3-10-06 Letting, Item 018

CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	11BR-8 (10BR-3)D	JODAVIESS	45	1

INDEX OF SHEETS

STATE STANDARDS

001001	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND A FOOT
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
515001-02	NAME PLATE FOR BRIDGES
542401	END SECTION, METAL, FOR PIPE CULVERT
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER REPLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
667101	PERMANENT SURVEY MARKERS
701006-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701201-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701301-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701311-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701321-08	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701326-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

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

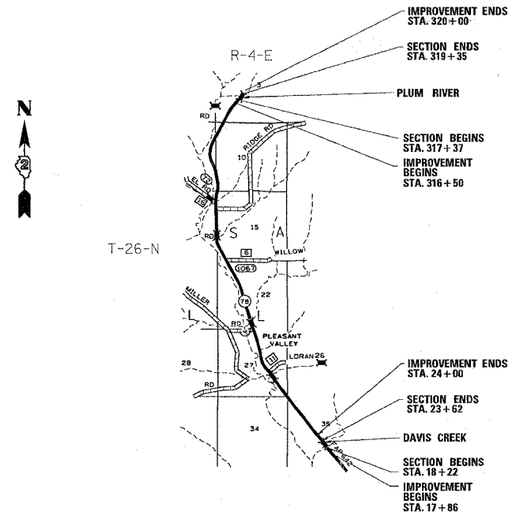
JODAVIESS COUNTY
PLEASANT VALLEY TOWNSHIP, SECTION 3 & 35, T. 26-N. & R-4-E.

CONTRACT NO. 64B27

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 642 (IL 78)
SECTION (10BR-3)D & 11BR-8
PROJECT
JODAVIESS COUNTY
C-92-045-06



-DAVIS CREEK (SN#043-0042) INCLUDES THE REMOVAL AND REPLACEMENT OF SUPERSTRUCTURE ON BRIDGE CARRYING IL 78 OVER DAVIS CREEK WITH GUARDRAIL UP DATES

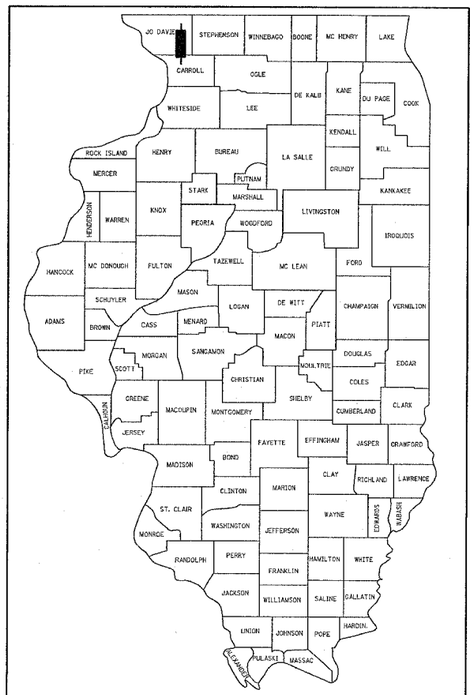
-PLUM RIVER (SN# 043-0040) WILL INCLUDE ONLY A NEW CONCRETE DECK OVERLAY

GROSS LENGTH OF SECTION = 738 FEET = .014 MILES

NET LENGTH OF SECTION = 738 FEET = .014 MILES

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
50' 100' — 1"= 20'

