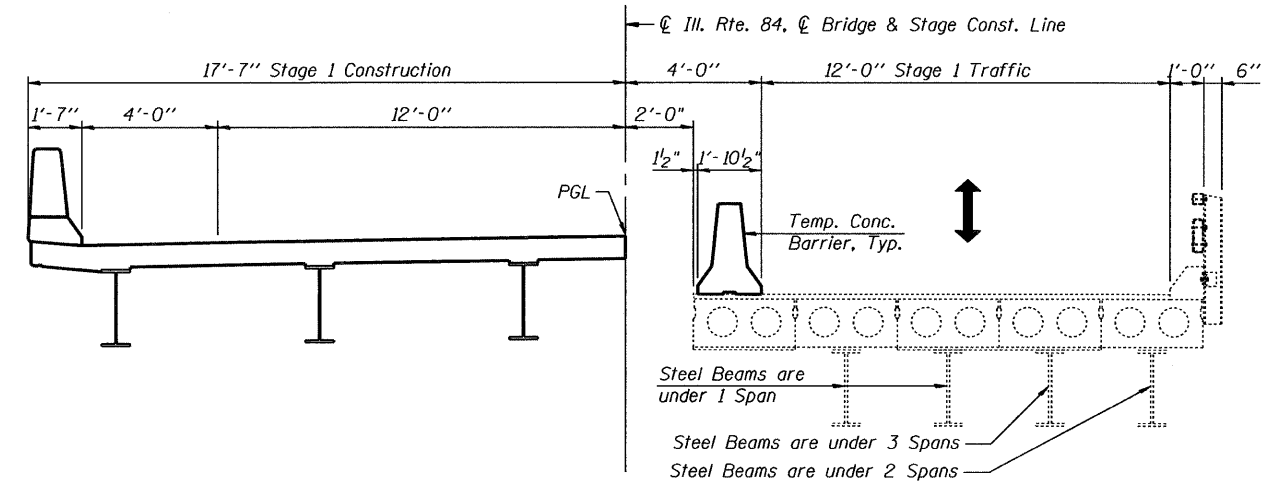
GR&EF 8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

\\s1\apps\2010\201003011\cadd\structural\1\sign\80\SA2\SAR2_GENERAL_NOTES.dgn 10/12/2010

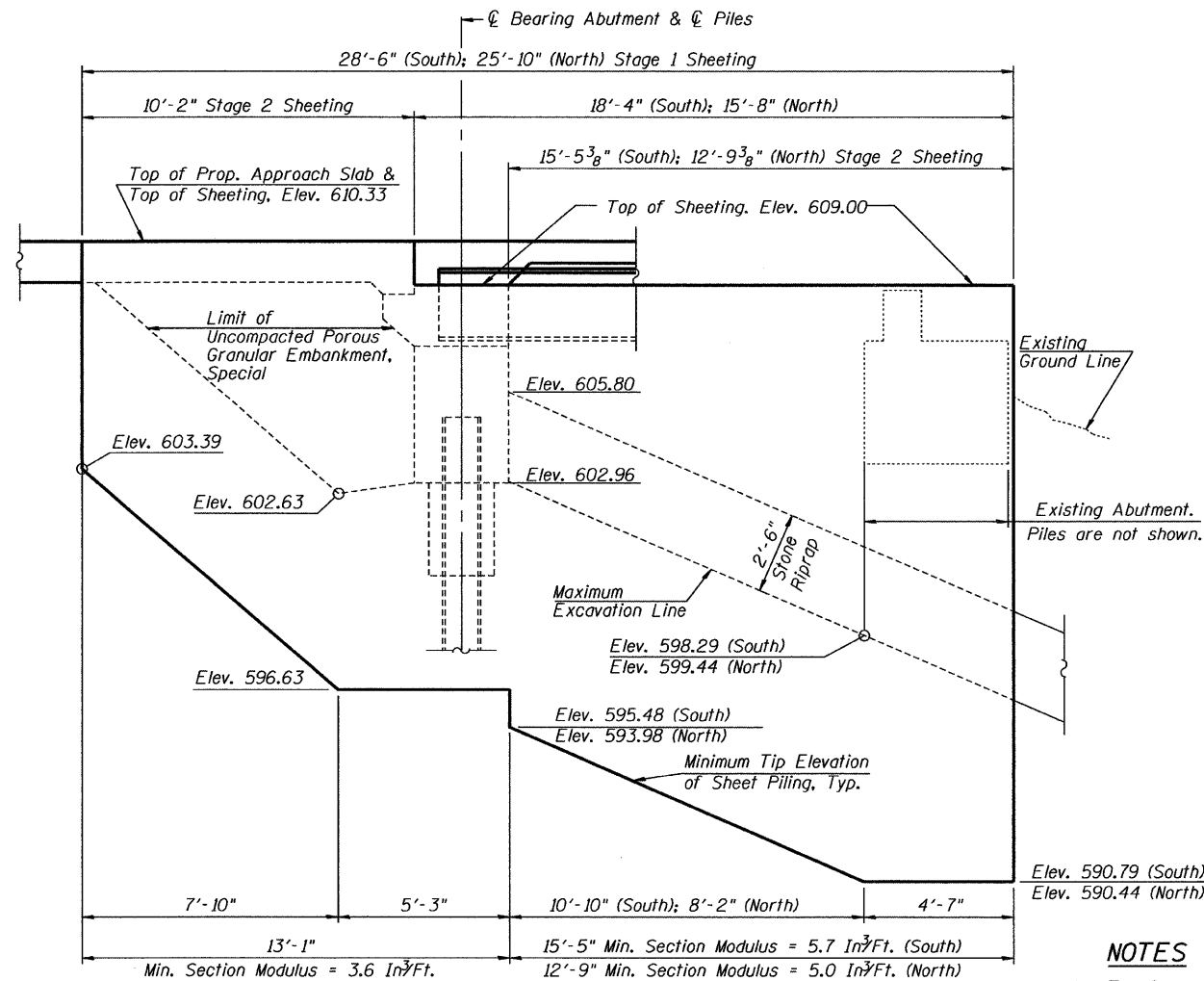
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



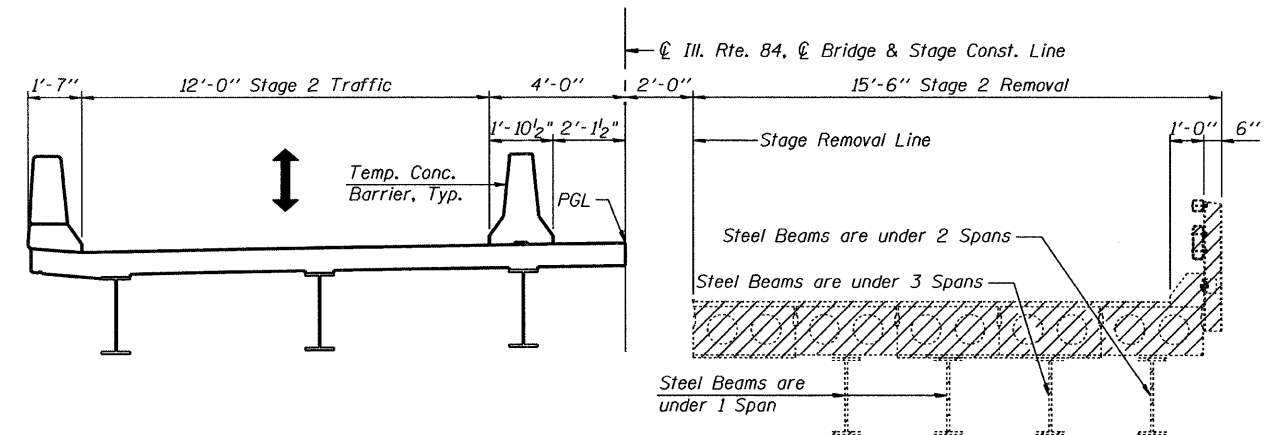
STAGE 1 REMOVAL (LOOKING NORTH)



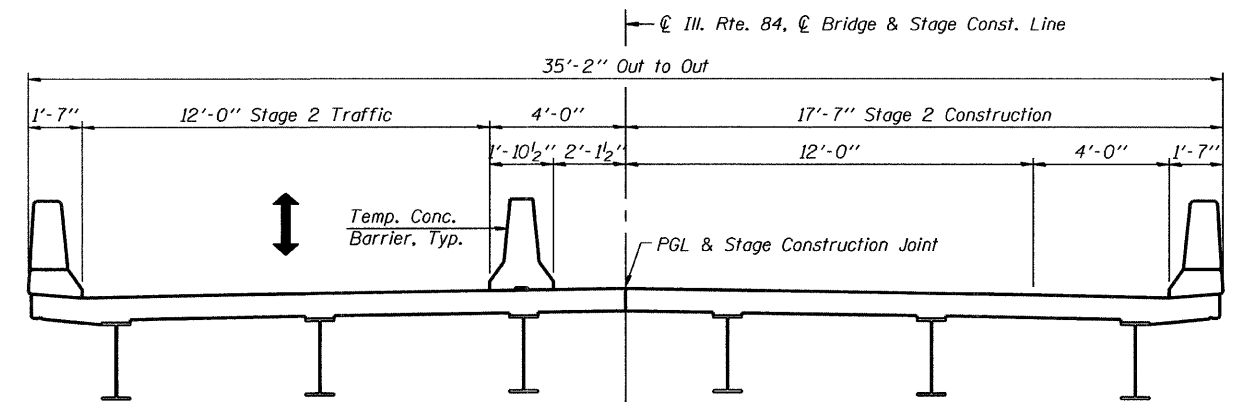
STAGE 1 CONSTRUCTION (LOOKING NORTH)



ELEVATION VIEW OF TEMPORARY SHEET PILING
LOOKING WEST AT SOUTH ABUTMENT, LOOKING EAST AT NORTH ABUTMENT



STAGE 2 REMOVAL (LOOKING NORTH)



STAGE 2 CONSTRUCTION (LOOKING NORTH)

NOTES

1. The Stage Removal and Stage Construction for the bridge Approach Slab are the same as for the bridge deck.
2. The cost for removal of existing bridge rails and for removal of the temporary steel beams and their required attachment items for the support of the deck beams shall be included with the Removal of Existing Structures Pay Item.
3. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

CONSTRUCTION STAGING & TEMPORARY SHEET PILING

Illinois Rte. 84 Over Apple River Tributary

STATION 165+50.00

STRUCTURE NO. 043-0078

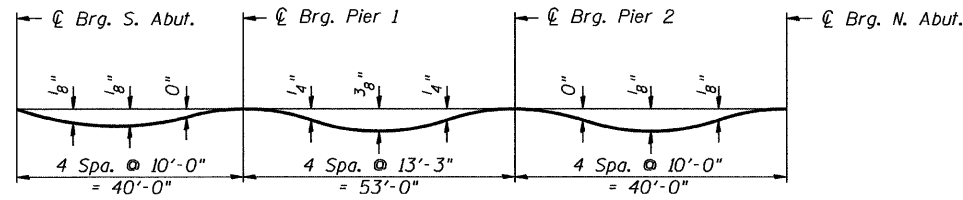
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA3 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	39
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

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Chicago, Illinois 60631
(773) 399-0112

1:\A\165+50.00\2010\0301\cadd\structural\1.dgn\88\5803_5\STAGING.dgn 10/17/2010

DESIGNED	J.A.Z.
CHECKED	J.J.G.
DRAWN	E.E.J.
CHECKED	J.A.Z.

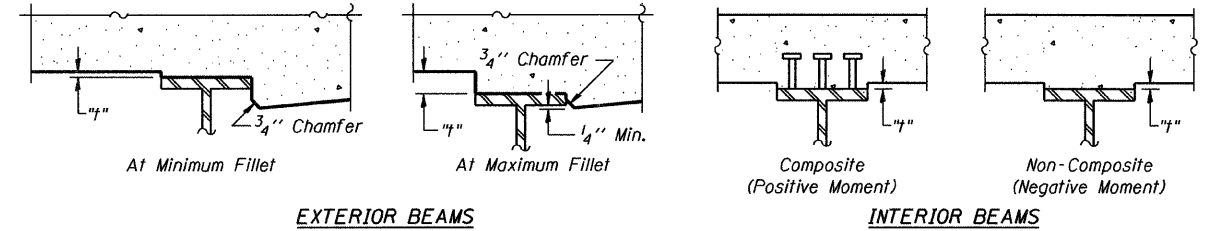
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets SA5 and SA6.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets SB5 and SB6, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

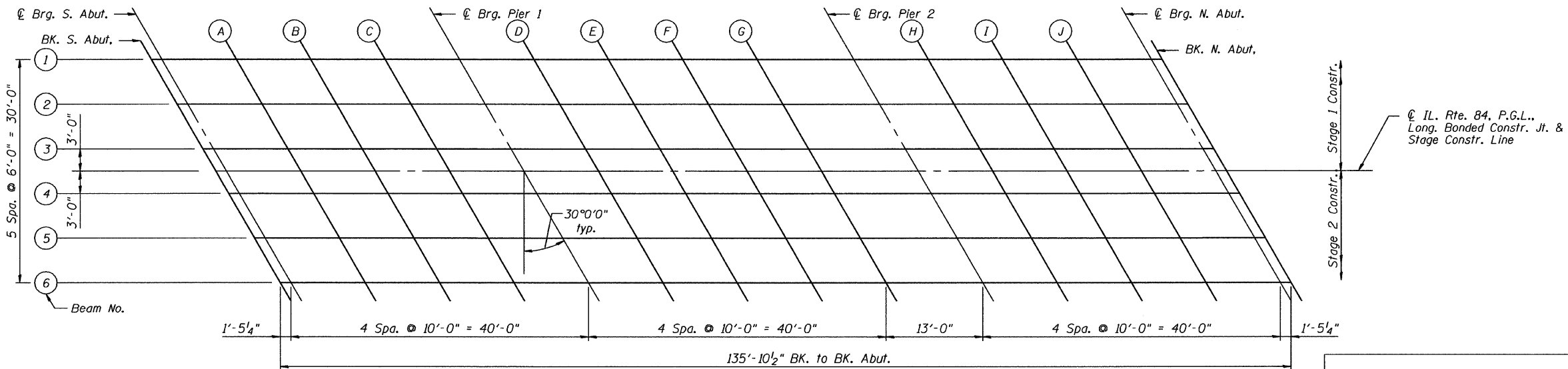
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+73.40	-15.000	610.03	610.03
☉ BRG. S. Abut.	164+74.84	-15.000	610.04	610.04
A	164+84.84	-15.000	610.10	610.11
B	164+94.84	-15.000	610.15	610.16
C	165+04.84	-15.000	610.19	610.19
☉ Pier 1	165+14.84	-15.000	610.22	610.22
D	165+24.84	-15.000	610.24	610.26
E	165+34.84	-15.000	610.26	610.29
F	165+44.84	-15.000	610.27	610.30
G	165+54.84	-15.000	610.27	610.29
☉ Pier 2	165+67.84	-15.000	610.26	610.26
H	165+77.84	-15.000	610.24	610.24
I	165+87.84	-15.000	610.21	610.22
J	165+97.84	-15.000	610.18	610.19
☉ BRG. N. Abut.	166+07.84	-15.000	610.13	610.13
BK. N. Abut.	166+09.28	-15.000	610.13	610.13

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+76.86	-9.000	610.16	610.16
☉ BRG. S. Abut.	164+78.30	-9.000	610.17	610.17
A	164+88.30	-9.000	610.22	610.24
B	164+98.30	-9.000	610.27	610.28
C	165+08.30	-9.000	610.31	610.31
☉ Pier 1	165+18.30	-9.000	610.34	610.34
D	165+28.30	-9.000	610.36	610.37
E	165+38.30	-9.000	610.37	610.40
F	165+48.30	-9.000	610.38	610.41
G	165+58.30	-9.000	610.38	610.39
☉ Pier 2	165+71.30	-9.000	610.36	610.36
H	165+81.30	-9.000	610.34	610.34
I	165+91.30	-9.000	610.31	610.32
J	166+01.30	-9.000	610.27	610.28
☉ BRG. N. Abut.	166+11.30	-9.000	610.23	610.23
BK. N. Abut.	166+12.74	-9.000	610.22	610.22

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+80.33	-3.000	610.27	610.27
☉ BRG. S. Abut.	164+81.77	-3.000	610.28	610.28
A	164+91.77	-3.000	610.33	610.35
B	165+01.77	-3.000	610.38	610.39
C	165+11.77	-3.000	610.41	610.42
☉ Pier 1	165+21.77	-3.000	610.44	610.44
D	165+31.77	-3.000	610.46	610.47
E	165+41.77	-3.000	610.47	610.50
F	165+51.77	-3.000	610.47	610.50
G	165+61.77	-3.000	610.47	610.49
☉ Pier 2	165+74.77	-3.000	610.45	610.45
H	165+84.77	-3.000	610.42	610.43
I	165+94.77	-3.000	610.39	610.40
J	166+04.77	-3.000	610.35	610.36
☉ BRG. N. Abut.	166+14.77	-3.000	610.30	610.30
BK. N. Abut.	166+16.21	-3.000	610.29	610.29



PLAN — Z —>

TOP OF DECK SLAB ELEVATIONS I
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA5 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	41
CONTRACT NO. 64B26					

GRÄEF 8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

10-15-2010 ILLINOIS FED. AID PROJECT

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DESIGNED J.Z.
CHECKED J.J.G.
DRAWN R.B.H.
CHECKED J.J.G.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL RTE 84, P.G.L.,
LONG. BONDED CONSTR. JT.
& STAGE CONSTR. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+82.06	0.000	610.33	610.33
☉ BRG. S. Abut.	164+83.50	0.000	610.34	610.34
A	164+93.50	0.000	610.39	610.40
B	165+03.50	0.000	610.43	610.44
C	165+13.50	0.000	610.47	610.47
☉ Pier 1	165+23.50	0.000	610.49	610.49
D	165+33.50	0.000	610.51	610.52
E	165+43.50	0.000	610.52	610.55
F	165+53.50	0.000	610.52	610.55
G	165+63.50	0.000	610.51	610.53
☉ Pier 2	165+76.50	0.000	610.49	610.49
H	165+86.50	0.000	610.47	610.47
I	165+96.50	0.000	610.43	610.44
J	166+06.50	0.000	610.39	610.40
☉ BRG. N. Abut.	166+16.50	0.000	610.34	610.34
BK. N. Abut.	166+17.94	0.000	610.33	610.33

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+83.79	3.000	610.29	610.29
☉ BRG. S. Abut.	164+85.23	3.000	610.30	610.30
A	164+95.23	3.000	610.35	610.36
B	165+05.23	3.000	610.39	610.40
C	165+15.23	3.000	610.42	610.43
☉ Pier 1	165+25.23	3.000	610.45	610.45
D	165+35.23	3.000	610.46	610.48
E	165+45.23	3.000	610.47	610.50
F	165+55.23	3.000	610.47	610.50
G	165+65.23	3.000	610.46	610.48
☉ Pier 2	165+78.23	3.000	610.44	610.44
H	165+88.23	3.000	610.41	610.42
I	165+98.23	3.000	610.38	610.39
J	166+08.23	3.000	610.33	610.35
☉ BRG. N. Abut.	166+18.23	3.000	610.28	610.28
BK. N. Abut.	166+19.67	3.000	610.27	610.27

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+87.26	9.000	610.22	610.22
☉ BRG. S. Abut.	164+88.70	9.000	610.23	610.23
A	164+98.70	9.000	610.27	610.28
B	165+08.70	9.000	610.31	610.32
C	165+18.70	9.000	610.34	610.34
☉ Pier 1	165+28.70	9.000	610.36	610.36
D	165+38.70	9.000	610.37	610.39
E	165+48.70	9.000	610.38	610.41
F	165+58.70	9.000	610.38	610.41
G	165+68.70	9.000	610.37	610.38
☉ Pier 2	165+81.70	9.000	610.34	610.34
H	165+91.70	9.000	610.31	610.31
I	166+01.70	9.000	610.27	610.28
J	166+11.70	9.000	610.22	610.24
☉ BRG. N. Abut.	166+21.70	9.000	610.17	610.17
BK. N. Abut.	166+23.13	9.000	610.16	610.16

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	164+90.72	15.000	610.13	610.13
☉ BRG. S. Abut.	164+92.16	15.000	610.13	610.13
A	165+02.16	15.000	610.18	610.19
B	165+12.16	15.000	610.21	610.22
C	165+22.16	15.000	610.24	610.24
☉ Pier 1	165+32.16	15.000	610.26	610.26
D	165+42.16	15.000	610.27	610.28
E	165+52.16	15.000	610.27	610.30
F	165+62.16	15.000	610.26	610.29
G	165+72.16	15.000	610.25	610.27
☉ Pier 2	165+85.16	15.000	610.22	610.22
H	165+95.16	15.000	610.19	610.19
I	166+05.16	15.000	610.15	610.16
J	166+15.16	15.000	610.10	610.11
☉ BRG. N. Abut.	166+25.16	15.000	610.04	610.04
BK. N. Abut.	166+26.61	15.000	610.03	610.03

TOP OF DECK SLAB ELEVATIONS II
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA6 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	42
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

DESIGNED	J.Z.
CHECKED	J.J.G.
DRAWN	R.B.H.
CHECKED	J.J.G.

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STATE OF ILLINOIS
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IL RTE. 84, P.G.L.,
LONG. CONSTR. JT. &
STAGE CONSTR. LINE

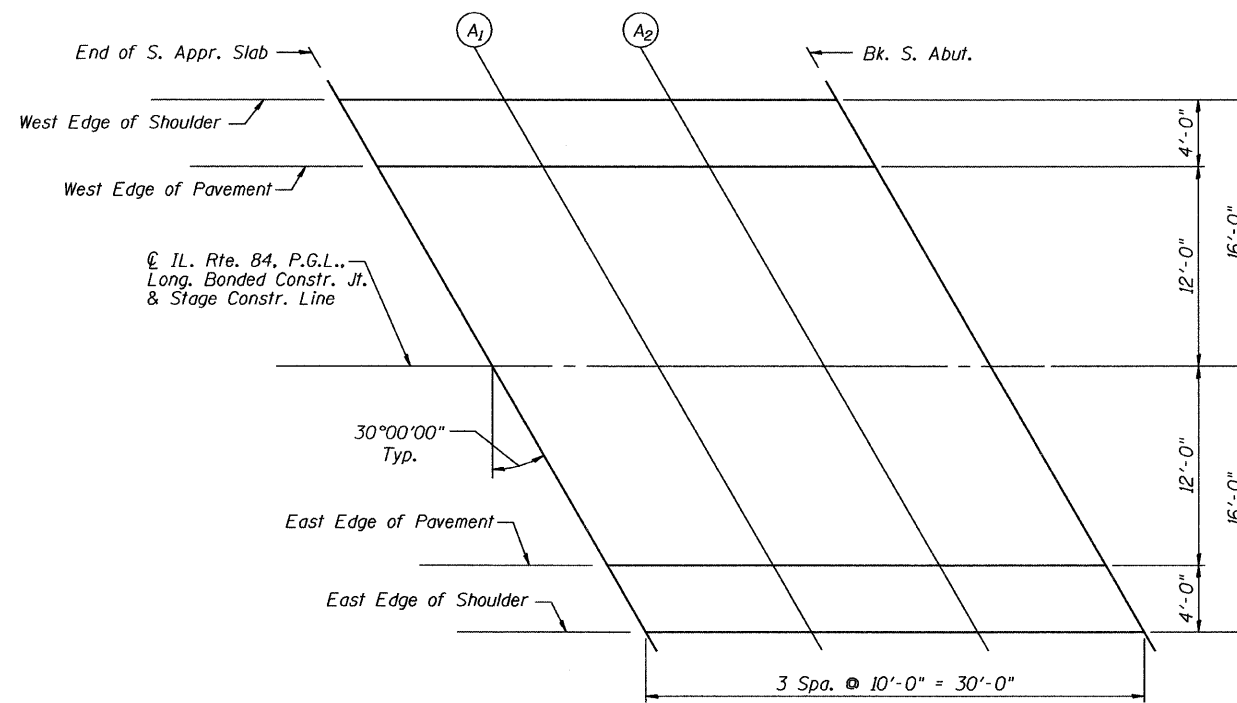
WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	164+42.82	-16.000	609.78
A ₁	164+52.82	-16.000	609.86
A ₂	164+62.82	-16.000	609.94
BK. S. Abut.	164+72.82	-16.000	610.00

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	164+45.13	-12.000	609.88
A ₁	164+55.13	-12.000	609.96
A ₂	164+65.13	-12.000	610.04
BK. S. Abut.	164+75.13	-12.000	610.10

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	164+52.06	0.000	610.13
A ₁	164+62.06	0.000	610.20
A ₂	164+72.06	0.000	610.27
BK. S. Abut.	164+82.06	0.000	610.33



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	164+58.99	12.000	609.99
A ₁	164+68.99	12.000	610.06
A ₂	164+78.99	12.000	610.13
BK. S. Abut.	164+88.99	12.000	610.18

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	164+61.30	16.000	609.93
A ₁	164+71.30	16.000	610.00
A ₂	164+81.30	16.000	610.06
BK. S. Abut.	164+91.30	16.000	610.11

TOP OF SOUTH APPROACH SLAB ELEVATIONS
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA7 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	43
CONTRACT NO. 64B26					

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

10-15-2010 ILLINOIS FED. AID PROJECT

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 10/13/2010

DESIGNED	J.Z.
CHECKED	J.J.G.
DRAWN	R.B.H.
CHECKED	J.J.G.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL RTE. 84, P.G.L.,
LONG. CONSTR. JT. &
STAGE CONSTR. LINE

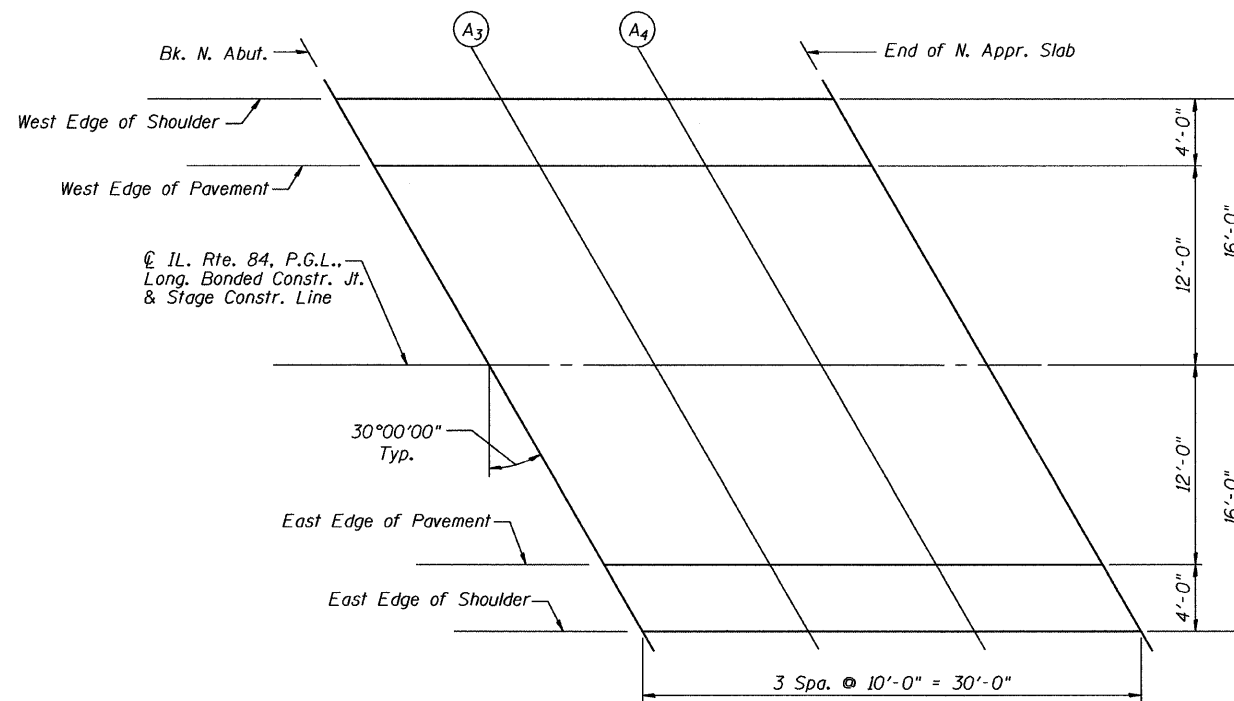
WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	166+08.70	-16.000	610.11
A ₃	166+18.70	-16.000	610.06
A ₄	166+28.70	-16.000	610.00
End of N. Appr. Slab	166+38.70	-16.000	609.93

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	166+11.01	-12.000	610.18
A ₃	166+21.01	-12.000	610.13
A ₄	166+31.01	-12.000	610.06
End of N. Appr. Slab	166+41.01	-12.000	609.99

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	166+17.94	0.000	610.33
A ₃	166+27.94	0.000	610.27
A ₄	166+37.94	0.000	610.20
End of N. Appr. Slab	166+47.94	0.000	610.13



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	166+24.87	12.000	610.10
A ₃	166+34.87	12.000	610.04
A ₄	166+44.87	12.000	609.96
End of N. Appr. Slab	166+54.87	12.000	609.88

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	166+27.18	16.000	610.00
A ₃	166+37.18	16.000	609.94
A ₄	166+47.18	16.000	609.86
End of N. Appr. Slab	166+57.18	16.000	609.78

TOP OF NORTH APPROACH SLAB ELEVATIONS
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SAB OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	44
			CONTRACT NO. 64B26		

10-15-2010 ILLINOIS FED. AID PROJECT

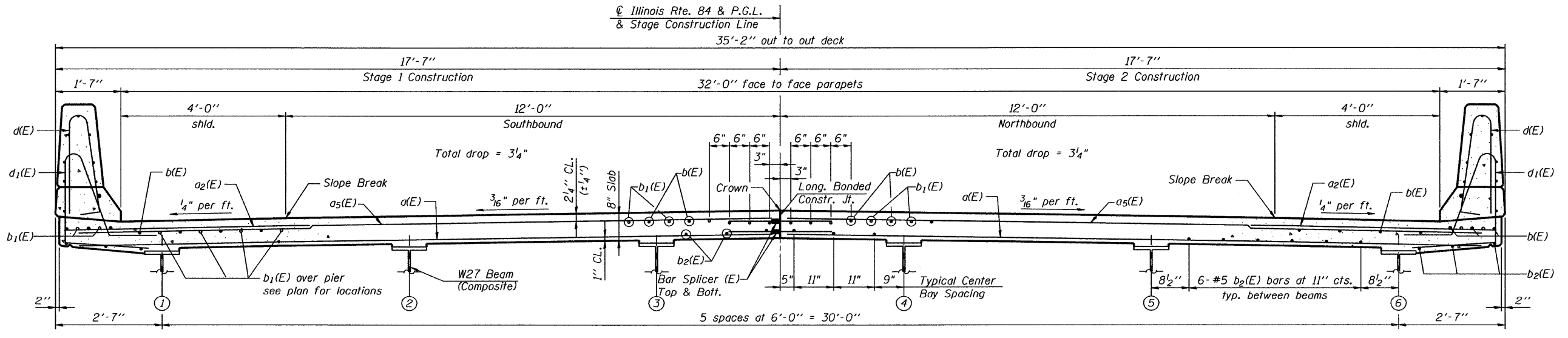
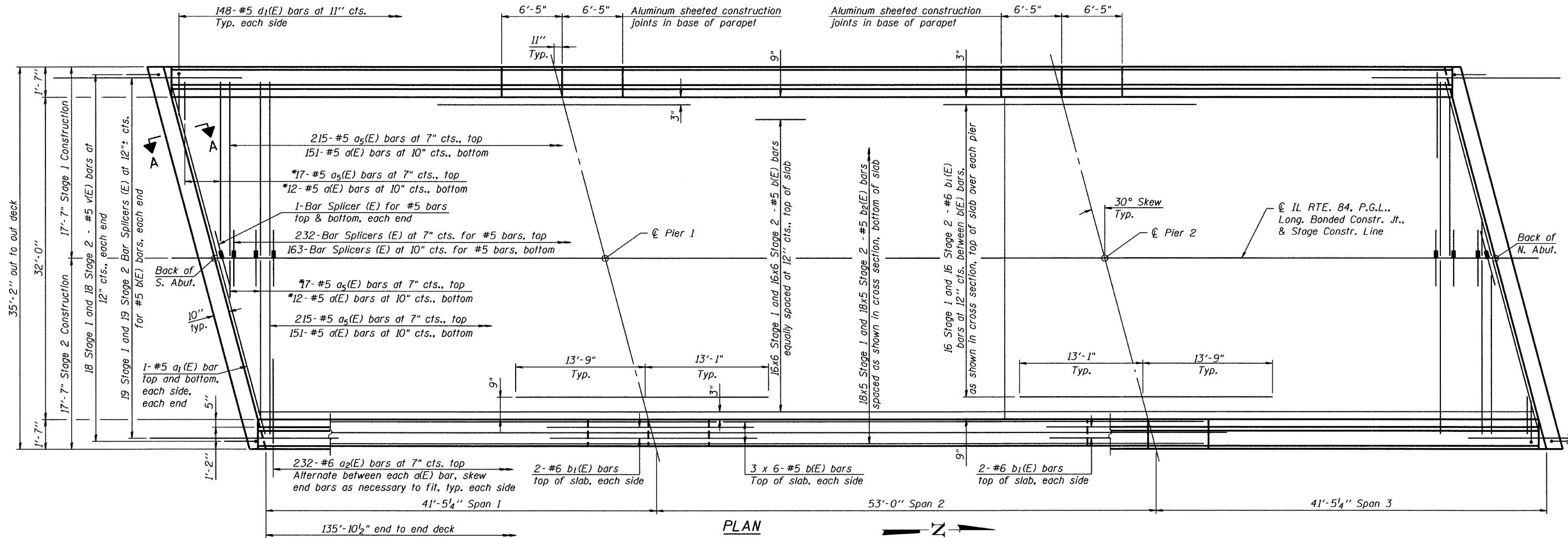
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DESIGNED	J.Z.
CHECKED	J.J.G.
DRAWN	R.B.H.
CHECKED	J.J.G.

GRÄEF 8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order a(E) and a₅(E) bars full length.
Cut to fit skew and use remainder of
bars in opposite end.



MINIMUM BAR LAP

#5 bar = 2'-7"
#6 bar = 3'-1"

NOTES

- See Sheet SA10 of 25 for superstructure details and Bill of Material.
- Bars indicated thus 16 x 6-#5 etc. indicates 16 lines of bars with 6 lengths per line.
- See Sheet SA10 of 25 for parapet reinforcement.
- See Sheet SA3 of 25 for Construction Staging.
- See Sheet SA11 of 25 for Section A-A.

DECK PLAN & CROSS SECTION
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

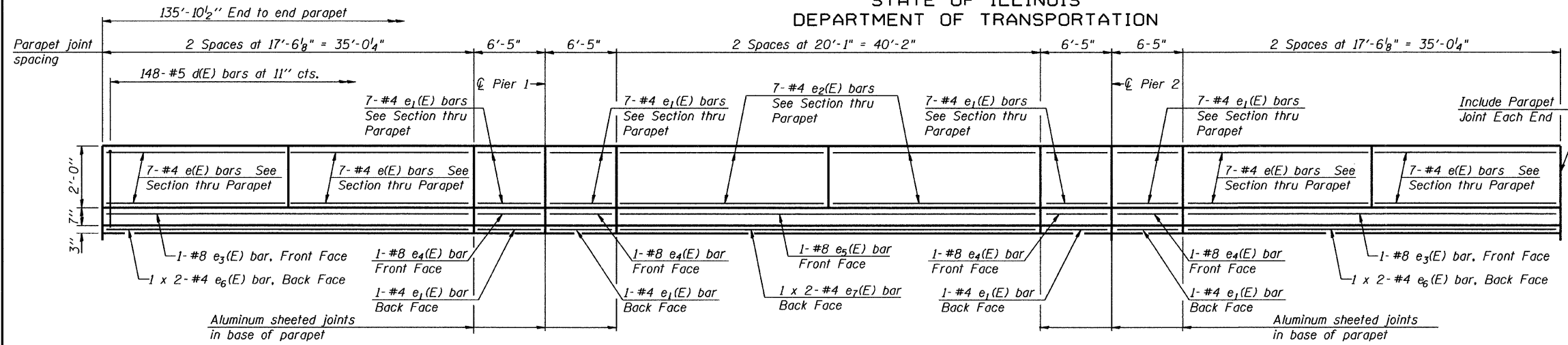
SHEET NO. SA9 OF 25 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	104BR-1	JO DAVIESS	126	45
CONTRACT NO. 64B26					
10-15-2010	ILLINOIS FED. AID PROJECT				

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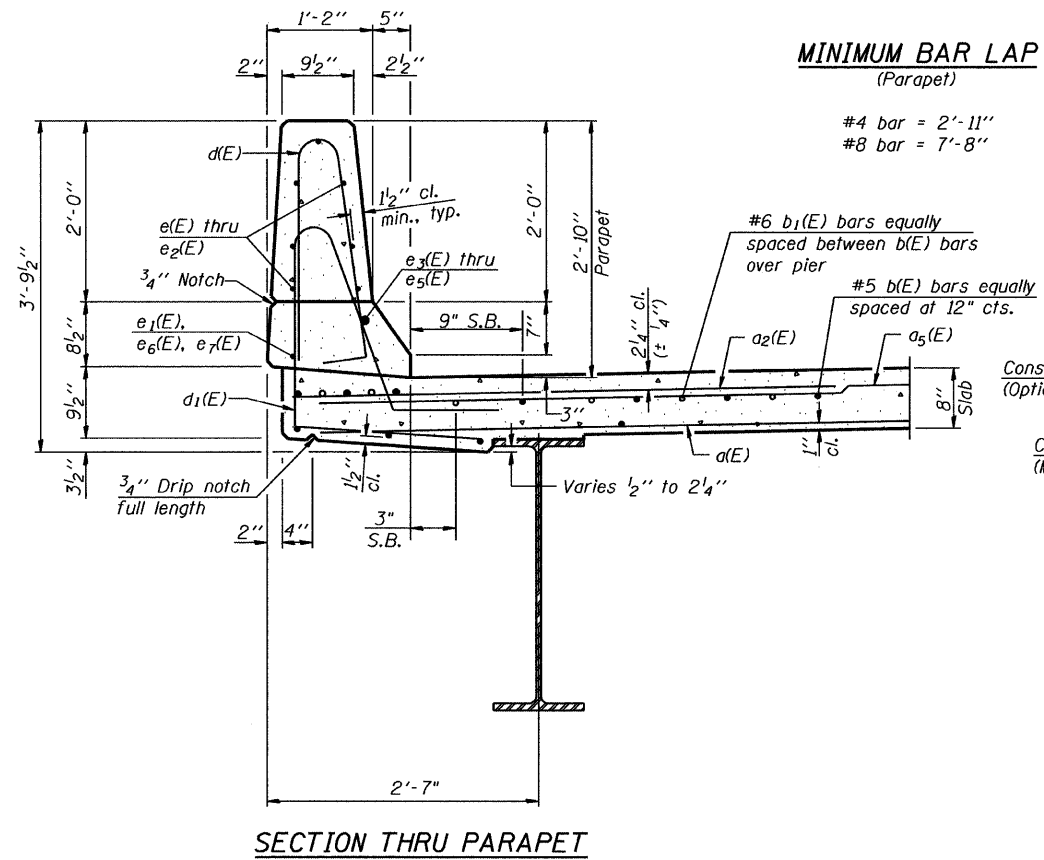
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 10/15/2010

DESIGNED J.Z.
CHECKED E.E.J.
DRAWN E.E.J.
CHECKED J.Z.

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DEPARTMENT OF TRANSPORTATION

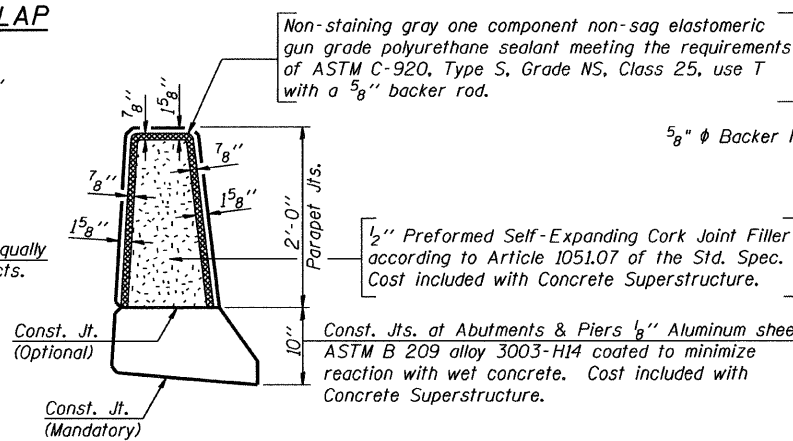


INSIDE ELEVATION OF WEST PARAPET
REFLECTED INSIDE ELEVATION OF EAST PARAPET

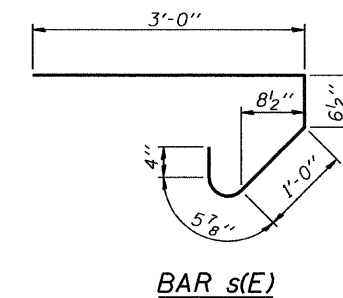


MINIMUM BAR LAP
(Parapet)

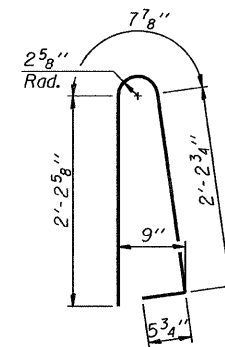
#4 bar = 2'-11"
#8 bar = 7'-8"



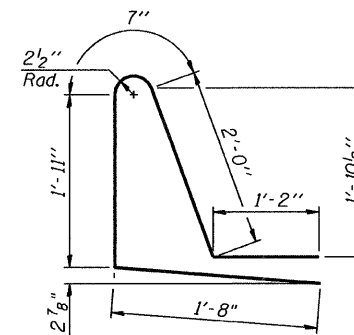
PARAPET JOINT DETAILS



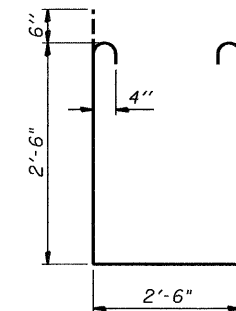
BAR s(E)



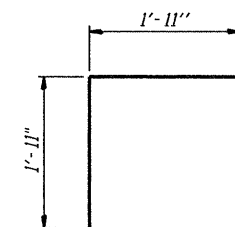
BAR d(E)



BAR d1(E)



BAR s1(E)



BAR v(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	326	#5	17'-0"	—
a1(E)	8	#5	19'-9"	—
a2(E)	464	#6	6'-6"	—
a5(E)	464	#5	17'-3"	—
b(E)	228	#5	24'-9"	—
b1(E)	72	#6	26'-10"	—
b2(E)	180	#5	29'-3"	—
d(E)	296	#5	5'-7"	⌒
d1(E)	296	#5	7'-4"	⌒
e(E)	56	#4	17'-3"	—
e1(E)	64	#4	6'-1"	—
e2(E)	28	#4	19'-9"	—
e3(E)	4	#8	33'-9"	—
e4(E)	8	#8	6'-1"	—
e5(E)	2	#8	39'-10"	—
e6(E)	8	#4	18'-10"	—
e7(E)	4	#4	39'-10"	—
m(E)	20	#6	17'-5"	—
m1(E)	24	#6	8'-9"	—
m2(E)	8	#6	5'-8"	—
m3(E)	4	#6	2'-3"	—
m4(E)	4	#6	2'-8"	—
s(E)	72	#5	5'-5"	⌒
s1(E)	72	#4	8'-6"	⌒
v(E)	72	#5	3'-10"	⌒
Concrete Superstructure		Cu. Yd.	180.7	
Bridge Deck Grooving		Sq. Yd.	453	
Protective Coat		Sq. Yd.	597	
Reinforcement Bars, Epoxy Coated		Pound	41,320	
Bar Splicers		Each	491	

Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

PARAPET & DECK DETAILS

Illinois Rte. 84 Over Apple River Tributary

STATION 165+50.00

STRUCTURE NO. 043-0078

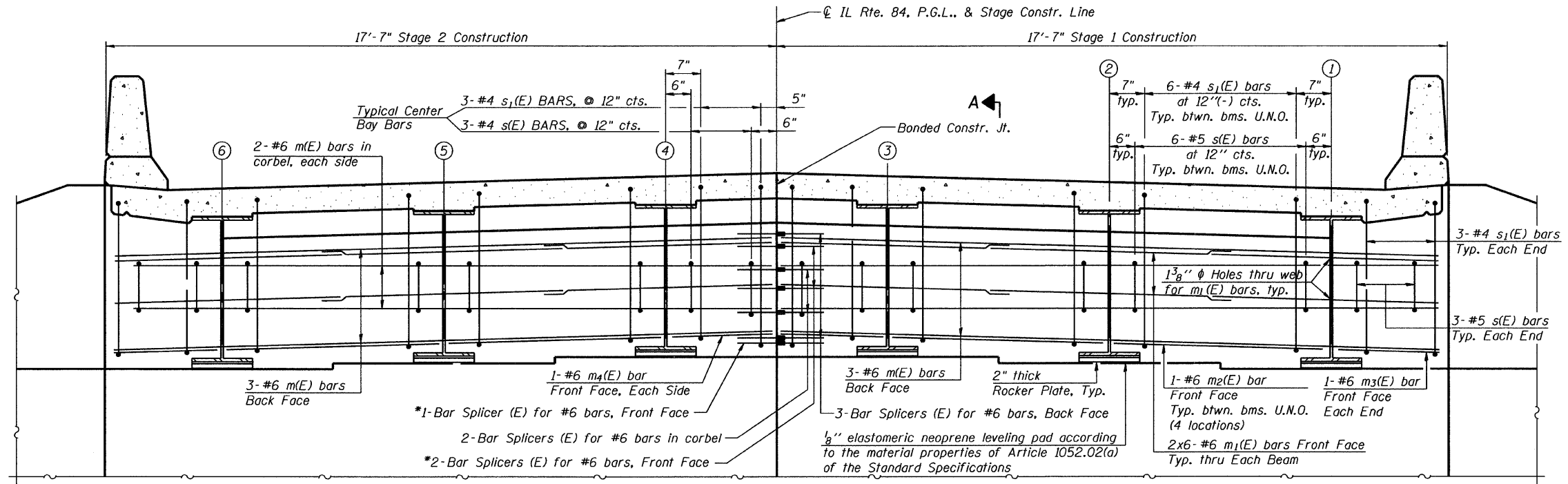
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA10 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	46
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

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 10/13/2010

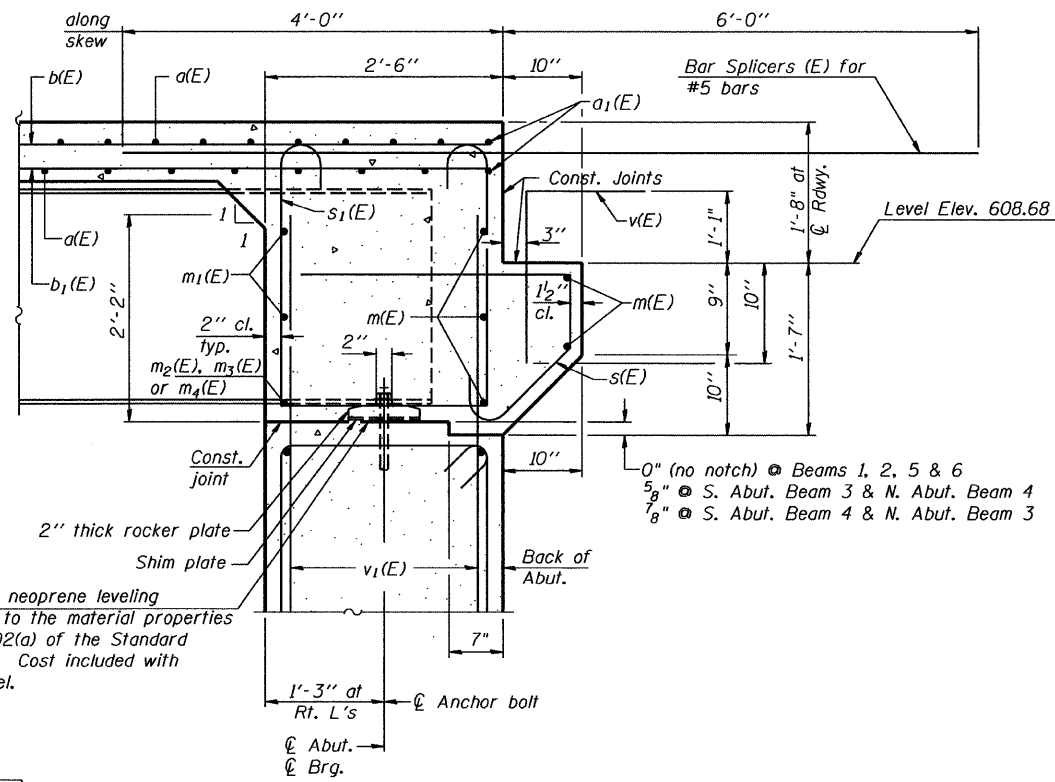
DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	J.Z.