D-92-090-05



LOCATION OF SECTION INDICATED THUS: –

PLANS ENGINEER
ROBERT WAGNER

SQUAD LEADER
MIKE YUSEF
(815) 284-5343

PROJECT ENGINEER
THOMAS HALLA
PHONE: (815) 284-5993

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 30th 2005
George I. Mavrogenes
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 3, 2006
Mike Hine (RD)
ENGINEER OF DESIGN AND ENVIRONMENT
February 3, 2006
Milton L. Sees, P.E. (RD)
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	(10BR-3)D	JODAVIESS	45	2
STA.	11BR-8	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER		PAY ITEM	UNIT	TOTAL QUANTITY	BR FUNDS B H F X080-2A @ 100% STATE	BR FUNDS B H F SFTY-3N 100% STATE	STP FUNDS F %100 STATE SFTY-2A EXIST. SN# 043-0040
20200600		EXCAVATING & GRADING EXISTING SHOULDERS	UNIT	1	1		
20400800		FURNSHED EXCAVATION	CU YD	75	75		
25100630		EROSION CONTROL BLANKET	SQ YD	1114	1114		
28000250		TEMPORARY EROSION CONTROL SEEDING	POUND	150	150		
28000400		PERIMETER EROSION BARRIER	FOOT	950	950		
X4066765		LEVELING BINDER (MACHINE METHOD) SUPERPAVE N50	TON	114	114		
44000007		BITUMINOUS CONCRETE SURFACE REMOVAL 2"	SQ YD	282	158		124
44001205		BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	555			555
48101200		AGGREGATE SHOULDERS, TYPE B	TON	190	190		
48200300		BITUMINOUS SHOULDERS 5"	SQ YD	366	366		
50101500		REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1		
50102400		CONCRETE REMOVAL	CU YD	20.7	12.6		8.1
50300100		FLOOR DRAINS	EACH	8.0			8.0
50300225		CONCRETE STRUCTURES	CU YD	11.7	5.4		6.3
50300255		CONCRETE SUPERSTRUCTURE	CU YD	2.7			2.7
50300260		BRIDGE DECK GROOVING	SQ YD	924	409		515
50300300		PROTECTIVE COAT	SQ YD	1013	447		566
50300530		FLOOR DRAIN EXTENSION	EACH	8			8
50301250		FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")	SQ FT	21			21
50400305		PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ. FT.	3852	3852		
50800205		REINFOREMENT BARS, EPOXY COATED	POUND	14530	6400		8130
50901005		STEEL BRIDGE RAIL, TYPE SM	FOOT	214	214		
51500100		NAME PLATES	EACH	1	1		
542D0220		PIPE CULVERTS, CLASSD, TYPE 1 15"	FOOT	50	50		
54213450		END SECTIONS 15"	EACH	1	1		
* 63000005		STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	402	402		
* 63100087		TRAFFIC BARRIER TERMINAL , TYPE 6A	EACH	4	4		

* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

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CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	(108R-3)D	JODAVIESS	45	3
STA.	11BR-8	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	BR FUNDS B H F X080-2A 100 % STATE	BR FUNDS B H F SFTY-3N 100 % STATE	STP FUNDS F 100 STATE SFTY-2A EXIST. SN# 043-0040
*	63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	1		
	63200310	GUARDRAIL REMOVAL	FOOT	717	717		
	63500105	DELINEATORS	EACH	4	4		
	66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3		
	67100100	MOBILIZATION	L SUM	1	1		
	70100100	TRAFFIC CONTROL AND PROTECTION STD 701316	EACH	1			1
	70100405	TRAFFIC CONTROL AND PROTECTION STD 701321	EACH	1	1		
	70100450	TRAFFIC CONTROL AND PROTECTION STD. 701201	L SUM	1	1		
	70100500	TRAFFIC CONTROL AND PROTECTION STD. 701326	L SUM	1			1
	70103815	TRAFFIC CONTROL SURVEILANCE	CAL DA	4	4		
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1		1
	70300200	TEMPORARY PAVEMENT MARKING	FOOT	3965	2313		1652
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	382	382		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	480	480		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	480	480		
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3462	2480		982
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6		
	78200410	GUARDRAIL MARKERS, TYPE A	EACH	15	15		
	78201000	TEMINAL MARKER - DIRECT APPLIED	EACH	4	4		
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6		
	X0323557	BRIDGE JOINT SYSTEM (EXPANSION), 1"	FOOT	74.6			74.6
	X0323558	BRIDGE JOINT SYSTEM (EXPANSION) 1-5/8"	FOOT	36	36		
	X0712400	TEMPORARY PAVEMENT	SQ YD	24			24
	X4066414	BITUMINOUS CONCRETE SURFACE COARSE, SUPERPAVE, MIX "C", N50	TON	118	104		14
	X5030305	CONCRETE WEARING SURFACE 5"	SQ YD	977.5	429		548.5
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	72	72		
	Z0002600	BAR SPLICERS	EACH	358	197		161
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2		2	
	Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2		2	

* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 642 (IL 78)	(10BR-3)D & 11BR-8	JoDaviess	45	4
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64B27				

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 6 (modified) shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1 (modified). Class 6 (modified) shall be used on front slopes and ditch bottoms. Class 4 shall be used on all backslopes and areas behind the backslope. This work will be done at no additional cost to the Department.

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be done at no additional cost to the Department.

Mulch Method II shall be applied over all seeded areas. This work shall be done at no additional cost to the Department.

Program #5 (Arch. Size) Large 200% Enlarge 107%

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	Mainline Surface Course
PG:	PG 64-22
RAP%: (Max)	10%
Design Air Voids	4.2 @ N50
Mixture Composition (Gradation Mixture)	IL 9.5 or 12.5
Friction Aggregate	C
20 Year ESAL	4.3

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

This structure will retain the same numbers: 043-0040 & 043-0042.

Bituminous Prime Coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the Bituminous Prime Coat shall be included in the contract unit price per TON for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N50.

One 16d galvanized nail shall be used to toe nail the wood block out to the wood post on all Traffic Barrier Terminal Type I Specials and on all existing posts in need of a nail.

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 Highway Standard 667101. A marker shall be placed near each end of the structure in such a location that will take into account satellite and future construction. Location shall be determined by the Engineer.

The Contractor shall submit to the Engineer a description of location, elevation, and coordinates for each permanent survey marker. The Engineer shall submit this information to the Survey Crew.

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:

Commonwealth Edison Co. Verizon

Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which are not members of JULIE and should be notified individually by the contractor:

IDOT
819 Depot Ave.
Dixon, IL 61021

Due to environmental concerns, the following shall be strictly adhered to:

1. All work shall be performed from the existing decks and no work shall take place below the existing structure on the ground.
2. No fill shall be placed in or around Plum River or Davis Creek.

The final top 100 mm (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 proposed pipes for entrances and side roads shall be placed in line with the existing or proposed ditch line.

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) or Steel Plate Beam Guardrail Terminal Type I Special (Flared).

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.

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.

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.

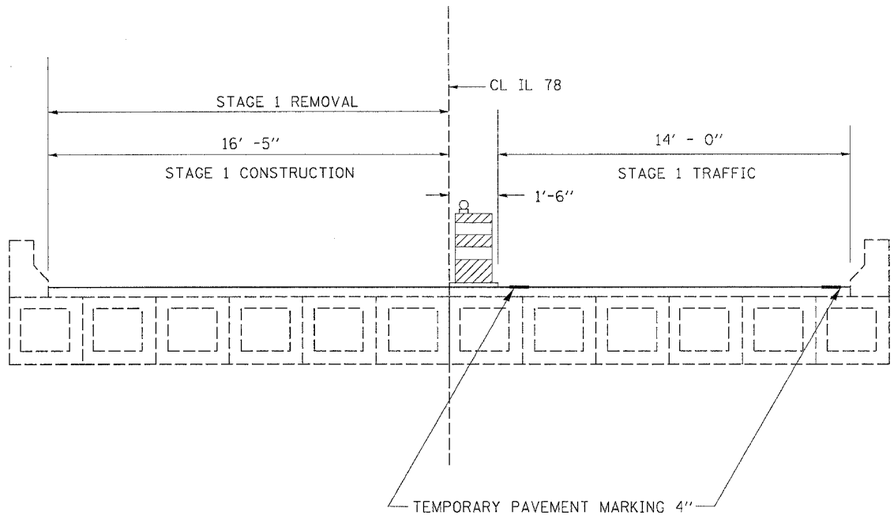
CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