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DIAPHRAGM ELEVATION AT SOUTH ABUTMENT

(Looking South)
(South Abut. Shown, North Abut. similar, opp. hand)
(Dimensions at right angles to \bar{C} IL Rte 84)



SECTION A-A

Dimensions at right angles to abutment, except as shown.

NOTES

1. Reinforcement bars in diaphragm are billed with superstructure on sheet SA10 of 25.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet SA10 of 25.
3. For details of bars s(E) & s₁(E) see sheet SA10 of 25.
4. The s(E) and s₁(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
5. 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)
6. Bar Splicers indicated with * may be field cut to fit.

MIN. BAR LAP
#6 bar = 4'-5"

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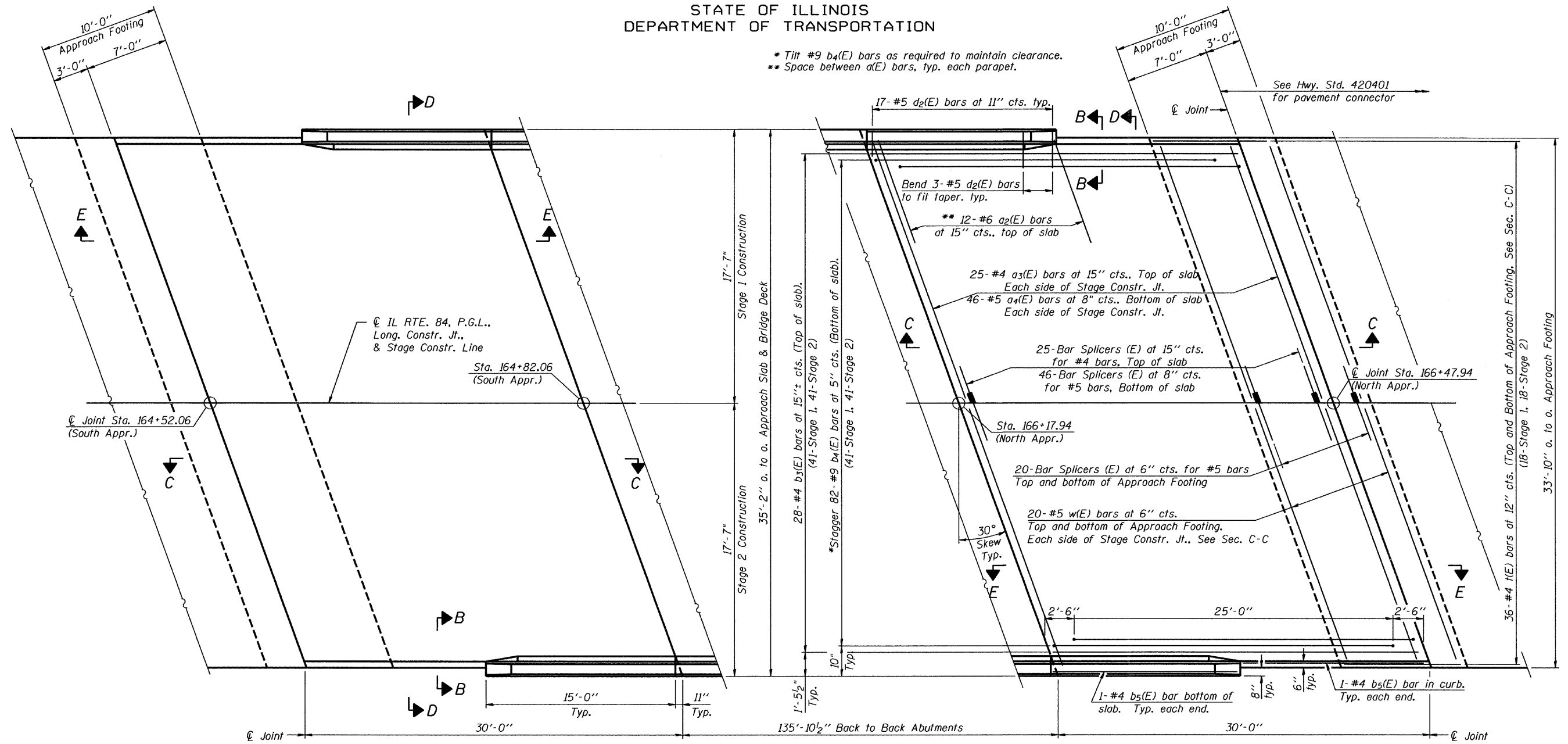
DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	J.Z.

DIAPHRAGMS AT ABUTMENTS					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA11 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	47
			CONTRACT NO. 64B26		
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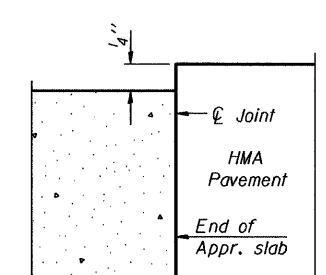
* Tilt #9 b₄(E) bars as required to maintain clearance.
** Space between a₄(E) bars, typ. each parapet.



PLAN

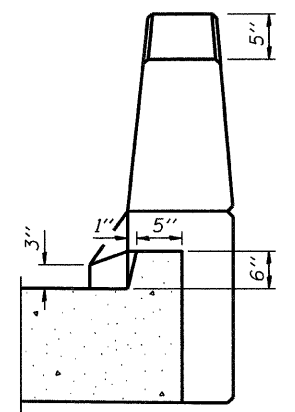
NOTES

- See Sheet SA13 of 25 for Sections C-C & D-D, View E-E and location of Detail A.
- a₃(E) and a₄(E) bar spacings measured along \varnothing Rdwy.
- Reinforcement is shown for North Approach. South Approach reinforcement is opposite hand.



FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B

DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	E.E.J.
CHECKED	J.Z.

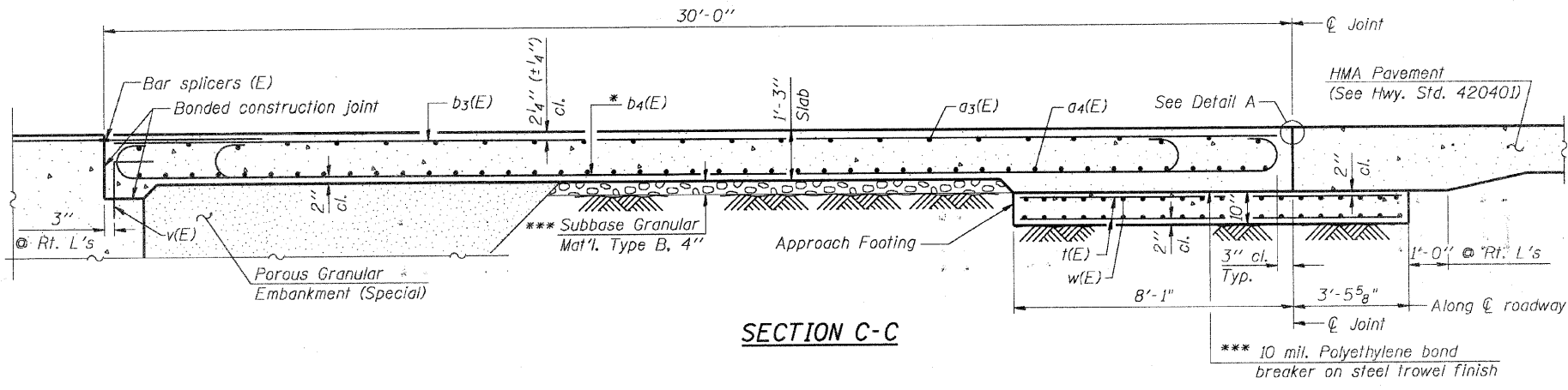
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 10/12/2010

BRIDGE APPROACH SLAB					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA12 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	48
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

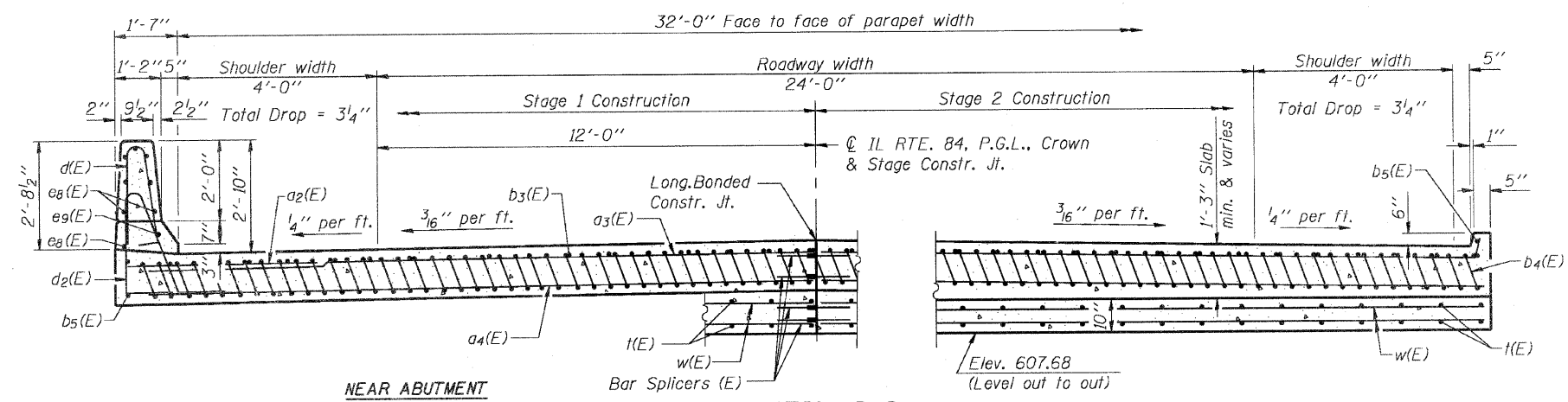
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NOTES

1. See Sheet SA12 of 25 for Detail A.
2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v(E) bar details, see Sheet SA10 of 25.
6. The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
7. For bar splicer details, see Sheet SA20 of 25.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Porous Granular Embankment (Special) and drainage treatment details, see Sheet SA2 of 25.



SECTION C-C

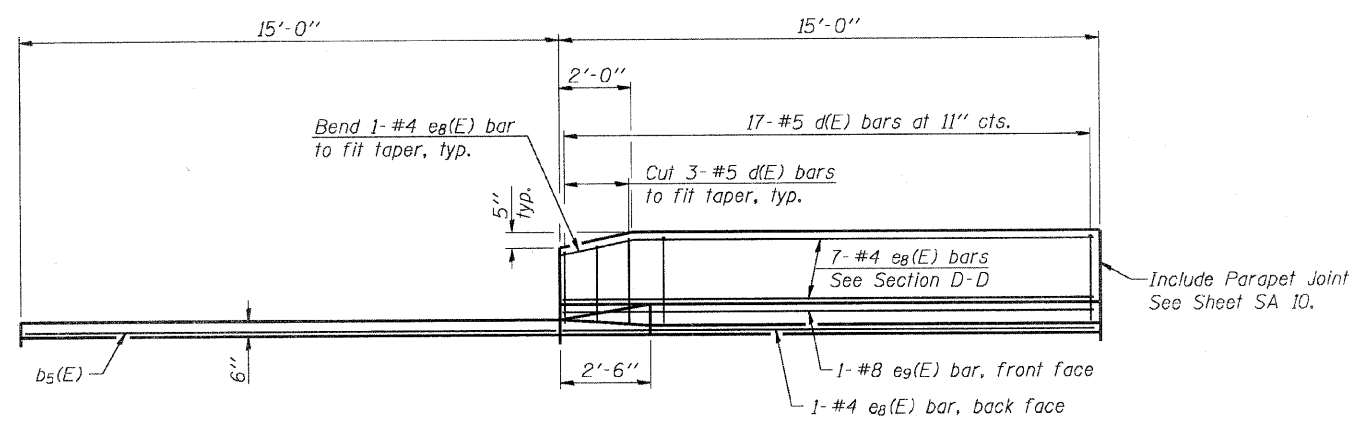


SECTION D-D

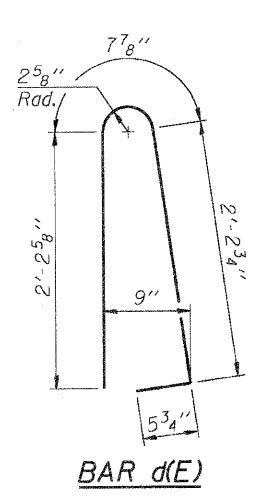
* Tilt #9 b₄(E) bars as required to maintain clearance.
*** Cost is included with Concrete Superstructure.

**TWO APPROACHES
BILL OF MATERIAL**

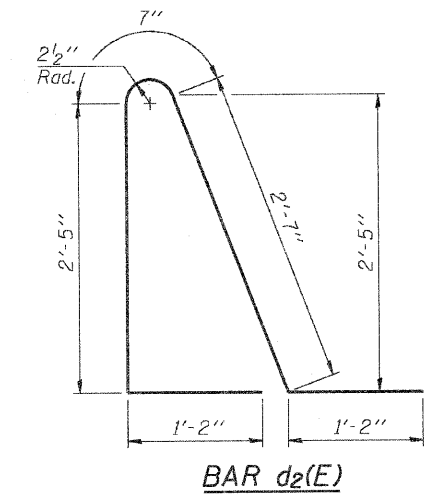
Bar	No.	Size	Length	Shape
a ₂ (E)	48	#6	6'-6"	—
a ₃ (E)	100	#4	19'-2"	—
a ₄ (E)	184	#5	19'-2"	—
b ₃ (E)	56	#4	29'-8"	—
b ₄ (E)	164	#9	29'-9"	—
b ₅ (E)	8	#4	14'-8"	—
d(E)	68	#5	5'-7"	⌒
d ₂ (E)	68	#5	7'-11"	⌒
e ₈ (E)	32	#4	14'-8"	—
e ₉ (E)	4	#8	14'-8"	—
t(E)	144	#4	11'-2"	—
w(E)	160	#5	19'-2"	—
Concrete Structures		Cu. Yd.	24.1	
Concrete Superstructure		Cu. Yd.	107.1	
Bridge Deck Grooving		Sq. Yd.	203	
Protective Coat		Sq. Yd.	248	
Reinforcement Bars, Epoxy Coated		Pound	28,910	
Bar Splicers		Each	222	



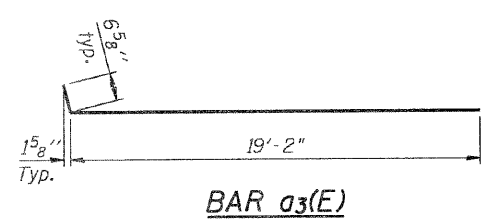
VIEW E-E



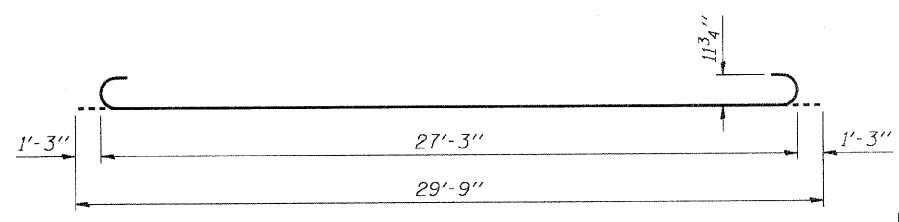
BAR d(E)



BAR d2(E)



BAR a₃(E)



BAR b₄(E)

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DRAWN R.B.H.
CHECKED J.Z.

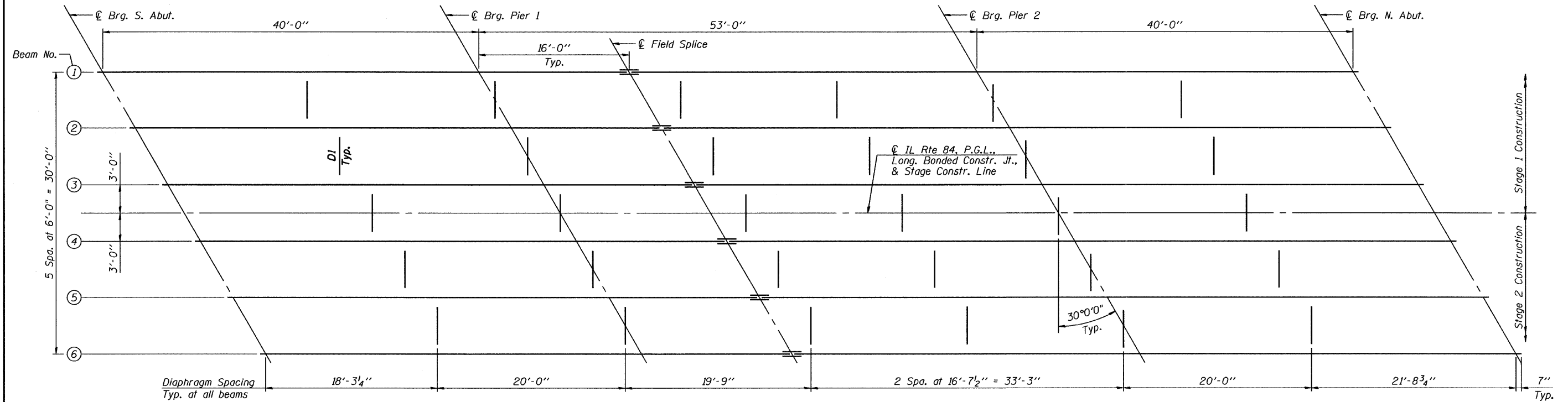
BRIDGE APPROACH SLAB DETAILS
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO. SA13 OF 25 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	104BR-1	JO DAVIESS	126	49
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

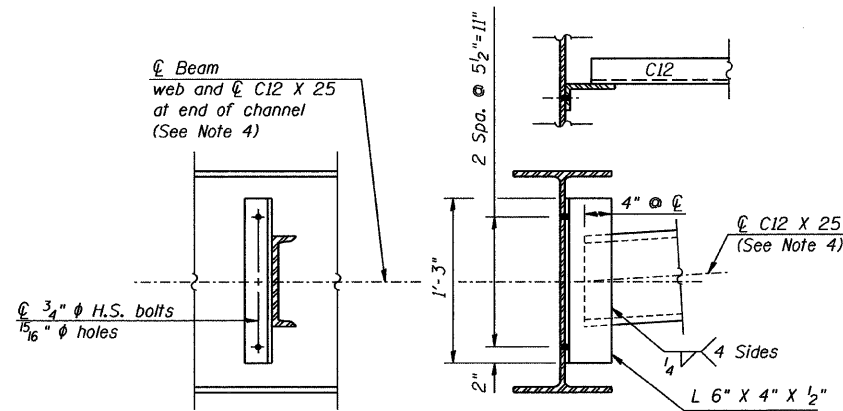
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN



DIAPHRAGM D1
30 Required

NOTES

- Two hardened washers required for each set of oversized holes at diaphragms.
- All Structural Steel on this sheet shall be AASHTO M270 Grade 50W.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.
- C12 X 30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

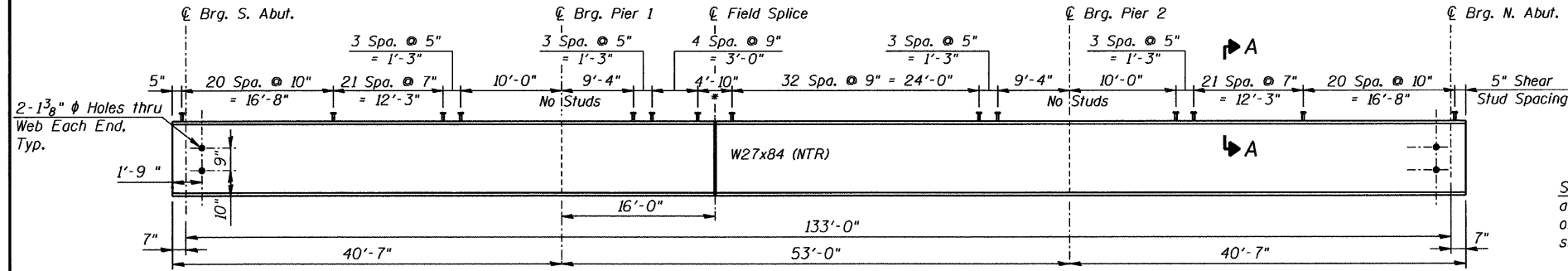
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DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

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FRAMING PLAN & DIAPHRAGMS					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA14 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	50
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



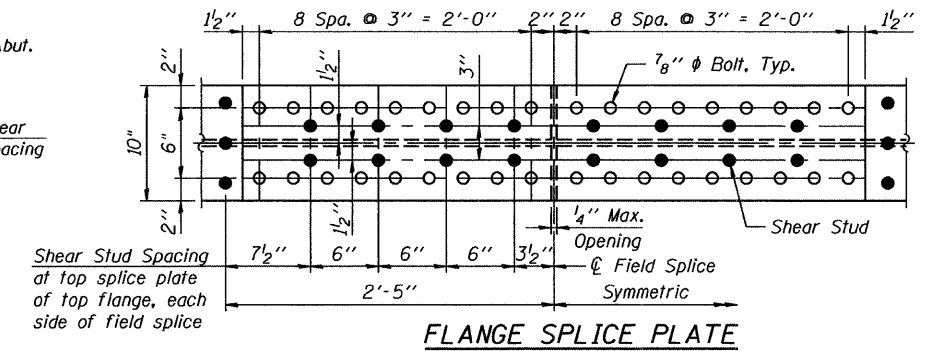
TYPICAL BEAM ELEVATION * See Splice Details

INTERIOR BEAM MOMENT TABLE			
	0.4 Sp. 1 & 0.6 Sp. 3	Pier 1 & Pier 2	0.5 Span 2
I_s	(in ⁴) 2,850	2,850	2,850
I_c (n)	(in ⁴) 9,566	-	9,566
I_c (3n)	(in ⁴) 7,106	-	7,106
S_s	(in ³) 213	213	213
S_c (n)	(in ³) 354	-	354
S_c (3n)	(in ³) 319	-	319
DC1	(k/')	0.706	0.706
MDC1	(k)	74.0	156
DC2	(k/')	0.150	0.150
MDC2	(k)	18.3	26.4
DW	(k/')	0.267	0.267
MDW	(k)	32.6	46.8
$M_L + Imp$	(k)	332	195
M_u (Strength I)	(k)	755	640
$\phi_r M_n$, $\phi_r M_{nc}$	(k)	1,827	1,017
f_s DC1	(ksi)	4.17	8.76
f_s DC2	(ksi)	0.69	1.49
f_s DW	(ksi)	1.22	2.64
f_s 1.3(I+I)	(ksi)	15.0	14.3
f_s (Service II)	(ksi)	20.9	27.2
f_s (Total)(Strength I)	(ksi)	-	-
V_r	(k)	20.4	20.6

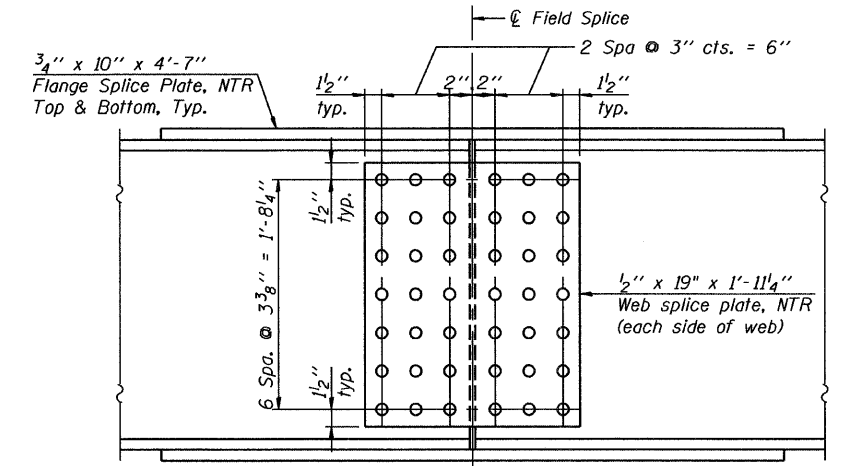
INTERIOR BEAM REACTION TABLE HL93 Loading		
	Abut.	Pier
RDC1	(k) 10.22	36.70
RDC2	(k) 2.34	7.64
RDW	(k) 4.17	13.61
R L + Imp	(k) 63.88	81.23
R Total	(k) 80.61	139.18

	TOP OF BEAM ELEVATIONS (For Fabrication only)				
	℄ Brg. S. Abut.	℄ Brg. Pier 1	℄ Splice	℄ Brg. Pier 2	℄ Brg. N. Abut.
Beam 1	609.31	609.44	609.49	609.45	609.40
Beam 2	609.44	609.55	609.60	609.55	609.50
Beam 3	609.55	609.66	609.70	609.64	609.57
Beam 4	609.57	609.66	609.70	609.63	609.55
Beam 5	609.50	609.58	609.61	609.53	609.44
Beam 6	609.40	609.47	609.50	609.41	609.31

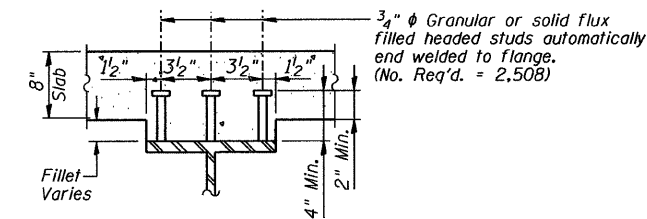
- I_s, S_s Non-composite moment of inertia and section modulus of the steel section used for computing I_s (Total-Strength I, and Service II) due to non-composite dead loads.
- $I_c(n), S_c(n)$ Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads.
- $I_c(3n), S_c(3n)$ 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) due to long-term composite (superimposed) dead loads.
- DC1 Un-factored non-composite dead load.
- MDC1 Un-factored moment due to non-composite dead load.
- DC2 Un-factored long-term composite (superimposed excluding future wearing surface) dead load.
- MDC2 Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load.
- DW Un-factored long-term composite (superimposed future wearing surface only) dead load.
- MDW Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load.
- $M_{LL} + Imp$ Un-factored live load moment plus dynamic load allowance (impact).
- M_u (Strength I) Factored design moment.
 $1.25(M_{DC1} + M_{DC2}) + 1.5M_{DW} + 1.75M_{LL} + Imp$
- $\phi_r M_n$ Compact composite positive moment capacity computed according to Article 6.10.7.1.
- $\phi_r M_{nc}$ Compact non-composite negative moment capacity computed according to Article A6.1.1.
- f_s (Service II) Sum of stresses as computed from the moments below.
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3M_{LL} + Imp$
- f_s (Total)(Strength I) Sum of stresses as computed from the moments below on non-compact section.
 $1.25(M_{DC1} + M_{DC2}) + 1.5M_{DW} + 1.75M_{LL} + Imp$
- V_r Factored shear range computed according to Article 6.10.10.



FLANGE SPLICE PLATE



WEB SPLICE PLATE



SECTION A-A

NOTES

1. Work this Sheet with Sheet SA14 of 25.
2. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3. All Structural Steel on this Sheet shall be AASHTO M270 Grade 50W Steel.

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	EACH	2,508

BEAM ELEVATION & TABLES
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA15 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	51
CONTRACT NO. 64B26					

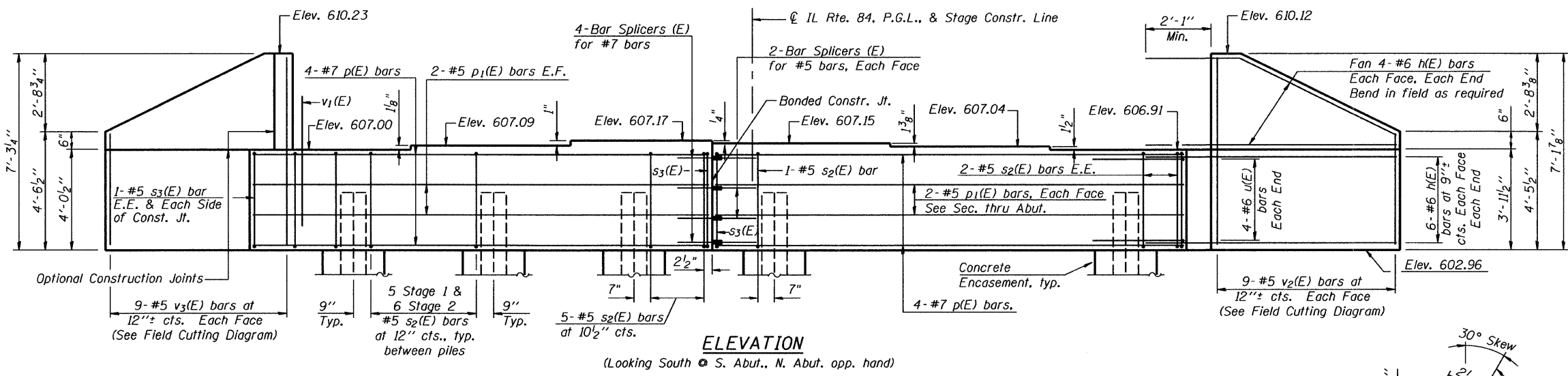
GRAEF 8501 W. Higgins Road, Suite 280
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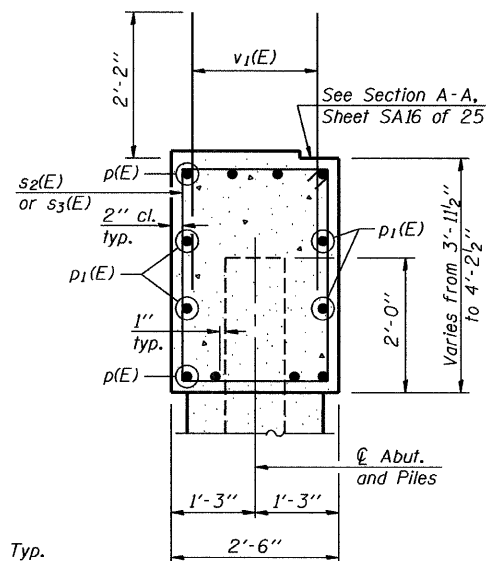
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 10/15/2010

DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

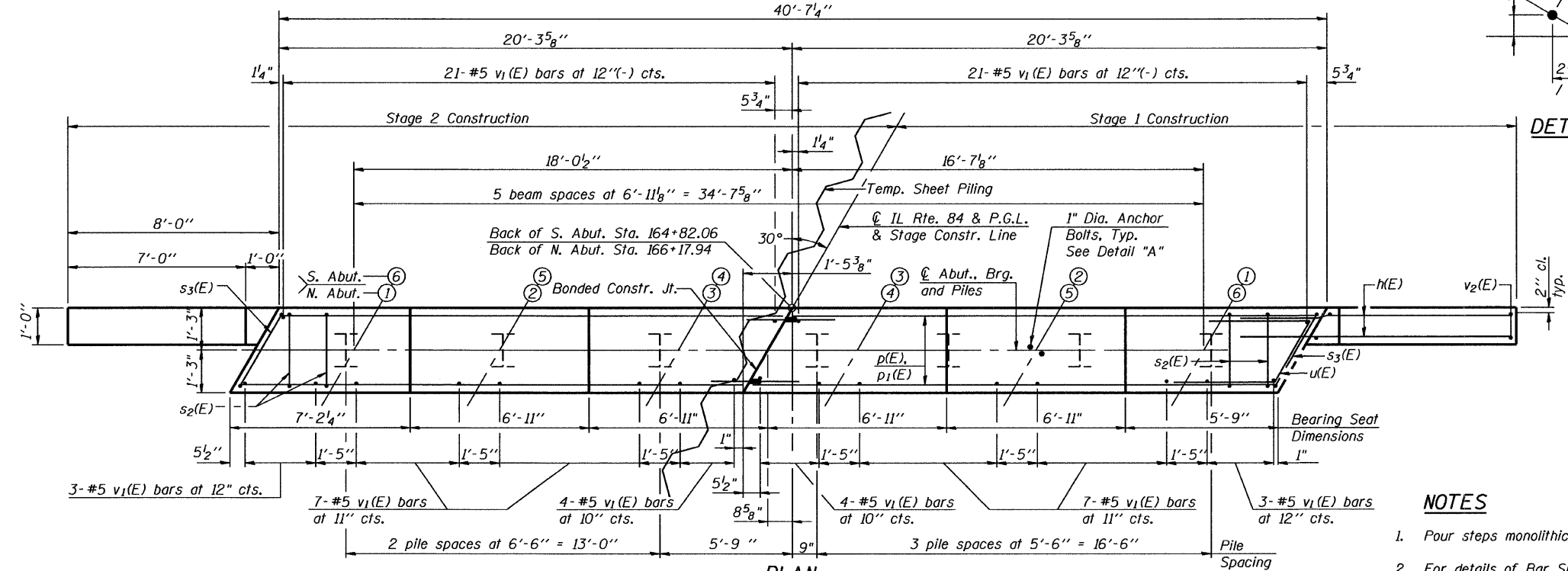
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DEPARTMENT OF TRANSPORTATION



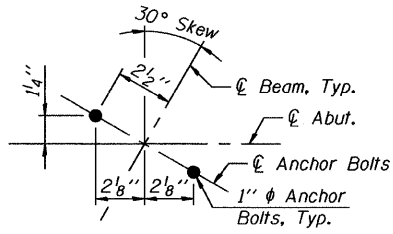
ELEVATION
(Looking South @ S. Abut., N. Abut. opp. hand)



SEC. THRU ABUT.



PLAN
(South Abut. Shown, North Abut. opp. hand)



DETAIL "A"

**TWO ABUTMENTS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	80	#6	10'-5"	—
p(E)	32	#7	19'-11"	—
p1(E)	16	#5	19'-11"	—
s2(E)	74	#5	12'-6"	□
s3(E)	8	#5	13'-2"	□
u(E)	16	#6	8'-4"	┌
v1(E)	168	#5	4'-4"	—
v2(E)	18	#5	10'-10"	—
v3(E)	18	#5	11'-0"	—
Structure Excavation			Cu. Yd.	220
Concrete Structures			Cu. Yd.	37.1
Concrete Encasement			Cu. Yd.	4.7
Reinforcement Bars, Epoxy Coated			Pound	5,330
Bar Splicers			Each	24
Furnishing Steel Piles HP12x63			Foot	534
Driving Piles			Foot	534
Test Pile HP12x63			Each	2
Pile Shoes			Each	14

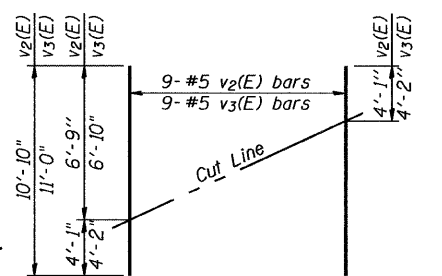
NOTES

1. Pour steps monolithically with cap.
2. For details of Bar Splicers, see sheet SA20 of 25.
3. For details of piles and Concrete Encasement, see sheet SA19 of 25.
4. Estimated pile lengths have been increased by 2' for penetration into rock.

I:\Projects\2010\201011\road\structural\dgn\08\SA17_ABUTMENTS.dgn
 10/12/2010

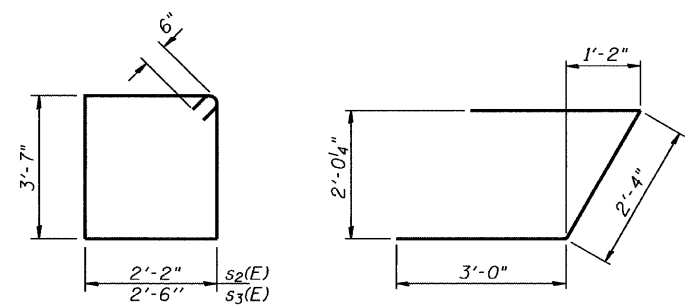
PILE DATA
 Pile Type and Size: Steel HP12x63 with Pile Shoes
 Nominal Required Bearing: 497 kip
 Factored Resistance Available: 245 kip
 Est. Length: 43 ft @ S. Abut., 46 ft @ N. Abut.
 (See Note 4)
 No. Production Piles Per Abutment: 6
 No. Test Piles per Abutment: 1
 Estimated Top of Rock Elevation: 564.00 @ S. Abut.
 561.00 @ N. Abut.

DESIGNED	E.E.J.
CHECKED	J.Z.
DRAWN	E.E.J.
CHECKED	J.Z.



FIELD CUTTING DIAGRAM

Order v2(E) & v3(E) full length. Cut as shown and use remainder of bars in opposite face.



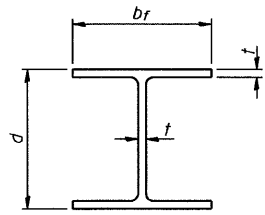
BARS s2(E) & s3(E)

BAR u(E)

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 (773) 399-0112

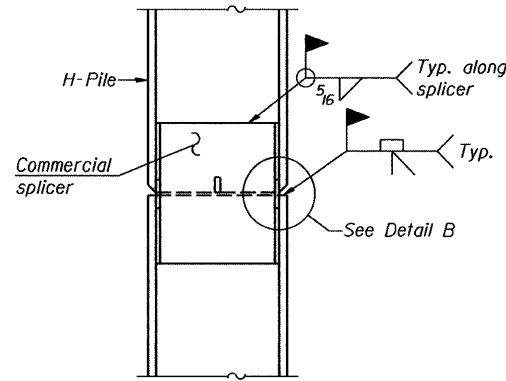
ABUTMENTS				
Illinois Rte. 84 Over Apple River Tributary				
STATION 165+50.00 STRUCTURE NO. 043-0078				
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
SA17 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126
				53
CONTRACT NO. 64B26				
10-15-2010		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

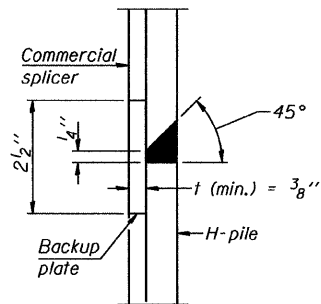


STEEL PILE TABLE

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

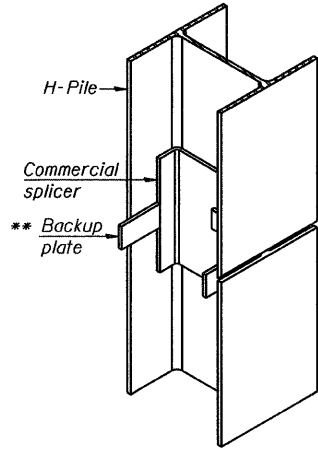


ELEVATION

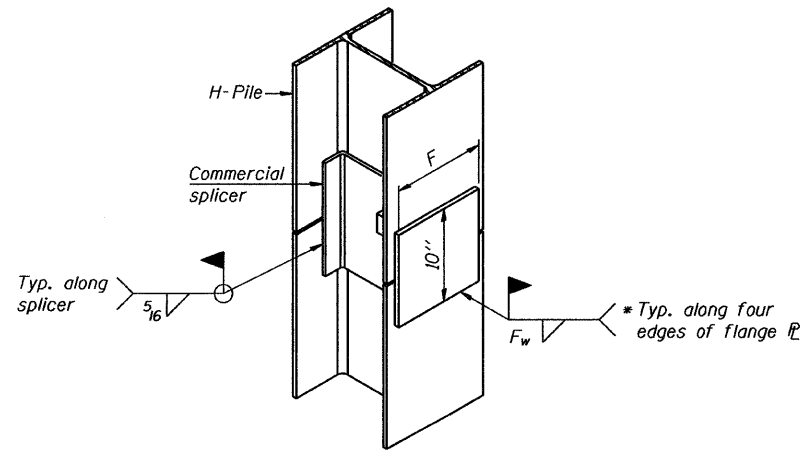


DETAIL "B"

WELDED COMMERCIAL SPLICE



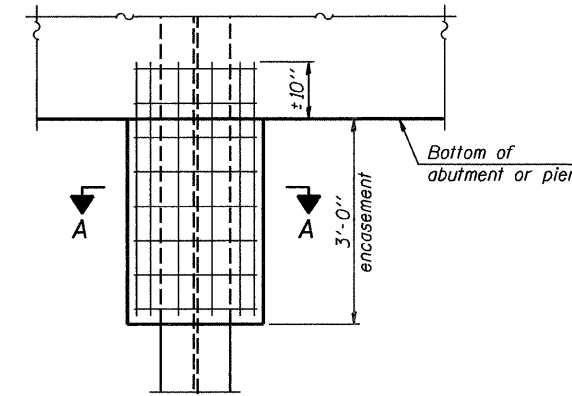
ISOMETRIC VIEW



ISOMETRIC VIEW

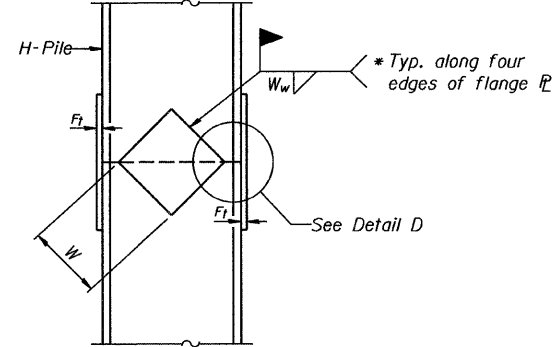
WELDED COMMERCIAL SPLICE ALTERNATE

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

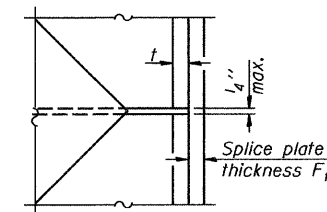


ELEVATION

PILE ENCASEMENT

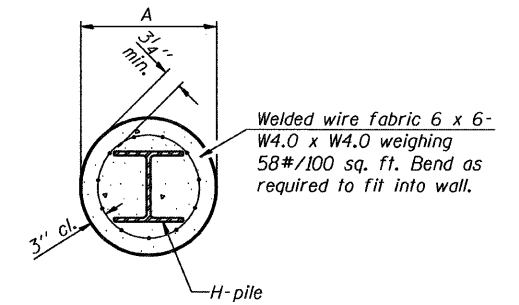


ELEVATION



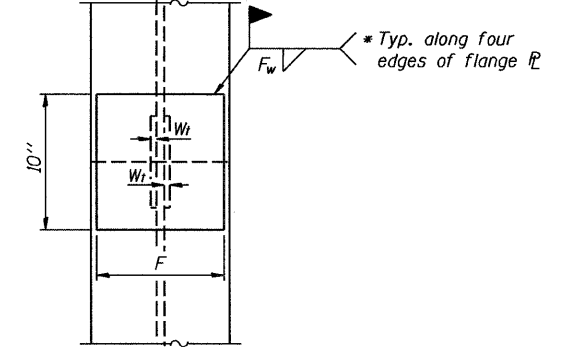
DETAIL D

WELDED PLATE FIELD SPLICE



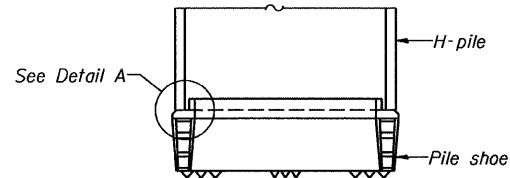
SECTION A-A

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

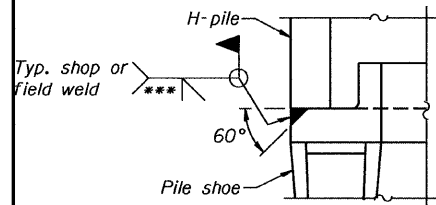


END VIEW

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



ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT

HP PILES					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA19 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	55
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

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

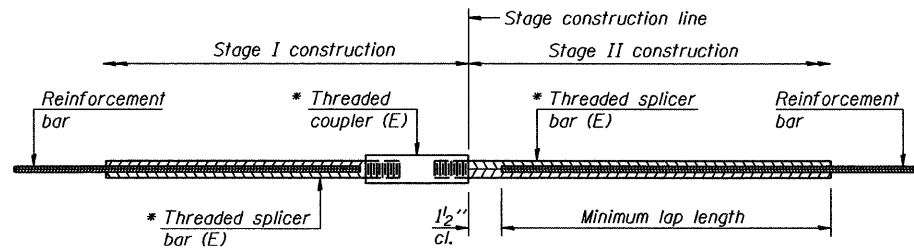
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Chicago, Illinois 60631
(773) 399-0112

I:\projects\2010\20100801\cadd\structure\1\sign\80\SA19_HP_PILES.dgn
 10/15/2010

DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	E.E.J.

F-HP 11-1-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

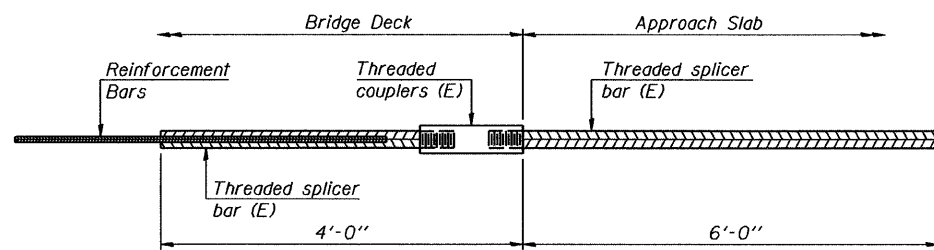
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
11	7'-2"	10'-0"	10'-8"	12'-1"	13'-4"	15'-1"

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

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

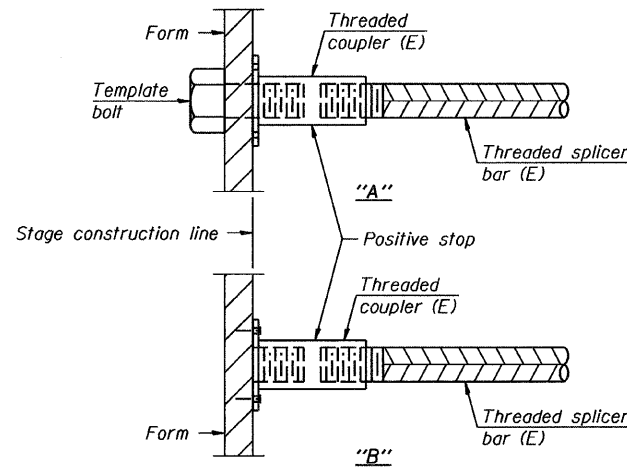
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	399	3
Diaphragms	#6	16	6
Approach Slabs	#4	50	4
Approach Slabs	#5	172	3
Abutments	#5	8	6
Abutments	#7	16	6
Piers	#5	80	6
Piers	#7	8	6
Piers	#11	4	6



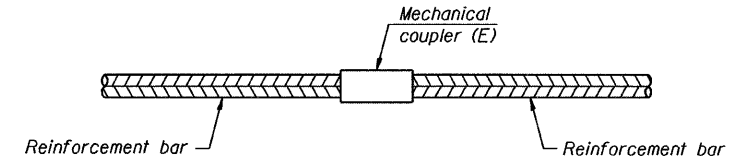
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 76



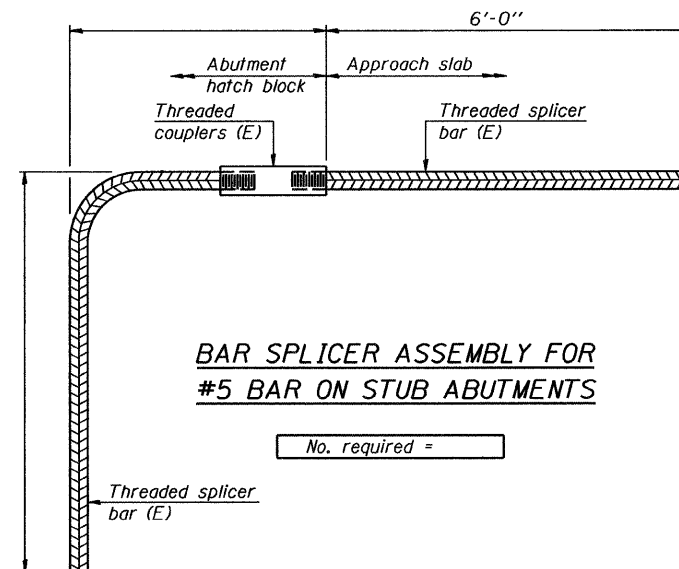
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

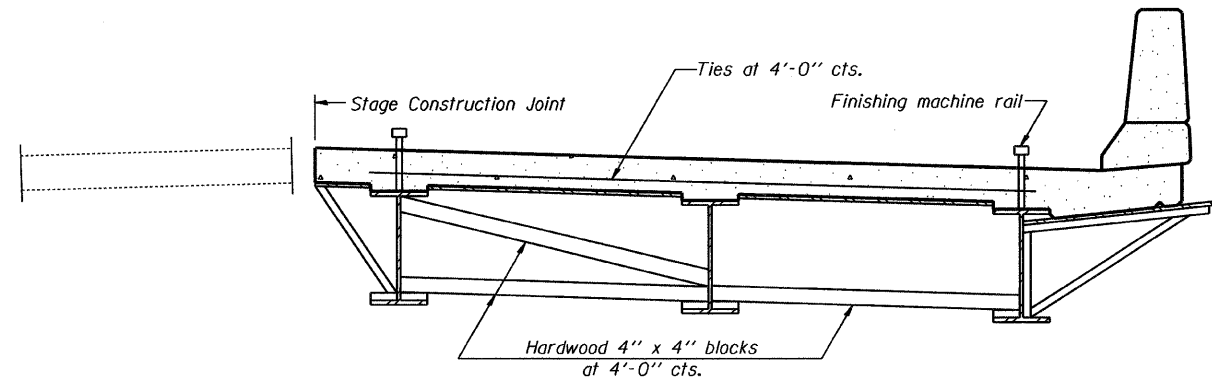
H:\projects\2010\201003011\road\structure\1.dgn\805A20.BAR_SPLICERS.dgn
 10/17/2010

DESIGNED J.Z.
 CHECKED E.E.J.
 DRAWN R.B.H.
 CHECKED J.Z.

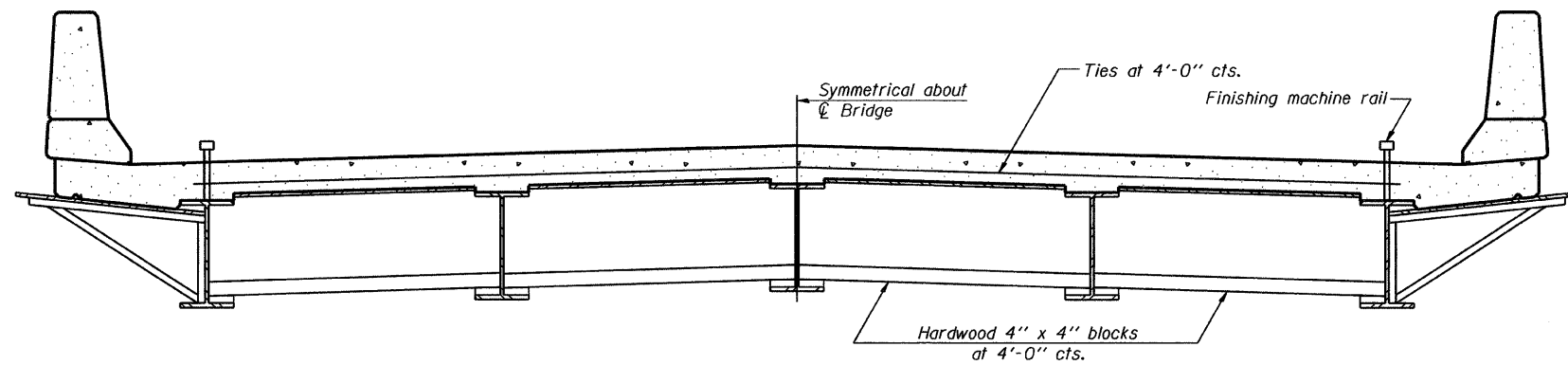
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 Chicago, Illinois 60631
 (773) 399-0112

BAR SPLICER ASSEMBLY DETAILS					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA20 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	56
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**FORM BRACES FOR
STAGE CONSTRUCTION**



**FORM BRACES FOR
STANDARD CONSTRUCTION**

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.

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 10/12/2010

DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

SB-1

11-1-09

GRÄEF 8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURE					
<i>Illinois Rte. 84 Over Apple River Tributary</i>					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO. SA21 OF 25 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	104BR-1	JO DAVIESS	126	57
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		



SOIL BORING LOG

Date 4/9/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Apple River Tributary, 2 miles south of Hanover LOGGED BY J. Straling

SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 22SE, SEC. , TWP. 26N, RNG. 2E

COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	D	B	U	M
		EP	LO	CS	OIS			EP	LO	CS	OIS
BORING NO.	Station	H	W	Qu	T	Groundwater Elev.:		H	S	Qu	T
						First Encounter					
						Upon Completion		(ft)	(/6")	(tsf)	(%)
						After	Hrs.				
MEDIUM brown/gray SILTY LOAM				0.5	22.0	STIFF tan/brown SILTY LOAM with SAND lens		5			
				P				4	1.3	24.0	
	605.40		2					2	P		
STIFF gray SILTY CLAY			3	1.3	31.0	MEDIUM gray SILTY CLAY		1			
			5	P				1	0.6	33.0	
	603.90							1	B		
STIFF gray SILTY CLAY			2			SOFT gray SILTY CLAY		0			
			5	1.4	30.0			1	0.3		
	601.40			B				2	P		
STIFF gray SILTY CLAY			2			STIFF gray SILTY CLAY		0			
			3	1.4	30.0			1	1.5	36.0	
	598.90		3	B				2	P		
MEDIUM dark gray SILTY LOAM			3			SOFT gray SILTY CLAY		1			
			3	0.8	29.0			1	0.3	34.0	
	596.40		4	P				2	P		
MEDIUM gray SILTY LOAM			2			SOFT gray SILTY CLAY		0			
			2	0.6	35.0			1	0.3	33.0	
	593.90		4	P				3	P		
SOFT gray SILTY LOAM			1			MEDIUM gray SILTY LOAM with SAND lens		1			
			2	0.3	33.0			3	0.5	27.0	
	591.40		3	P				4	P		
MEDIUM dark gray SILTY CLAY LOAM			2			HARD tan/gray CLAY LOAM		8			
			2	1.0	30.0			15	9.0	17.0	
	588.90		5	B				19	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, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 4/9/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Apple River Tributary, 2 miles south of Hanover LOGGED BY J. Straling

SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 22SE, SEC. , TWP. 26N, RNG. 2E

COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	D	B	U	M
		EP	LO	CS	OIS			EP	LO	CS	OIS
BORING NO.	Station	H	W	Qu	T	Groundwater Elev.:		H	S	Qu	T
						First Encounter					
						Upon Completion		(ft)	(/6")	(tsf)	(%)
						After	Hrs.				
HARD tan/gray CLAY LOAM				10				15	4.5	17.0	
				S				25			
	586.40										
HARD tan/gray CLAY LOAM with well-cemented SAND lens				32				21		19.0	
				35							
	582.90										
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, from 137 (Rev. 8-99)

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 10/13/2010

DESIGNED E.E.J.
 CHECKED J.Z.
 DRAWN R.B.H.
 CHECKED J.Z.

BORING LOGS II

Illinois Rte. 84 Over Apple River Tributary

STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA23 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	59
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

GR&E 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**Illinois Department
of Transportation**
Division of Highways
Illinois Department of Transportation/D-2

ROCK CORE LOG

Page 1 of 1

Date 4/9/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Apple River Tributary, 2 miles south of Hanover LOGGED BY J. Strating
SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 22SE, SEC. , TWP. 26N, RNG. 2E
COUNTY JoDaviess CORING METHOD _____

STRUCT. NO. Station	BORING NO. Station Offset Ground Surface Elev.	CORING BARREL TYPE & SIZE Core Diameter Top of Rock Elev. Begin Core Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
043-0038 165+48	B-2a 165+35 10.00ft Rt Cl 607.90 ft	1.5 in 562.90 ft 562.90 ft	562.90	1	100	42	2.6	813.0
Dolomite: buff gray, very dense and marbled with dark gray streaks. t.s.f.: 561.5 to 561.0								
557.90 -50								
Dolomite: as above with minor pitting. t.s.f.: 554.9 to 554.4								
552.90 -55								
End of Boring								
-60								
-65								

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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DESIGNED	E.E.J.
CHECKED	J.Z.
DRAWN	R.B.H.
CHECKED	J.Z.

ROCK CORE LOG
Illinois Rte. 84 Over Apple River Tributary
STATION 165+50.00 STRUCTURE NO. 043-0078

SHEET NO. SA24 OF 25 SHEETS	F.A.P. RTE. 308	SECTION 104BR-1	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 60
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

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



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation D-2

SOIL BORING LOG

Date 4/10/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Apple River, 2 miles south of Hanover LOGGED BY W. Garza
SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 22SE, SEC. , TWP. 26N, RNG. 2E
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	DEPTH (ft)	BLOW (16")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (16")	UCS (tsf)	MOIST (%)	DESCRIPTION
043-0038	165+48					10" Asphalt, 6" Concrete					
B-3a	164+55					MEDIUM brown SILTY CLAY LOAM	586.80	1	0.4	27.0	SOFT tan SILTY LOAM with SAND lens
	11.00ft LI CL					STIFF gray/tan SILTY CLAY	584.30	1	P		SOFT gray SILTY LOAM
	Ground Surface Elev. 608.30 ft						581.80	1	0.4	30.0	VERY SOFT gray SILTY LOAM
							579.30	2	P		MEDIUM/SOFT brown SILTY CLAY with SAND lens
							576.80				No Recovery
							574.30				MEDIUM gray SILTY CLAY with SAND lens
							571.80				VERY STIFF gray CLAY LOAM with LIMESTONE fragments
							568.80				VERY STIFF tan/gray CLAY LOAM with LIMESTONE fragments

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, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation D-2

SOIL BORING LOG

Date 4/10/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Apple River, 2 miles south of Hanover LOGGED BY W. Garza
SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 22SE, SEC. , TWP. 26N, RNG. 2E
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	DEPTH (ft)	BLOW (16")	UCS (tsf)	MOIST (%)	DESCRIPTION
043-0038	165+48					10" Asphalt, 6" Concrete
B-3a	164+55					MEDIUM brown SILTY CLAY LOAM
	11.00ft LI CL					STIFF gray/tan SILTY CLAY
	Ground Surface Elev. 608.30 ft					SOFT tan SILTY LOAM with SAND lens
						SOFT gray SILTY LOAM
						VERY SOFT gray SILTY LOAM
						MEDIUM/SOFT brown SILTY CLAY with SAND lens
						No Recovery
						MEDIUM gray SILTY CLAY with SAND lens
						VERY STIFF gray CLAY LOAM with LIMESTONE fragments
						VERY STIFF tan/gray CLAY LOAM with LIMESTONE fragments

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, from 137 (Rev. 8-99)

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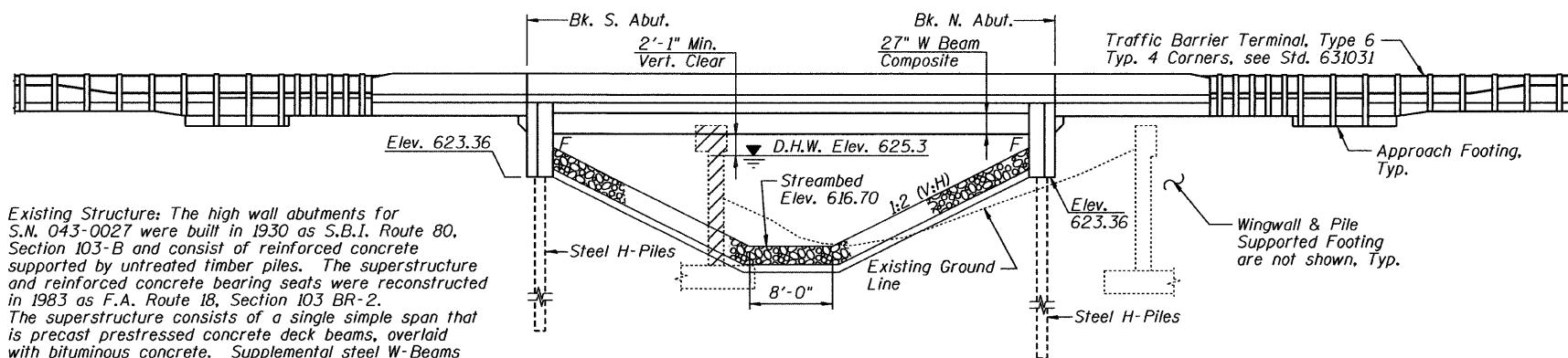
DESIGNED	E.E.J.
CHECKED	J.Z.
DRAWN	R.B.H.
CHECKED	J.Z.

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BORING LOGS III					
Illinois Rte. 84 Over Apple River Tributary					
STATION 165+50.00			STRUCTURE NO. 043-0078		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA25 OF 25 SHEETS	308	104BR-1	JO DAVIESS	126	61
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

Benchmark: BM#407 is a mark on the west side of the existing South Abutment. Sta. 336+33.85; 17.11 feet left; Elev. 629.586.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

Existing Structure: The high wall abutments for S.N. 043-0027 were built in 1930 as S.B.I. Route 80, Section 103-B and consist of reinforced concrete supported by untreated timber piles. The superstructure and reinforced concrete bearing seats were reconstructed in 1983 as F.A. Route 18, Section 103 BR-2. The superstructure consists of a single simple span that is precast prestressed concrete deck beams, overlaid with bituminous concrete. Supplemental steel W-Beams were added below 5 deck beams in 2009. The bridge is 44'-6" back to back abutment caps (42'-9 1/2" back to back abutments), and the width is 33'-0" out to out plus railing posts. The bridge is to be removed and replaced using stage construction. Supplemental steel W-Beams are to be salvaged and delivered to a location to be designated by the District.

STATION 336+42
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. RT. 308 SEC. 103BR-3
LOADING HL-93
STRUCTURE NO. 043-0079

DESIGN SPECIFICATIONS

2007 AASHTO LRFD
Bridge Design Specifications
with 2008 & 2009 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Structural Steel M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.05g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.08g
Soil Site Class = C

LOADING HL-93

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

NAME PLATE
See Std. 515001

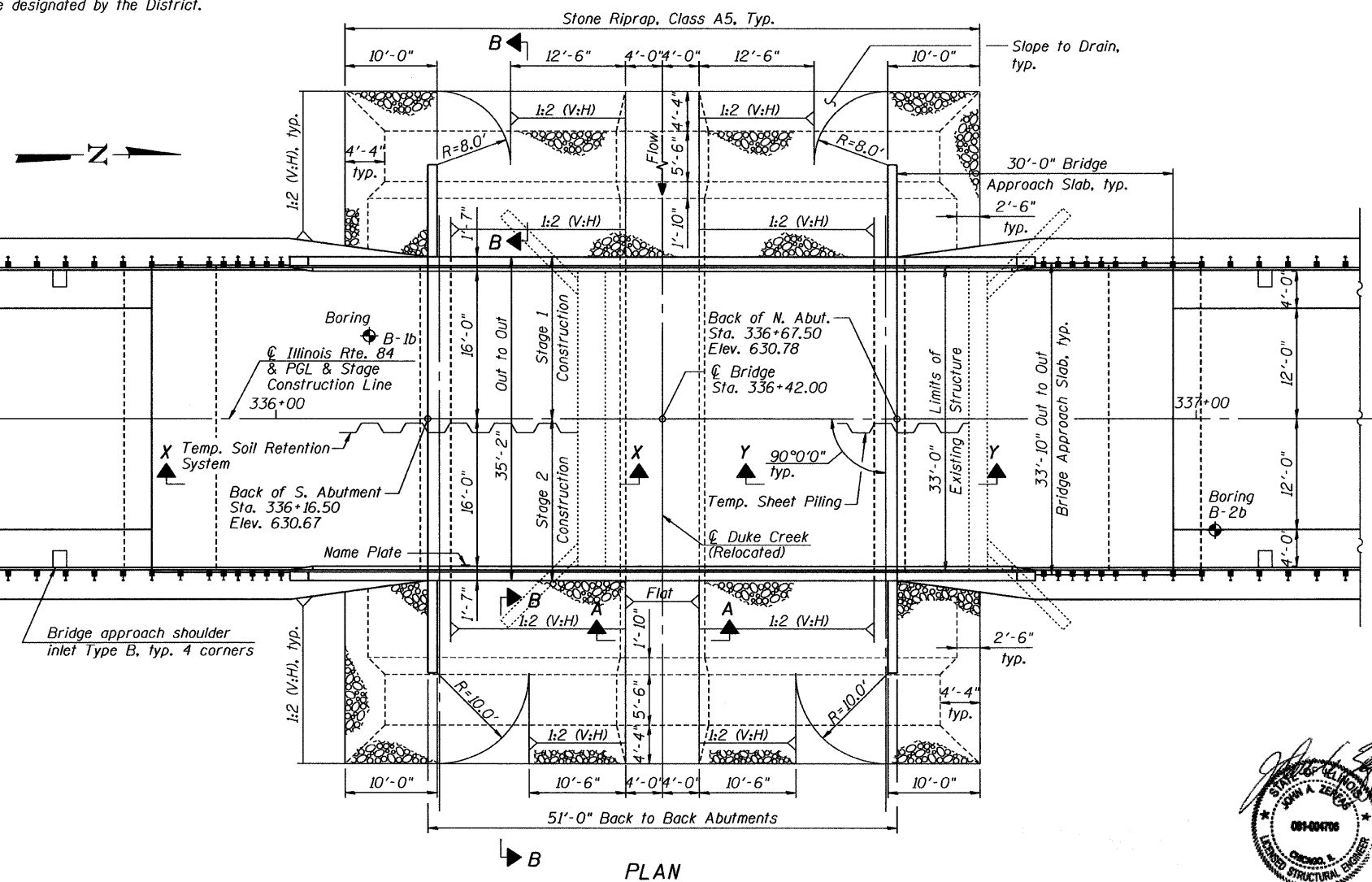
DESIGN SCOUR
ELEVATION TABLE

Design Scour Elevation (Ft.)	S. Abut.	N. Abut.
	623.36	623.36

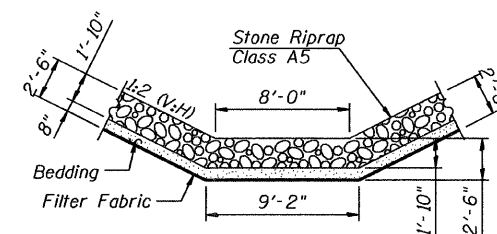
WATERWAY INFORMATION TABLE

Drainage Area = 2.6 sq. mi.		Existing Low Grade Elev. - 629.66 ft. @ Sta. 334+14		Proposed Low Grade Elev. - 629.66 ft. @ Sta. 334+14					
Flood	Frequency (Year)	Discharge (C.F.S.)	Waterway Opening (Sq. Ft.)		Natural H.W.E.	Head - (Feet)		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Ten Year	10	760	149.0	186.5	624.5	0.3	0.3	624.9	624.9
Design	50	1270	189.8	227.1	625.3	0.9	0.9	626.2	626.2
Base	100	1500	201.1	238.3	625.6	1.1	1.1	626.7	626.7
Max. Calc.	500	2100	226.3	263.4	626.1	1.9	1.7	628.0	627.9

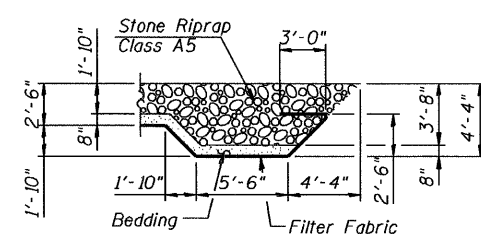
10-Year Velocity through Existing Structure = 5.2 fps
10-Year Velocity through Proposed Structure = 4.08 fps



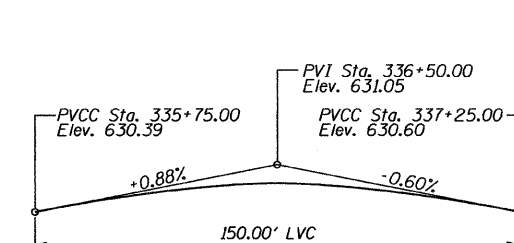
PLAN



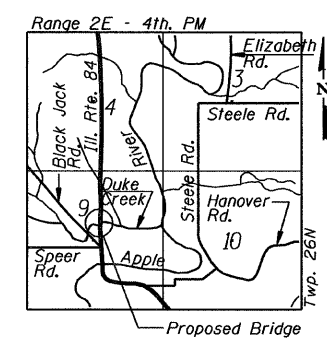
SECTION A-A



SECTION B-B



PROFILE GRADE LINE:
ILLINOIS RTE. 84
Along E. Roadway



LOCATION SKETCH

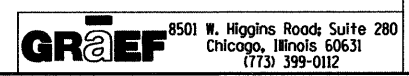


NOTES
1. For Sections X-X and Y-Y, see Sheet SB2 of 23.

DESIGNED	J.J.G.
CHECKED	J.A.Z.
DRAWN	E.E.J.
CHECKED	J.J.G.

LEGEND
 - Stone Riprap
 - Soil Boring

GENERAL PLAN & ELEVATION ILLINOIS RTE. 84 OVER DUKE CREEK					
F.A.P. RTE. 308		SEC. 103BR-3		JO DAVIESS COUNTY	
STATION 336+42.00		STRUCTURE NO. 043-0079			
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB1 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	62
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

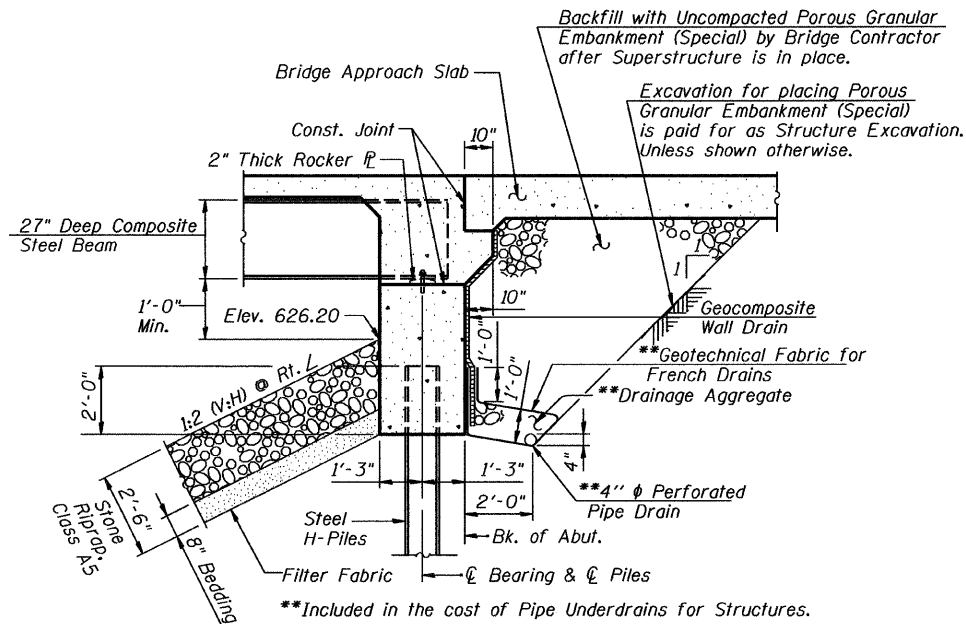


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INDEX OF SHEETS

- SB1 GENERAL PLAN & ELEVATION
- SB2 GENERAL DATA
- SB3 CONSTRUCTION STAGING
- SB4 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- SB5 TOP OF DECK SLAB ELEVATIONS I
- SB6 TOP OF DECK SLAB ELEVATIONS II
- SB7 TOP OF SOUTH APPROACH SLAB ELEVATIONS
- SB8 TOP OF NORTH APPROACH SLAB ELEVATIONS
- SB9 DECK PLAN & CROSS SECTION
- SB10 PARAPET & DECK DETAILS
- SB11 DIAPHRAGMS AT ABUTMENTS
- SB12 BRIDGE APPROACH SLAB
- SB13 BRIDGE APPROACH SLAB DETAILS
- SB14 FRAMING PLAN & DIAPHRAGMS
- SB15 BEAM ELEVATION, BEARINGS & TABLES
- SB16 SOUTH ABUTMENT
- SB17 NORTH ABUTMENT
- SB18 HP PILES
- SB19 BAR SPLICER ASSEMBLY DETAILS
- SB20 CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURE
- SB21 BORING LOGS I
- SB22 ROCK CORE LOG
- SB23 BORING LOGS II

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

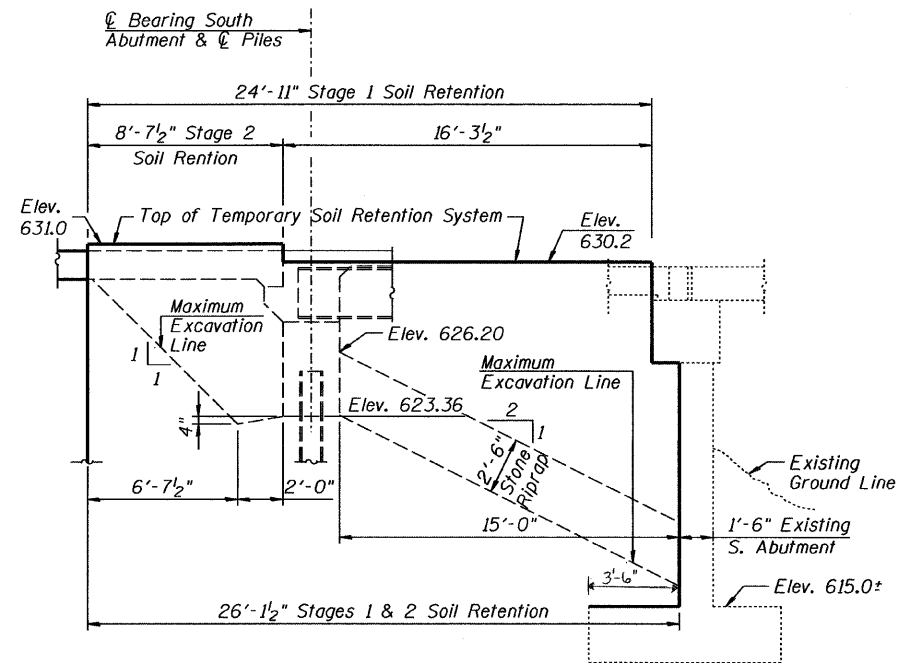


Note: All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

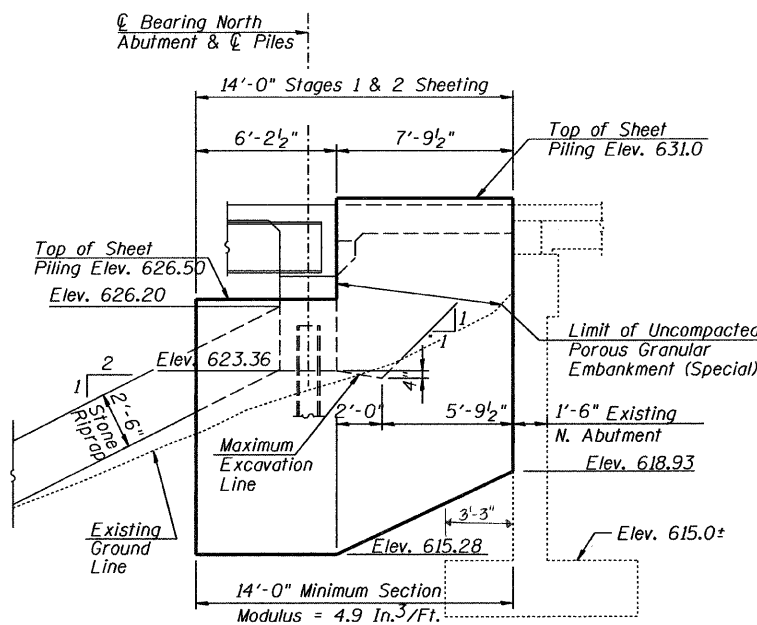
SECTION THRU INTEGRAL ABUTMENT

GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts are 7/8" diameter in 1/2" diameter holes unless otherwise noted.
2. Calculated weight of Structural Steel = 26,560 lbs.
3. All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. Structural steel shall be only painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
8. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
9. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
10. A cantilevered sheet piling design does not appear feasible at the South Abutment, 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.
11. The Contractor is advised that the existing structure contains members that are 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.
12. Slipforming of the Parapets is not allowed.



ELEVATION VIEW OF TEMPORARY SOIL RETENTION SYSTEM AT SOUTH ABUTMENT (SECTION X-X)



ELEVATION VIEW OF TEMPORARY SHEET PILING AT NORTH ABUTMENT (SECTION Y-Y)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	CU YD	-	120	120
Stone Riprap, Class A5	SQ YD	-	482	482
Filter Fabric	SQ YD	-	482	482
Removal of Existing Structures No. 2	EACH	-	-	1
Structure Excavation	CU YD	-	115	115
Concrete Structures	CU YD	20.9	32.6	53.5
Concrete Superstructure	CU YD	187.1	-	187.1
Bridge Deck Grooving	SQ YD	374	-	374
Concrete Encasement	CU YD	-	4.8	4.8
Protective Coat	SQ YD	472	-	472
Furnishing & Erecting Structural Steel	L. SUM	0.25	-	0.25
Stud Shear Connectors	EACH	738	-	738
Reinforcement Bars, Epoxy Coated	POUND	43,380	4,730	48,110
Bar Splicers	EACH	464	24	488
Furnishing Steel Piles HP12x63	FOOT	-	672	672
Driving Piles	FOOT	-	672	672
Test Pile Steel HP12x63	EACH	-	2	2
Pile Shoes	EACH	-	14	14
Temporary Sheet Piling	SQ FT	-	178	178
Name Plates	EACH	1	-	1
Anchor Bolts, 1"	EACH	24	-	24
Geocomposite Wall Drain	SQ YD	-	62	62
Pipe Underdrains for Structures 4"	FOOT	-	132	132
Temporary Soil Retention System	SQ FT	-	217	217
Asbestos Bearing Pad Removal	EACH	26	-	26

NOTES

1. For location of Sections X-X and Y-Y, see Sheet SB1 of 23.

GENERAL DATA

Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB2 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	63
CONTRACT NO. 64B26					

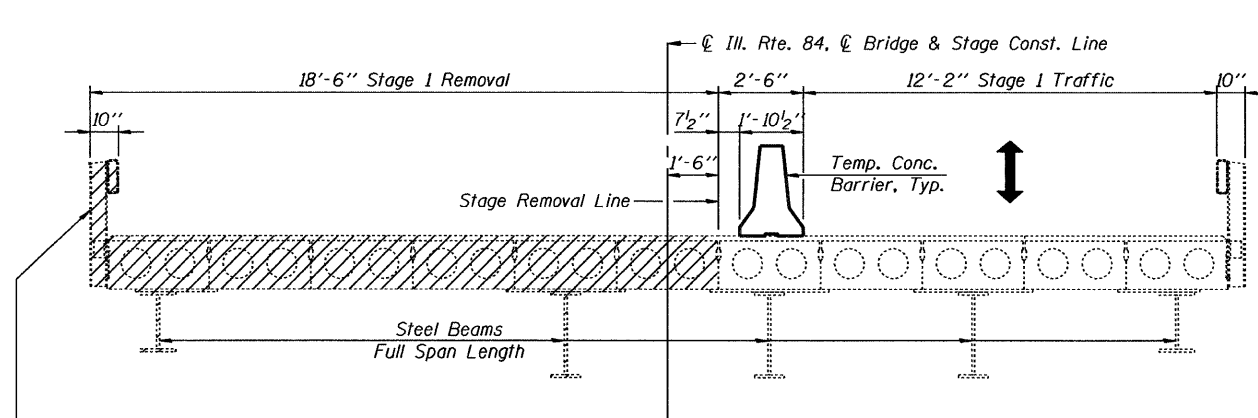
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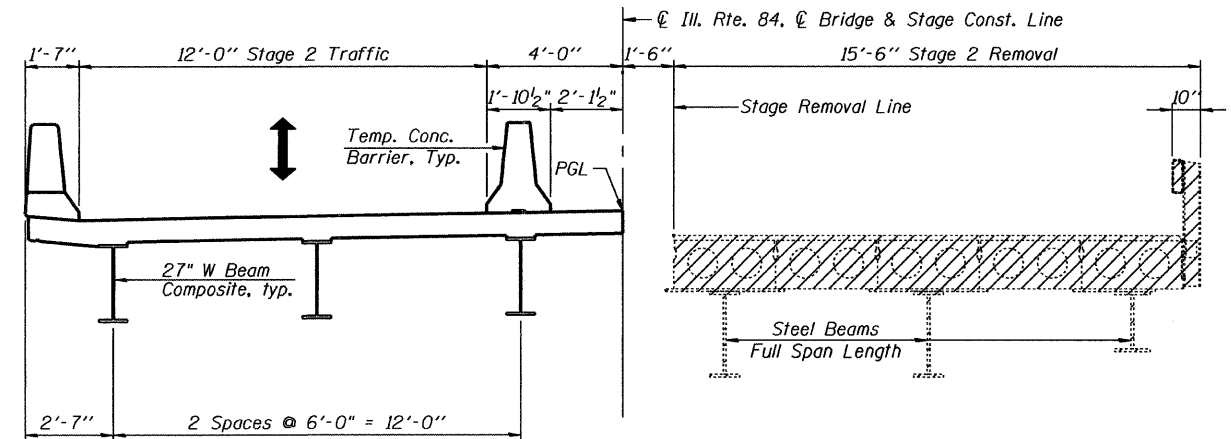
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CHECKED	J.A.Z.
DRAWN	S.R.K.
CHECKED	J.J.G.

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DEPARTMENT OF TRANSPORTATION

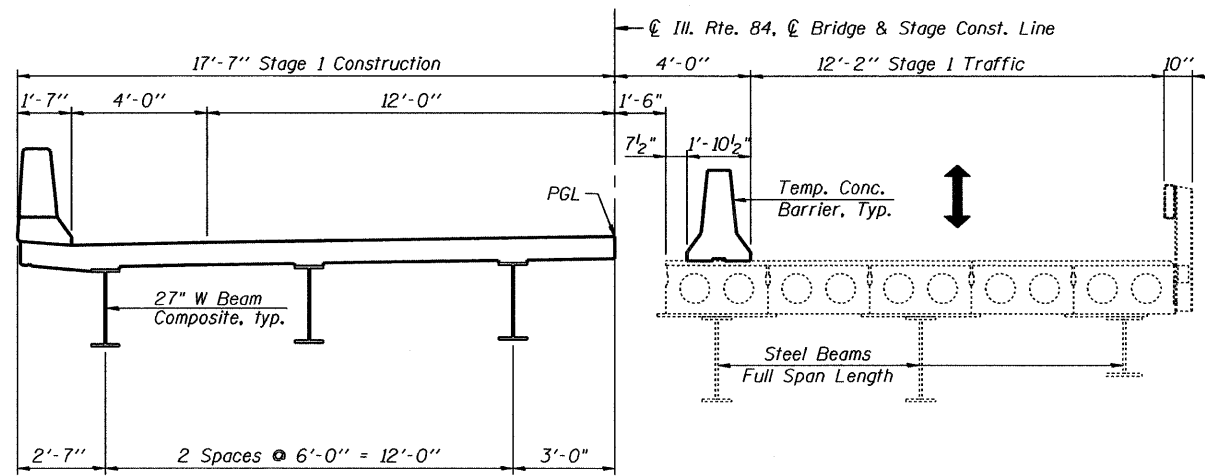


Cost for removal of existing bridge rails shall be included with Removal of Existing Structures.

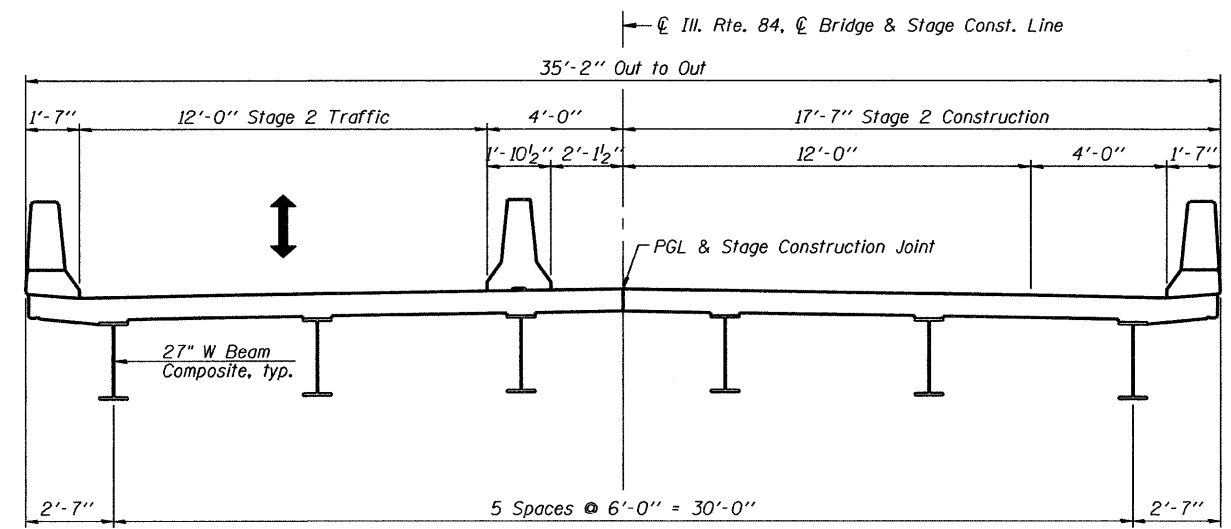
STAGE 1 REMOVAL
(Looking North)



STAGE 2 REMOVAL
(Looking North)



STAGE 1 CONSTRUCTION
(Looking North)



STAGE 2 CONSTRUCTION
(Looking North)

NOTES

- The Stage Removal and Stage Construction for the bridge Approach Slabs are the same as for the bridge deck.
- The cost for removal of existing bridge rails and for removal of the temporary steel beams and their required attachment items for the support of the deck beams shall be included with the Removal of Existing Structures Pay Item.

CONSTRUCTION STAGING					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB3 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	64
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

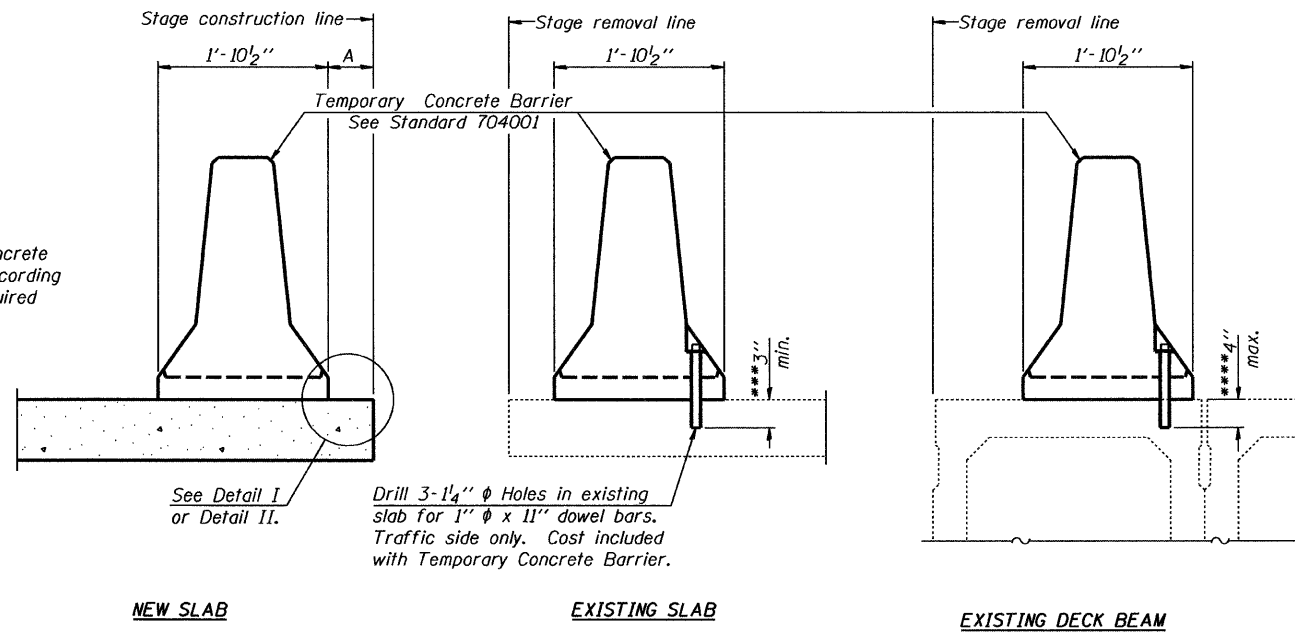
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When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

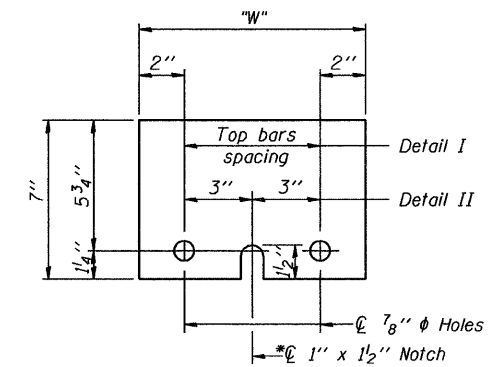
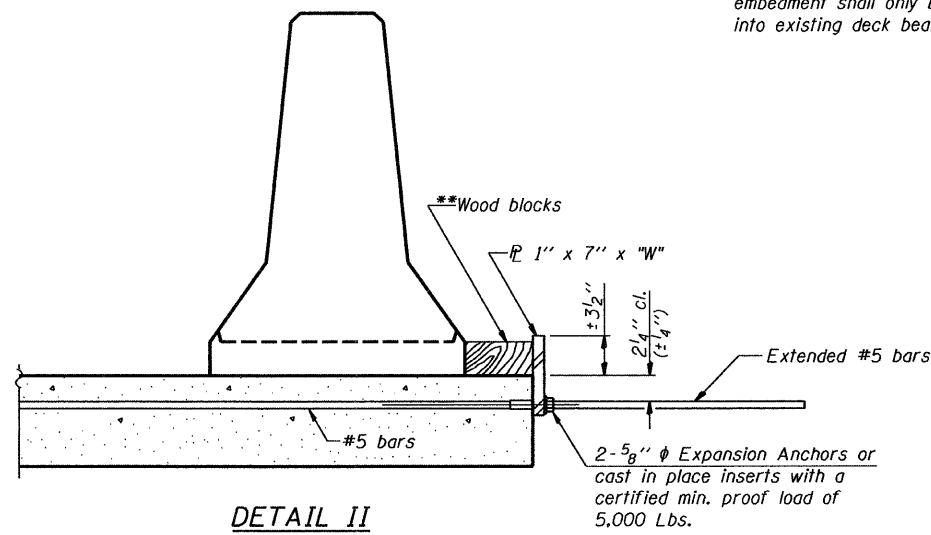
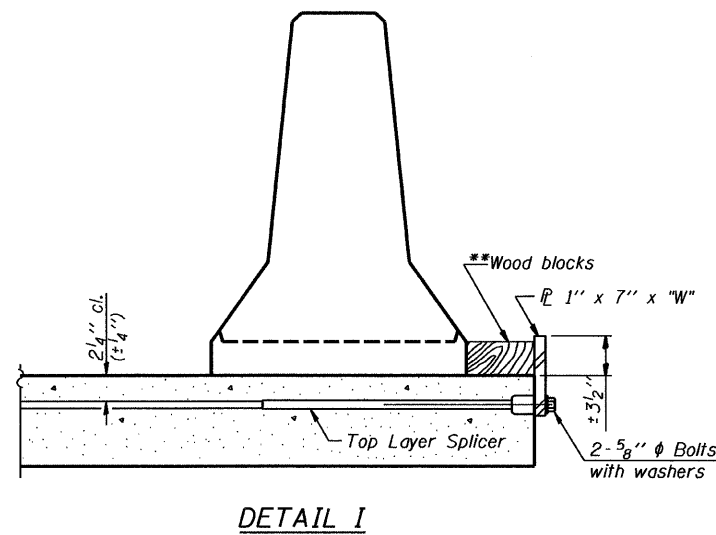
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

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



STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II

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

"W" = Top bars spacing + 4"

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB4 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	65
					CONTRACT NO. 64B26

10-15-2010 ILLINOIS FED. AID PROJECT

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DRAWN	R.B.H.
CHECKED	E.E.J.

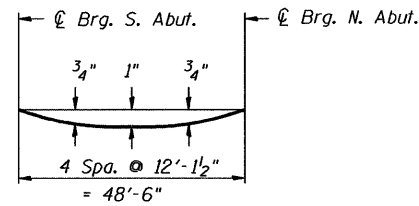
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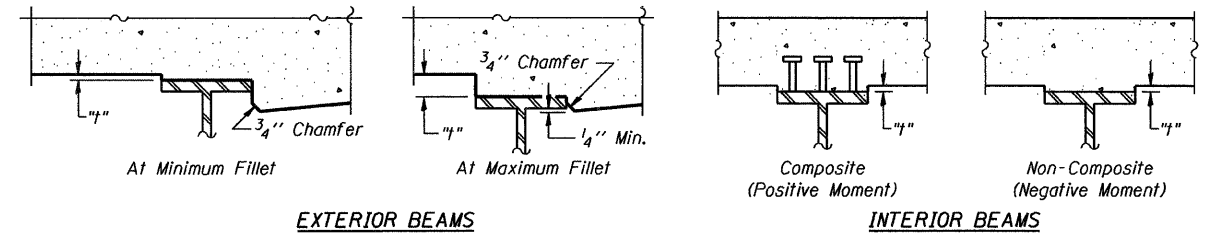
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets SB5 and SB6.