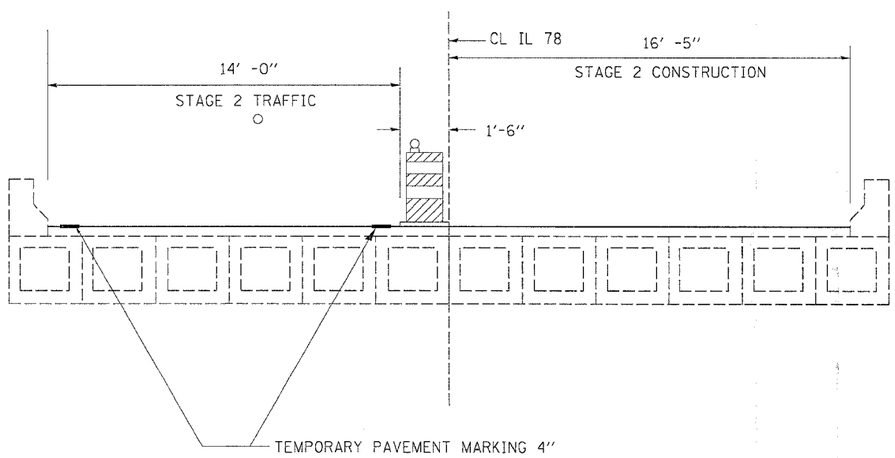
* (10BR-3)D & 11BR-8

TYPICAL SECTION
(SN 043-0040)
PLUM RIVER

STAGE 1



STAGE 2



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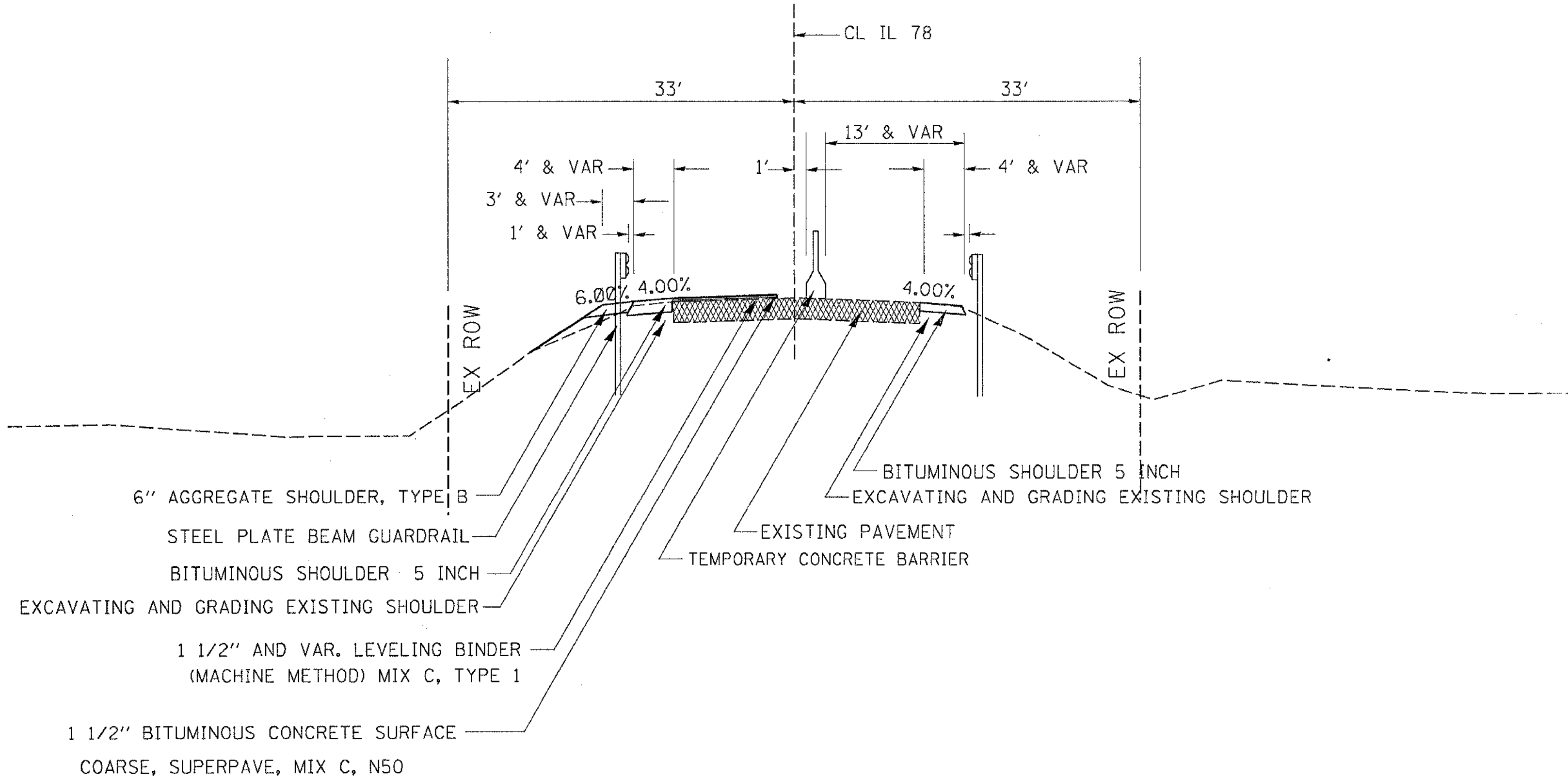
CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