EXTERIOR BEAMS

INTERIOR BEAMS

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets SB5 and SB6, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

BEAM 1

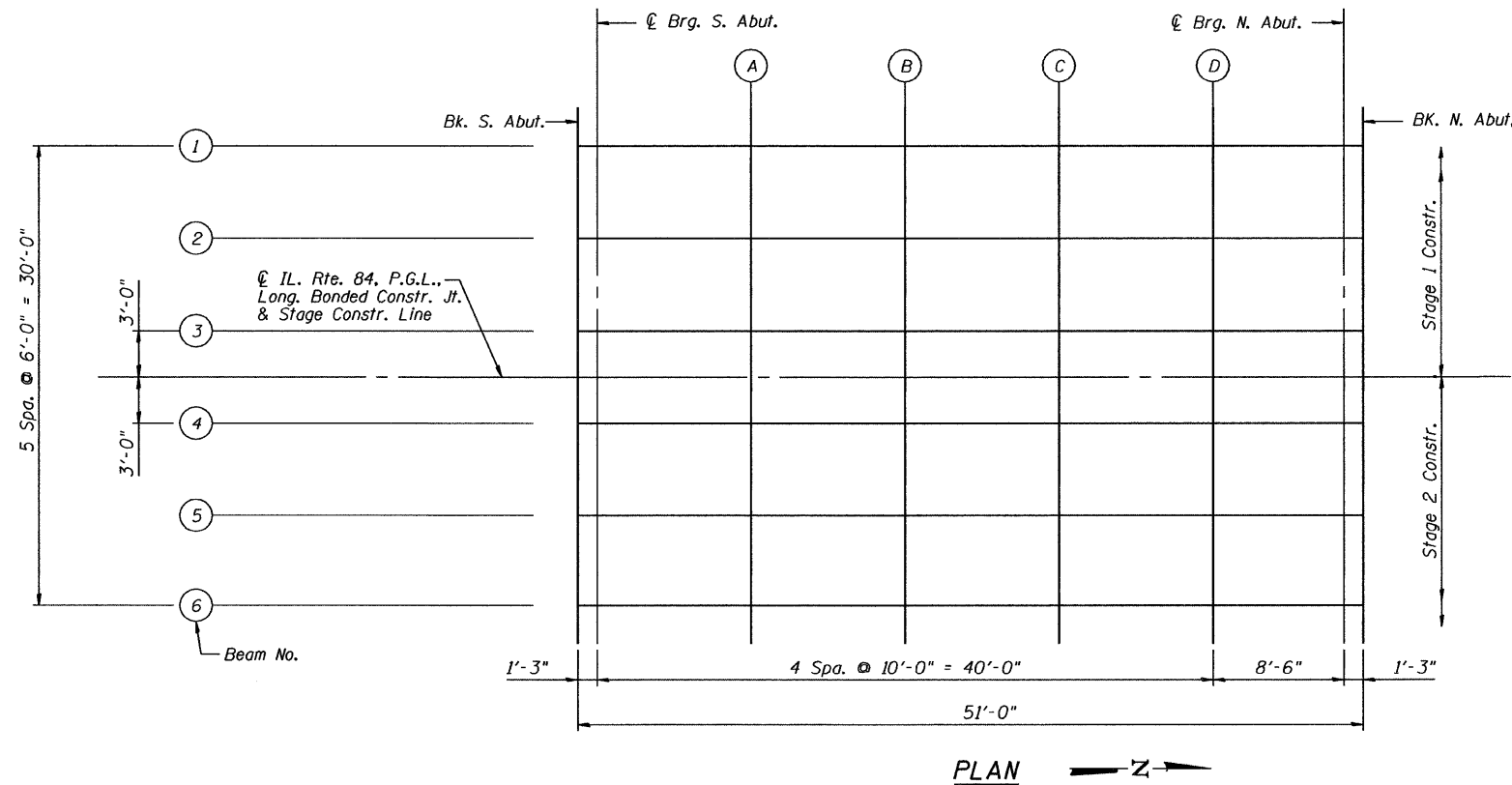
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	-15.000	630.42	630.42
CL. BRG. S. Abut.	336+17.75	-15.000	630.43	630.43
A	336+27.75	-15.000	630.47	630.52
B	336+37.75	-15.000	630.50	630.58
C	336+47.75	-15.000	630.52	630.60
D	336+57.75	-15.000	630.53	630.58
CL. BRG. N. Abut.	336+66.25	-15.000	630.53	630.53
BK. N. Abut.	336+67.50	-15.000	630.53	630.53

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	-9.000	630.53	630.53
CL. BRG. S. Abut.	336+17.75	-9.000	630.54	630.54
A	336+27.75	-9.000	630.58	630.63
B	336+37.75	-9.000	630.61	630.69
C	336+47.75	-9.000	630.63	630.71
D	336+57.75	-9.000	630.64	630.69
CL. BRG. N. Abut.	336+66.25	-9.000	630.64	630.64
BK. N. Abut.	336+67.50	-9.000	630.64	630.64

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	-3.000	630.62	630.62
CL. BRG. S. Abut.	336+17.75	-3.000	630.63	630.63
A	336+27.75	-3.000	630.67	630.72
B	336+37.75	-3.000	630.70	630.78
C	336+47.75	-3.000	630.72	630.80
D	336+57.75	-3.000	630.73	630.78
CL. BRG. N. Abut.	336+66.25	-3.000	630.74	630.74
BK. N. Abut.	336+67.50	-3.000	630.74	630.74



PLAN — Z —>

TOP OF DECK SLAB ELEVATIONS I					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB5 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	66
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		

DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

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 10/12/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL RTE 84, P.G.L.,
LONG. BONDED CONSTR. JT.
& STAGE CONSTR. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	0.000	630.67	630.67
CL. BRG. S. Abut.	336+17.75	0.000	630.68	630.68
A	336+27.75	0.000	630.72	630.77
B	336+37.75	0.000	630.75	630.83
C	336+47.75	0.000	630.77	630.85
D	336+57.75	0.000	630.78	630.83
CL. BRG. N. Abut.	336+66.25	0.000	630.78	630.78
BK. N. Abut.	336+67.50	0.000	630.78	630.78

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	3.000	630.62	630.62
CL. BRG. S. Abut.	336+17.75	3.000	630.63	630.63
A	336+27.75	3.000	630.67	630.72
B	336+37.75	3.000	630.70	630.78
C	336+47.75	3.000	630.72	630.80
D	336+57.75	3.000	630.73	630.78
CL. BRG. N. Abut.	336+66.25	3.000	630.74	630.74
BK. N. Abut.	336+67.50	3.000	630.74	630.74

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	9.000	630.53	630.53
CL. BRG. S. Abut.	336+17.75	9.000	630.54	630.54
A	336+27.75	9.000	630.58	630.63
B	336+37.75	9.000	630.61	630.69
C	336+47.75	9.000	630.63	630.71
D	336+57.75	9.000	630.64	630.69
CL. BRG. N. Abut.	336+66.25	9.000	630.64	630.64
BK. N. Abut.	336+67.50	9.000	630.64	630.64

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	336+16.50	15.000	630.42	630.42
CL. BRG. S. Abut.	336+17.75	15.000	630.43	630.43
A	336+27.75	15.000	630.47	630.52
B	336+37.75	15.000	630.50	630.58
C	336+47.75	15.000	630.52	630.60
D	336+57.75	15.000	630.53	630.58
CL. BRG. N. Abut.	336+66.25	15.000	630.53	630.53
BK. N. Abut.	336+67.50	15.000	630.53	630.53

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 10/12/2010

DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

TOP OF DECK SLAB ELEVATIONS II Illinois Rte. 84 Over Duke Creek STATION 336+42.00 STRUCTURE NO. 043-0079					
SHEET NO. SB6 OF 23 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	103BR-3	JO DAVIESS	126	67
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL RTE. 84, P.G.L.
LONG. BONDED CONSTR. JT.
& STAGE CONSTR. LINE

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	335+86.50	-16.000	630.21
A ₁	335+96.50	-16.000	630.29
A ₂	336+06.50	-16.000	630.35
BK. S. Abut.	336+16.50	-16.000	630.40

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	335+86.50	-12.000	630.30
A ₁	335+96.50	-12.000	630.37
A ₂	336+06.50	-12.000	630.43
BK. S. Abut.	336+16.50	-12.000	630.48

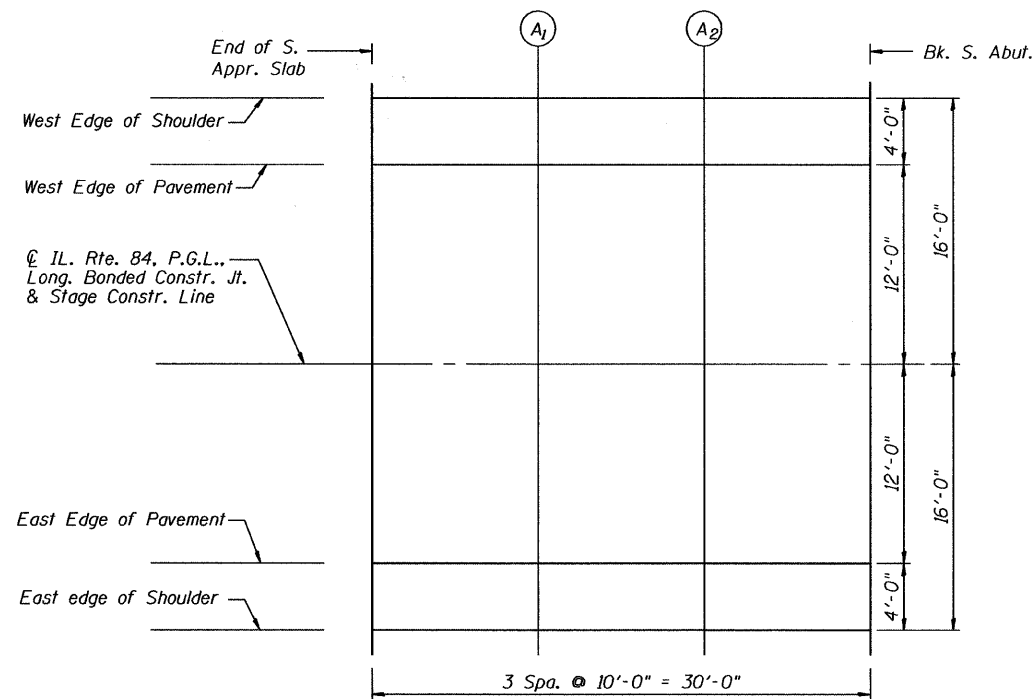
Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	335+86.50	0.000	630.48
A ₁	335+96.50	0.000	630.56
A ₂	336+06.50	0.000	630.62
BK. S. Abut.	336+16.50	0.000	630.67

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	335+86.50	12.000	630.30
A ₁	335+96.50	12.000	630.37
A ₂	336+06.50	12.000	630.43
BK. S. Abut.	336+16.50	12.000	630.48

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of S. Appr. Slab	335+86.50	16.000	630.21
A ₁	335+96.50	16.000	630.29
A ₂	336+06.50	16.000	630.35
BK. S. Abut.	336+16.50	16.000	630.40



PLAN

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DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

TOP OF SOUTH APPROACH SLAB ELEVATIONS					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB7 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	68
			CONTRACT NO. 64B26		
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DEPARTMENT OF TRANSPORTATION

IL RTE. 84, P.G.L.
LONG. CONSTR. JT. &
STAGE CONSTR. LINE

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
BK. N. Abut.	336+67.50	-16.000	630.51
A ₃	336+77.50	-16.000	630.50
A ₄	336+87.50	-16.000	630.48
End of N. Appr. Slab.	336+97.50	-16.000	630.46

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
BK. N. Abut.	336+67.50	-12.000	630.59
A ₃	336+77.50	-12.000	630.59
A ₄	336+87.50	-12.000	630.57
End of N. Appr. Slab.	336+97.50	-12.000	630.54

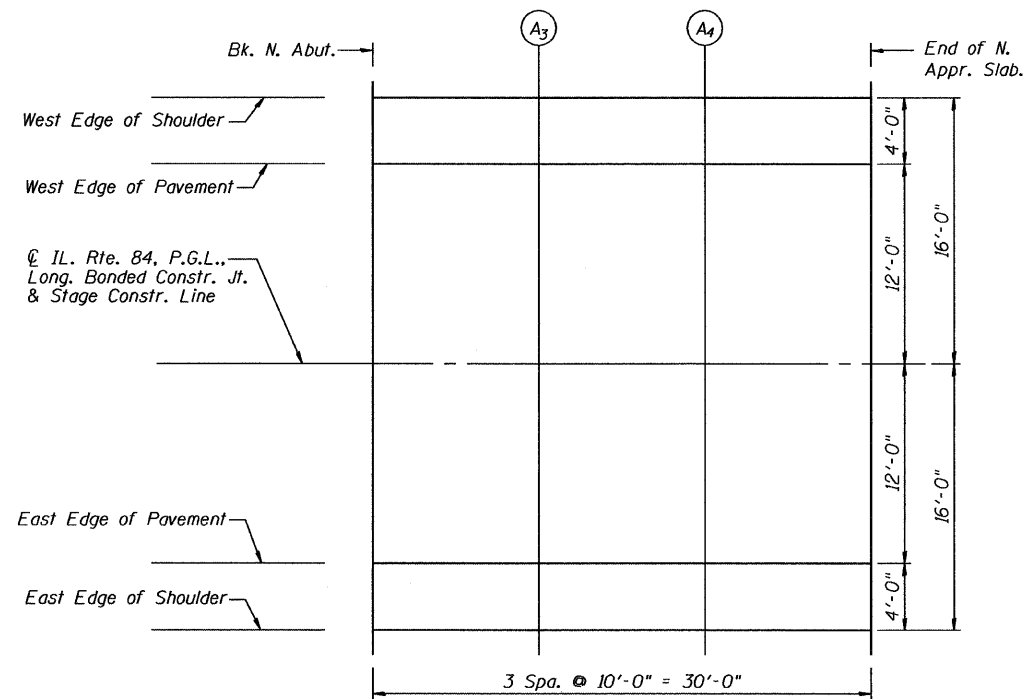
Location	Station	Offset	Theoretical Grade Elevations
BK. N. Abut.	336+67.50	0.000	630.78
A ₃	336+77.50	0.000	630.77
A ₄	336+87.50	0.000	630.76
End of N. Appr. Slab.	336+97.50	0.000	630.73

EAST EDGE OF PAVEMENT

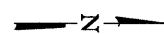
Location	Station	Offset	Theoretical Grade Elevations
BK. N. Abut.	336+67.50	12.000	630.59
A ₃	336+77.50	12.000	630.59
A ₄	336+87.50	12.000	630.57
End of N. Appr. Slab.	336+97.50	12.000	630.54

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
BK. N. Abut.	336+67.50	16.000	630.51
A ₃	336+77.50	16.000	630.50
A ₄	336+87.50	16.000	630.48
End of N. Appr. Slab.	336+97.50	16.000	630.46



PLAN



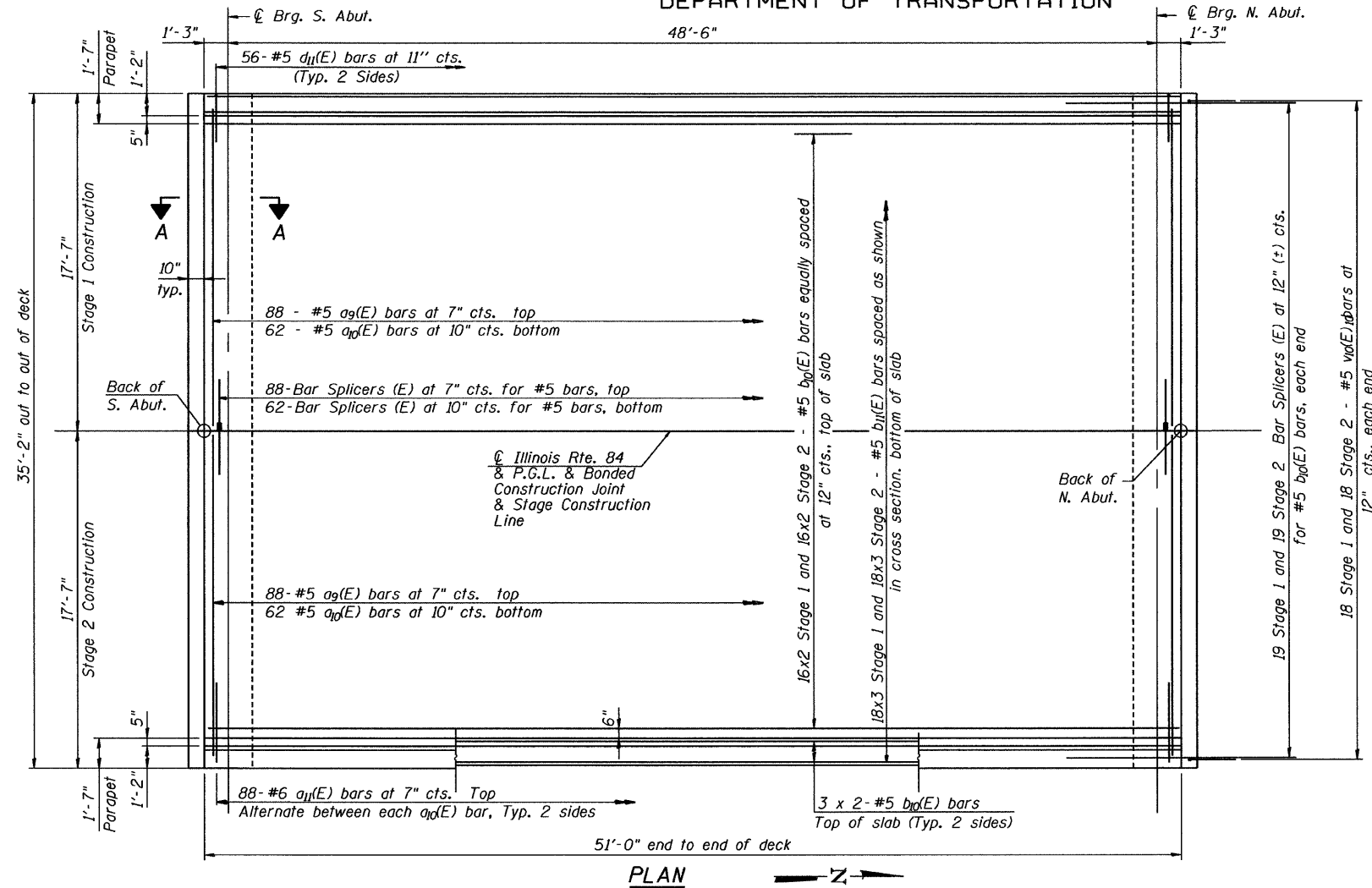
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 10/12/2010

DESIGNED	J.Z.
CHECKED	J.A.Z.
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CHECKED	J.A.Z.

TOP OF NORTH APPROACH SLAB ELEVATIONS					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB8 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	69
			CONTRACT NO. 64B26		
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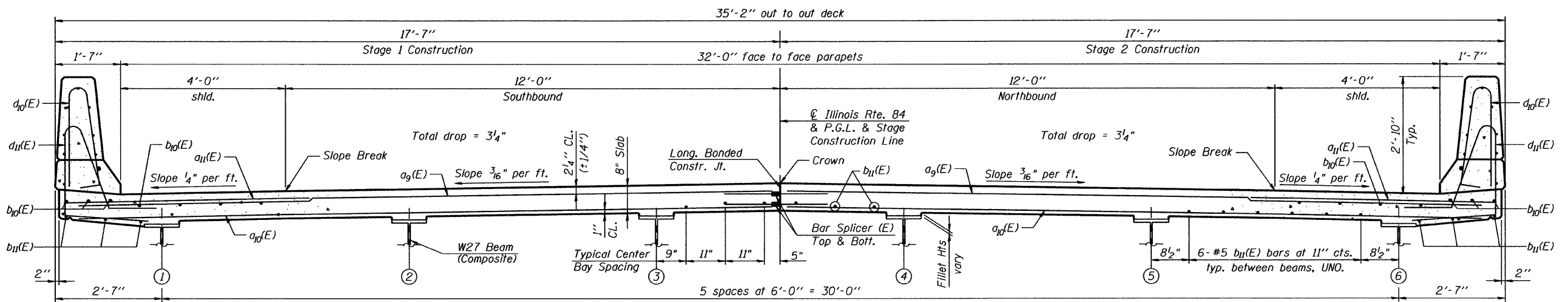


NOTES

1. See Sheet SB10 of 23 for Parapet & Deck Details and Bill of Material.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See Sheet SB3 of 23 for Construction Staging.
4. See Sheet SB11 of 23 for Section A-A.

MIN. LAP LENGTH

Bar Size	Lap
#5	2'-7"
#6	3'-1"



CROSS SECTION
(Looking North)

DECK PLAN & CROSS SECTION
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

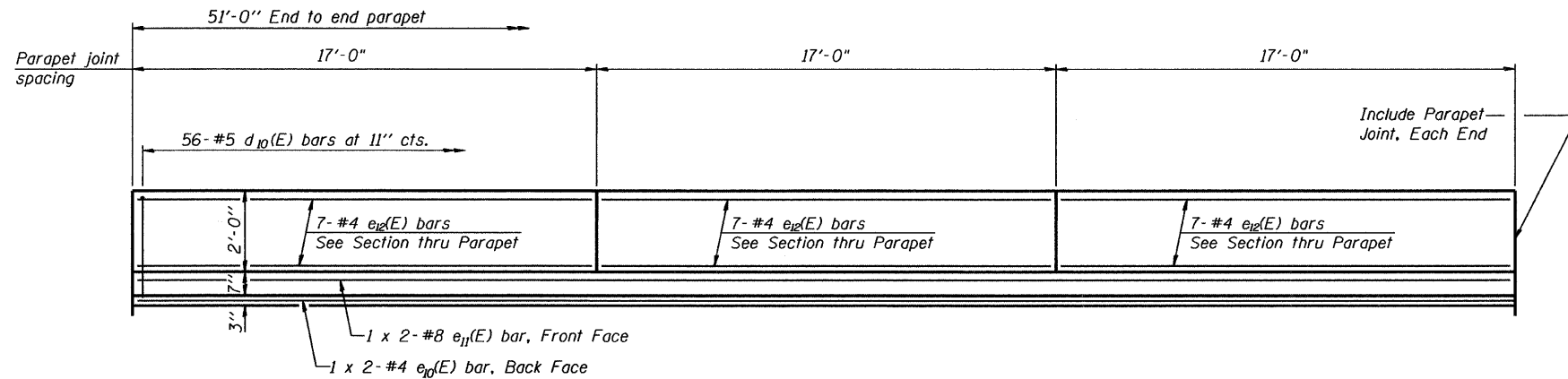
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SB9 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	70
CONTRACT NO. 64B26					
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CHECKED	E.E.J.
DRAWN	E.E.J.
CHECKED	J.Z.

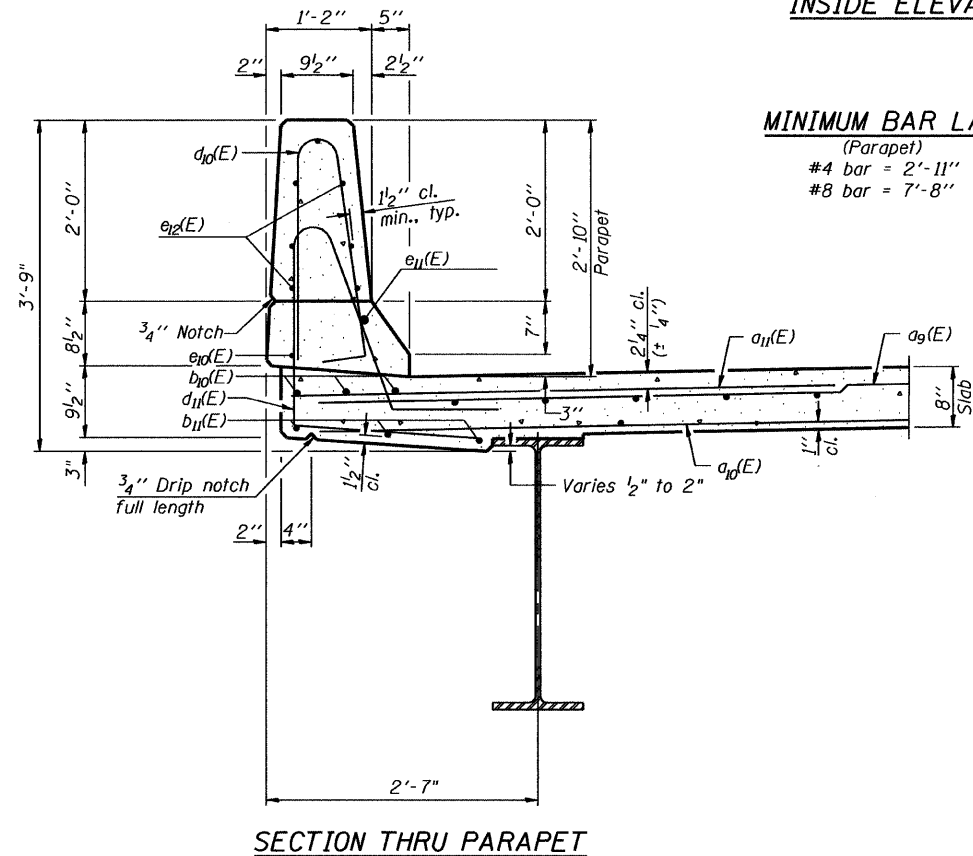
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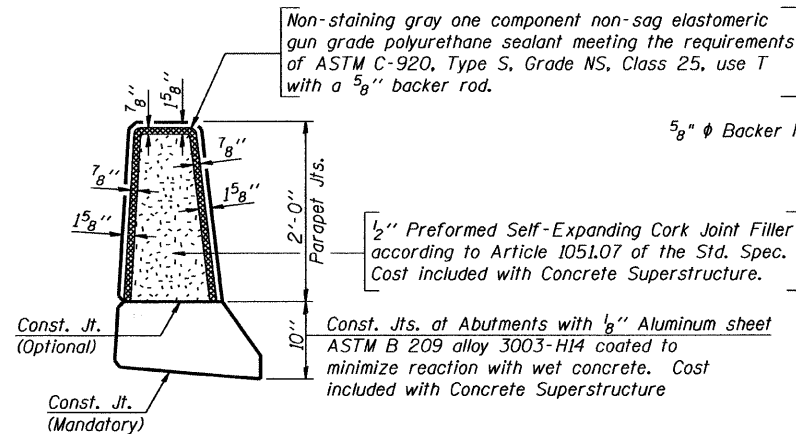


INSIDE ELEVATION OF PARAPET

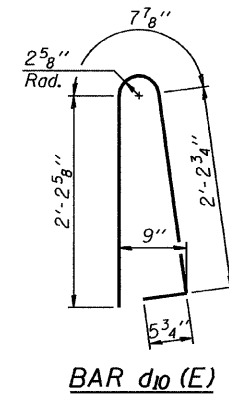


SECTION THRU PARAPET

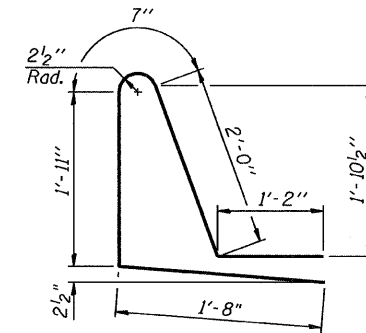
MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-11"
#8 bar = 7'-8"



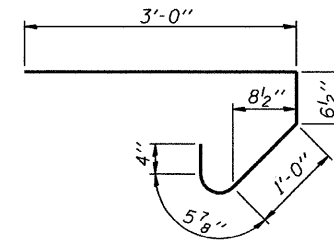
PARAPET JOINT DETAILS



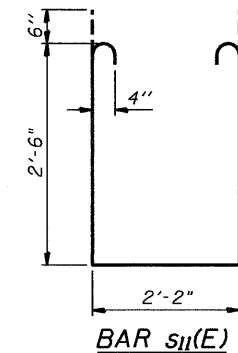
BAR $d_{10}(E)$



BAR $d_{11}(E)$



BAR $s_{10}(E)$

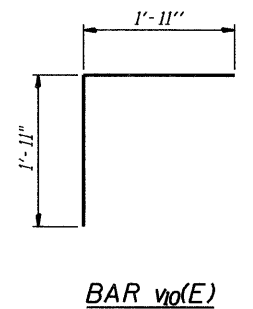


BAR $s_{11}(E)$

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_9(E)$	176	#5	17'-3"	—
$a_{10}(E)$	124	#5	17'-0"	—
$a_{11}(E)$	176	#6	6'-6"	—
$b_{10}(E)$	76	#5	26'-8"	—
$b_{11}(E)$	108	#5	18'-8"	—
$d_{10}(E)$	112	#5	5'-7"	⌋
$d_{11}(E)$	112	#5	7'-4"	⌋
$e_{10}(E)$	4	#4	26'-10"	—
$e_{11}(E)$	4	#8	29'-2"	—
$e_{12}(E)$	42	#4	16'-8"	—
$m_{10}(E)$	20	#6	17'-5"	—
$m_{11}(E)$	24	#6	8'-9"	—
$m_{12}(E)$	8	#6	5'-8"	—
$m_{13}(E)$	4	#6	2'-3"	—
$m_{14}(E)$	4	#6	2'-8"	—
$s_{10}(E)$	72	#5	5'-5"	⌋
$s_{11}(E)$	72	#4	8'-2"	⌋
$v_{10}(E)$	72	#5	3'-10"	⌋
Concrete Superstructure		Cu. Yds.	78.3	
Bridge Deck Grooving		Sq. Yd	170	
Protective Coat		Sq. Yd.	224	
Reinforcement Bars, Epoxy Coated		Pound	15,690	
Bar Splicers		Each	242	

Bars indicated thus 1 x 2- #5 etc. indicates 1 line of bars with 2 lengths per line.



BAR $v_{10}(E)$

PARAPET & DECK DETAILS
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

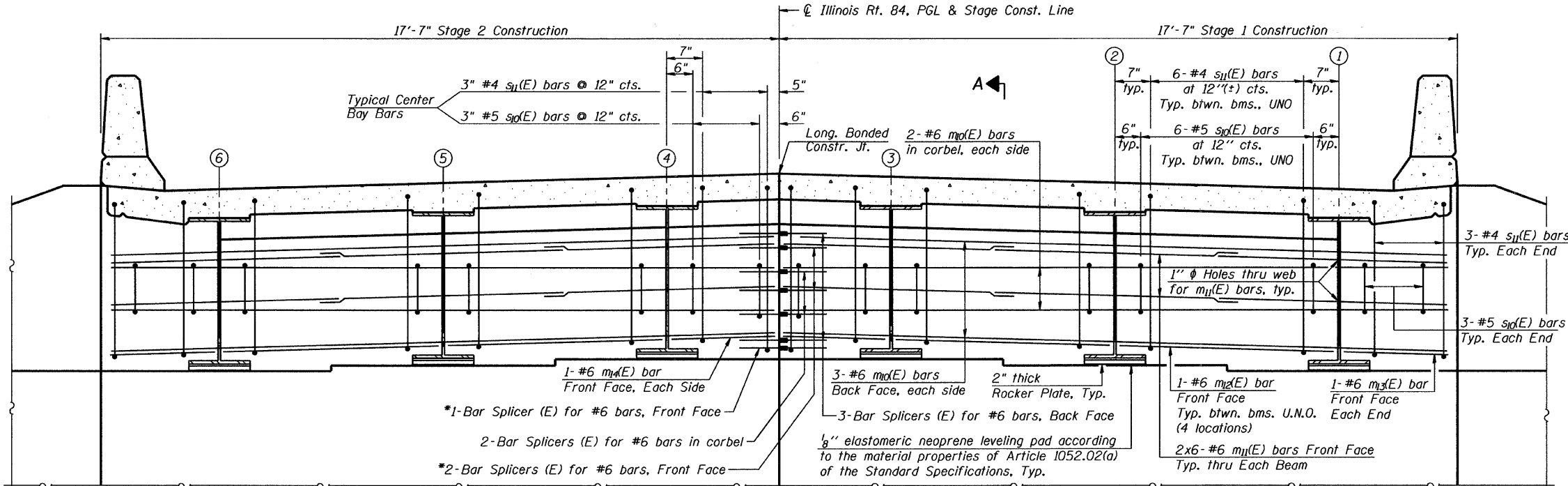
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB10 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	71
					CONTRACT NO. 64B26
10-15-2010			ILLINOIS FED. AID PROJECT		

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DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	J.Z.

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DEPARTMENT OF TRANSPORTATION

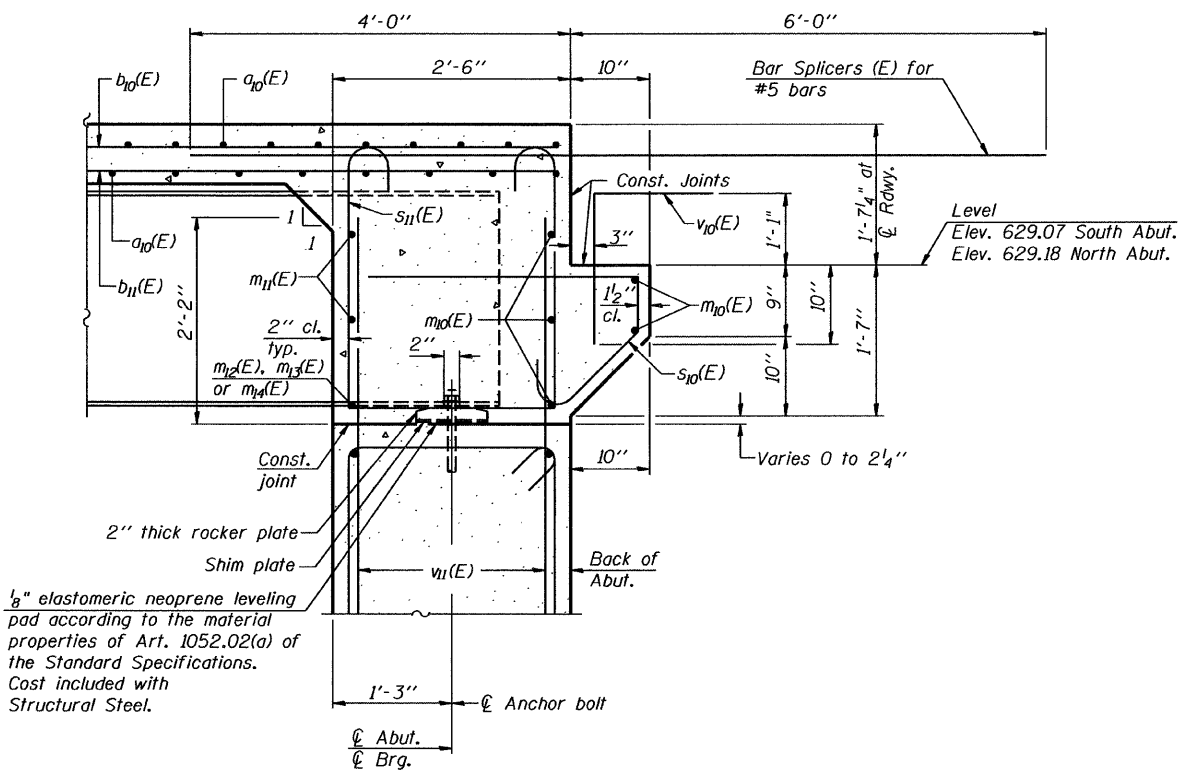


DIAPHRAGM ELEVATION AT SOUTH ABUTMENT

(South Abut. Shown, North Abut. similar, opp. hand)
(Looking South)

NOTES

1. Reinforcement bars in diaphragm are billed with superstructure on sheet SB10 of 23.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet SB10 of 23.
3. For details of bars s10(E) & s11(E) see sheet SB10 of 23.
4. Bar Splicers indicated with * may be field cut to fit.



SECTION A-A

MIN. BAR LAP
#6 bar = 4'-5"

DIAPHRAGMS AT ABUTMENTS
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB11 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	72
CONTRACT NO. 64B26					
10-15-2010			ILLINOIS FED. AID PROJECT		

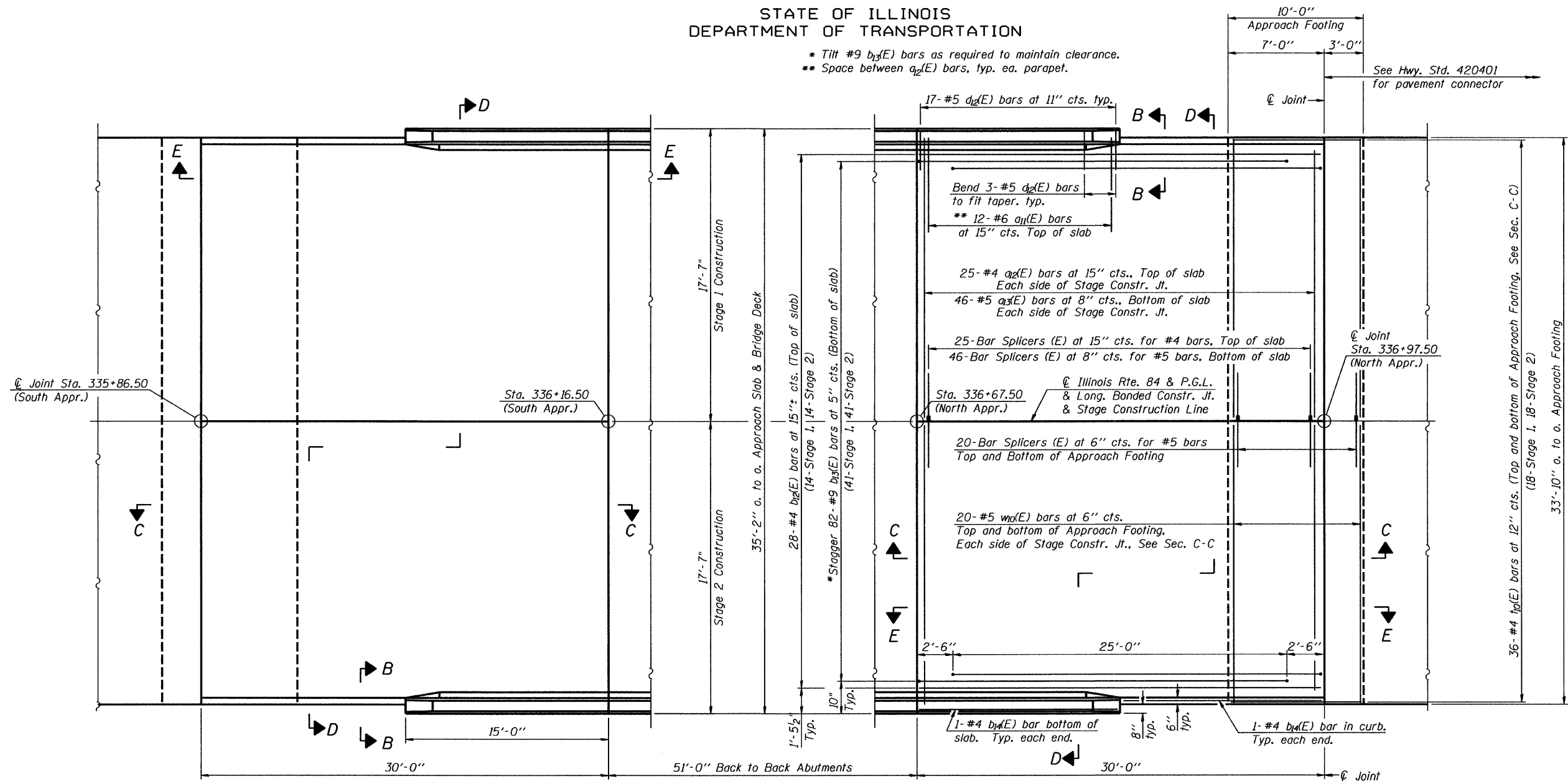
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DRAWN R.B.H.
CHECKED J.Z.

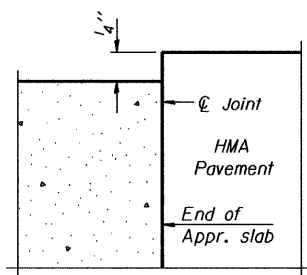
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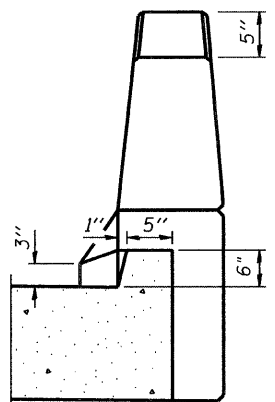
* Tilt #9 $b_{1/3}(E)$ bars as required to maintain clearance.
** Space between $a_{2/2}(E)$ bars, typ. ea. parapet.



PLAN



FLEXIBLE PAVEMENT
DETAIL A



VIEW B-B

NOTES

- See Sheet SB13 of 23 for Sections C-C & D-D, View E-E and location of Detail A.
- $a_{1/1}(E)$ thru $a_{3/3}(E)$ bar spacings are measured along CL IL Rte. 84.
- Reinforcement is shown for North Approach. South Approach is similar.

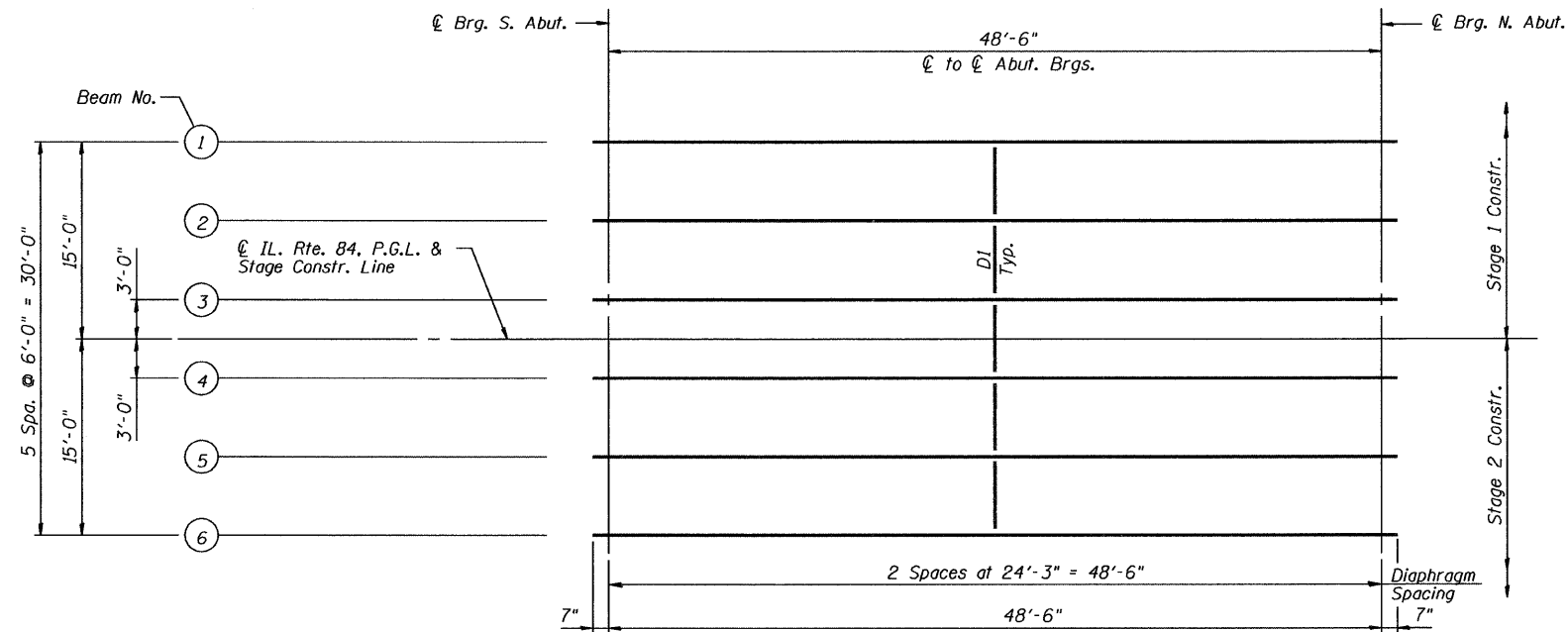
BRIDGE APPROACH SLAB					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO. SB12 OF 23 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	103BR-3	JO DAVIESS	126	73
CONTRACT NO. 64B26					
10-15-2010			ILLINOIS FED. AID PROJECT		

DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	E.E.J.
CHECKED	J.Z.

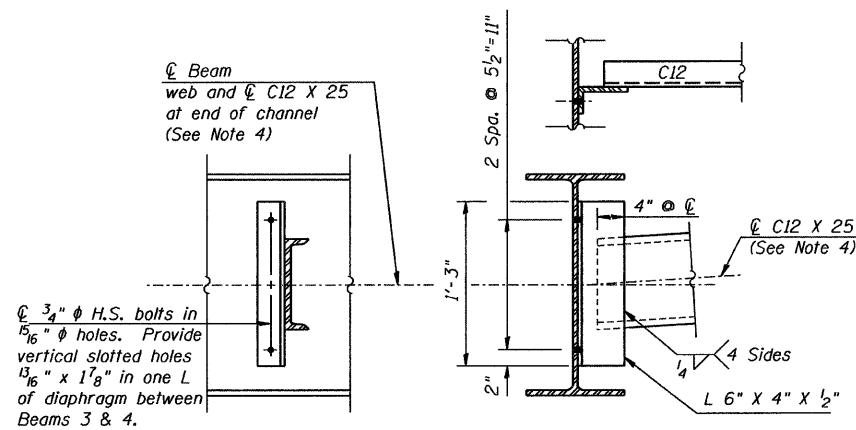
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FRAMING PLAN



DIAPHRAGM D1
5 Required

NOTES

- Two hardened washers are required for each set of oversized or slotted holes at diaphragms.
- All Structural Steel on this sheet shall be AASHTO M270 Grade 50W.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.
- C12 X 30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.
- Bolts in slotted holes shall be finger tight until the second stage deck pour is complete. Position slots so that the bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing the main members.

DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	E.E.J.

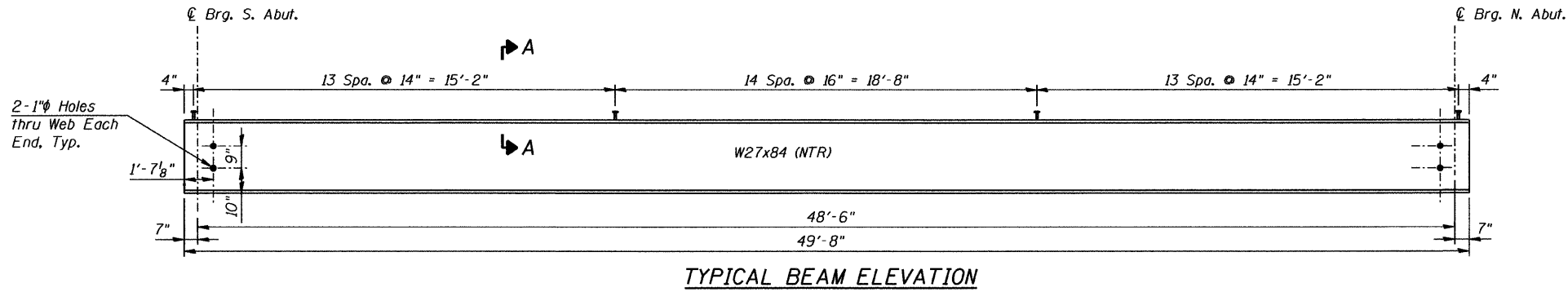
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 10/12/2010

FRAMING PLAN & DIAPHRAGMS
 Illinois Rte. 84 Over Duke Creek
 STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO. SB14 OF 23 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	308	103BR-3	JO DAVIESS	126	75
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

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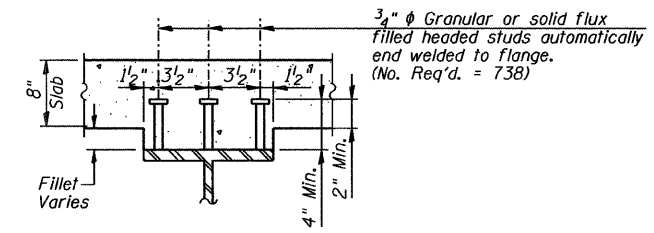
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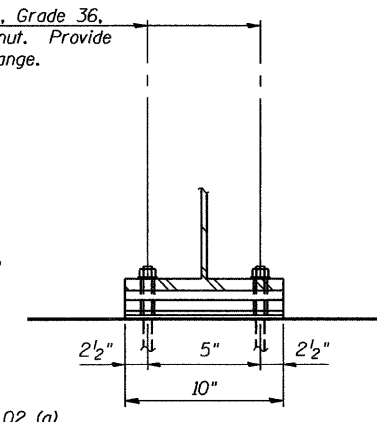
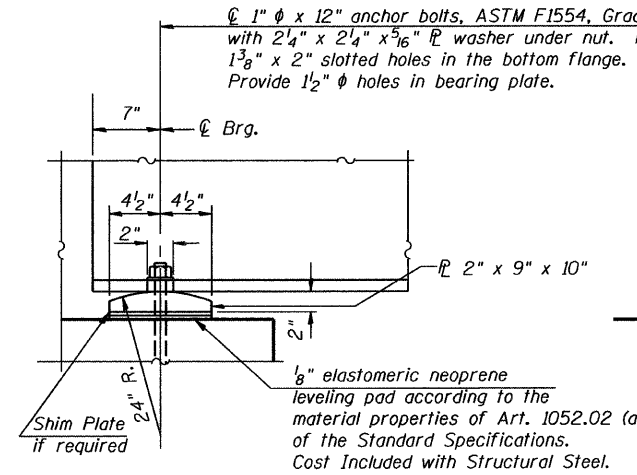
INTERIOR BEAM MOMENT TABLE		0.5 Span	
I_s	(in ⁴)	2,850	
I_c (n)	(in ⁴)	9,566	
I_c (3n)	(in ⁴)	7,106	
S_s	(in ³)	213	
S_c (n)	(in ³)	354	
S_c (3n)	(in ³)	319	
$DC1$	(k/')	0.702	
M_{DC1}	(k)	206	
$DC2$	(k/')	0.150	
M_{DC2}	(k)	44.1	
DW	(k/')	0.267	
M_{DW}	(k)	78.5	
$M_{LL} + Imp$	(k)	514	
M_u (Strength I)	(k)	1,324	
$\phi_f M_n$	(k)	1,941	
f_s DC1	(ksi)	11.6	
f_s DC2	(ksi)	1.66	
f_s DW	(ksi)	2.95	
f_s 1.3(LL+I)	(ksi)	22.5	
f_s (Service II)	(ksi)	38.7	
V_r	(k)	18.4	

INTERIOR BEAM REACTION TABLE		HL93 Loading	
	(k)	Abut.	
R_{DC1}	(k)	17.02	
R_{DC2}	(k)	3.64	
R_{DW}	(k)	6.47	
$R_{LL} + Imp$	(k)	62.27	
R_{Total}	(k)	89.40	

TOP OF BEAM ELEVATIONS			(For Fabrication only)	
	℄ Brg. S. Abut.	℄ Brg. N. Abut.		
Beam 1	629.71	629.81		
Beam 2	629.82	629.92		
Beam 3	629.91	630.02		
Beam 4	629.91	630.02		
Beam 5	629.82	629.92		
Beam 6	629.71	629.81		



- 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.
- $I_c(n), S_c(n)$ 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) due to short-term composite live loads.
- $I_c(3n), S_c(3n)$ 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) due to long-term composite (superimposed) dead loads.
- $DC1$ Un-factored non-composite dead load.
- M_{DC1} Un-factored moment due to non-composite dead load.
- $DC2$ Un-factored long-term composite (superimposed excluding future wearing surface) dead load.
- M_{DC2} Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load.
- DW Un-factored long-term composite (superimposed future wearing surface only) dead load.
- M_{DW} Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load.
- $M_{LL} + Imp$ Un-factored live load moment plus dynamic load allowance (impact).
- M_u (Strength I) Factored design moment.
 $1.25(M_{DC1} + M_{DC2}) + 1.5M_{DW} + 1.75M_{LL} + Imp$
- $\phi_f M_n$ Compact composite positive moment capacity computed according to Article 6.10.7.1.
- f_s (Service II) Sum of stresses as computed from the moments below.
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3M_{LL} + Imp$
- V_r Factored shear range computed according to Article 6.10.10.