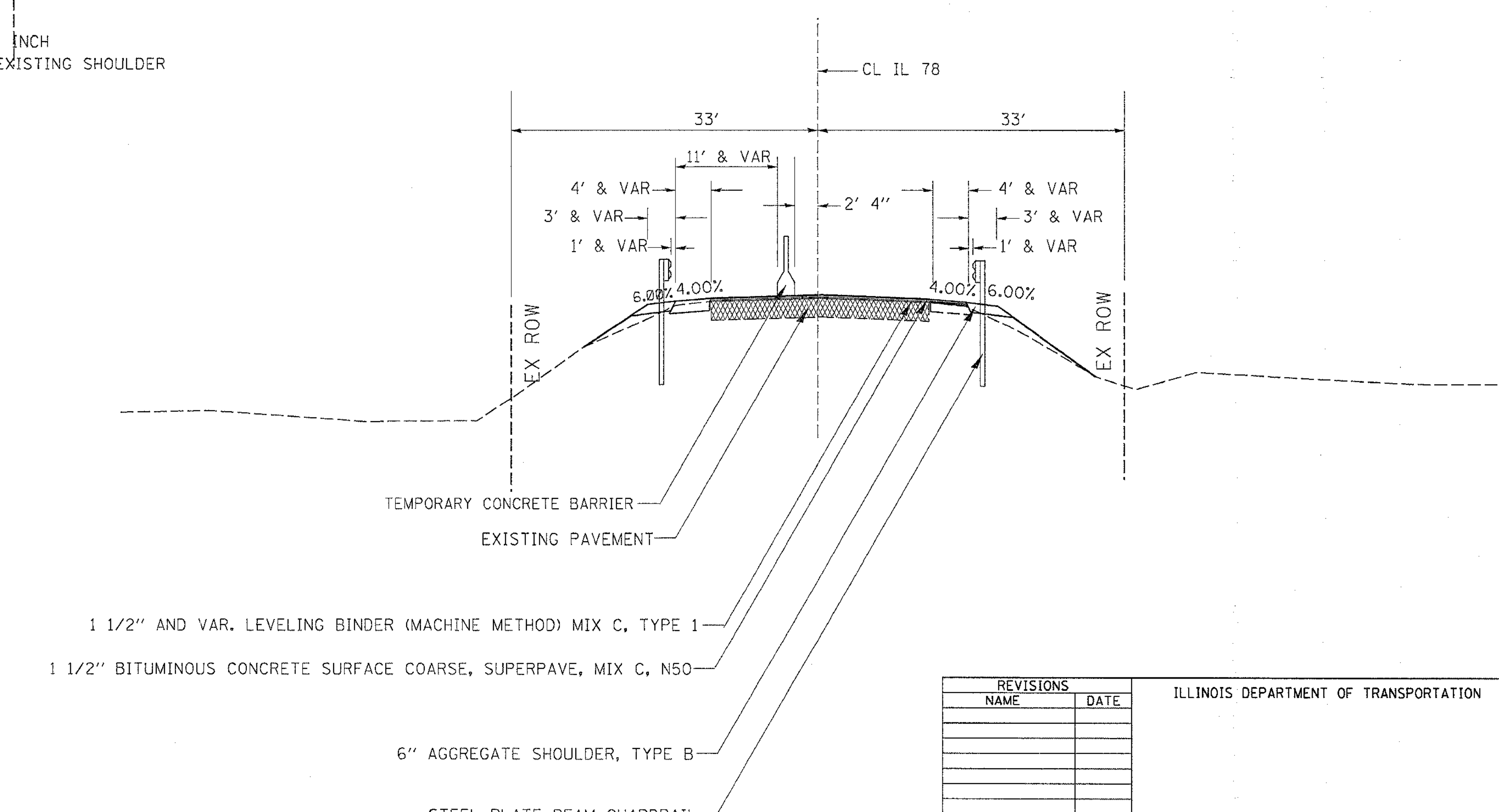
* (10BR-3)D & 11BR-8

TYPICAL SECTION
(SN 043-0042)
DAVIS CREEK

STAGE 1
18 + 12.93 − 23 + 62.40



STAGE 2
18 + 12.93 − 23 + 62.40



REVISIONS	
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

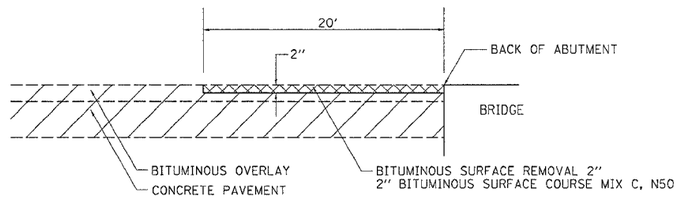
* (10BR-31D & 11BR-8

BUTT JOINT

PLUM RIVER

(SN # 043-0040)

BITUMINOUS SURFACE REMOVAL - 2"

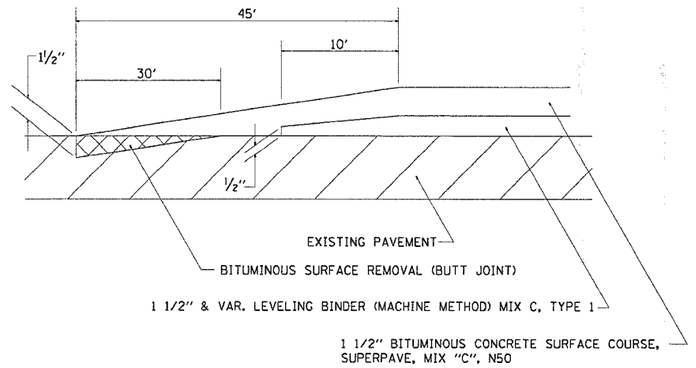


DAVIS CREEK

(SN # 043-0042)