- NOTES**
- Work this Sheet with Sheet SB14 of 23.
 - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 - All Structural Steel on this Sheet shall be AASHTO M270 Grade 50W Steel.
 - Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 - Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
 - Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	738
Anchor Bolts, 1"	Each	24

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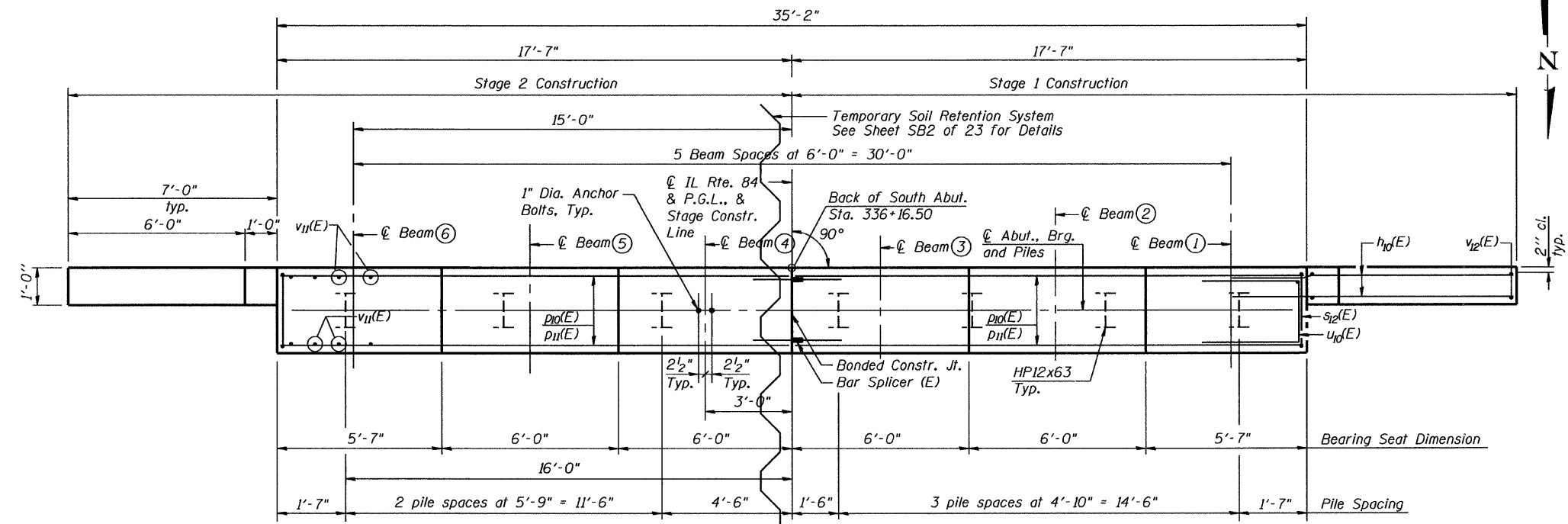
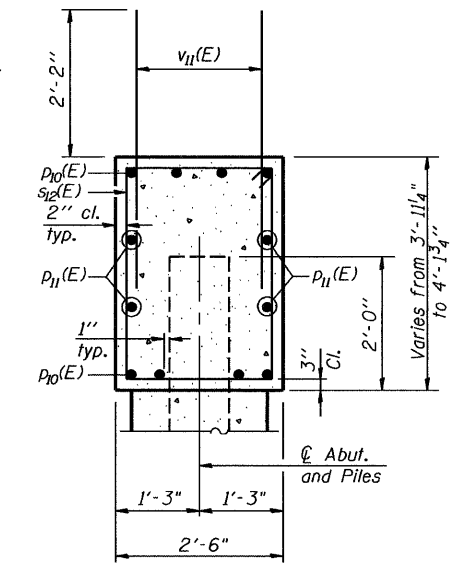
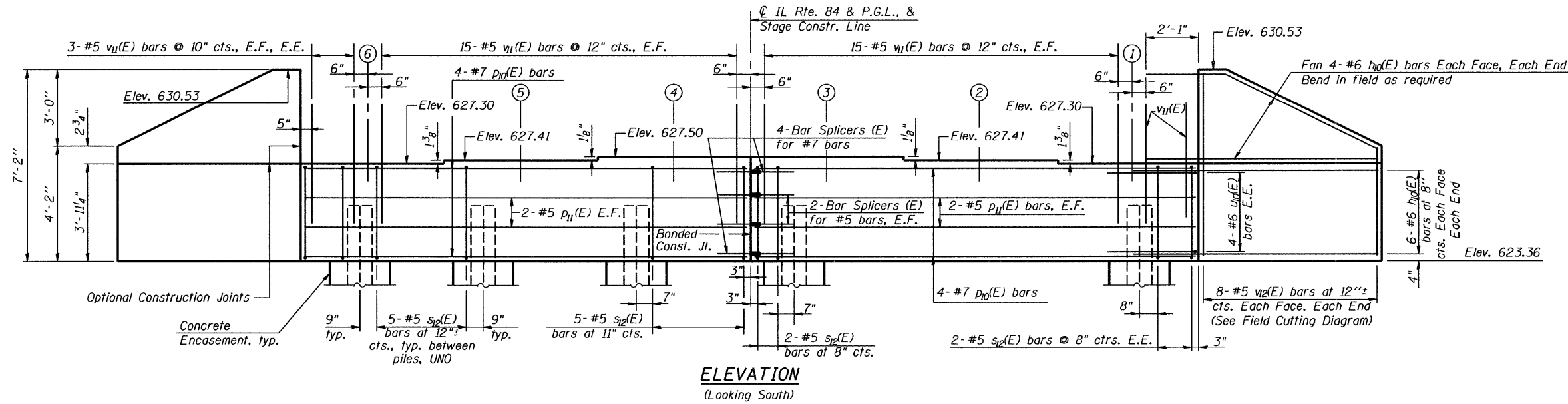
DESIGNED	J.Z.
CHECKED	E.E.J.
DRAWN	R.B.H.
CHECKED	E.E.J.

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BEAM ELEVATION, BEARINGS & TABLES
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

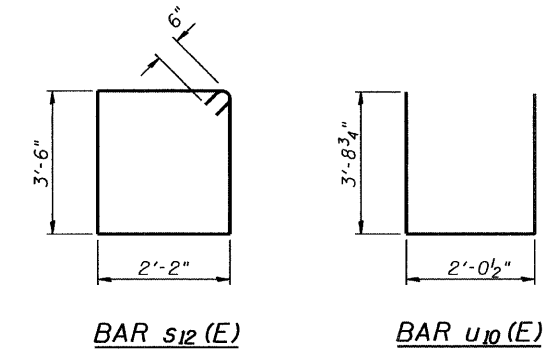
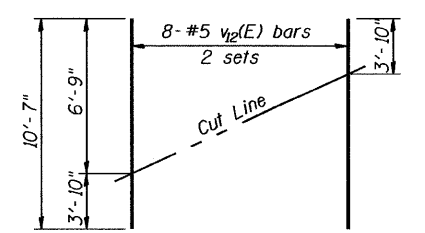
SHEET NO. SB15 OF 23 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		308	103BR-3	JO DAVIESS	126
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PILE DATA

Pile Type and Size: Steel HP 12x63 with Pile Shoes
Nominal Required Bearing: 498 kip
Factored Resistance Available: 279 kip
Est. Length: 47 ft. (See Note 4)
No. Production Piles: 6
No. Test Piles: 1
Estimated Top of Rock Elevation: 581.00



NOTES

1. Pour abut. steps monolithically with cap.
2. For details of Bar Splicers, see sheet SB19 of 23.
3. For details of piles and Concrete Encasement, see sheet SB18 of 23.
4. Estimated pile lengths have been increased by 2' for penetration into rock.
5. E.F. denotes each face.
6. E.E. denotes each end.

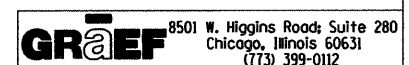
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	40	#6	9'-7"	—
p10(E)	16	#7	17'-3"	—
p11(E)	8	#5	17'-3"	—
s12(E)	36	#5	12'-4"	□
u10(E)	8	#6	9'-6"	U
v11(E)	72	#5	4'-4"	—
v12(E)	16	#5	10'-7"	—
Structure Excavation	Cu. Yd.	115		
Concrete Structures	Cu. Yd.	16.1		
Concrete Encasement	Cu. Yd.	2.4		
Reinforcement Bars, Epoxy Coated	Pound	2,360		
Bar Splicers	Each	12		
Furnishing Steel Piles HPI2x63	Foot	282		
Driving Piles	Foot	282		
Test Pile Steel HPI2x63	Each	1		
Pile Shoes	Each	7		

SOUTH ABUTMENT
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB16 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	77
CONTRACT NO. 64B26					

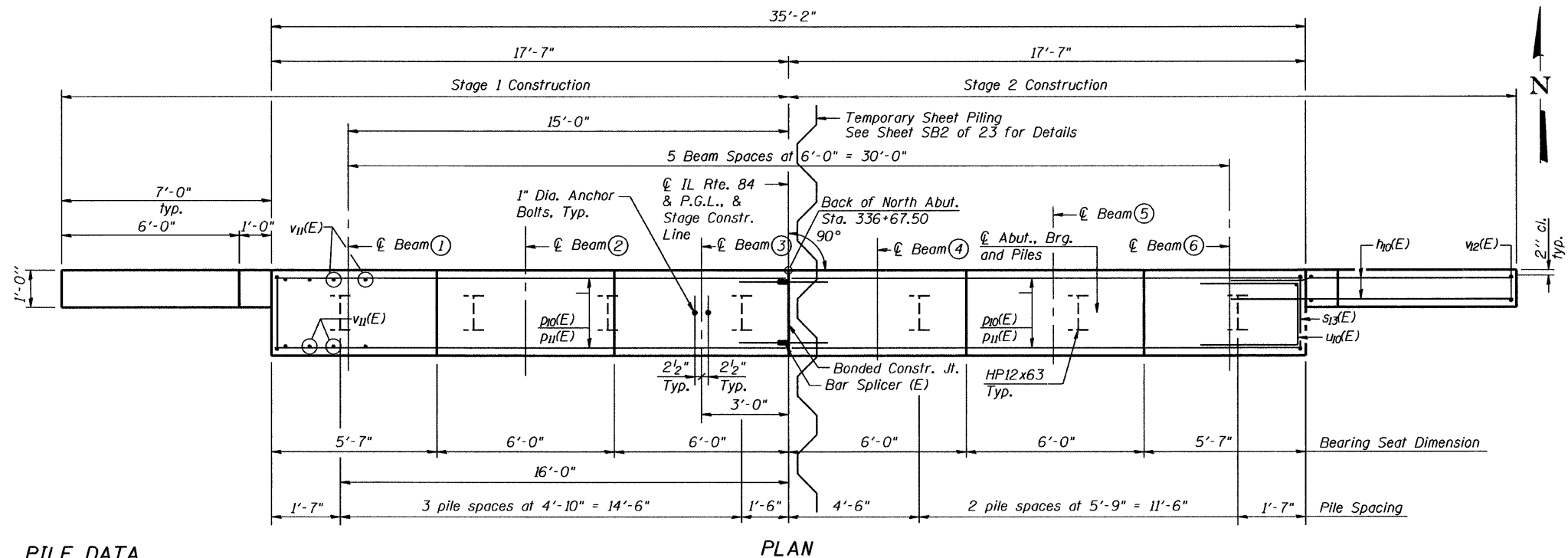
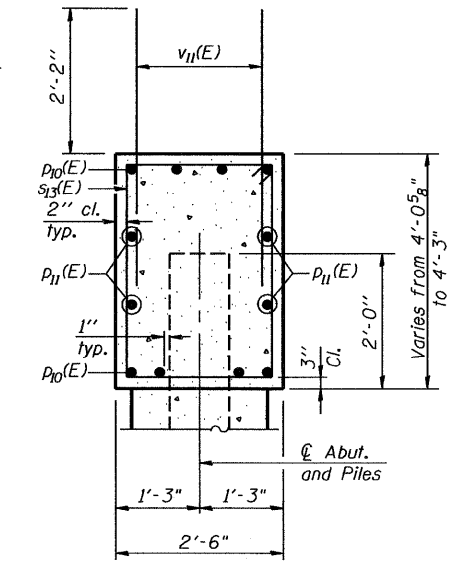
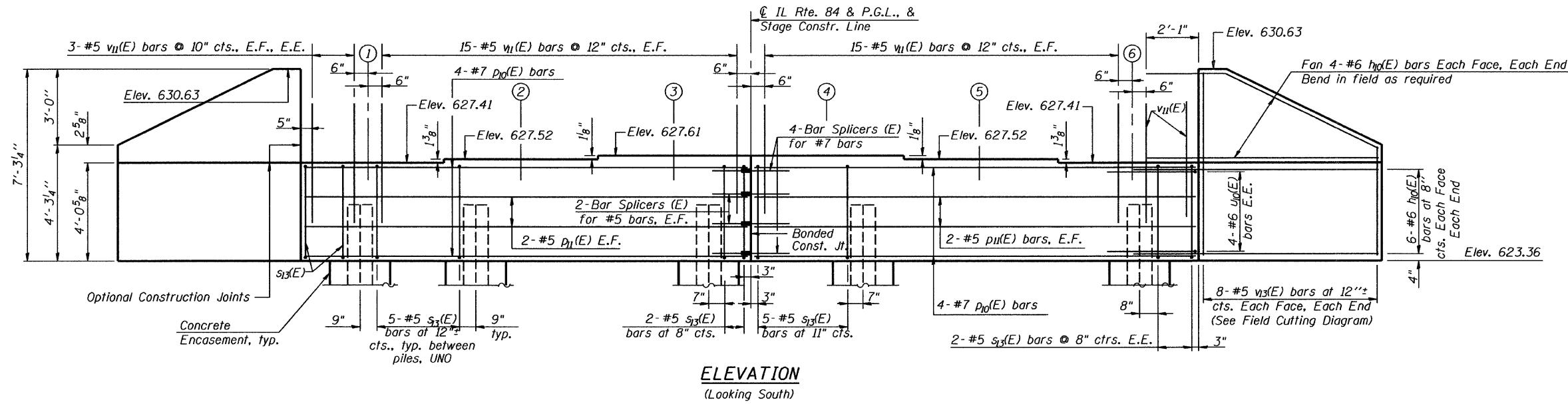
10-15-2010 ILLINOIS FED. AID PROJECT



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 10/12/2010

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DRAWN R.B.H.
CHECKED E.E.J.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



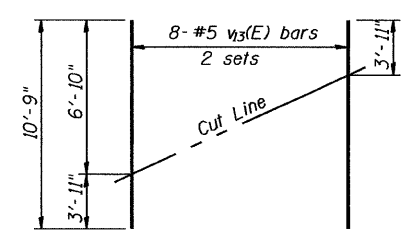
SEC. THRU ABUT.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	40	#6	9'-7"	—
p10(E)	16	#7	17'-3"	—
p11(E)	8	#5	17'-3"	—
s13(E)	36	#5	12'-6"	□
u10(E)	8	#6	9'-6"	—
v11(E)	72	#5	4'-4"	—
v13(E)	16	#5	10'-9"	—
Concrete Structures				Cu. Yd. 16.5
Concrete Encasement				Cu. Yd. 2.4
Reinforcement Bars, Epoxy Coated				Pound 2,370
Bar Splicers				Each 12
Furnishing Steel Piles HP12x63				Foot 390
Driving Piles HP12x63				Foot 390
Test Pile Steel HP12x63				Each 1
Pile Shoes				Each 7

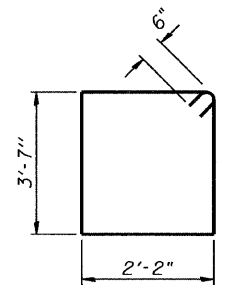
PILE DATA

Pile Type and Size: Steel HP 12x63 with Pile Shoes
Nominal Required Bearing: 498 kip
Factored Resistance Available: 152 kip
Est. Length: 65 ft. (See Note 4)
No. Production Piles: 6
No. Test Piles: 1
Estimated Top of Rock Elevation: 562.4

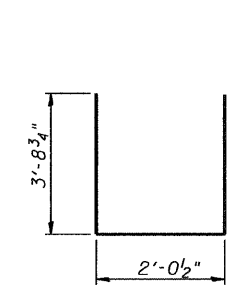


FIELD CUTTING DIAGRAM

Order v13(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s13(E)



BAR u10(E)

NOTES

1. Pour abut. steps monolithically with cap.
2. For details of Bar Splicers, see sheet SB19 of 23.
3. For details of piles and Concrete Encasement, see sheet SB18 of 23.
4. Estimated pile lengths have been increased by 2' for penetration into rock.
5. E.F. denotes each face.
6. E.E. denotes each end.
7. Piles shall be driven through 2 foot diameter precored holes extending to elevation 583.4 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

NORTH ABUTMENT
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB17 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	78
CONTRACT NO. 64B26					

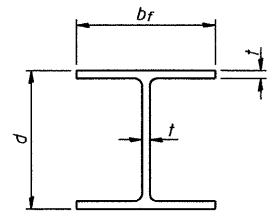
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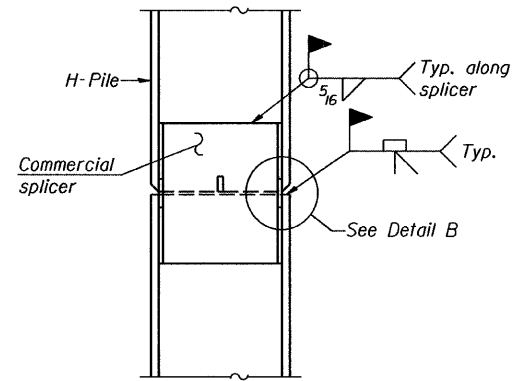
DESIGNED J.Z.
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DRAWN R.B.H.
CHECKED E.E.J.

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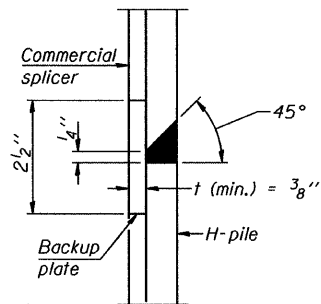


STEEL PILE TABLE

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

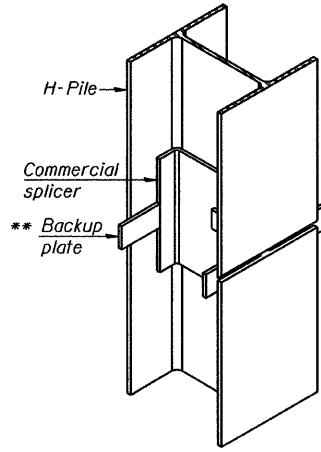


ELEVATION

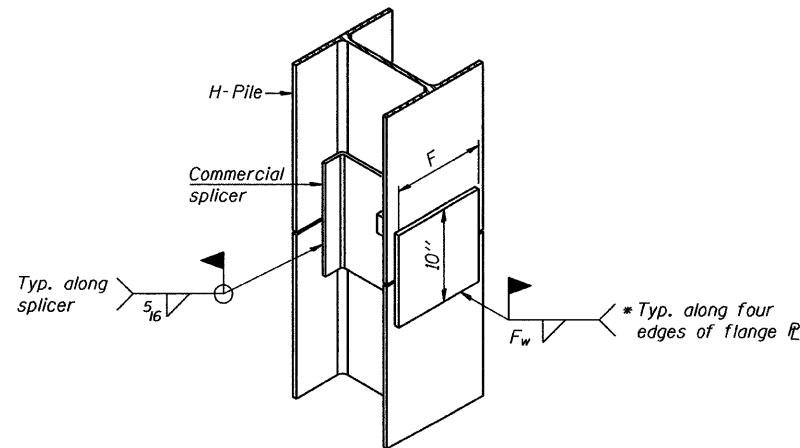


DETAIL "B"

WELDED COMMERCIAL SPLICE



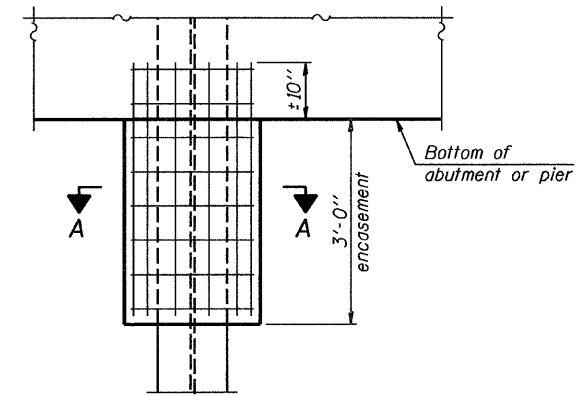
ISOMETRIC VIEW



ISOMETRIC VIEW

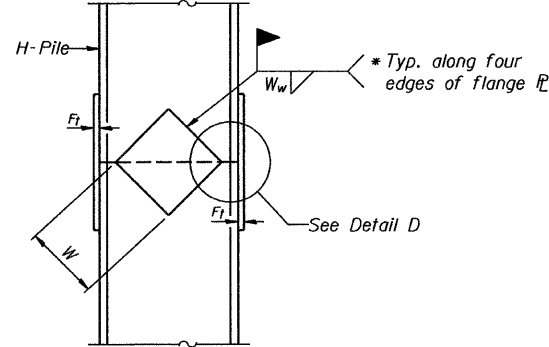
WELDED COMMERCIAL SPLICE ALTERNATE

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

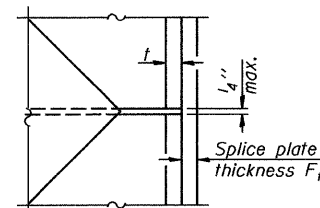


ELEVATION

PILE ENCASEMENT

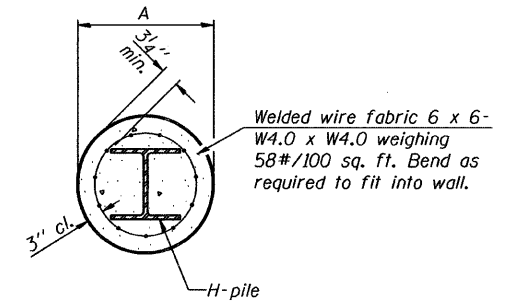


ELEVATION



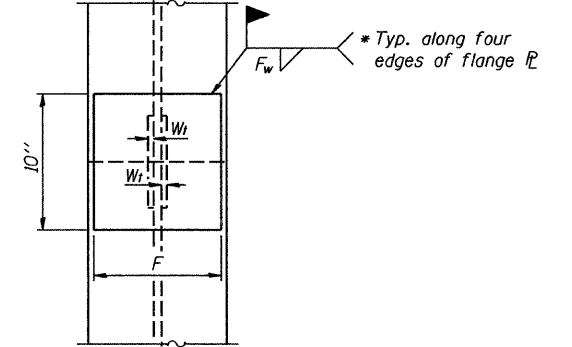
DETAIL D

WELDED PLATE FIELD SPLICE

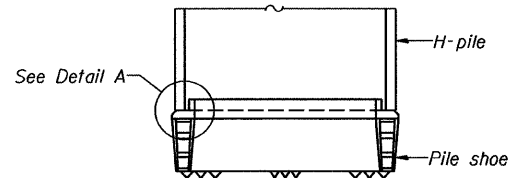


SECTION A-A

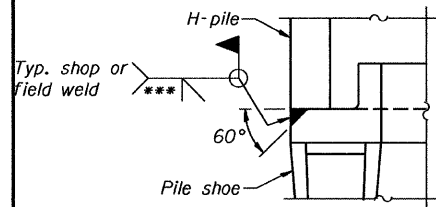
Note:
Forms for encasement may be omitted when soil conditions permit.



END VIEW



ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT

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

DESIGNED J.Z.
CHECKED E.E.J.
DRAWN R.B.H.
CHECKED E.E.J.

F-HP 11-1-09

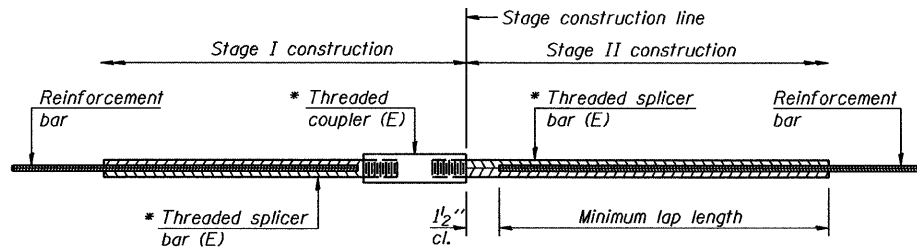
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

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HP PILES					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00 STRUCTURE NO. 043-0079					
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB18 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	79
CONTRACT NO. 64B26					
10-15-2010			ILLINOIS FED. AID PROJECT		

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 10/12/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

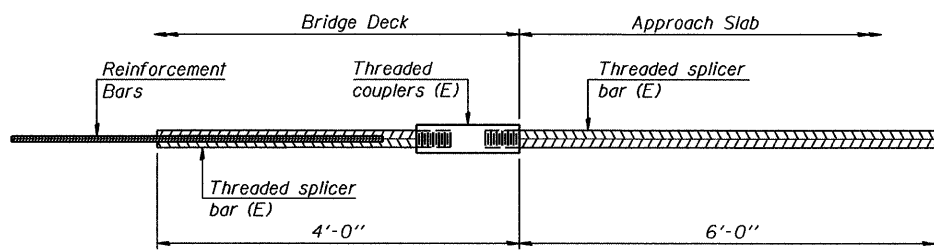
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

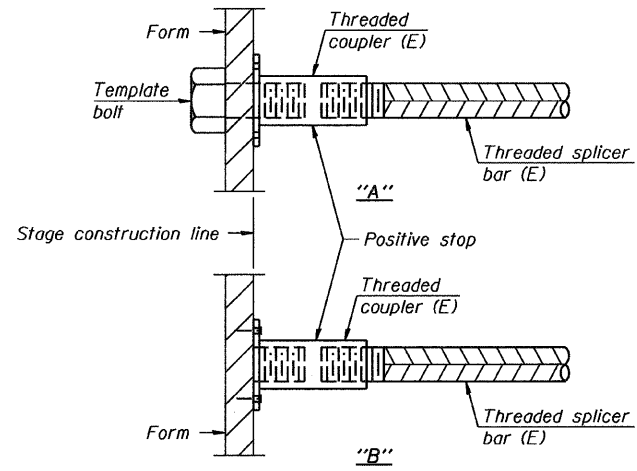
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	150	3
Diaphragms	#6	16	6
Approach Slabs	#4	50	4
Approach Slabs	#5	172	3
Abutments	#5	8	6
Abutments	#7	16	6



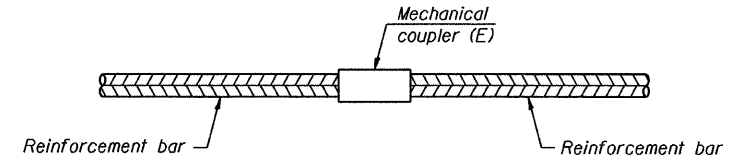
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 76



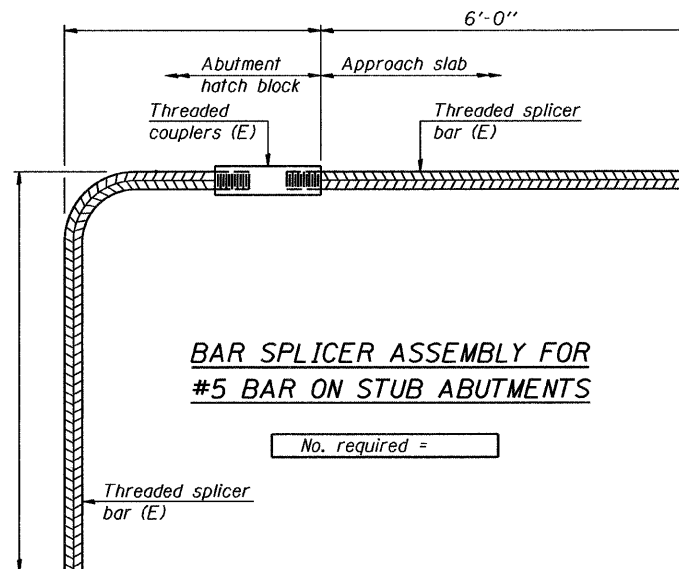
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

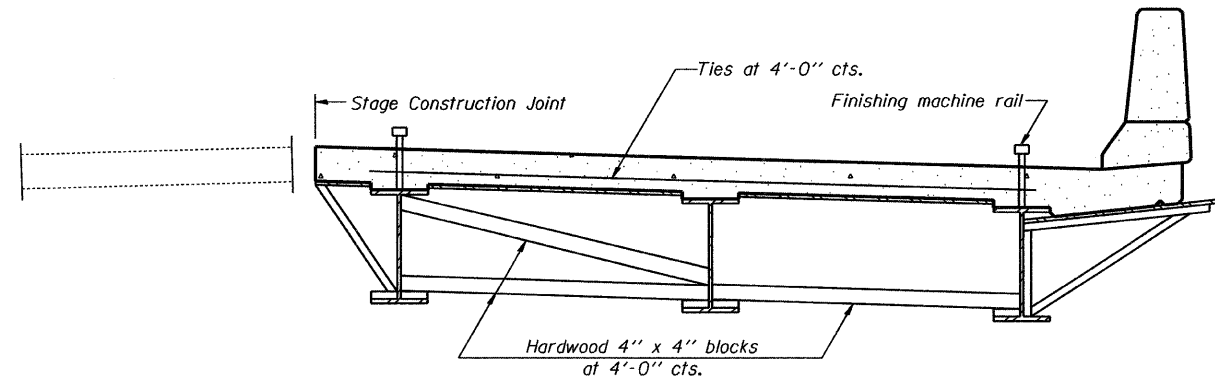
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DESIGNED	E.E.J.
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DRAWN	E.E.J.
CHECKED	J.A.Z.

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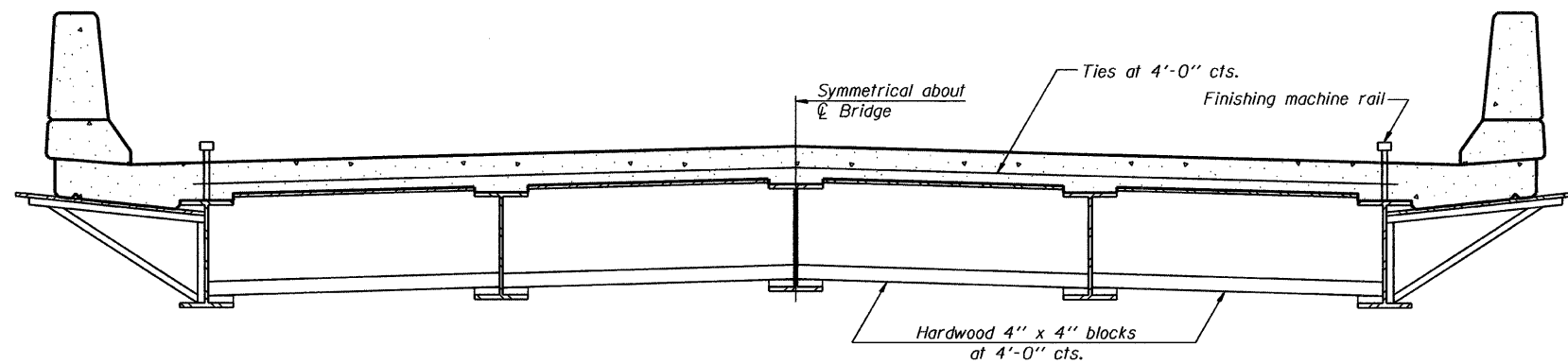
BAR SPLICER ASSEMBLY DETAILS					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB19 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	80
			CONTRACT NO. 64B26		
10-15-2010		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FORM BRACES FOR
STAGE CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.
The finishing machine rails shall be placed on the top flange of the exterior beams.
The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.
For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STANDARD CONSTRUCTION

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 10/12/2010

DESIGNED	J.Z.
CHECKED	J.A.Z.
DRAWN	R.B.H.
CHECKED	J.A.Z.

SB-1

11-1-09

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Chicago, Illinois 60631
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CANILEVER FORMING BRACKETS FOR SUPERSTRUCTURE					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB20 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	81
			CONTRACT NO. 64B26		
10-15-2010			ILLINOIS FED. AID PROJECT		



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation D-2

SOIL BORING LOG

Page 1 of 2

Date 3/14/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Duke Creek, north edge of Hanover LOGGED BY W. Garza
SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 9NW, SEC. , TWP. 26N, R1G. 2E
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	BORING NO.	Station	Offset	Ground Surface Elev.	DEPTH	SOIL	UCS	SPT	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
043-0027	356+55	B-1b	356+10	9.00ft LI CL	629.50	(ft)	(/6")	(tsf)	(%)	618.60	617.60	609.5	609.5	602.0	ft
15" Asphalt															
MEDIUM tanish brown SILTY CLAY LOAM								0.9	19.0						
VERY STIFF tan SILTY CLAY	627.00														
STIFF tan/gray SILTY CLAY LOAM	625.50							3.1	20.0						
MEDIUM gray SILTY CLAY LOAM	623.00							2.0	24.0						
MEDIUM gray SILTY CLAY LOAM	620.50							0.8	30.0						
SOFT gray SILTY CLAY with LIMESTONE fragments	618.00							0.4	27.0						
MEDIUM dark gray SILTY CLAY	615.50							0.5	30.0						
STIFF dark gray SILTY CLAY	613.00							1.2	30.0						
SOFT gray SILTY CLAY LOAM with fine SAND lens	610.50							0.4	29.0						

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, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation D-2

SOIL BORING LOG

Page 2 of 2

Date 3/14/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Duke Creek, north edge of Hanover LOGGED BY W. Garza
SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 9NW, SEC. , TWP. 26N, R1G. 2E
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	Station	BORING NO.	Station	Offset	Ground Surface Elev.	DEPTH	SOIL	UCS	SPT	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
043-0027	356+55	B-1b	356+10	9.00ft LI CL	629.50	(ft)	(/6")	(tsf)	(%)	618.60	617.60	609.5	609.5	602.0	ft
SOFT gray CLAY LOAM with SILT lens															
LOOSE gray fine SAND	585.50														
VERY LOOSE gray dirty fine SAND	583.00														
VERY DENSE gray weathered LIMESTONE	581.00														
Auger Refusal at 48.5'															
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, from 137 (Rev. 8-99)

I:\Projects\2010\201003011\cadd\structural\log\SB21.BORING.L005.L.dgn 10/12/2010

DESIGNED E.E.J.
CHECKED J.Z.
DRAWN R.B.H.
CHECKED J.Z.

BORING LOGS I
Illinois Rte. 84 Over Duke Creek
STATION 336+42.00 STRUCTURE NO. 043-0079

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SB21 OF 23 SHEETS	308	103BR-3	JO DAVIESS	126	82
CONTRACT NO. 64B26					
10-15-2010		ILLINOIS FED. AID PROJECT			

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation ID-2

ROCK CORE LOG

Page 1 of 1

Date 3/14/07

ROUTE FAP 308 DESCRIPTION P92-089-05 IL 84 over Duke Creek, north edge of Hanover LOGGED BY W. Garza

SECTION 104 BR-1 and 103 BR-3 LOCATION Hanover Twp. - 9NW, SEC. , TWP. 26N, RNG. 2E

COUNTY Jo Daviess CORING METHOD _____

STRUCT. NO. 043-0027 CORING BARREL TYPE & SIZE _____
Station 356+55

BORING NO. B-1b Core Diameter 1.5 in
Station 356+10 Top of Rock Elev. 582.00 ft
Offset 9.00 ft Lt Cl Begin Core Elev. 581.00 ft

Ground Surface Elev. 629.50 ft

DESCRIPTION	DEPTH (ft)	CORRECTION (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dolomite: buff-tan, medium to thickly bedded, dense and chalky. L.s.f.: 578.7 to 577.8	581.00	1	100	50	1.4	472.0
Dolomite: as above, though heavily fractured from 572.5 to 571.0 L.s.f.: 574.3 to 573.6	576.00	2	100	36	1.4	642.0
End of Boring	571.00					

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)

DESIGNED E.E.J.
CHECKED J.Z.
DRAWN R.B.H.
CHECKED J.Z.

I:\Projects\2010\20100301\Lead\structural\fig\08\SB22.ROCK.CORE.LOG.dgn 10/12/2010

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

ROCK CORE LOG					
Illinois Rte. 84 Over Duke Creek					
STATION 336+42.00			STRUCTURE NO. 043-0079		
SHEET NO. SB22 OF 23 SHEETS	F.A.P. RTE. 308	SECTION 103BR-3	COUNTY JO DAVIESS	TOTAL SHEETS 126	SHEET NO. 83
			CONTRACT NO. 64B26		
			ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA. 18	104-BR	JO DAVIESS	19	7

SHEET 1 OF 7
Sheet 85 of 126

BENCHMARK: STAINLESS STEEL CYLINDER CAST IN N.W. CORNER OF NEW STRUCTURE ELEVATION: 608.64

EXISTING STRUCTURE:
Structure No. 043-0029; built as S.B.I. Rte. 80, Section 104 B in 1928 at Station 125+71.1, consists of a one span reinforced concrete slab bridge on closed reinforced concrete abutments. Existing bridge length 28'-10 3/4" Bk. to Bk. of Abuts. and existing bridge width 40'-0" Face to Face of rail. Contractor shall remove and dispose of the Existing Structure after construction of the temporary runaround is completed. No Salvage.

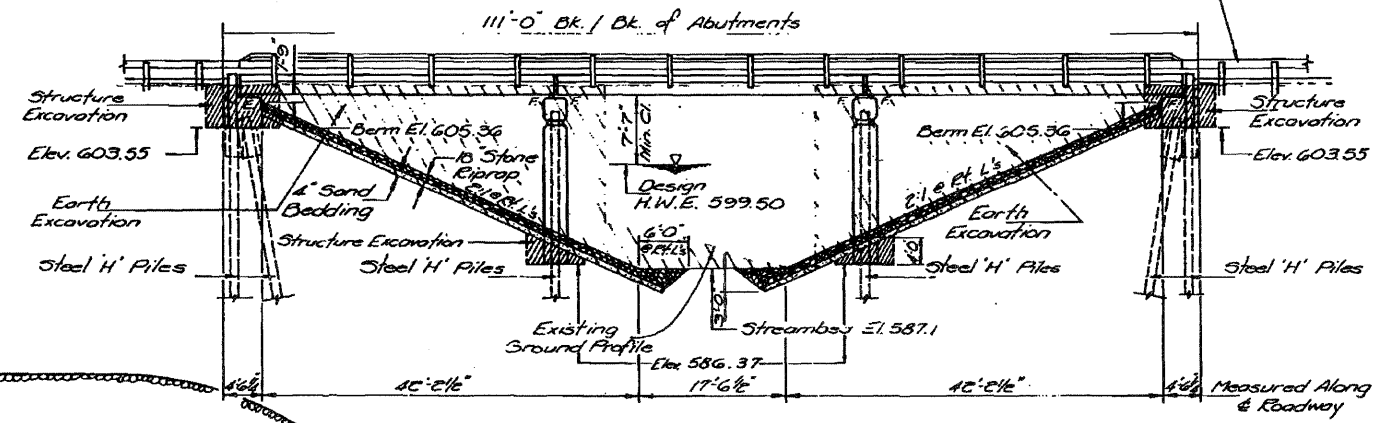
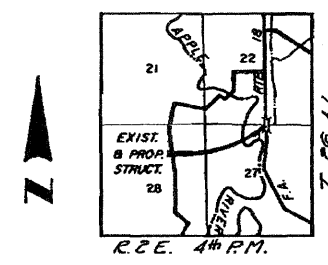
*Backwater from Apple River
H.W.E. @ 604.7
@ 605.1
@ 610.3

WATERWAY INFORMATION
Drainage Area = 4.0 Sq. Mi. Low Grade El. 609.00 @ Sta. 125+71.00

Flood	Freq. Yr.	Q CFS	Opening Sq. Ft. Exist.	Prop.	Not. #	Head-Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	1938	202	490	599.50	.99	.13	600.49	599.63
Base	100	2239	217	532	600.20	1.28	.17	601.48	600.37
Max. Calc.	500	2957	251	634	601.80	1.70	.19	603.58	601.99

GENERAL NOTES:

- See Proposal for Boring Data.
- Layout of Stone Riprap Slope Wall may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive one (1) Steel HP 12x53 test pile in a permanent location at the North Abutment and one (1) Steel HP 12x53 test pile in a permanent location at Pier No. 1 as directed by the Engineer before ordering the remainder of piles.
- The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
- Reinforcement Bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-53, Grade 60, unless noted otherwise.
- Expansion Guards shall be fabricated and erected in accordance with Article 503.07 (c) of the Standard Specifications. Cost Incidental.

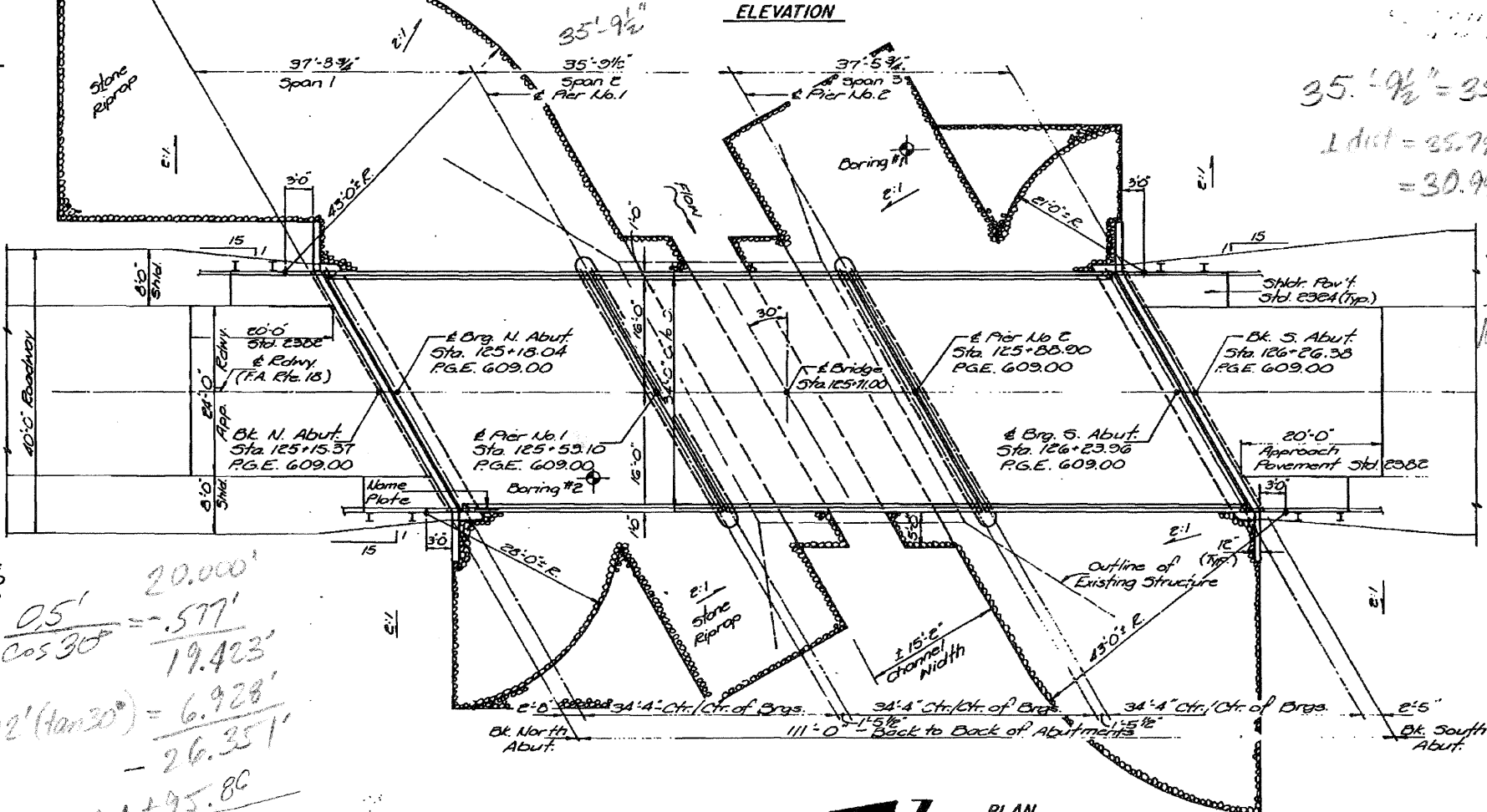


ROADWAY DATA

FA. Rte. 18 (Ill. Rte. 84)
Class: Major Highway
D.H.V.: 465 (2000)
A.D.T.: 2100 (1980), 3100 (2000)
Design Speed: 70 M.P.H.

PROFILE GRADE
(Top of Class I)

DESIGNED:	V.S.N.
CHECKED:	K.L.F.
DRAWN:	R.A.W.
CHECKED:	K.L.F.



STATION 125+71
BUILT 1928 BY
STATE OF ILLINOIS
F.A. 18 SEG 104-BR
PROJECT 64-B (117)
LOADING HS 20
STR. NO. 1

NAME PLATE
(See Std. 2113)

FOR INFORMATION ONLY

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Structure Excavation	C.Y.	—	—	209
Bit. Conc. Surf. Crse. Mix. D Class I	Ton	34	—	34
Removal of Exist. Structure	Each	—	—	1
Stone Riprap	S.Y.	—	1058	1058
Class X Concrete	C.Y.	13.2	211.1	224.3
Prec. Press. Conc. Dk. Brms. 17" Depth	S.F.	3638	—	3638
Steel Railing, Type T1	L.F.	215	—	215
Reinforcement Bars	Lbs.	470	12930	13400
Steel Piles HP 12x53	L.F.	—	457	457
Test Piles, Steel HP 12x53	Each	—	2	2
Name Plate	Each	—	—	1
Portland Cem. Mortar For Crse.	L.F.	304.3	—	304.3
Waterproofing Membrane System	S.Y.	386	—	386
Protective Coat	S.Y.	96	—	96
Preformed Joint Seal (4")	L.F.	40	—	40

Note: Quantity of Earth Excavation within structure limits included with Roadway Quantities.

GENERAL PLAN & ELEVATION

F.A. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125+71.00

DESIGN STRESSES
PRECAST PRESTRESSED UNITS
f'c = 5,000 p.s.i.
f'ci = 4,000 p.s.i.
f's = 270,000 p.s.i. (16" Strands)
f'si = 189,000 p.s.i. (12" Strands)
CAST IN PLACE CONCRETE
f'c = 3,500 p.s.i.
f'y = 60,000 p.s.i. (Reinf.)
n = 9

LOADING HS 20-44
Design Specifications: 1977 A.A.S.H.T.O.; 1978; 1979; 1980 Interim Specifications (Allow 25 p.s.f. for future wearing surface)

Handwritten calculations:
 $20.000' - \frac{0.5'}{\cos 30^\circ} = 19.423'$
 $12' (\tan 30^\circ) = 6.928'$
 $164 + 95.80 - 26.351 = 164 + 69.509$

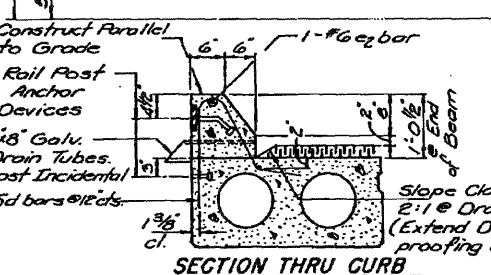
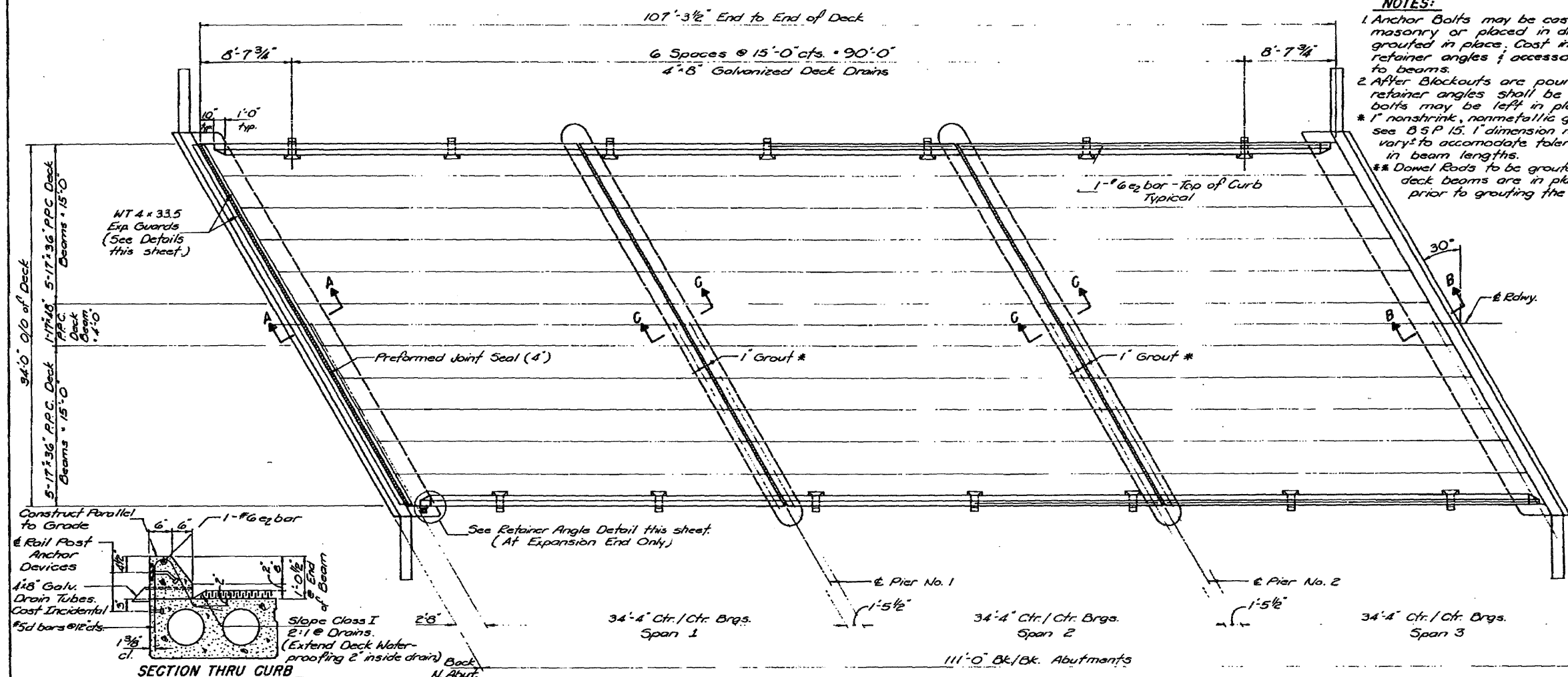
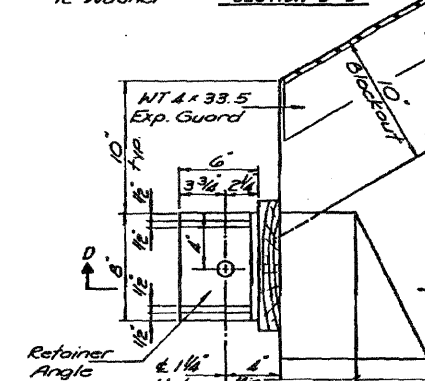
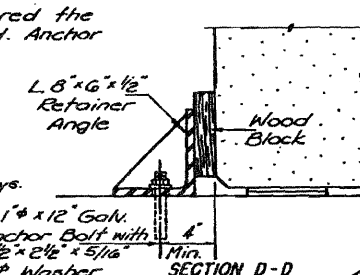
KENNETH L. FIGGE
REGISTERED STRUCTURAL
ENGINEER IN ILLINOIS
NO. 2992

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA. 18	104-BR	JO DAVIESS	19	8

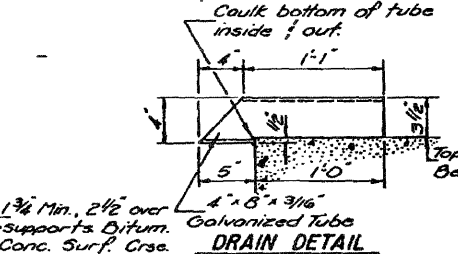
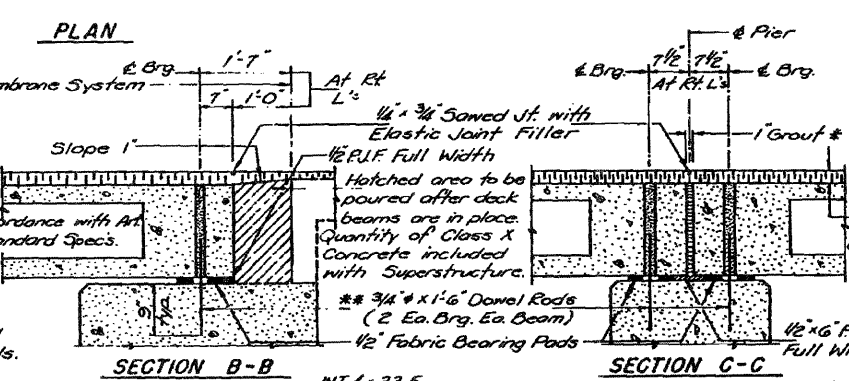
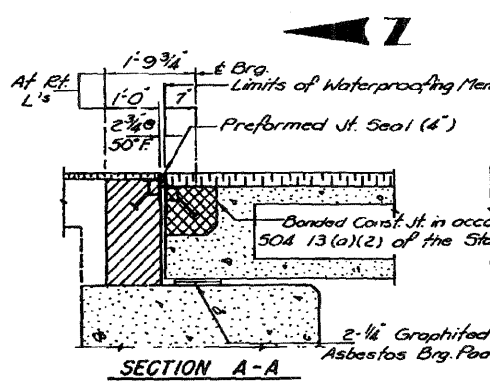
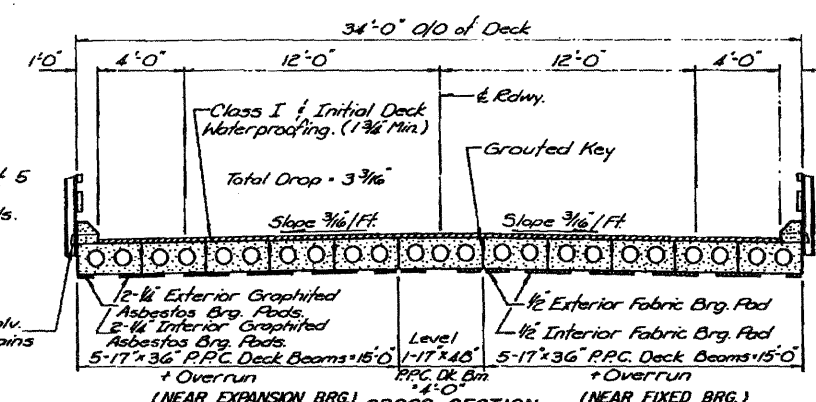
SHEET 2 OF 7
Sheet 86 of 126

NOTES:

- Anchor Bolts may be cast into the masonry or placed in drilled holes & grouted in place. Cost including retainer angles & accessories is incidental to beams.
- After Blockouts are poured & cured the retainer angles shall be removed. Anchor bolts may be left in place.
- 1" nonshrink, nonmetallic grout, see D 5 P 15. 1" dimension may vary to accommodate tolerance in beam lengths.
- ** Dowel Rods to be grouted after deck beams are in place and prior to grouting the shear keys.



Curbs shall be poured in the field.



BILL OF MATERIAL

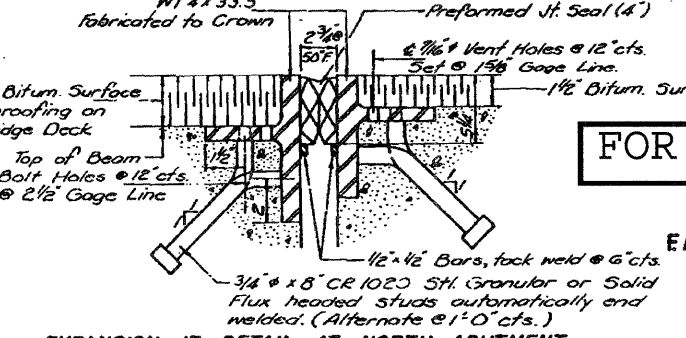
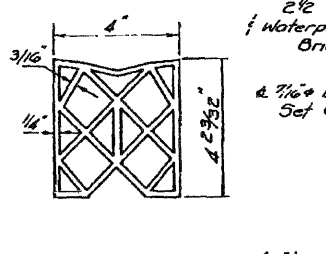
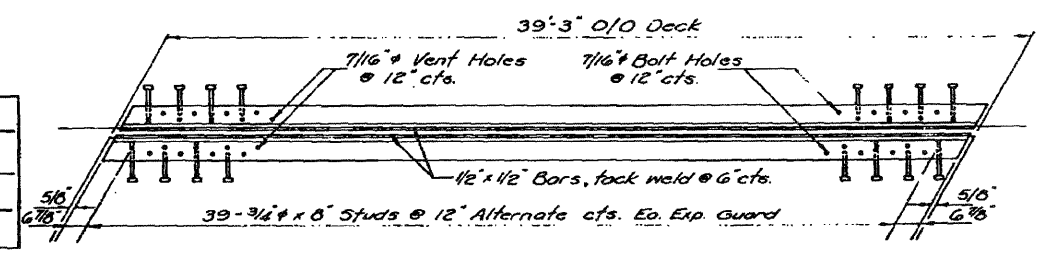
Bar	No.	Size	Length	Shape
2	12	#6	18'-8"	—
1	6	#5	20'-4"	—
17	36	P.P.C. Dk Beams	Sq. Ft.	3210
17	48	P.P.C. Dk Beams	Sq. Ft.	428
		Reinforcement Bars	Lbs.	470
		Class X Concrete	Cu. Yds.	13.2
		Preformed Jt Seal (4')	Lin. Ft.	40

FOR INFORMATION ONLY

SUPERSTRUCTURE DECK

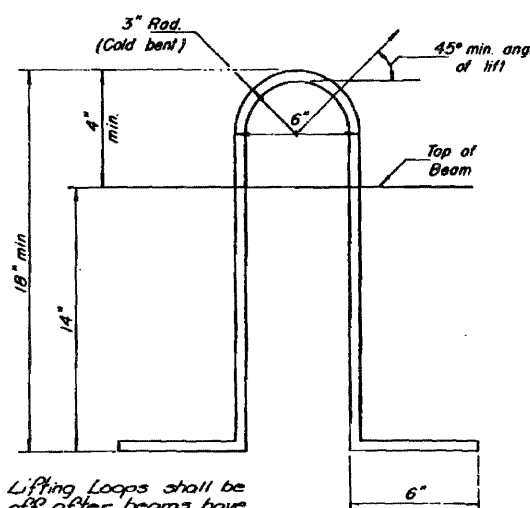
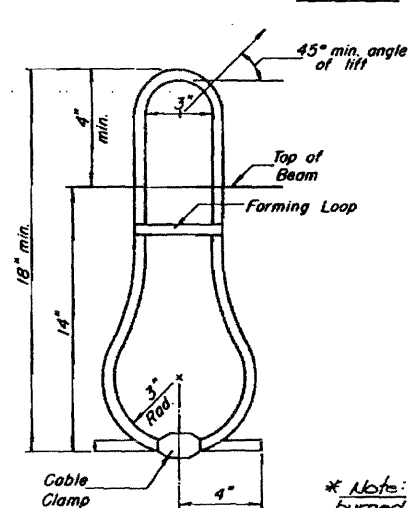
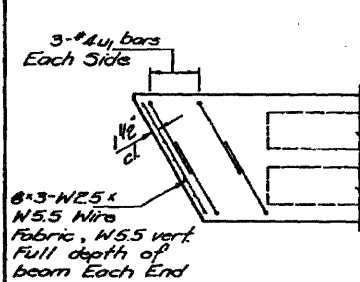
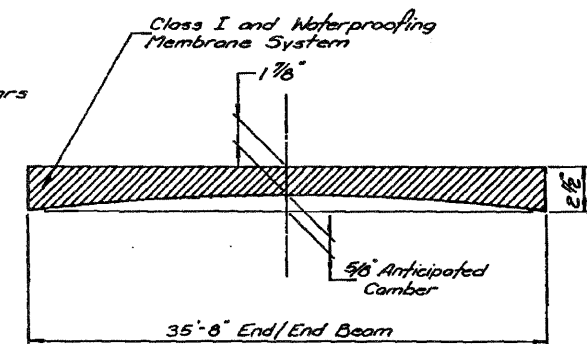
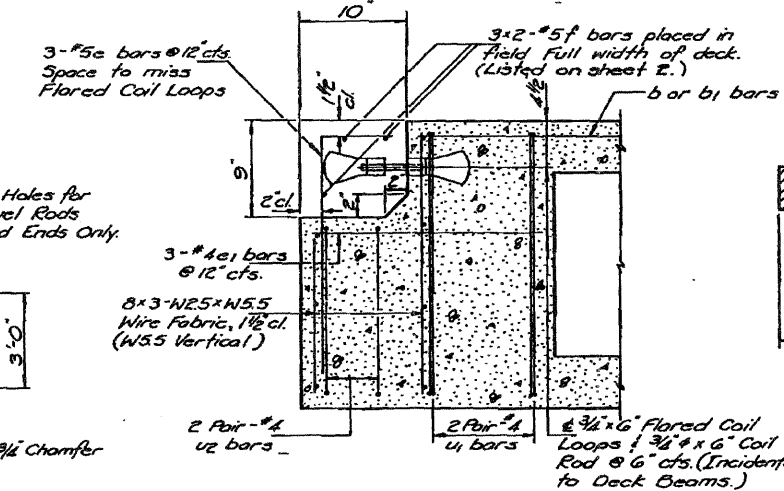
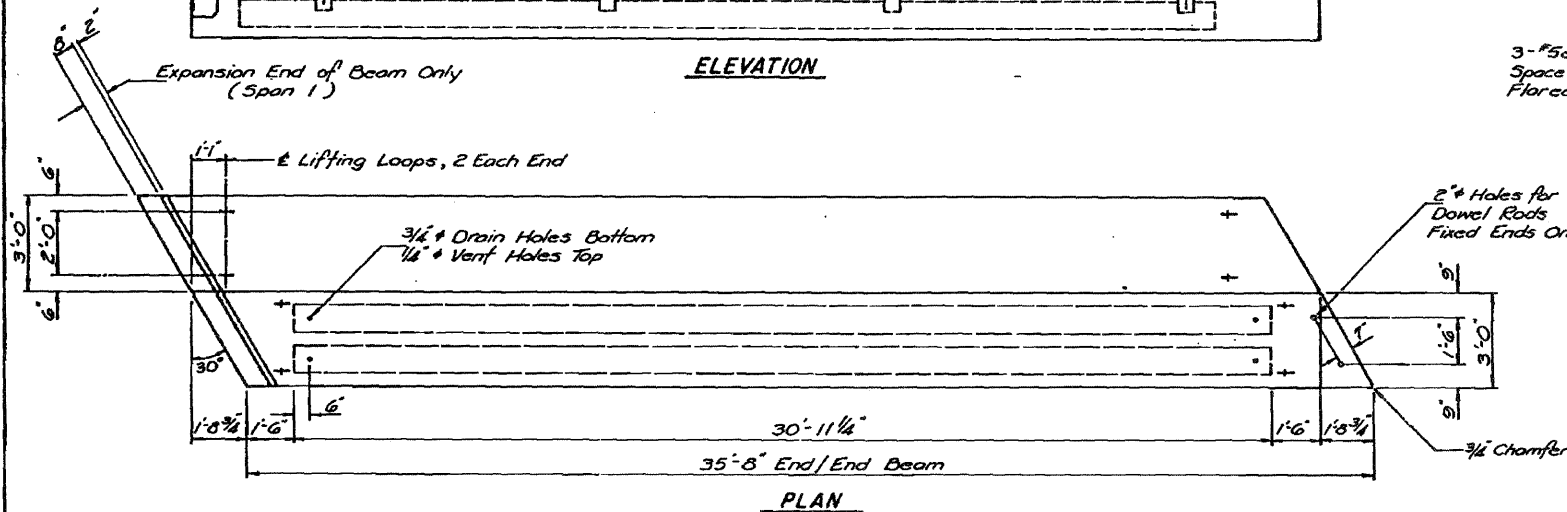
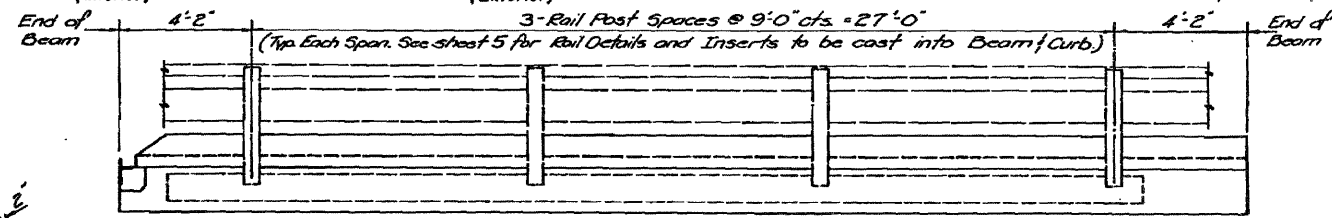
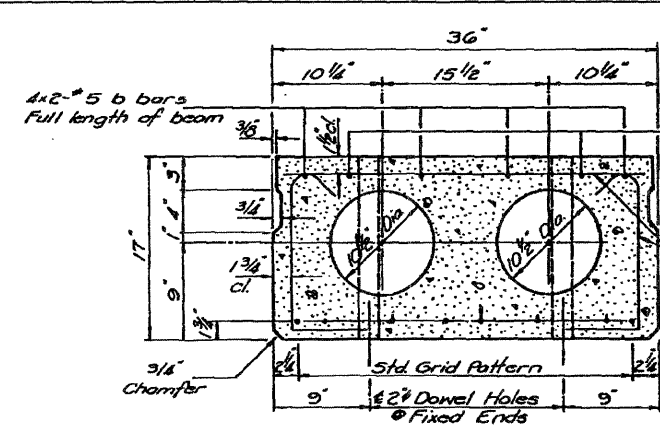
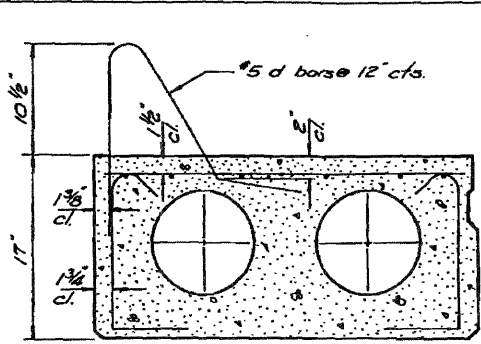
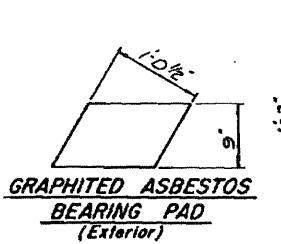
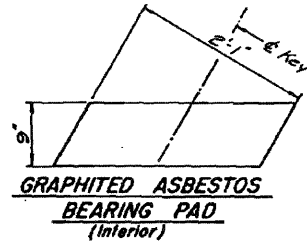
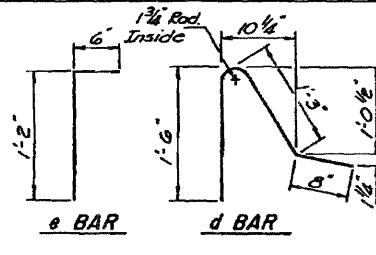
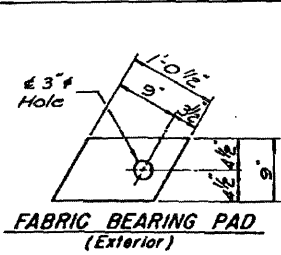
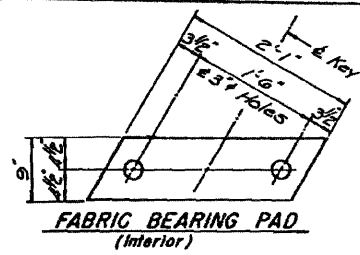
EA. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125 + 71.00

DESIGNED: V. S. N.
CHECKED: D. H. G.
DRAWN: R. A. W.
CHECKED: K. L. F.



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 18	104 BR	JO DAVIESS	19	9

SHEET 3 OF 7



* Note: Lifting Loops shall be burned off after beams have been erected.

DESIGNED:	V. S. N.
CHECKED:	D. H. C.
DRAWN:	R. A. W.
CHECKED:	K. L. F.

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 1/2" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2-1/2" - 270 ksi strands.

After beams have been erected, holes for the dowel anchors shall be drilled into the substructure and the anchor dowels shall be grouted in place.

Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60.

Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

FOR INFORMATION ONLY

ONE BEAM BILL OF MATERIAL

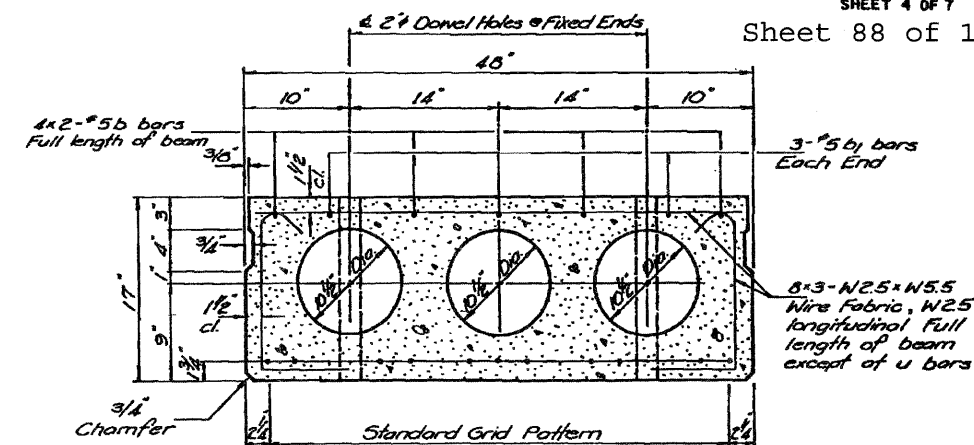
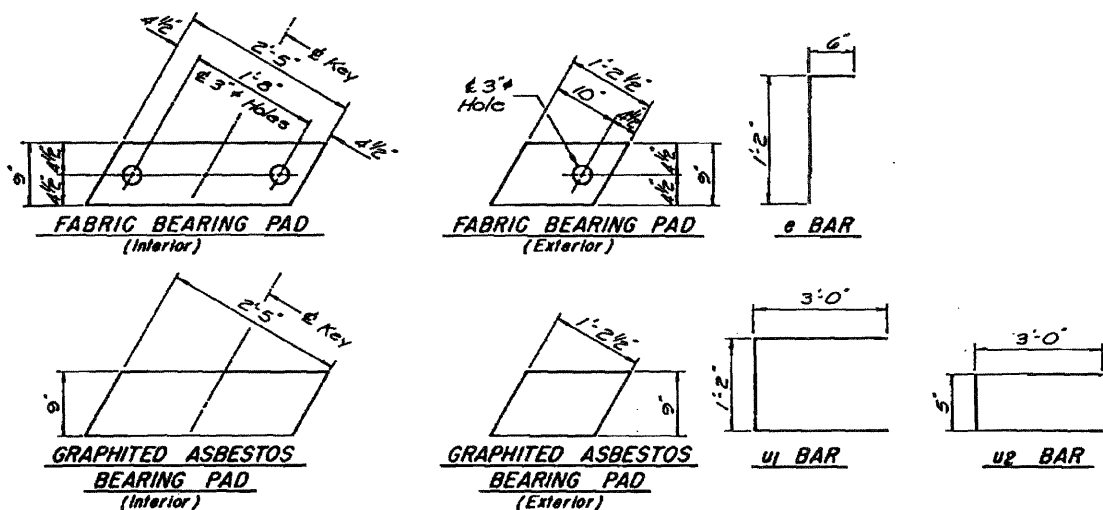
Bar Size	Curb Unit			Interior Unit		
	No.	Length	Shape	No.	Length	Shape
b #5	0	18'-7"	□	0	18'-7"	□
by #5	4	7'-3"	—	4	7'-3"	—
d #5	36	3'-9"	└			
#e #5	3	1'-8"	└	3	1'-8"	└
#e1 #4	3	1'-3"	—	3	1'-3"	—
u4 #4	10	6'-0"	□	10	6'-0"	□
u2 #4	4	5'-3"	□	4	5'-3"	□
Class x Concrete	200			4E		
Reinforcement Bars	Lbs			380		
Weight of Beam	Lbs			16,657		

* These bars required for expansion end only of Span 1 Beams.

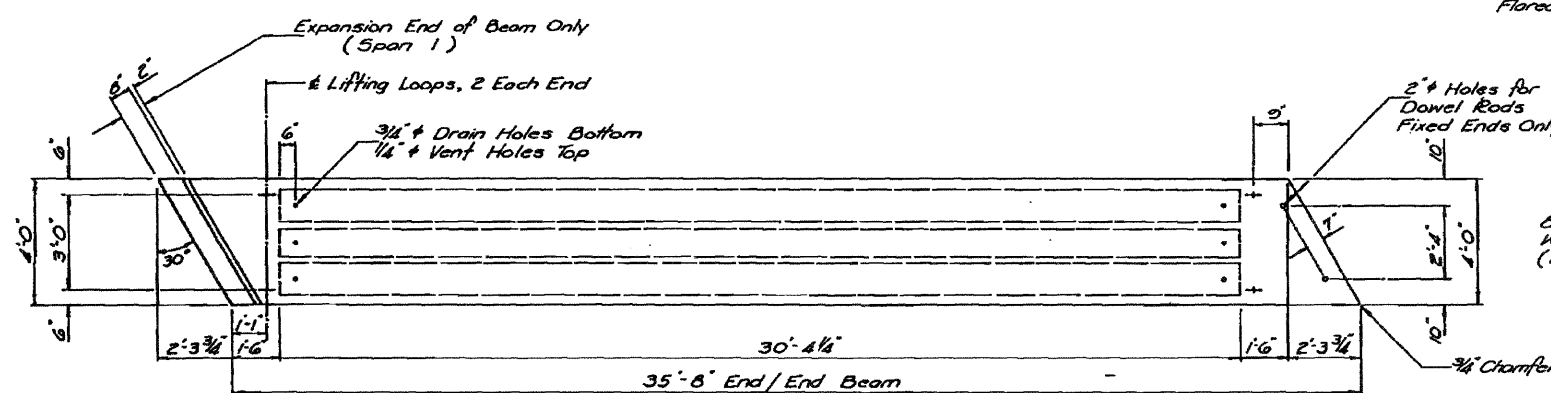
DETAILS PRECAST PRESTRESSED CONCRETE DECK BEAMS 17'x36"

F.A. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125 + 71.00

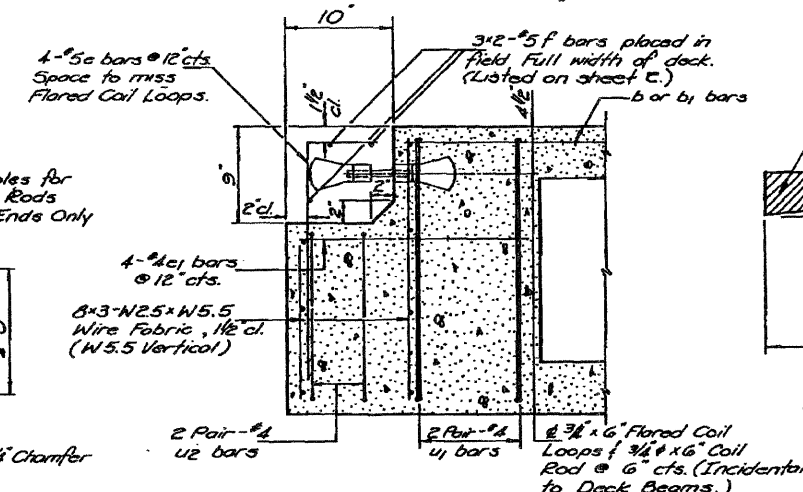
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A. 18	104 BR	JO DAVIESS	19	10



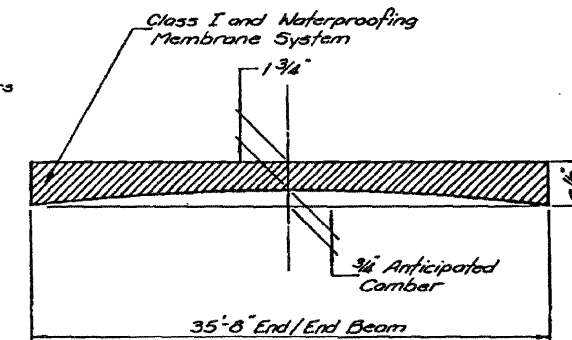
TYPICAL SECTION
 1/2" Strands, Each Strand Stressed to 28,900 lbs.
 11-Strands 1 1/2" up
 Place Strands Symmetrically about $\frac{1}{2}$ " of Beam.



PLAN



END OF BEAM
(EXP END)



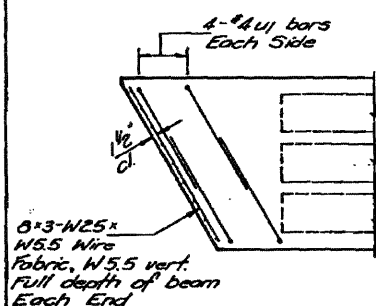
ANTICIPATED CAMBER DIAGRAM

ONE BEAM
BILL OF MATERIAL

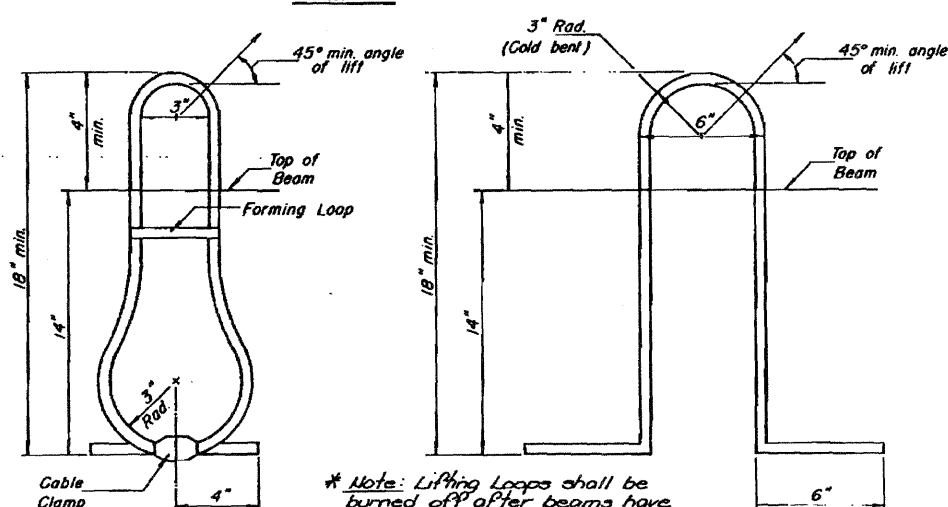
Bar	No	Size	Length	Shape
b	8	#5	18'-7"	—
b1	6	#5	7'-3"	—
# e	4	#5	1'-8"	Γ
# e1	4	#4	7'-3"	—
u1	12	#4	7'-2"	□
* u2	4	#4	6'-5"	—
Class x Concrete			Qty Yds.	6.4
Reinforcement Bars			Lbs.	290
Weight of Beam			Lbs	11,800

* These bars required for expansion and only of Span 1 Beam

NOTES
 Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq in. Lifting loops shall be 1/2" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2-1/2" - 270 ksi strands. After beams have been erected, holes for the dowel anchors shall be drilled into the substructure and the anchor dowels shall be grouted in place. Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."
 The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
 Keyway: Surfaces shall be cleaned to remove form oil or other hard breaking material prior to shipment of beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.



END PLAN
(FIXED END)



LIFTING LOOP DETAIL
ALTERNATE (2)

LIFTING LOOP DETAIL
ALTERNATE (1)

* Note: Lifting Loops shall be burned off after beams have been erected.

DESIGNED:	V. S. N.
CHECKED:	D. H. C.
DRAWN:	R. A. W.
CHECKED:	K. L. F.

FOR INFORMATION ONLY

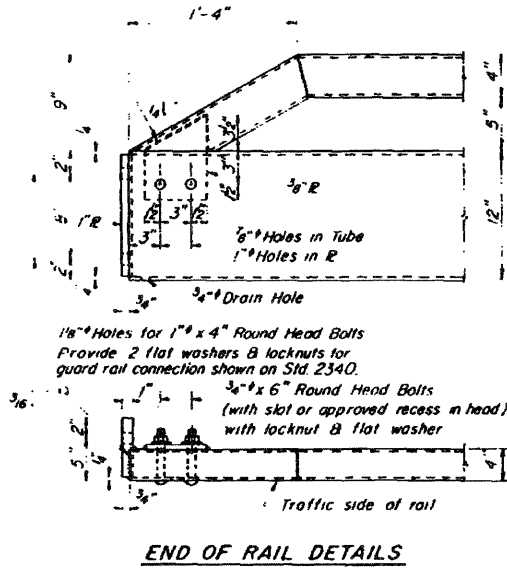
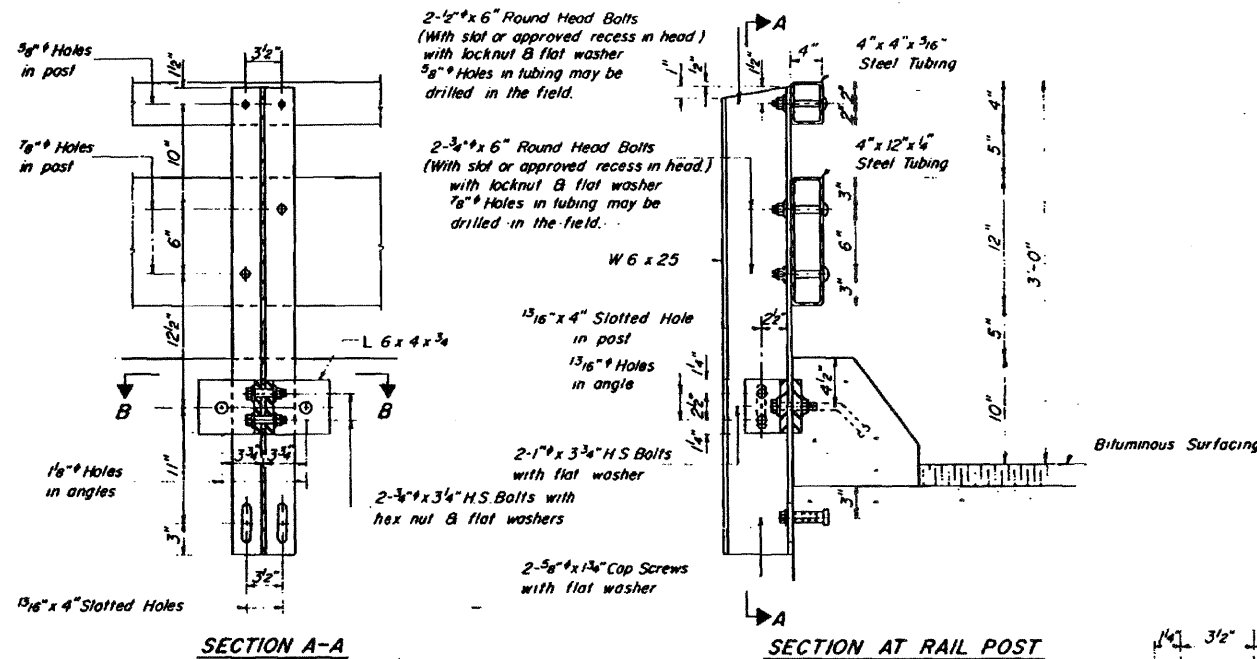
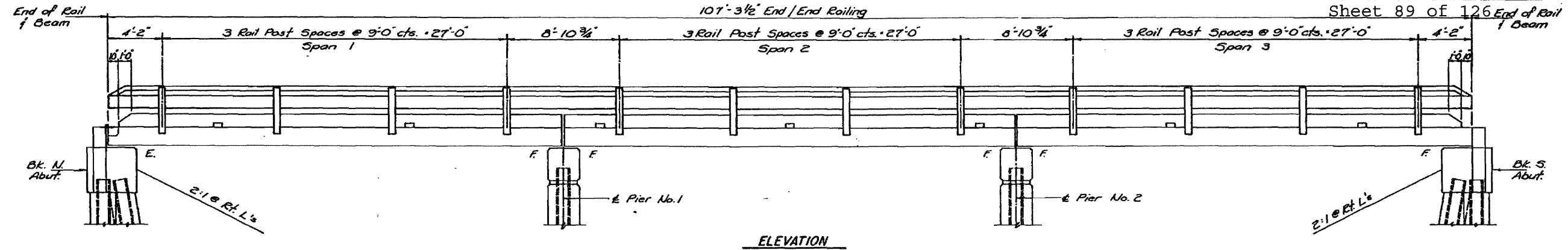
**DETAILS PRECAST PRESTRESSED
CONCRETE DECK BEAMS 17'x46"**

E.A. 18 OVER TRIBUTARY TO APPLE RIVER
 SECTION 104-BR
 JO DAVIESS COUNTY
 STATION 125 + 71.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DESIGNED	DRAWN	CHECKED	SHEET NO.
EA. 18	104-BR	JO DAVIESS	19	11	SHEETS 7

Sheet 89 of 126 End of Rail of Beam



NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 183 except posts and angles shall conform to AASHTO M 223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M III and ASTM A-385.

Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE T 1.

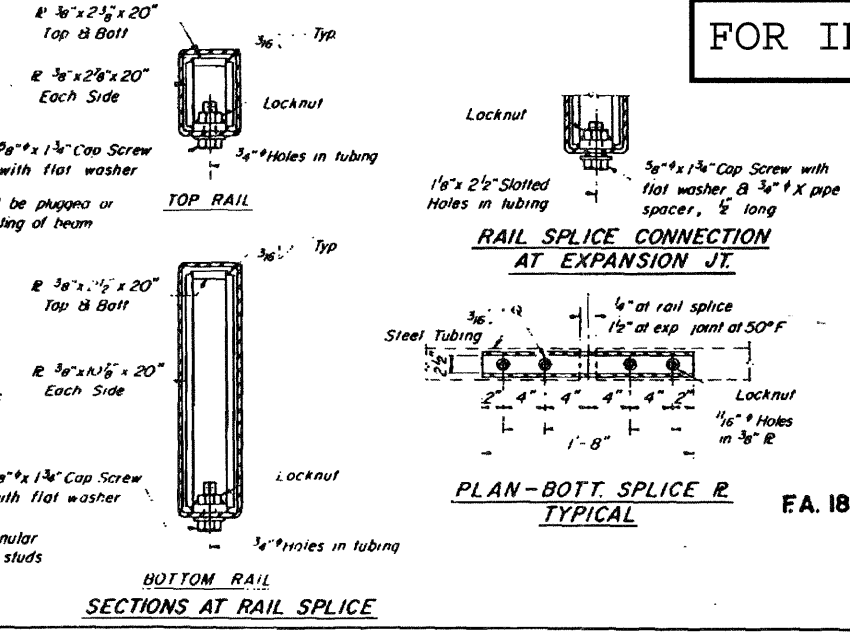
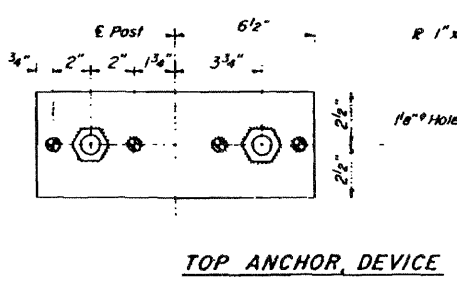
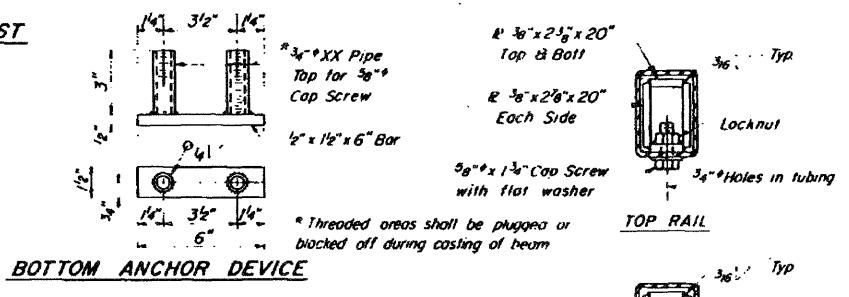
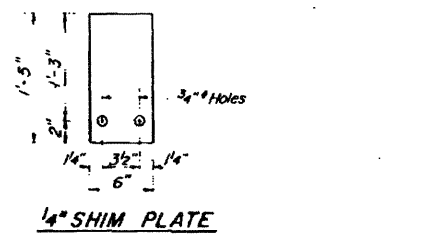
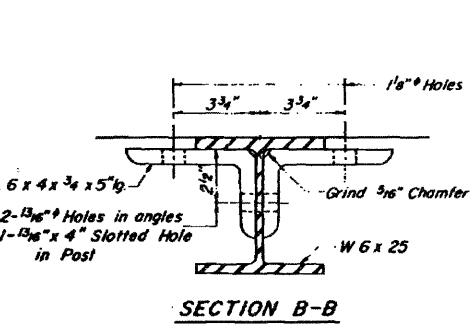
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714 08 Type B or place 1/2" fabric bearing pad between the post and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 5070.4(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 3/8" cap screws in bottom of posts shall be tightened to a snug fit only.

For multi-span bridges, sufficient 4" x 6" x 1/2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

FOR INFORMATION ONLY



BILL OF MATERIAL

Item	Unit	Quant.
Steel Railing Type T-1	LF	CIS

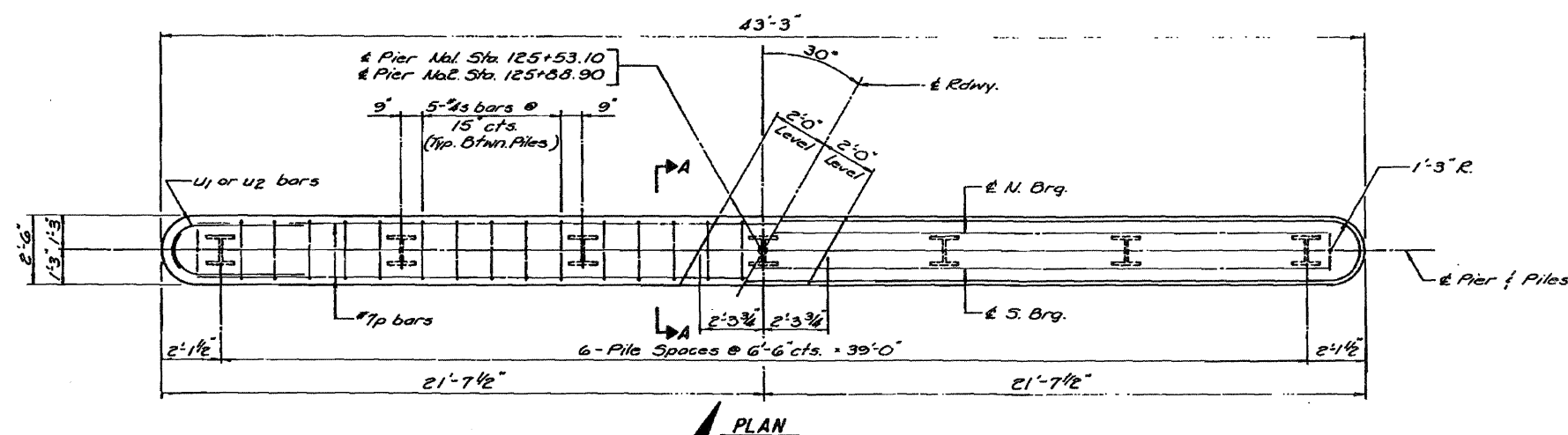
DESIGNED	V. S. N.
CHECKED	D. H. C.
DRAWN	R. A. W.
CHECKED	K. L. E.

R-24A 8-30-80 (11'-0" Maximum Post Spacing)

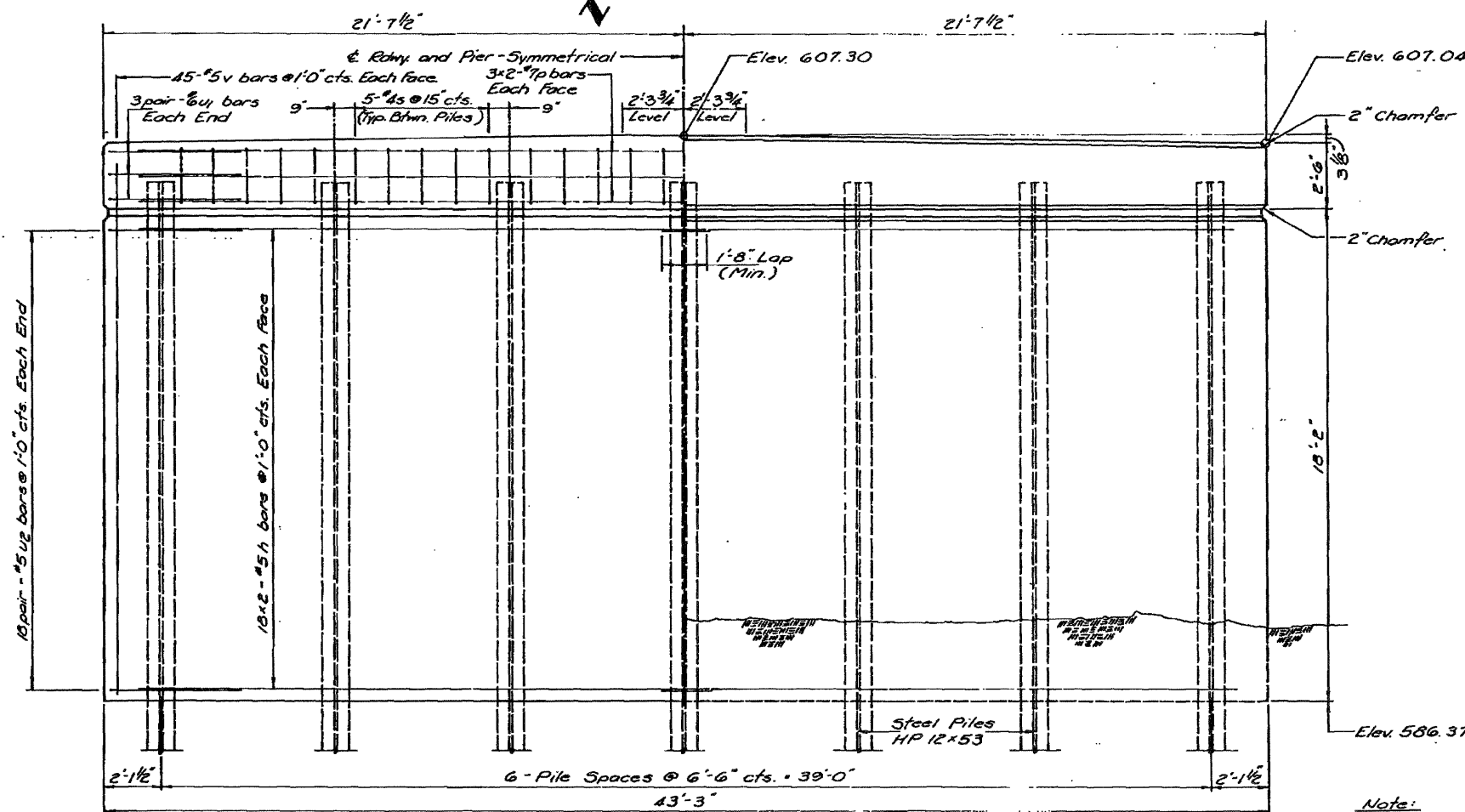
RAILING
FA. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125 +71.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA. 18	104-BR	JO DAVIESS	19	12

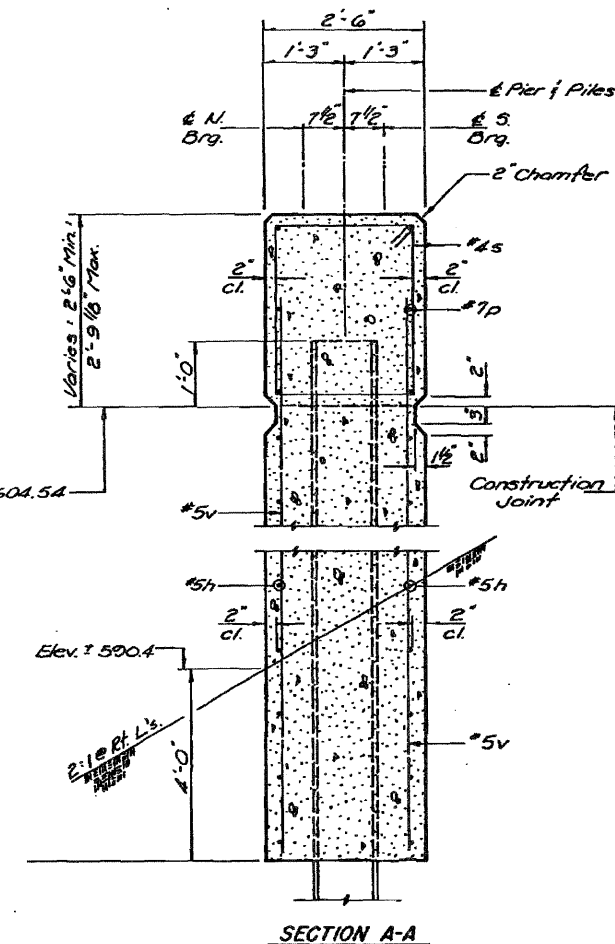
SHEET 6 OF 7
Sheet 90 of 126



PLAN



ELEVATION



SECTION A-A

PIER NO.1 & PIER NO.2
BILL OF MATERIAL

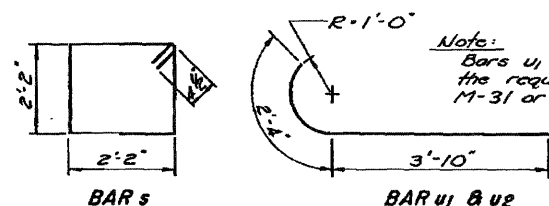
Bar	No.	Size	Length	Shape
h	144	#5	21'3"	—
p	12	#7	40'9"	—
s	60	#4	9'5"	□
u1	24	#6	6'2"	L
u2	144	#5	6'2"	L
v	180	#5	19'9"	—
Class X Concrete			C.Y.	164
Reinforcement Bars			Lbs.	9,430
Steel Piles HP 12x53			L.F.	497
Test Pile 5H, HP 12x53			Each	1

Note: Bars indicated thus 18x2-#5 etc. indicates 18 lines of bars with 2 lengths per line.