STA. 18+12.93 - STA 18+42.93 & STA 23+32.40 - STA. 23+62.40

BUTT JOINT



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SCHEDULE OF QUANTITIES

20200600 EXCAVATING & GRADING EXISTING SHOULDERS

UNIT	LOCATION			
1	18+12	-	23+62	LT & RT
1	TOTAL			

20400800 FURNISHED EXCAVATION

CU YD	LOCATION			
75	18+12	-	23+62	LT & RT
75	TOTAL			

25100630 EROSION CONTROL BLANKET

SQ YD	LOCATION			
444	18+04	-	20+21	LT & RT
670	21+28	-	23+86	LT & RT
1114	TOTAL			

28000250 TEMPORARY EROSION CONTROL

POUND	LOCATION			
70	18+04	-	20+21	LT & RT
80	21+28	-	23+86	LT & RT
150	TOTAL			

28000400 PERIMETER EROSION BARRIER

FOOT	LOCATION			
211	18+12	-	20+21	LT
230	18+04	-	20+21	RT
275	21+28	-	23+86	LT
234	21+27	-	23+62	RT
950	TOTAL			

40600530 LEVELING BINDER (MACHINE METHOD) MIX C, TYPE 1, N50

TON	LOCATION		
53	18+42	-	20+21
61	21+28	-	23+40
114	TOTAL		

44000007 BITUMINOUS CONCRETE SURFACE REMOVAL 2"

SQ YD	LOCATION		
79	18+12	-	18+42
80	23+32	-	23+62
61	317+37	-	317+63
62	319+09	-	319+35
282	TOTAL		

48101200 AGGREGATE SHOULDERS, TYPE B

TON	LOCATION			
50	18+04	-	20+21	RT
50	18+51	-	20+21	LT
45	21+28	-	22+90	RT
45	21+28	-	23+86	LT
190	TOTAL			

48200300 BITUMINOUS SHOULDERS 5"

SQ YD	LOCATION			
86	18+12	-	20+06	RT
97	21+44	-	23+62	RT
86	18+12	-	20+06	LT
97	21+44	-	23+62	LT
366	TOTAL			

542D0220 PIPE CULVERTS, CLASS D, TYPE 1 15"

FOOT	LOCATION			
50	18+15	-	18+65	RT
50	TOTAL			

54213450 END SECTIONS 15"

EACH	LOCATION	
1	18+65	RT
1	TOTAL	

63000005 STEEL PLATE BEAM GUARDRAIL, TYPE B

FOOT	LOCATION			
63	19+25	-	19+88	LT
126	18+62	-	19+88	RT
150	21+62	-	23+12	LT
63	21+62	-	22+25	RT
402	TOTAL			

63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A

EACH	LOCATION	
1	20+21	LT
1	21+28	LT
1	20+21	RT
1	21+28	RT
4	TOTAL	

63100167 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)

EACH	LOCATION			
1	18+75	-	19+25	LT
1	18+12	-	18+62	RT
1	23+12	-	23+62	LT
1	22+25	-	22+75	RT
4	TOTAL			

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

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CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	(10BR-3)D	JODAVIESS	45	9
STA.	11BR-8	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

63200310 GUARDRAIL REMOVAL

FOOT	LOCATION		
148	18+73	- 20+21	LT
211	21+28	- 23+39	LT
210	18+11	- 20+21	RT
148	21+28	- 22+76	RT
717	TOTAL		

63500105 DELINEATORS

EACH	LOCATION	
1	18+75	LT
1	18+12	RT
1	23+62	LT
1	22+75	RT
4	TOTAL	

70300200 TEMPORARY PAVEMENT MARKING

FOOT	LOCATION			
638	16+62	- 23+00	YELLOW	STAGE 1
511	17+89	- 23+00	WHITE	STAGE 1
638	16+62	- 23+00	YELLOW	STAGE 2
526	17+74	- 23+00	WHITE	STAGE 2
413	315+87	- 320+00	YELLOW	STAGE 1
413	315+87	- 320+00	WHITE	STAGE 1
413	315+87	- 320+00	YELLOW	STAGE 2
413	315+87	- 320+00	WHITE	STAGE 2
3965	TOTAL			

70301000 WORK ZONE PAVEMENT MARKING REMOVAL

SQ FT	LOCATION		
16	18+14	- 18+88	STAGE 1 CL
171	18+14	- 23+34	STAGE 1 WHITE RT
24	22+62	- 23+34	STAGE 1 CL
171	18+14	- 23+34	STAGE 2 WHITE LT
382	TOTAL		

70400100 TEMPORARY CONCRETE BARRIER

FOOT	LOCATION	
480	18+35	- 23+14
480	TOTAL	

70400200 RELOCATE TEMPORARY CONCRETE BARRIER

FOOT	LOCATION	
480	18+35	- 23+14
480	TOTAL	

78001110 PAINT PAVEMENT MARKING LINE 4"

FOOT	LOCATION		
1100	18+12	- 23+62	WHITE EDGELINES - 2 COATS
1100	18+12	- 23+62	WHITE EDGELINES - 2 COATS
280	18+12	- 23+62	SKIP DASH YELLOW - 2 COATS
436	317+27	- 319+45	WHITE EDGELINES - 2 COATS
436	317+27	- 319+45	WHITE EDGELINES - 2 COATS
110	317+27	- 319+45	SKIP DASH YELLOW - 2 COATS
3462	TOTAL		

78100100 RAISED REFLECTIVE MARKER

EACH	LOCATION	
6	18+12	- 23+62
6	TOTAL	

78200410 GUARDRAIL MARKERS, TYPE A

EACH	LOCATION		
2	19+25	- 19+88	LT
5	18+62	- 19+88	RT
6	21+62	- 23+12	LT
2	21+62	- 22+25	RT
15	TOTAL		

78201000 TERMINAL MARKER - DIRECT APPLIED

EACH	LOCATION	
1	18+75	LT
1	18+12	RT
1	23+62	LT
1	22+75	RT
4	TOTAL	

78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

EACH	LOCATION	
6	18+12	- 23+62
6	TOTAL	

X0712400 TEMPORARY PAVEMENT

SQ YD	LOCATION		
10	317+28	- 317+47	RT
14	319+33	- 319+63	RT
24	TOTAL		

X4066414 BITUMINOUS CONCRETE SURFACE COARSE, SUPERPAVE, MIX C, N50

TON	LOCATION	
9	18+12	- 18+42
9	23+32	- 23+62
40	18+12	- 20+21
46	21+28	- 23+32
7	317+37	- 317+63
7	319+09	- 319+35
118	TOTAL	

Z0030250 IMPACT ATENUATORS, TEMPORARY (NON -RE-DIRECTIVE), TEST LEVEL3

EACH	LOCATION	
1	18+35	LT
1	23+14	LT
2	TOTAL	

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

EACH	LOCATION	
1	18+35	RT
1	23+14	RT
2	TOTAL	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

EXISTING HORIZONTAL AND VERTICAL CONTROL

HORIZONTAL CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
1	1997911.6369	2345446.8475	643.3290	EXIL78	842+82.5479	29.6797' LT	108
10	2071986.5189	2335468.7378	1079.2100	EXIL78	631+74.3047	4339.8801' LT	108
29	2034703.2863	2331364.7568	695.3960	EXIL78	231+17.5461	201.1847' LT	108
31	2012576.0958	2342622.4698	861.0480	EXIL78	1006+86.8417	28.2775' LT	108
90	1975376.4564	2347921.0162	797.4100	EXIL78	647+64.8279	5143.8811' LT	108

SURVEY WORK POINTS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
127	2014465.0804	2341026.3453	0.0000	EXIL78	1+76.7182	21.4287' LT	SURVEY POINT
128	2019539.8183	2337078.1349	0.0000	EXIL78	66+06.5372	16.9984' LT	SURVEY POINT
137	2040801.1673	2332311.1225	0.0000	EXIL78	297+16.2328	13.5183' RT	SURVEY POINT
138	2041891.4331	2332887.2498	0.0000	EXIL78	309+47.8349	16.7900' LT	SURVEY POINT
139	2043298.4721	2334035.8037	0.0000	EXIL78	327+70.1124	15.1890' RT	SURVEY POINT
140	2044517.1746	2334422.2735	0.0000	EXIL78	340+45.4205	29.4412' LT	SURVEY POINT

Chain EXIL78 contains:
210 CUR 1200 CUR 1210 CUR 1220 CUR 1230 CUR 1240 CUR 1250 CUR 1260 CUR 1270 CU-
R 1280 CUR 1290 CUR 1300 CUR 1310 CUR 1320 CUR 1330 CUR 1340 CUR 1350 CUR 1360 -
CUR 1370 CUR 1380 CUR 1390 CUR 1400 CUR 1410 CUR 1420 CUR 1430 CUR 1440 CUR 145-
0 CUR 1460 CUR 1470 1473 CUR 1480 269 270 CUR 1510 273 CUR 1530 276 CUR 1550 27-
9 CUR 1570 282 CUR 1590 CUR 1600 CUR 1610 CUR 1620 CUR 1630 CUR 1640 294 CUR 16-
60 CUR 1670 299 CUR 1690 CUR 1700 CUR 1710 CUR 1720 CUR 1730 310 311 312 313 31-
4 CUR 1790 CUR 1800 319

Beginning chain EXIL78 description
===

Point 210 N 1,979,741.9831 E 2,347,841.0376 Sta 636+75.2910

Course from 210 to PC 1200 0° 54' 38.8674" Dist 607.4086'

Curve Data

Curve 1470
P.I. Station 1029+52.0827 N 2,014,234.6450 E 2,341,241.6868
Delta = 1° 37' 14.2365" (RT)
Degree = 0° 35' 19.0379"
Tangent = 137.6716'
Length = 275.3248'
Radius = 9,733.8897'
External = 0.9735'
Long Chord = 275.3156'
Mid. Ord. = 0.9734'
S. E. = 0.000
P.C. Station 1028+14.4111 N 2,014,130.8662 E 2,341,332.1492
P.T. Station 1030+89.7359 N 2,014,340.9406 E 2,341,154.1957
C.C. N 2,020,526.8892 E 2,348,669.6895

End Region 1
Equation: Sta 1030+89.7359 (BK) = Sta 0+00.0000 (AH) ----------------
Begin Region 2

Point 1473 N 2,014,340.9406 E 2,341,154.1957 Sta 0+00.0000

Curve Data

Curve 1480
P.I. Station 1+51.3310 N 2,014,457.7825 E 2,341,058.0239
Delta = 1° 46' 52.9729" (RT)
Degree = 0° 35' 19.0277"
Tangent = 151.3309'
Length = 302.6375'
Radius = 9,733.9362'
External = 1.1763'
Long Chord = 302.6253'
Mid. Ord. = 1.1761'
S. E. = 0.000
P.C. Station 0+00.0000 N 2,014,340.9406 E 2,341,154.1957
P.T. Station 3+02.6375 N 2,014,577.5576 E 2,340,965.5307
C.C. N 2,020,526.9188 E 2,348,669.7255