PILE DATA

	Pier No. 1	Pier No. 2
Type	SH. HP 12x53	SH. HP 12x53
Estimated Length	42 Ft.	35 Ft.
Capacity	Refusal	Refusal
Number	6	
Test Pile	1	

DESIGNED:	V.S.N.
CHECKED:	D.H.C.
DRAWN:	R.A.W.
CHECKED:	K.L.F.



Note: Bars u1 & u2 shall conform to the requirements of A.A.S.H.T.O. M-31 or M-53, Grade 40.

PIER NO. 1 & NO. 2

EA. 18 OVER TRIBUTARY TO APPLE RIVER
SECTION 104-BR
JO DAVIESS COUNTY
STATION 125+71.00

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
308	*	JO DAVIESS	13	5
FED. ROAD DIST. NO. 7		ILL. DIST.		FED. AID PROJECT
Contract Number: 64D87		Sheet 92 of 126		

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

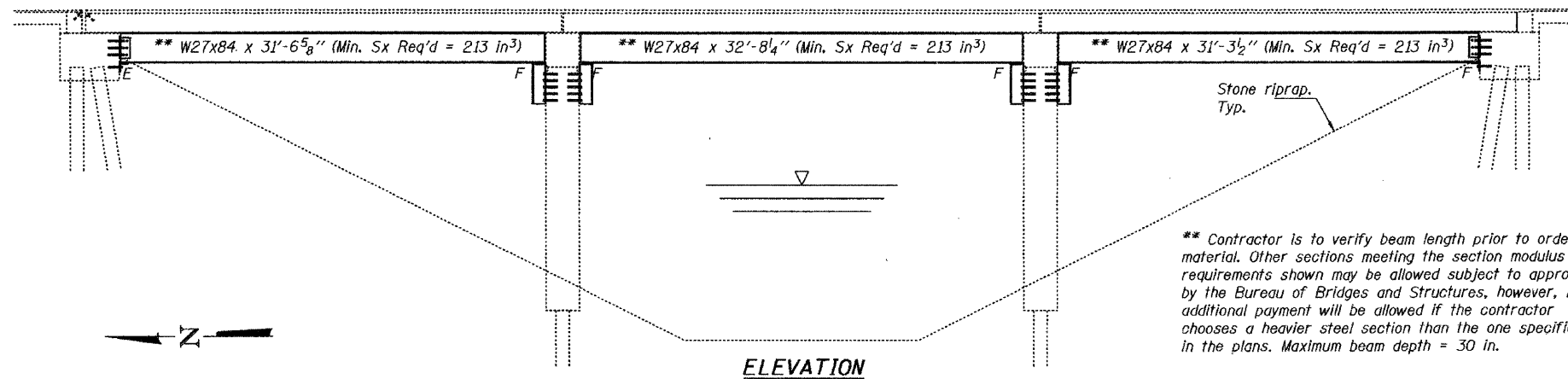
The cost of epoxy grouting threaded rods on the pier cap and beams shall be included with Furnishing and Erecting Structural Steel.

The cost of any excavation required shall be included with Furnishing and Erecting Structural Steel.

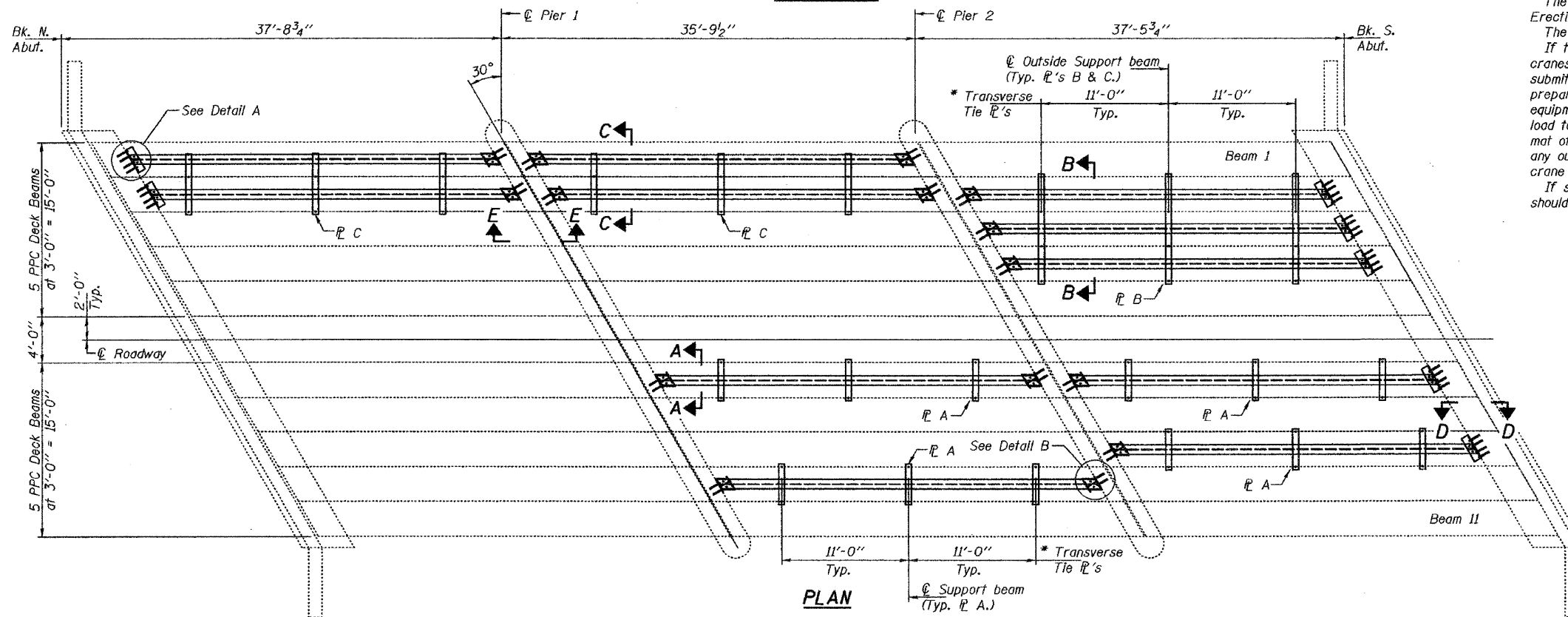
The Contractor has the option of using used steel. See Special Provisions.

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

If staging is required for installation of the steel beams, Stage I construction should be on the east side of the structure.



** Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures, however, no additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. Maximum beam depth = 30 in.



* @ Transverse tie R's (3 per span). Place additional shims at midpoints between tie R's. Securely weld shims to top flange of support beam. Min. shim size is 6" x flange width.

Note:
For Sections A-A thru E-E &
Details A & B, see sheet 2 of 2.

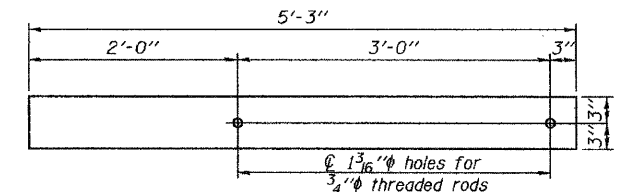


PLATE C
R 1/2" x 6" x 5'-3"
(6 required)

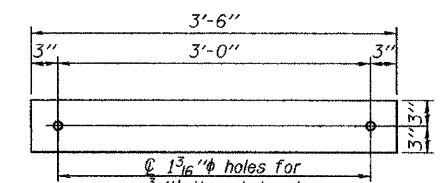


PLATE A
R 1/2" x 6" x 3'-6"
(12 required)

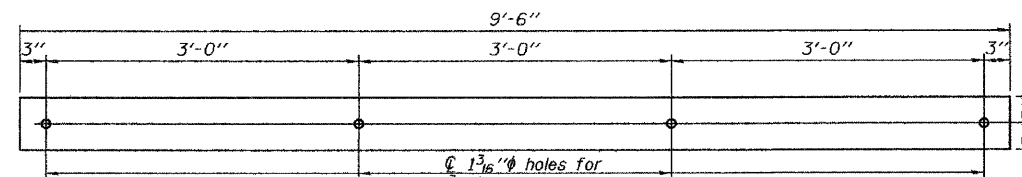


PLATE B
R 1/2" x 6" x 9'-6"
(3 required)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	35980

PLAN AND ELEVATION
FA 18 OVER
TRIBUTARY TO APPLE RIVER
JO DAVIESS COUNTY
SN 043-0038

FOR INFORMATION ONLY

DESIGNED	SJB
CHECKED	VHV
DRAWN	balva
CHECKED	SJB VHV

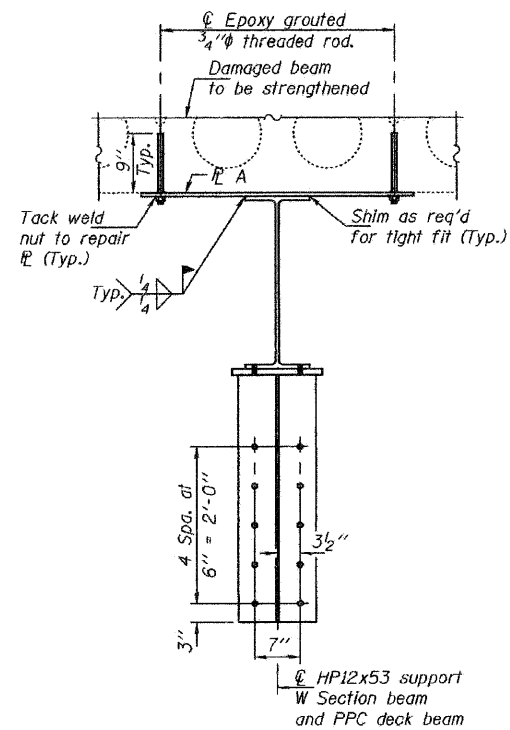
SEPTMBER 10, 2007
EXAMINED *[Signature]*
REPAIR PLANS UNIT CHIEF
PASSED *[Signature]*
ENGINEER OF BRIDGES AND STRUCTURES



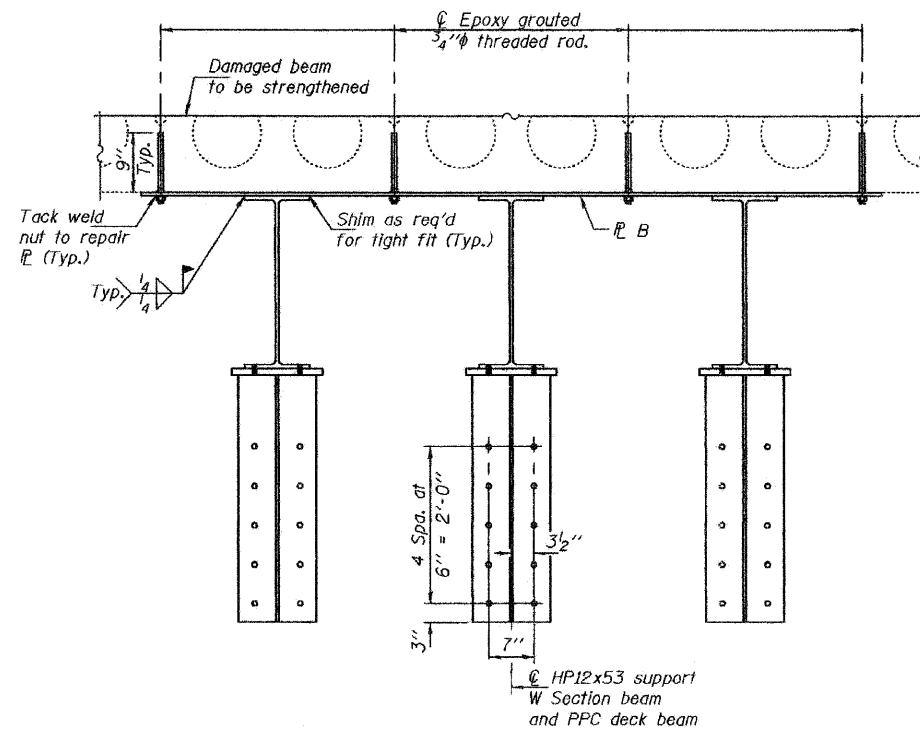
Expires: November 30, 2008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

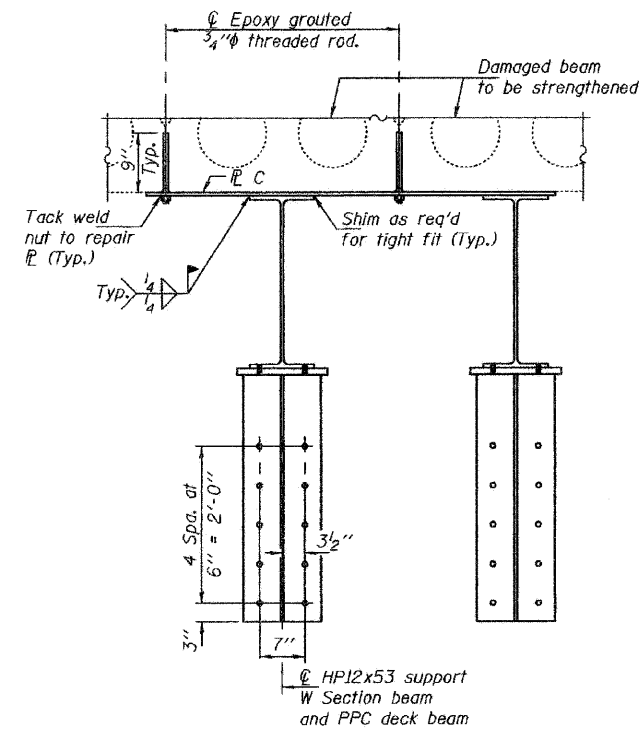
ROUTE NO.	SECTION	COUNTY	STREET	SHEET	SHEET NO.
*104BRM	308	JO DAVIESS	13	6	2 SHEETS
Contract Number: 64D87					Sheet 93 of 126



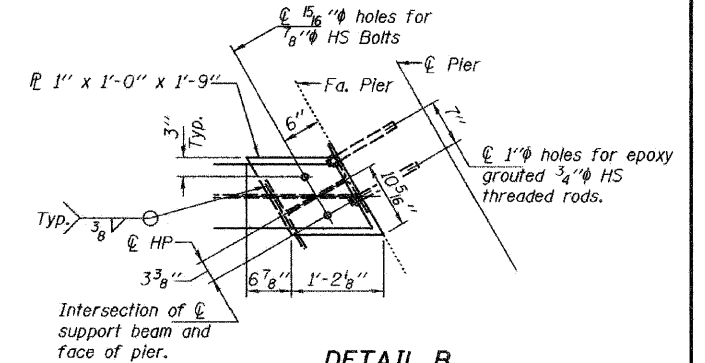
SECTION A-A



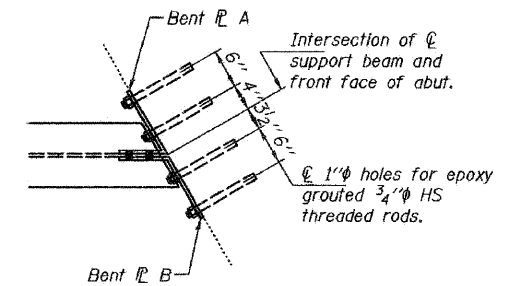
SECTION B-B



SECTION C-C

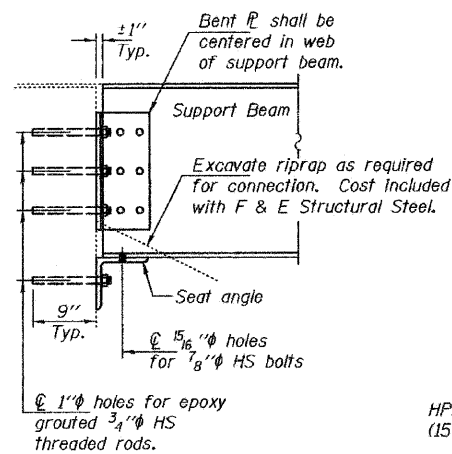


DETAIL B

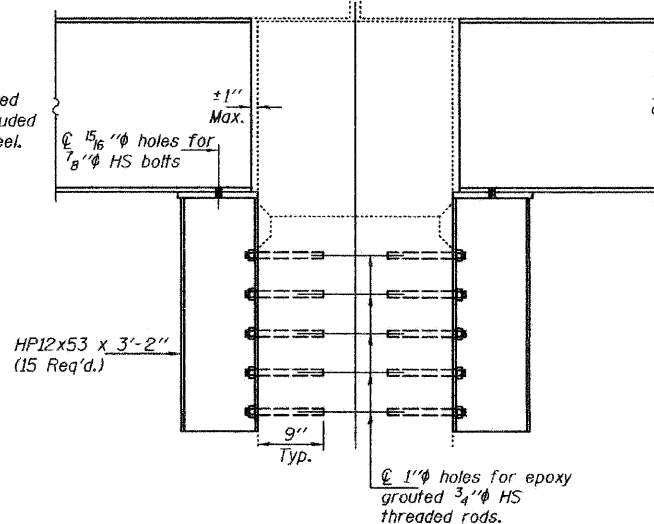


DETAIL A

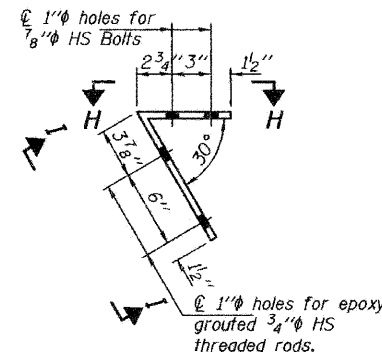
L 8 x 8 x 3/4 not shown for clarity



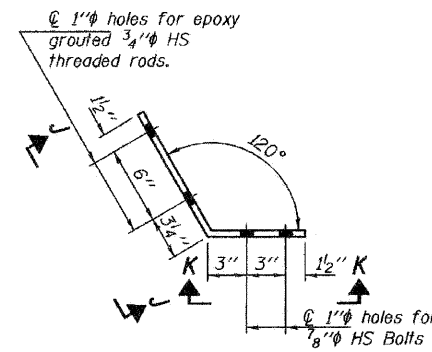
SECTION D-D



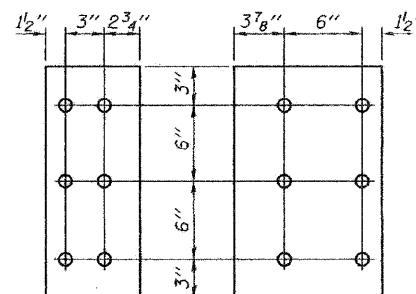
SECTION E-E



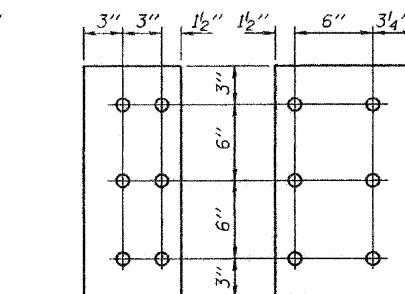
BENT PLATE A
L 1/2" x 1'-6" x 1'-6 5/8"
(7 Req'd)



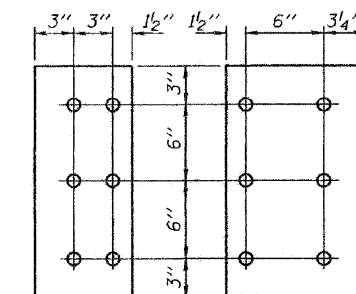
BENT PLATE B
L 1/2" x 1'-6" x 1'-6 1/4"
(7 Req'd)



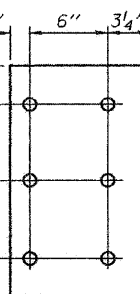
VIEW H-H



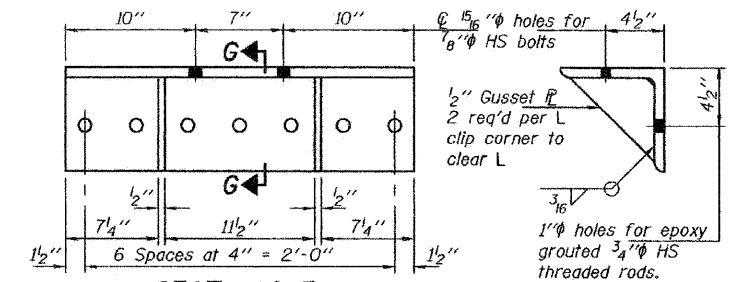
VIEW I-I



VIEW K-K



VIEW J-J



SEAT ANGLE
L 8x8x3/4 x 2'-3"
(7 Req'd)

SECTION G-G

FOR INFORMATION ONLY

DESIGNED	SJB
CHECKED	VHV
DRAWN	balva
CHECKED	SJB VHV

SEPTEMBER 10, 2007
EXAMINED *Carl Perry*
REPAIR PLANS UNIT CHIEF
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FA 18 OVER
TRIBUTARY TO APPLE RIVER
JO DAVIESS COUNTY
SN 043-0038

BENCH MARK "B-1"

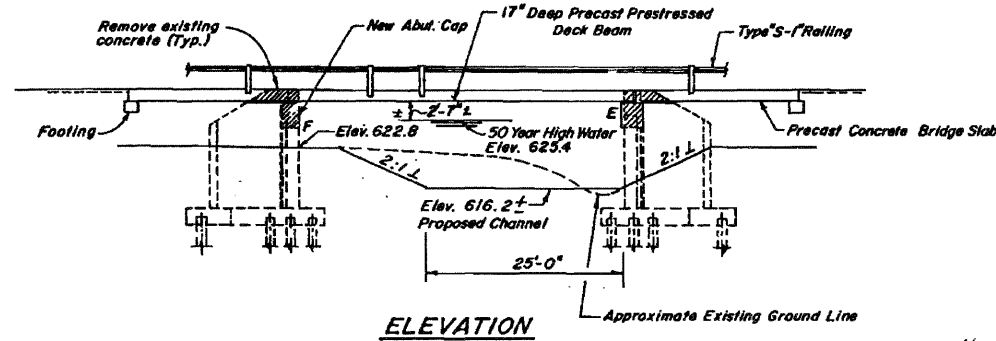
1" CUT IN S.W. CORNER OF CONCRETE BLOCK AT GUYWIRE STA. 240+06.141' LT. - ELEV. 633.05 EXISTING STRUCTURE BUILT AS S.B.1 RTE. 80, SEC.103-B, STA. 242+47 IN 1930

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

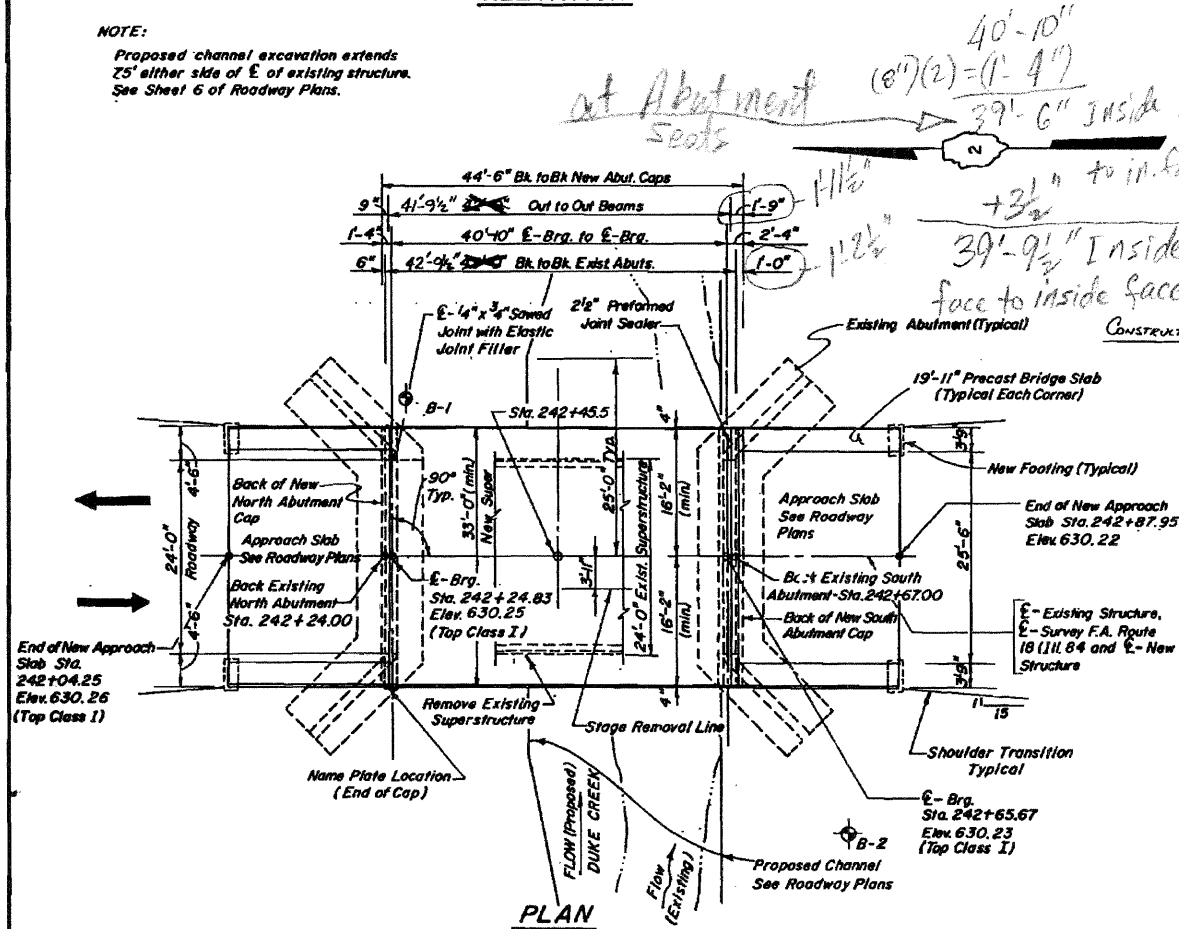
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.1	103 BR-2	JO DAVIESS	18	7
F.A. 18		ILLINOIS FED. AID PROJECT		

SHEET NO. 1
SHEETS 7

Sheet 94 of 126



NOTE:
Proposed channel excavation extends 25' either side of E. of existing structure. See Sheet 6 of Roadway Plans.



DESIGNED	<i>J. Amari</i>
CHECKED	R.F.C.
DRAWN	<i>J. Amari</i>
CHECKED	ES, I.R.F.C.

PROFILE GRADE PROPOSED STRUCTURE

GENERAL NOTES

- See Proposal for Boring Data.
- Structure shall be open to traffic at all times during construction. Contractor shall submit schedule of construction to the Engineer for approval well in advance of construction.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.
- The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specification except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a min. of 1/4".
- All structural steel shall be shop pointed with two coats of basic lead silico chromate paint.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
- Anchor bolts shall consist of approved cast-in anchors, providing minimum proof certified load = 4,080 lbs., and 3/4" x 12" hooked bolts, and shall be cast incidental to Class X Concrete.
- A Cobium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for Precast Prestressed Concrete Deck Beams.
CONSTRUCTION NOTE: Due to greater than anticipated number in the P.P.C. Deck Beams, it was necessary to eliminate the protective sand seal from the waterproofing system in order to obtain a smooth riding surface over the bridge.

WATERWAY INFORMATION

Drainage Area 2.77 Sq. Mile		Low Grade Elevation 629.75'		Station 242 + 45.5				
Flood Year	Q C.F.S.	Opening Existing	Proposed	Net. H.W.E.	Head-Foot Existing	Proposed	Headwater Elev. Existing	Proposed
Design	50 1649	237	301	625.4'	1.37	0.91	626.77	626.31
Base	100 1908	249	313	626.7'	1.45	0.91	627.15	626.61
Overtopping								
Max. Calc.	500 2528	273	277	626.3'	2.54	1.59	628.84	627.89

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		46	46
Class "X" Concrete	Cu. Yd.		23.1	23.1
Name Plates	Each		1	1
Channel Excavation	Cu. Yd.		451	451
Reinforcement Bars	Lbs.		2136	2136
Epoxy Crack Sealing	Lin. Ft.		25	25
Bituminous Concrete Surface Course, Mixture D, C1	Tons	18.5		18.5
Precast Prestressed Concrete Deck Beams (17" Deep)	Sq. Ft.	1386		1386
Waterproofing Membrane System	Sq. Yd.	156		156
Removal of Existing Superstructure ①	Each	1		1
Concrete Removal	Cu. Yd.		6.7	6.7
Temporary Bridge Roll	Lin. Ft.	83		83
Repair Concrete Structures ②	Sq. Ft.		36	36
Preformed Joint Seal (2 1/2")	Lin. Ft.	33		33
Structural Steel	Lbs.	2320		2320
Steel Railing, Type S-1	Lin. Ft.	166		166
Portland Cement Mortar Fairing Course	Lin. Ft.	250		250
Precast Concrete Bridge Slabs	Sq. Ft.	299		299

- ① Approximate quantity of Existing Superstructure Concrete is 78.0 cubic yards.
② Deteriorated Concrete Surface Areas of the Existing Abutment Walls consisting of hollow, cracked and spalled areas specified by the Engineer shall be removed and replaced with pneumatic concrete in accordance with the Special Provisions. Table quantity is approximate.

STATION 242+45.50 (FA Rte. 18)
REBUILT 198 BY
STATE OF ILLINOIS
FA Rte. 18 SEC. 103 BR-2
LOADING HS 20
STRUCTURE NO. 043-0027

PROJECT GR-18 (115)

BRIDGE NAME PLATE
SEE STD. DWG. 2113

DESIGN STRESSES

PRECAST UNITS

f'c = 4500 psi
fc = 1800 psi
fs = 20,000 psi
n = 8

FIELD UNITS

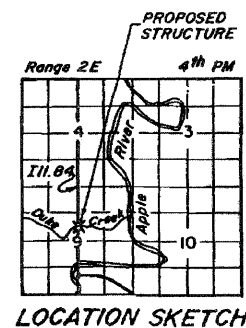
f'c = 3500, fy = 60,000 psi Reinforcement
fy = 36,000 psi Structural Steel (M183)
PRECAST PRESTRESSED UNITS
f'c = 5000 psi
f'cl = 4000 psi
f's = 270,000 psi, 1/2" Strands
f'sl = 185,000 psi, 1/2" Strands
fy = 60,000 psi (Non-prestressed Reinforcement)

LOADING HS 20-44

Allow 25 P.S.F. for Future Wearing Surface

DESIGN SPECIFICATIONS

AASHTO 1977 and Interims 1978, 1979 and 1980



APPROVED



EXISTING SUPERSTRUCTURE: #043-0027
Reinforced Concrete Deck Girder, 41" ±
E-Brg. to E-Brg. with Concrete Railing
EXISTING SUBSTRUCTURE:
Reinforced Concrete Abutments on
Untreated Timber Piles

FOR INFORMATION ONLY

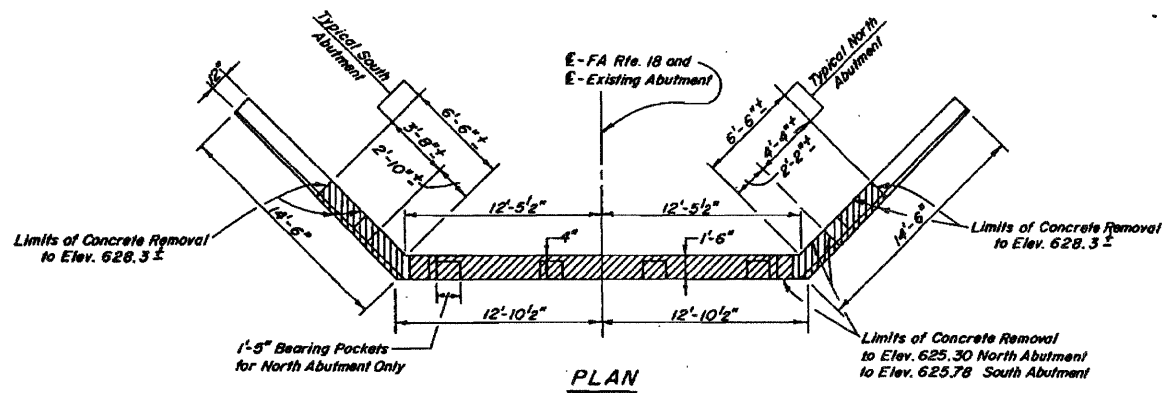
GENERAL PLAN
PROJECT GR-18 (115) SEC. 103 BR-2
FA 18 (III. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242+45.5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

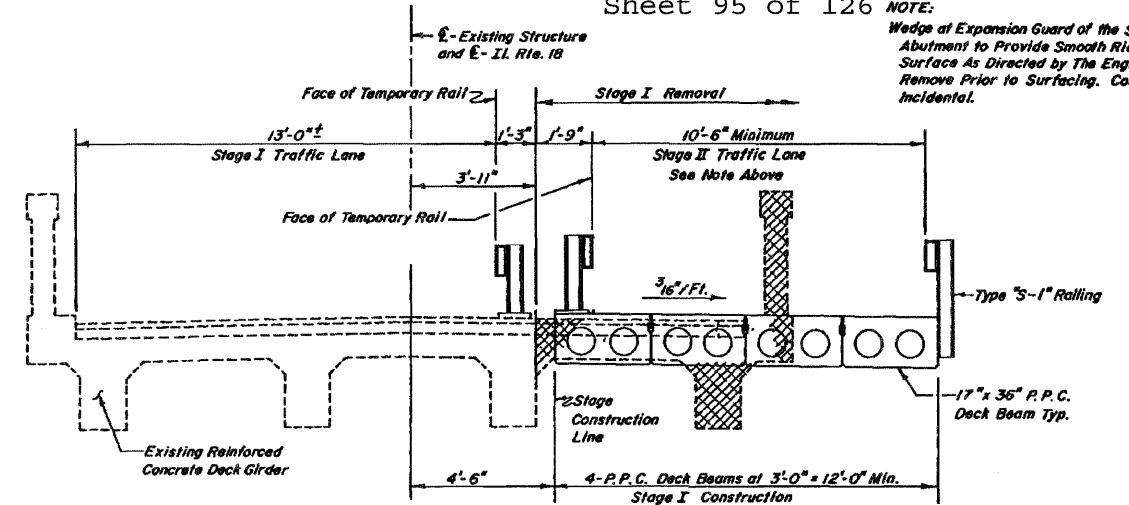
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 SHEETS 7
S.R.L.	103	JO DAVIESS	18	8	
F.A. 18	BR-2	ILLINOIS	FED. AID PROJECT		

Sheet 95 of 126 NOTE:

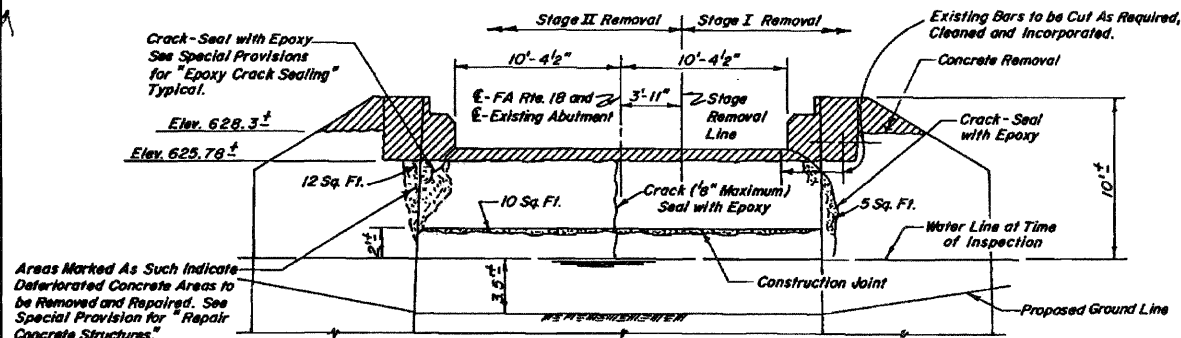
Wedge of Expansion Guard of the South Abutment to Provide Smooth Riding Surface As Directed by The Engineer. Remove Prior to Surfacing. Cost Incidental.



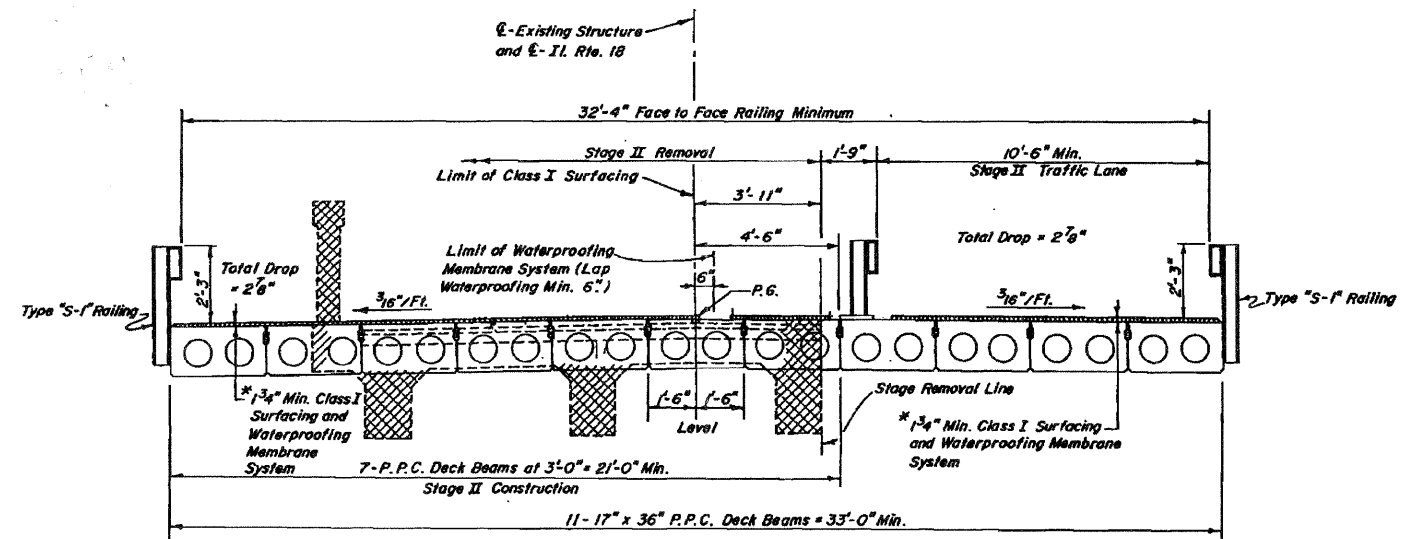
NOTE:
Cracks and deteriorated concrete surface areas between the water line and/or existing ground line and the proposed ground line shall be specified for repair by the Engineer. Plan dimensions and details relative to existing structure have been taken from the existing plans and are subject to nominal construction variations.



CROSS SECTION-STAGE I CONSTRUCTION
(LOOKING SOUTH)



SOUTH ABUTMENT ELEVATION



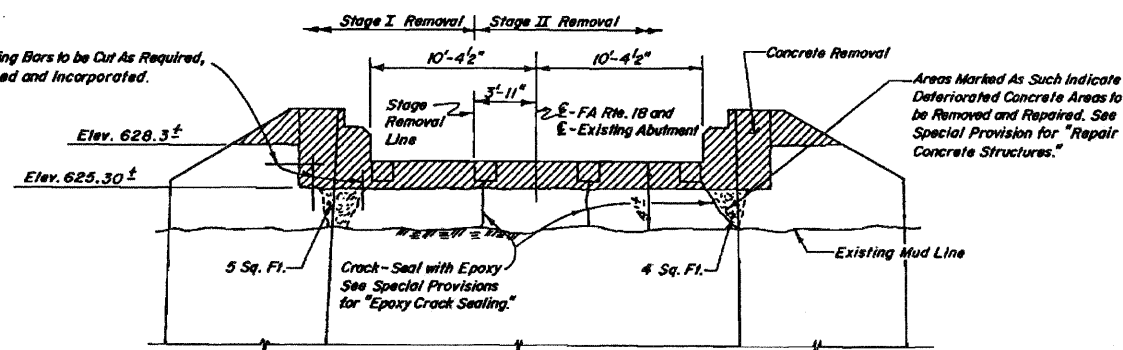
CROSS SECTION-STAGE II CONSTRUCTION
(LOOKING SOUTH)

* Stage III Construction: Waterproof and Surface Northbound Lanes.
Stage IV Construction: Waterproof and Surface Southbound Lanes.
See Sheet 4 of Roadway Plans for Traffic Staging and Stage Construction Details.

Note: For Shear Key Clamping Details at Stage Construction Joint see Sheet 14 of 18.

Areas Marked As Such Indicate Deteriorated Concrete Areas to be Removed and Repaired. See Special Provision for "Repair Concrete Structures."

Areas Marked As Such Indicate Deteriorated Concrete Areas to be Removed and Repaired. See Special Provision for "Repair Concrete Structures."



NORTH ABUTMENT ELEVATION

EXISTING ABUTMENT DETAILS
(SHOWING STRUCTURE REHABILITATION AND CONCRETE REMOVAL)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal - North Abutment	Cu. Yds.	3.7
Concrete Removal - South Abutment	Cu. Yds.	3.0
Removal of Existing Superstructure	Each	1
Repair Concrete Structures - North Abutment	Sq. Ft.	27
Repair Concrete Structures - South Abutment	Sq. Ft.	9
Epoxy Crack Sealing - North Abutment	Lin. Ft.	10
Epoxy Crack Sealing - South Abutment	Lin. Ft.	15

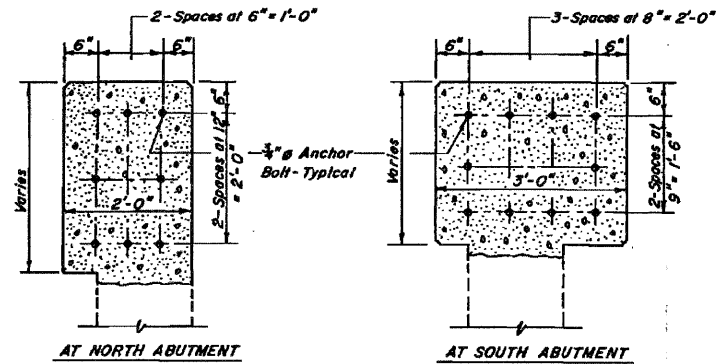
DESIGNED	Samani
CHECKED	R.F.C.
DRAWN	Samani
CHECKED	R.F.C./F.S.

FOR INFORMATION ONLY

ABUTMENT REHABILITATION
AND DECK SECTIONS
PROJECT GR-18 (I15) SEC. 103 BR-2
FA 18 (I. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242 + 45.5

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.A. 18	103 BR-2	JO DAVIESS	18	9
FED. ROAD DIST. NO. 7	ILLINOIS	FEL. AIR PRODUCT		

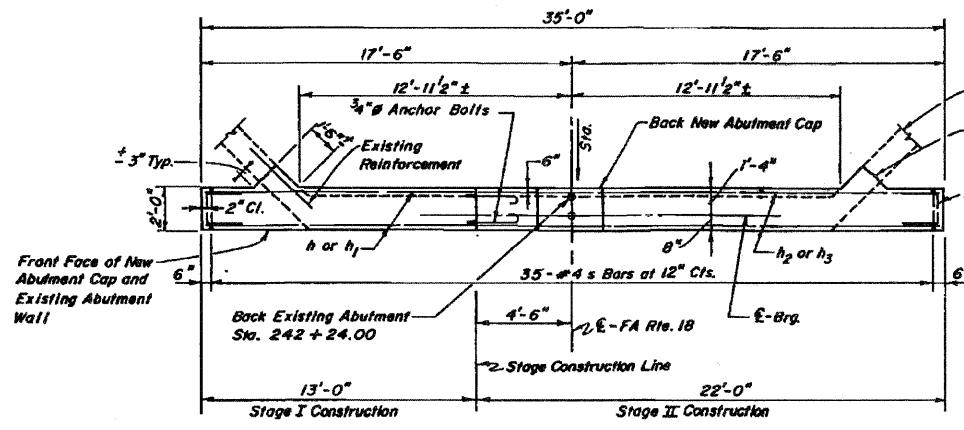
Sheet 96 of 126



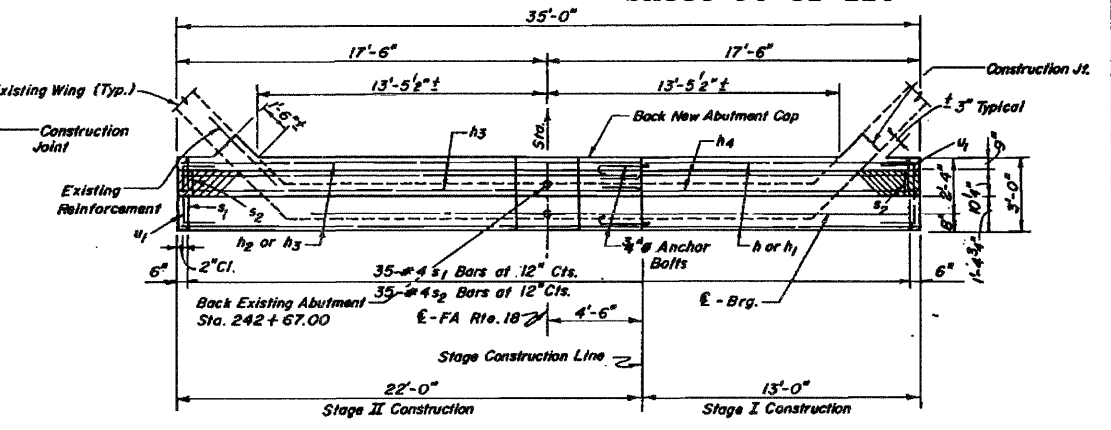
CAP SECTION AT BONDED CONSTRUCTION JOINT
(SHOWING LOCATION OF ANCHOR BOLTS)

NOTE:
Anchor bolts shall consist of approved cast-in anchors, providing minimum proof load = 4,080 lbs. and 3/4" x 12" hooked bolts.

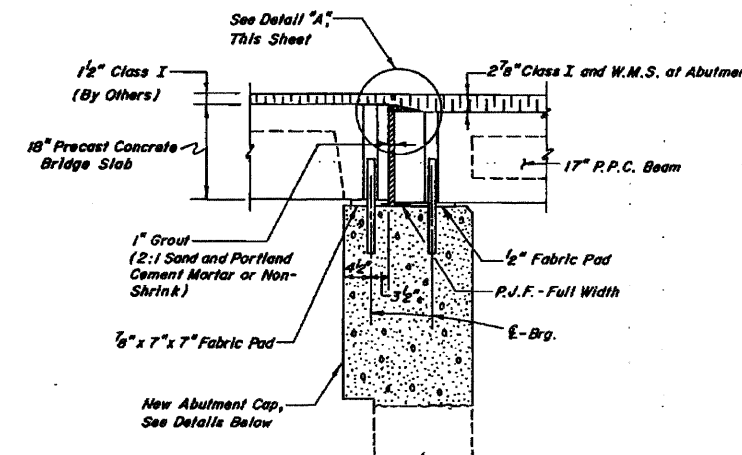
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



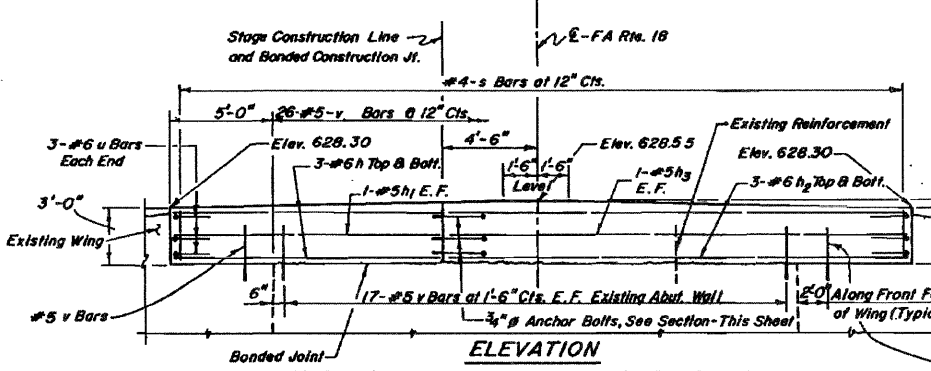
PLAN



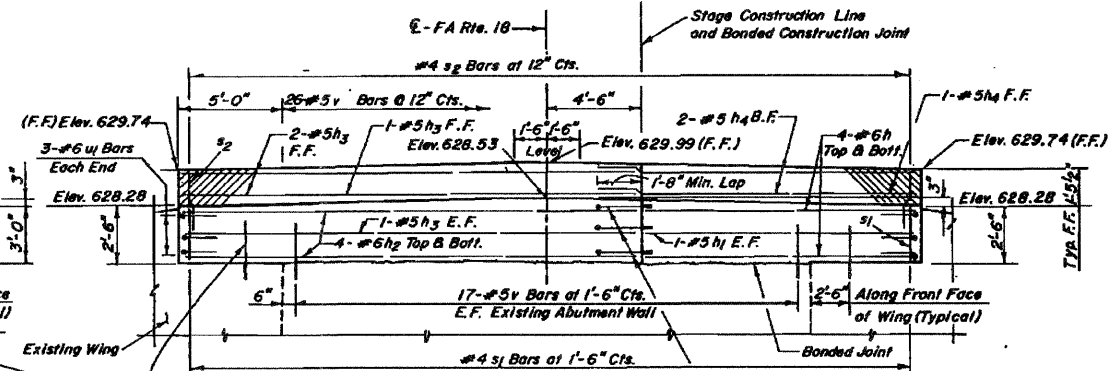
PLAN



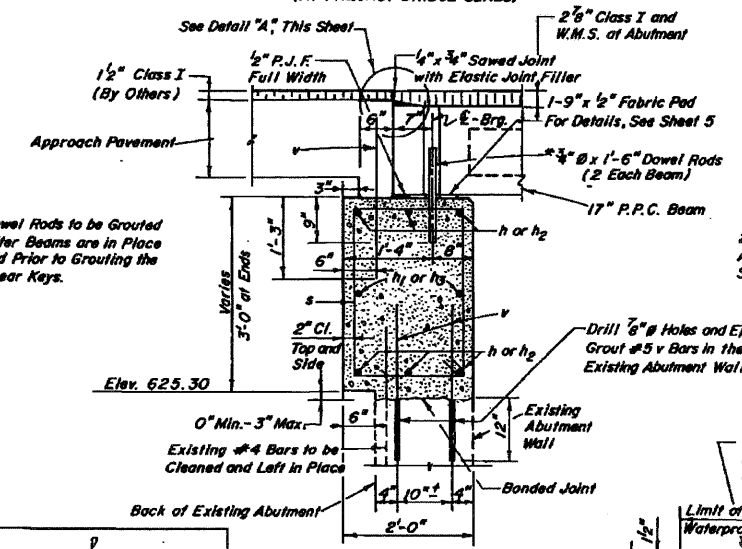
TYPICAL SECTION THRU NORTH ABUTMENT
(AT PRECAST BRIDGE SLABS)



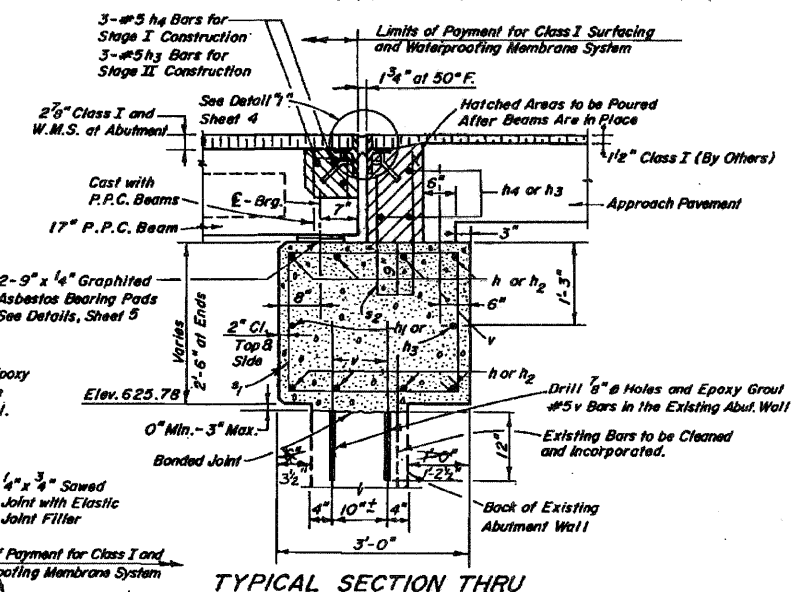
NEW NORTH ABUTMENT CAP DETAILS
(FOR STAGE REMOVAL LIMITS SEE SHEET 2)



NEW SOUTH ABUTMENT CAP DETAILS
(FOR STAGE REMOVAL LIMITS SEE SHEET 2)



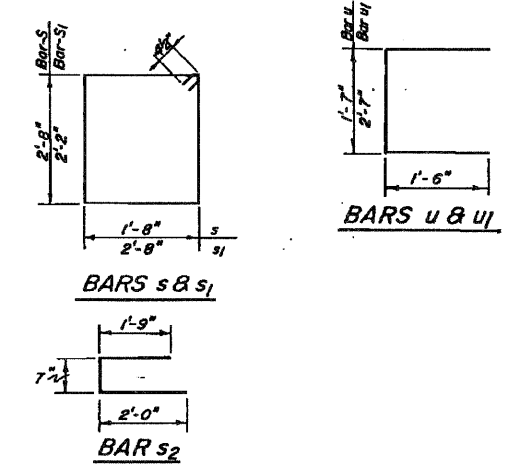
TYPICAL SECTION THRU NORTH ABUTMENT
(AT APPROACH PAVEMENT)



TYPICAL SECTION THRU SOUTH ABUTMENT
(AT APPROACH PAVEMENT SHOWN, SIMILAR AT PRECAST BRIDGE SLABS)

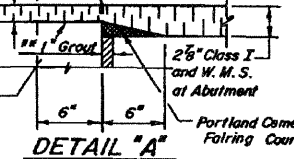
BILL OF MATERIAL

Bar	Number		Size	Length	Shape
	N. Abut.	S. Abut.			
h	6	8	14	#6	12'-8"
h1	2	2	4	#5	12'-8"
h2	6	8	14	#6	21'-8"
h3	2	8	10	#5	21'-8"
h4		6	6	#5	14'-6"
s	35		35	#4	9'-5"
s1		35	35	#4	10'-5"
s2		35	35	#4	4'-4"
u	6		6	#6	4'-7"
u1		6	6	#6	5'-7"
v	62		62	#5	3'-0"



DESIGNED *Jansen*
CHECKED *R.F.C.*
DRAWN *L. Jansen*
CHECKED *R.F.C./F.S.*

**1" Grout at Precast Bridge Slab Only.



DETAIL "A"

FOR INFORMATION ONLY

ABUTMENT DETAILS
PROJECT GR-18(115) SEC. 103 BR-2
FA 18 (I. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242+45.5

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 18	BR-2	JO DAVIESS	18	10
SHEETS 7				

Sheet 97 of 126

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
Class X Concrete	Cu. Yds.	1.6

BAR LIST - ONE UNIT

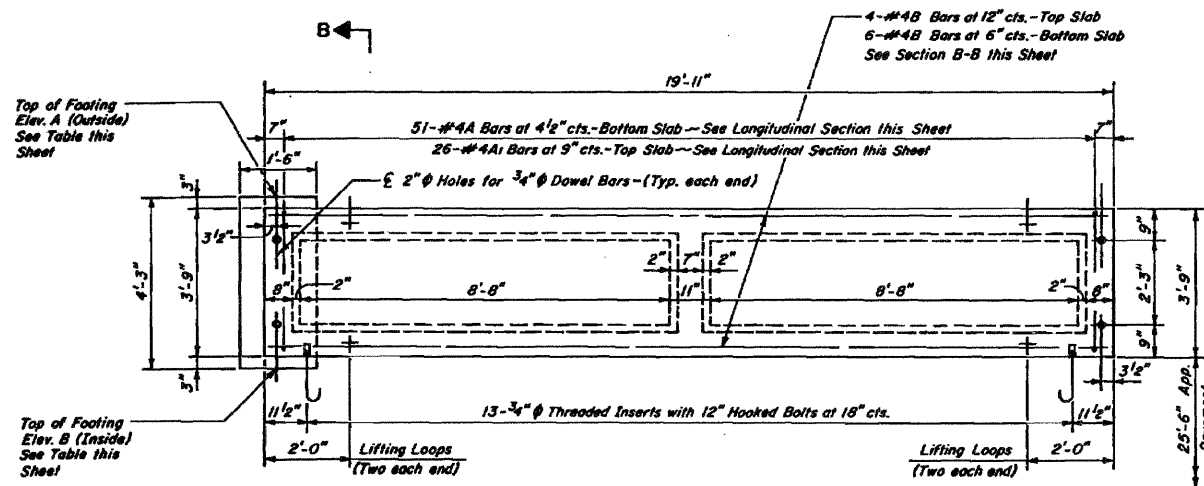
Reinforcement to be cast into slab.

Bar	No.	Size	Length	Shape
A	51	#4	3'-3"	—
A1	26	#4	4'-0"	—
B	10	#4	19'-7"	—
B1	6	#4	3'-6"	—
G	4	#10	19'-7"	—
S	42	#3	3'-4"	—

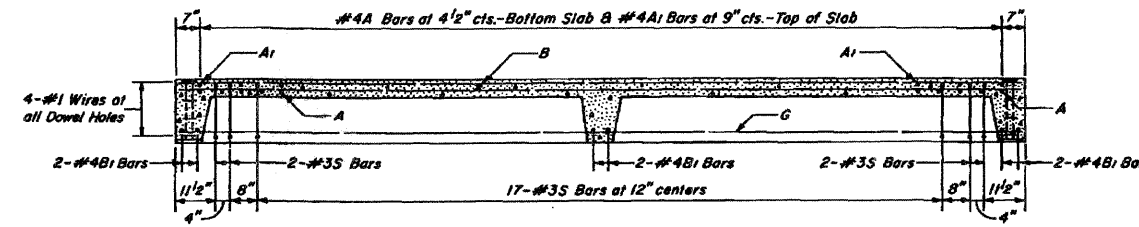
BAR A1

TABLE OF ELEVATIONS (FOOTING)

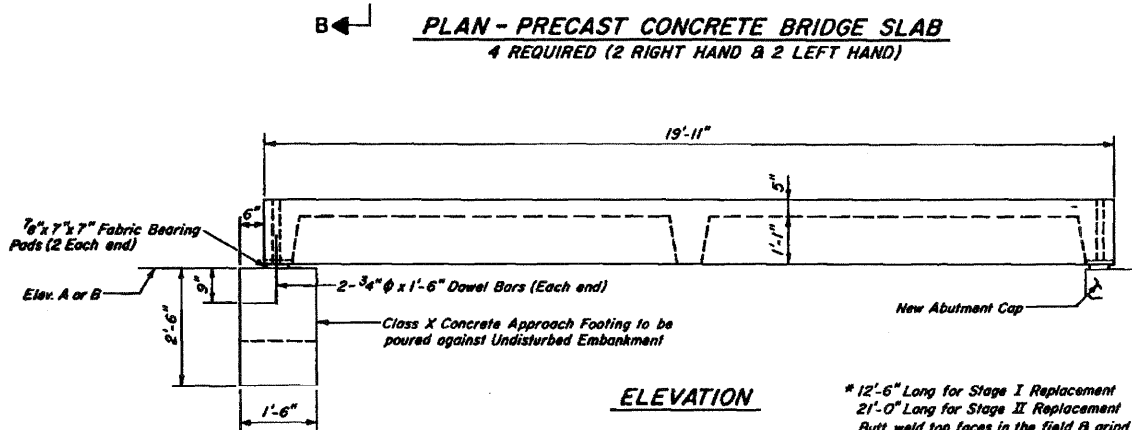
Location	Elevation	
	A	B
Northeast	628.32	628.39
Northwest	628.32	628.39
Southeast	628.28	628.35
Southwest	628.28	628.35



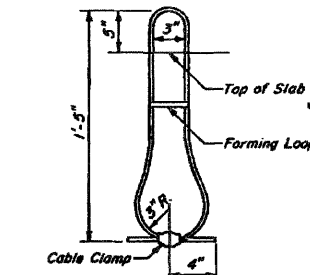
PLAN - PRECAST CONCRETE BRIDGE SLAB
4 REQUIRED (2 RIGHT HAND & 2 LEFT HAND)



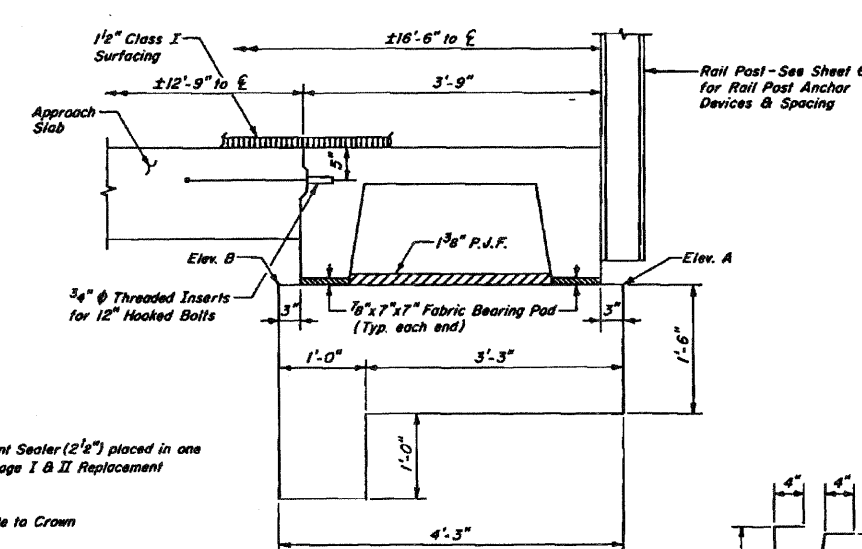
LONGITUDINAL SECTION



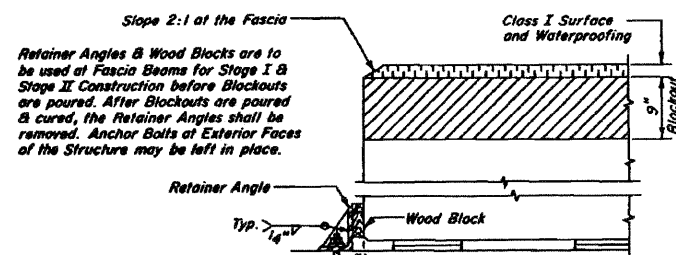
ELEVATION



LIFTING LOOP DETAIL

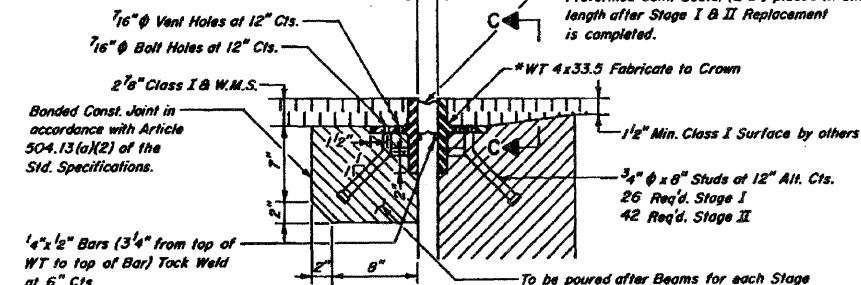


SECTION B-B

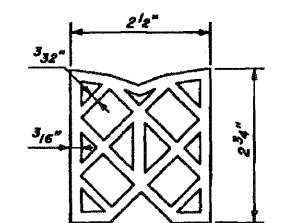


SECTION A-A

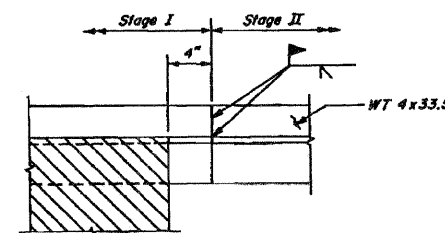
* 12'-6" Long for Stage I Replacement
21'-0" Long for Stage II Replacement
Butt weld top faces in the field & grind smooth before placing Preformed J. Sealer. Place Stage I portion 4" beyond face of Inside Beam.



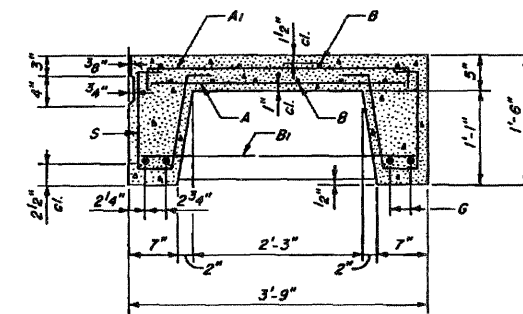
DETAIL "1"



PREFORMED JOINT SEALER



SECTION C-C



SECTION THRU PRECAST UNIT

NOTES:
Unless otherwise approved by the Engineer, lifting loops shall be 1/2" #6, 6x19 class wire rope with fiber core, and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing, and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

Approach Pavement
DETAILS

PROJECT GR-18 (H5) SEC. 103 BR-2
FA 18 (II. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242+45.5

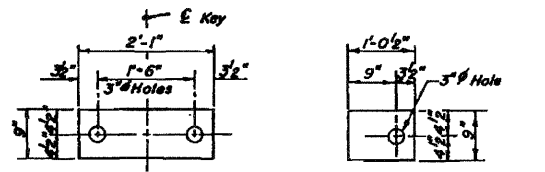
FOR INFORMATION ONLY

DESIGNED	<i>R.C.C.</i>
CHECKED	<i>R.F.C.</i>
DRAWN	<i>brh</i>
CHECKED	<i>R.F.C./F.S.</i>

NOTE:
Anchor Bolts may be cast into the masonry or placed in drilled holes and grouted in place. Cost including Retainer Angle and Accessories incidental to Beams.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
103	BR-2	JO DAVIESS	18	11	SHEETS 7
F.A. 18	BR-2	ILLINOIS	FED. AID PROJECT		

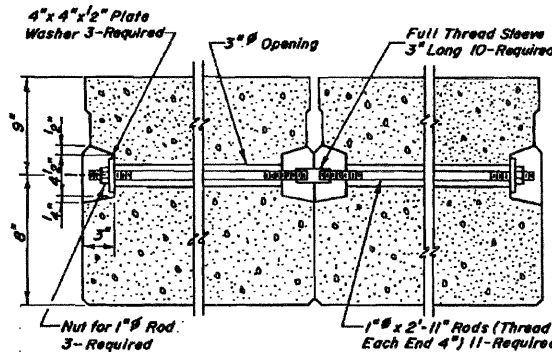
Sheet 98 of 126



FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

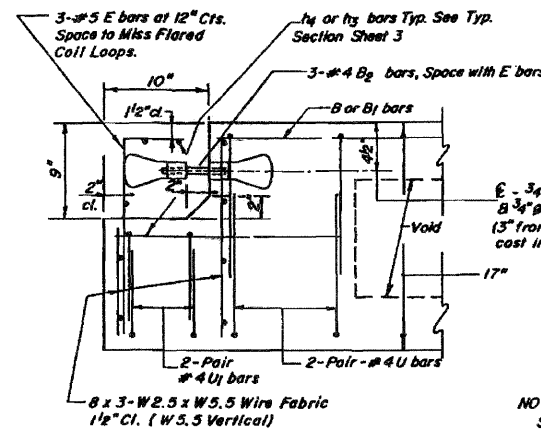
GRAPHITED ASBESTOS BEARING PAD
(Interior) **GRAPHITED ASBESTOS BEARING PAD**
(Exterior)

Provide two (2) 1/8" Fabric Shim Pads as required for all bearings



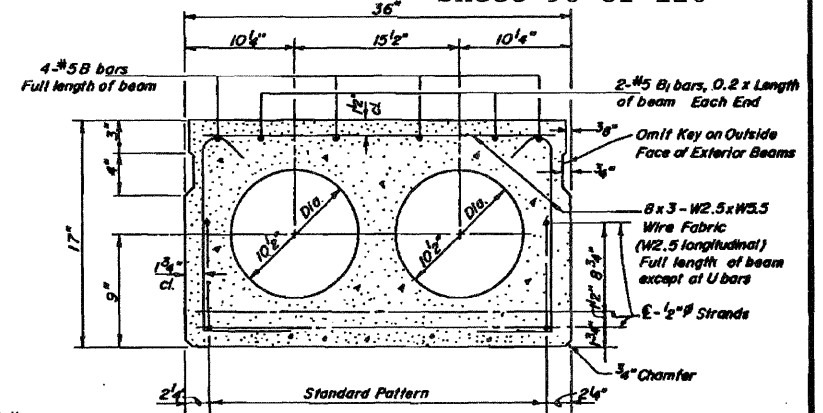
SECTION AT TIE ROD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



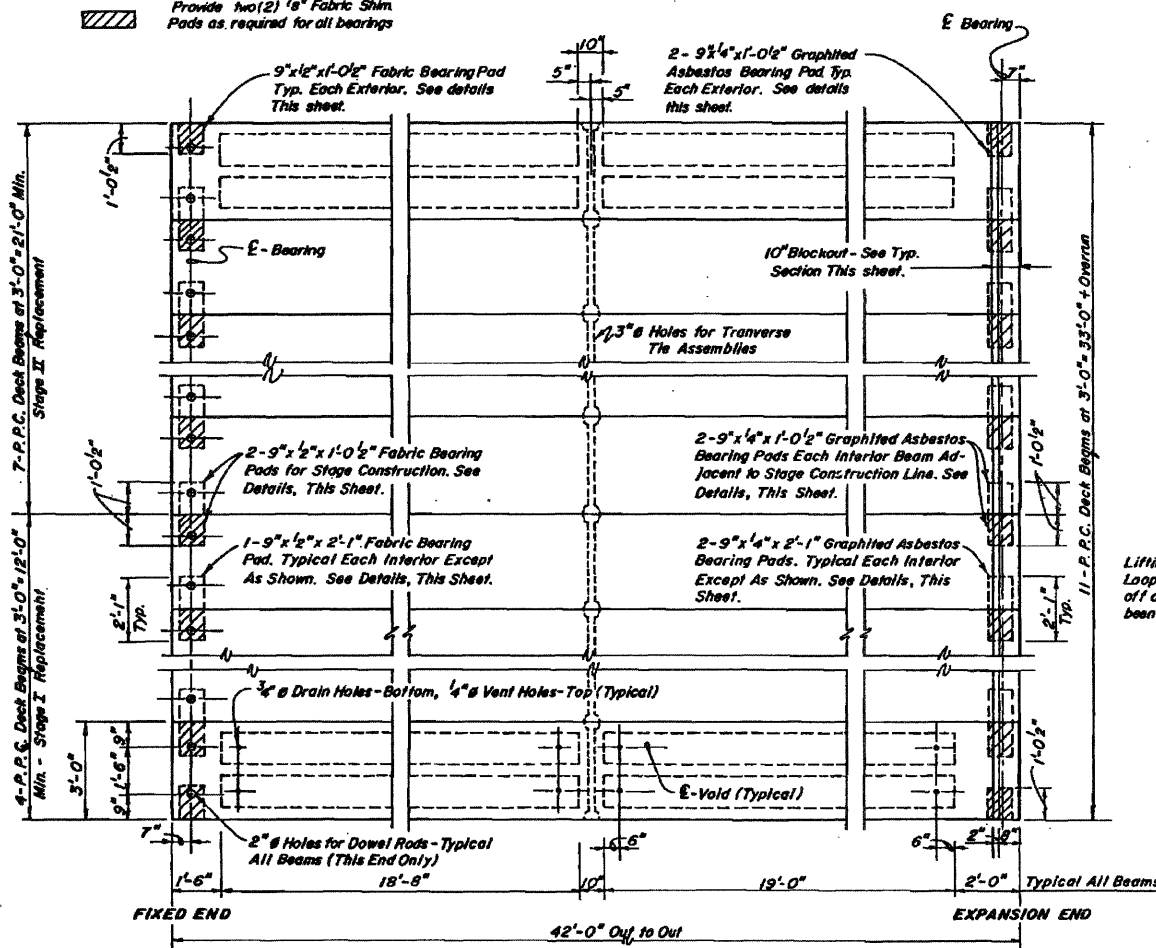
END OF BEAM SECTION AT EXP. END

NOTE:
See Sheets 6 and 7 for Details and Location of Anchor Devices for the Temporary and Permanent Bridge Rails.

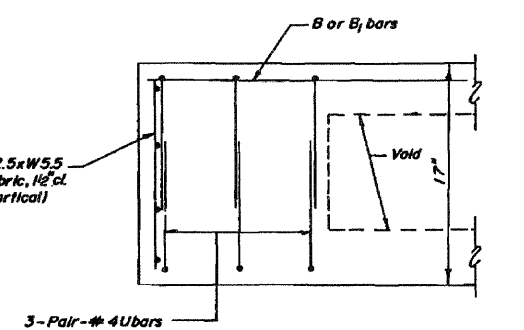


TYPICAL SECTION

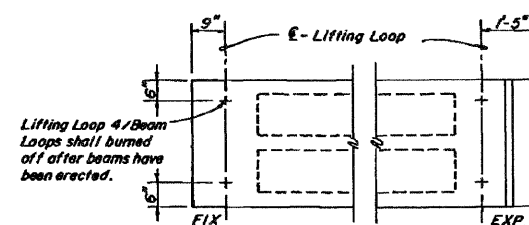
1/2" Strands, Each Strand Stressed to 28,900 Lbs.
10-Strands 1 1/4" up, 2-Strands 3/4" up, 2-Strands 1/2" up.
Place Strands Symmetrically About E-Beams.



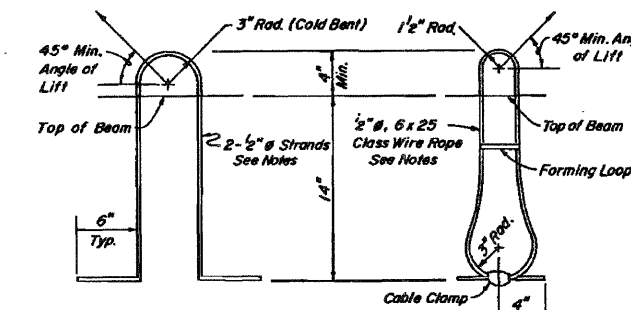
PLAN



END OF BEAM SECTION AT FIXED END



END OF BEAM PLAN LIFTING LOOPS LOCATION



ALTERNATE LIFTING LOOP DETAIL

FOR INFORMATION ONLY

NOTES

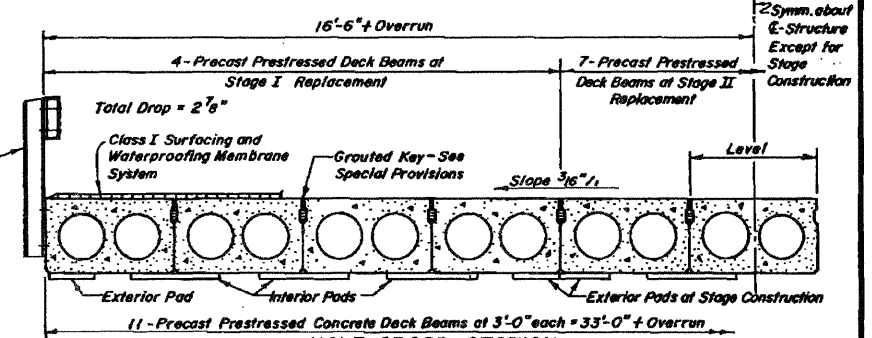
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 1/2" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2-1/2" - 270 ksi strands.

Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

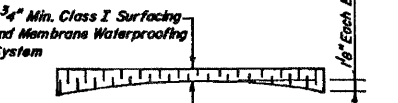
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Number of nuts and washers shown includes one additional of each for Stage Construction.

Keyway surfaces shall be cleaned to remove form oil or other bonding breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting 11 - keyway areas between the top of the beam and the bottom edge of the key.



HALF CROSS SECTION (LOOKING NORTH)

ANTICIPATED CAMBER DIAGRAM



BILL OF MATERIAL

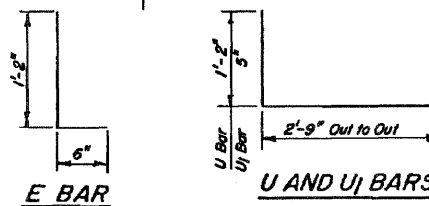
Bar	No.	Size	Length	Shape
B	44	#5	40'-10"	—
B1	44	#5	8'-5"	—
B2	33	#4	1'-6"	—
E	33	#5	1'-8"	—
U	110	#4	5'-1"	—
Uj	44	#4	3'-7"	—
Precast Prestressed Concrete Deck Beams			Sq. Ft	1386

NOTE: Bars B1 and B2 are listed on Sheet 3.

BEAM DETAILS

PROJECT GR-18 (IIS) SEC. 103 BR-2
FA 18 (I.I. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242 + 45.5

DESIGNED	Samani
CHECKED	R.F.C.
DRAWN	A.B. - Samani
CHECKED	R.F.C./FS



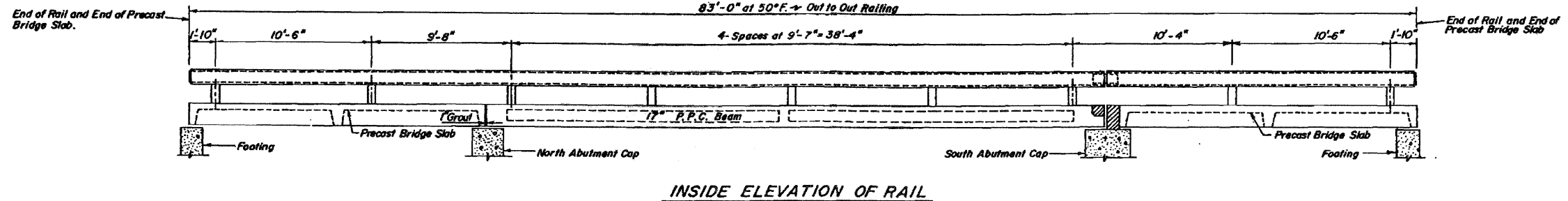
E BAR

U AND Uj BARS

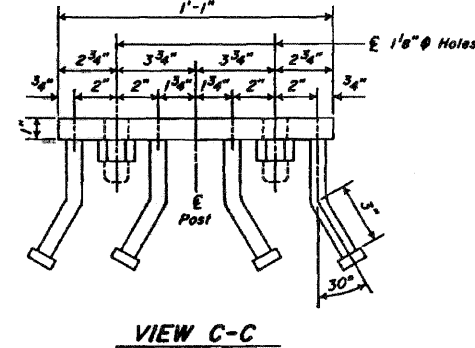
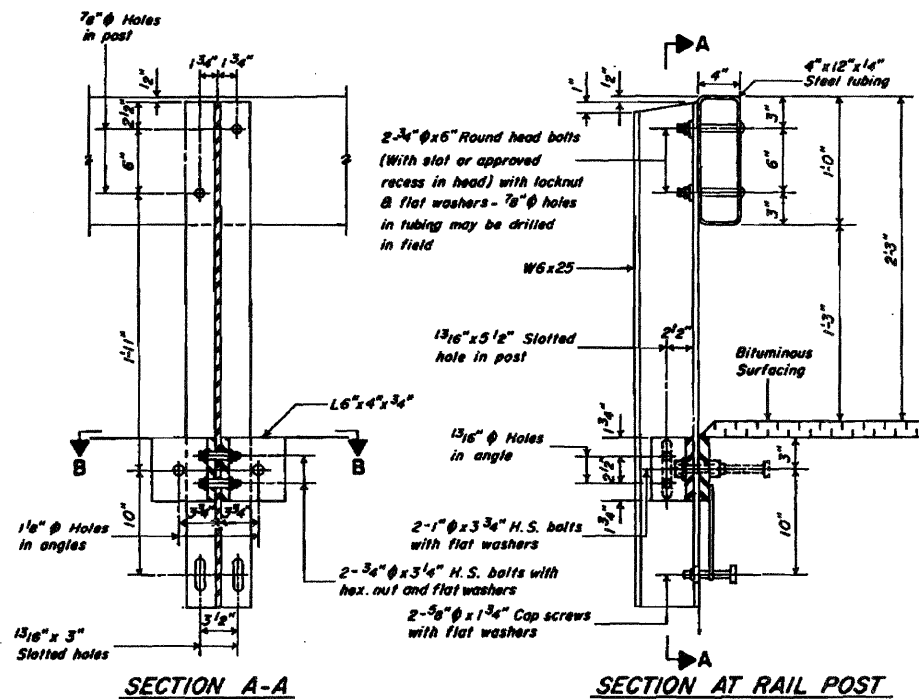
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 SHEETS 7
R.A. 18	103 BR-2	JO DAVIESS	18	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Sheet 99 of 126

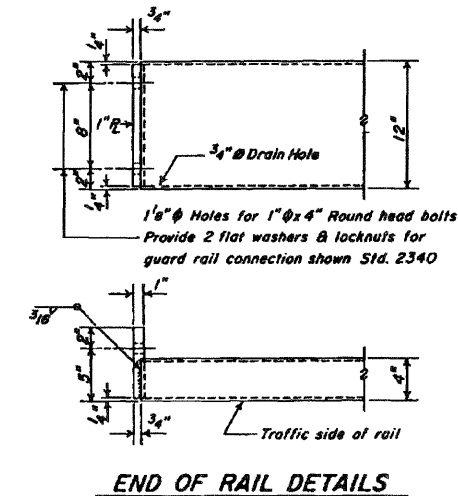
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



INSIDE ELEVATION OF RAIL



VIEW C-C



END OF RAIL DETAILS

NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-183 except posts and angles shall conform to A.A.S.H.T.O. M-223 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

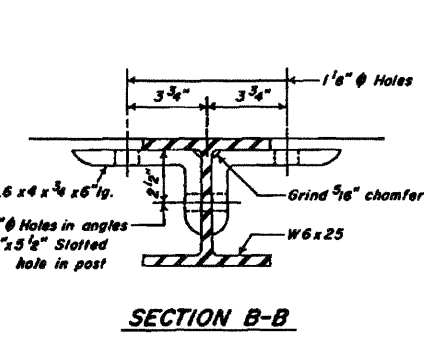
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

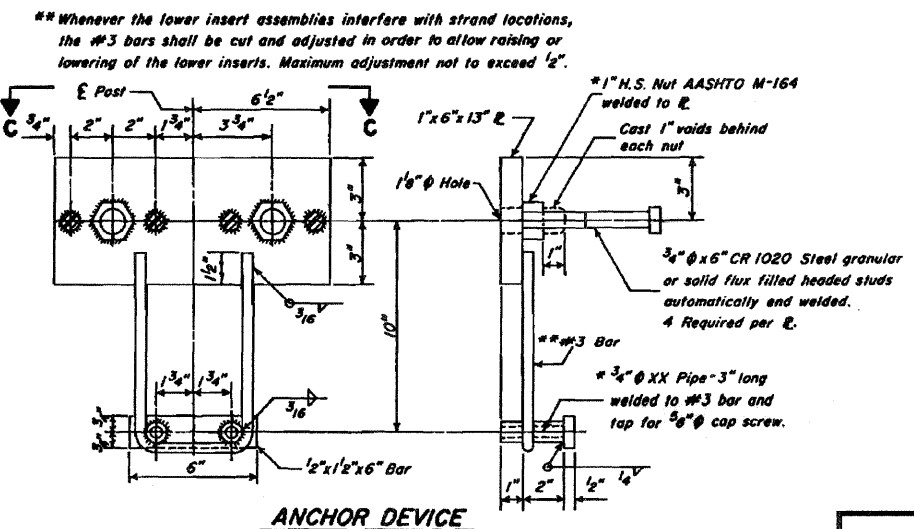
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.

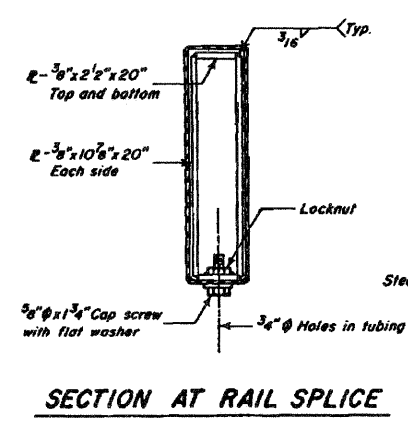
The 3/4" high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.



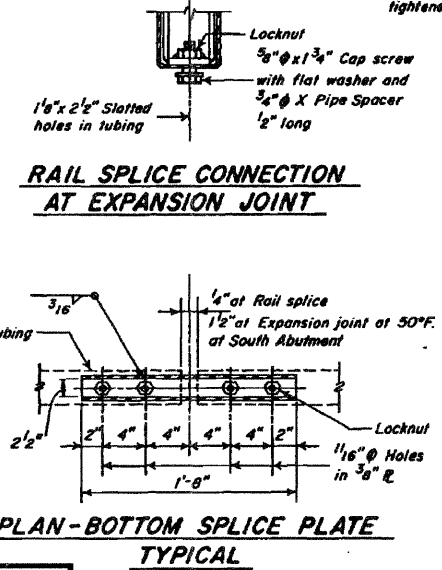
SECTION B-B



ANCHOR DEVICE



SECTION AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JOINT

PLAN-BOTTOM SPLICE PLATE TYPICAL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Railing Type S-1	Lin. Foot	166

TYPE S-1 STEEL RAILING DETAILS
PROJECT GR-18 (15) SEC. 103 BR-2
FA 18 (I. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242+45.5

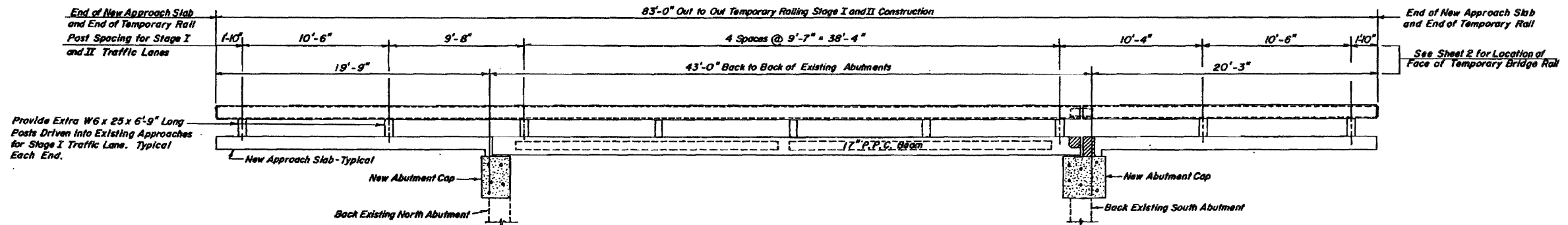
FOR INFORMATION ONLY

DESIGNED	Jamari
CHECKED	R.F.C.
DRAWN	brh / B.S.
CHECKED	R.F.C. / I.F.S.

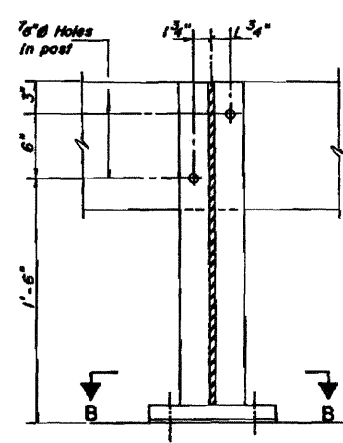
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
A.S.L.	103	JO DAVIESS	18	13	SHEETS 7
F.A. 18	BR-2				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

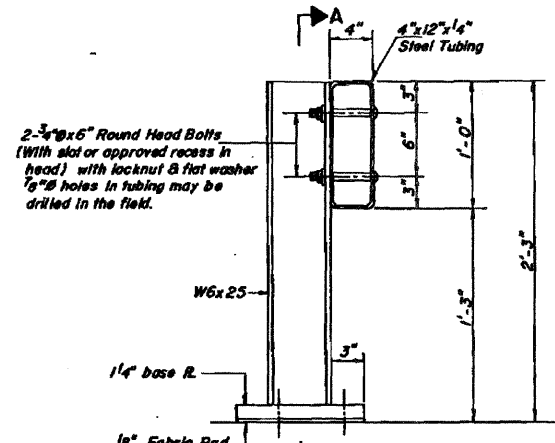
Sheet 100 of 126



INSIDE ELEVATION OF RAIL

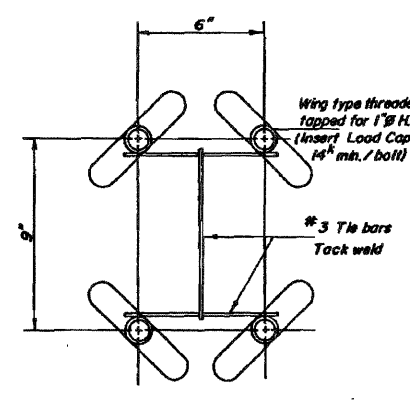


SECTION A-A

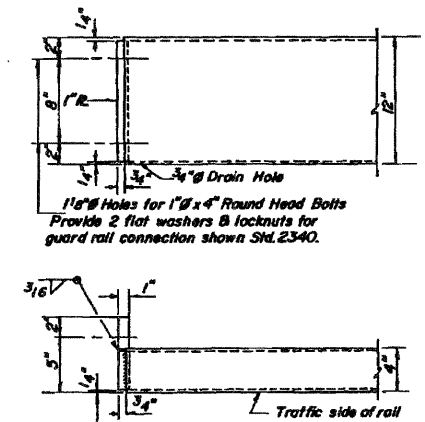


SECTION AT RAIL POST

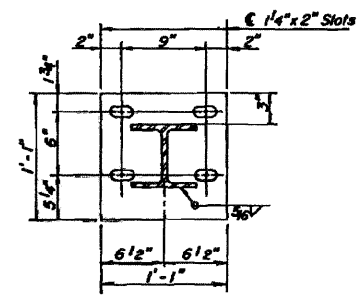
Typical except at approaches for Stage I Traffic Lane. See inside elevation of rail above.



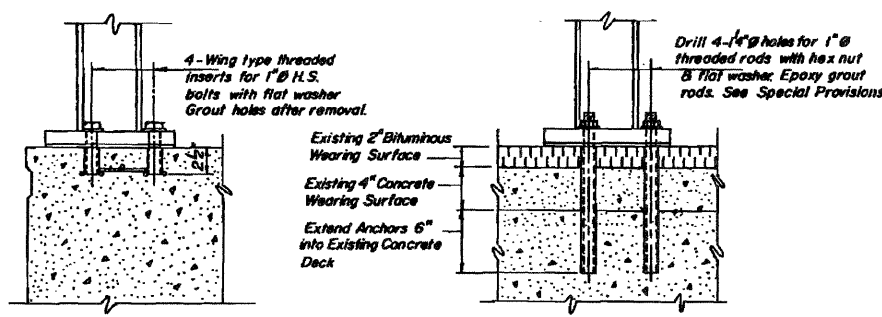
INSERT DETAIL



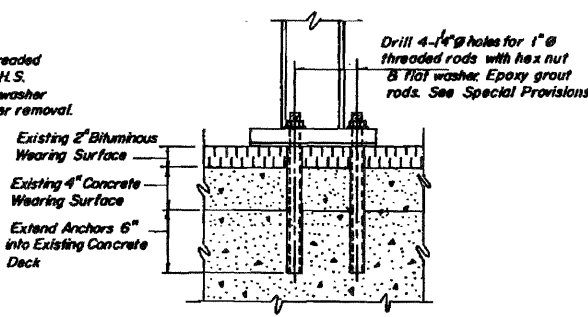
END OF RAIL DETAILS



SECTION B-B

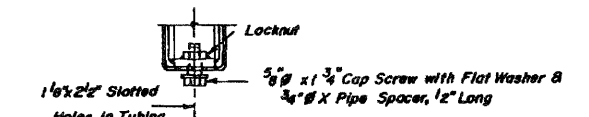


NEW P.P.C. DECK BEAMS AND APPROACH SLAB

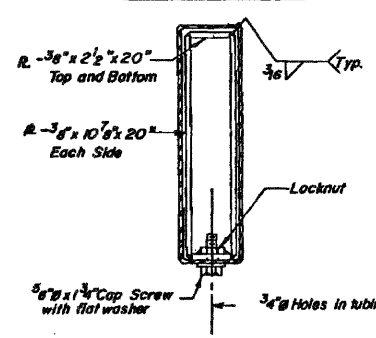


EXISTING REINFORCED CONC. DECK

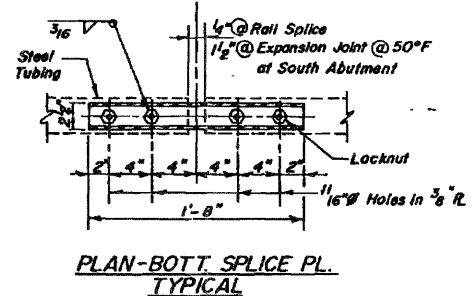
NEW & EXISTING DECKS ANCHORAGE DETAILS



RAIL SPLICE CONNECTION AT EXPANSION JT.



SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE PL. TYPICAL

NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.
All other steel shapes & plates shall conform to the requirements of AASHTO M-183 except posts shall conform to AASHTO M-223, Grade 50.
Bolts, cap screws, & nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, threaded rods, nuts and washers noted which shall conform to AASHTO M-164.
The bridge rail shall receive one shop coat of a steel prime paint.
The 1" high strength bolts or threaded rods used to connect the railposts shall be tightened in accordance with Article 502D-4(g)(3) of the Standard Specification.
See Special Provisions for Temporary Bridge Rail.
See Roadway Plans for Traffic Control and Protection beyond limits of Temporary Railing.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Temporary Bridge Rail	Lh. Ft.	83

TEMPORARY RAILING DETAILS
PROJECT GR-18 (115) SEC. 103 BR-2
FA 18 (I.I. 84) OVER DUKE CREEK
JO DAVIESS COUNTY
STA. 242 + 45.5

FOR INFORMATION ONLY

DESIGNED	Samari
CHECKED	R.F.C.
DRAWN	A.B.I. & Co.
CHECKED	R.F.C./F.S.