Course from PT 1480 to 269 322° 19' 25.7963" Dist 1,024.8645'

Point 269 N 2,015,388.7152 E 2,340,339.1357 Sta 13+27.5021

Course from 269 to 270 322° 15' 06.2685" Dist 802.6215'

Point 270 N 2,016,023.3546 E 2,339,847.7763 Sta 21+30.1235

Course from 270 to PC 1510 322° 17' 57.6998" Dist 2,288.3665'

Curve Data

Curve 1510
P.I. Station 48+57.0351 N 2,018,180.9326 E 2,338,180.1720
Delta = 0° 45' 57.1840" (LT)
Degree = 0° 05' 14.3605"
Tangent = 438.5450'
Length = 877.0770'
Radius = 65,614.0909'
External = 1.4655'
Long Chord = 877.0705'
Mid. Ord. = 1.4655'
S. E. = 0.000
P.C. Station 44+18.4901 N 2,017,833.9484 E 2,338,448.3581
P.T. Station 52+95.5671 N 2,018,524.3010 E 2,337,907.3719
C.C. N 1,977,708.5787 E 2,286,533.3927

Course from PT 1510 to 273 321° 32' 00.5158" Dist 699.1796'

Point 273 N 2,019,071.7388 E 2,337,472.4422 Sta 59+94.7467

Course from 273 to PC 1530 321° 28' 51.4610" Dist 3,534.3654'

Curve Data

Curve 1530
P.I. Station 97+73.0837 N 2,022,027.9145 E 2,335,119.3896
Delta = 26° 58' 46.8240" (RT)
Degree = 5° 38' 01.4947"
Tangent = 243.9717'
Length = 478.8938'
Radius = 1,017.0099'
External = 28.8540'
Long Chord = 474.4816'
Mid. Ord. = 28.0580'
S. E. = 0.000
P.C. Station 95+29.1121 N 2,021,837.0307 E 2,335,271.3290
P.T. Station 100+08.0059 N 2,022,266.9549 E 2,335,070.5852
C.C. N 2,022,470.3987 E 2,336,067.0388

Course from PT 1530 to 276 348° 27' 38.2850" Dist 591.8503'

Point 276 N 2,022,846.8425 E 2,334,952.1908 Sta 105+99.8562

Course from 276 to PC 1550 348° 13' 51.7816" Dist 627.1230'

Curve Data

Curve 1690
P.I. Station 309+47.5380 N 2,041,888.6020 E 2,332,888.8603
Delta = 13° 19' 47.6819" (RT)
Degree = 2° 49' 00.7198"
Tangent = 237.6819'
Length = 473.2177'
Radius = 2,034.0253'
External = 13.8398'
Long Chord = 472.1512'
Mid. Ord. = 13.7463'
S. E. = 0.000
P.C. Station 307+09.8561 N 2,041,679.9413 E 2,332,775.0473
P.T. Station 311+83.0738 N 2,042,065.4006 E 2,333,047.7153
C.C. N 2,040,705.9566 E 2,334,560.7160

Course from PT 1690 to PC 1700 41° 56' 23.8786" Dist 1,126.5395'

Curve Data

Curve 1700
P.I. Station 325+24.5959 N 2,043,063.2859 E 2,333,944.3238
Delta = 24° 08' 10.5258" (LT)
Degree = 5° 41' 52.9777"
Tangent = 214.9827'
Length = 423.5881'
Radius = 1,005.5332'
External = 22.7248'
Long Chord = 420.4630'
Mid. Ord. = 22.2226'
S. E. = 0.000
P.C. Station 323+09.6133 N 2,042,903.3720 E 2,333,800.6398
P.T. Station 327+33.2013 N 2,043,267.9729 E 2,334,010.0562
C.C. N 2,043,575.4217 E 2,333,052.6784

Course from PT 1700 to PC 1710 17° 48' 13.3528" Dist 914.0343'

Curve Data

Curve 1710
P.I. Station 339+82.5342 N 2,044,457.4747 E 2,334,392.0484
Delta = 18° 58' 37.4021" (RT)
Degree = 2° 51' 21.7132"
Tangent = 335.2986'
Length = 664.4554'
Radius = 2,006.1327'
External = 27.8274'
Long Chord = 661.4224'
Mid. Ord. = 27.4466'
S. E. = 0.000
P.C. Station 336+47.2356 N 2,044,138.2337 E 2,334,289.5286
P.T. Station 343+11.6911 N 2,044,726.0262 E 2,334,592.8100
C.C. N 2,043,524.8448 E 2,336,199.5867

Course from PT 1710 to PC 1720 36° 46' 50.7549" Dist 713.8902'

===
Ending chain EXIL78 description

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PLOT DATE = Fri Dec 30 09:02:31 2005
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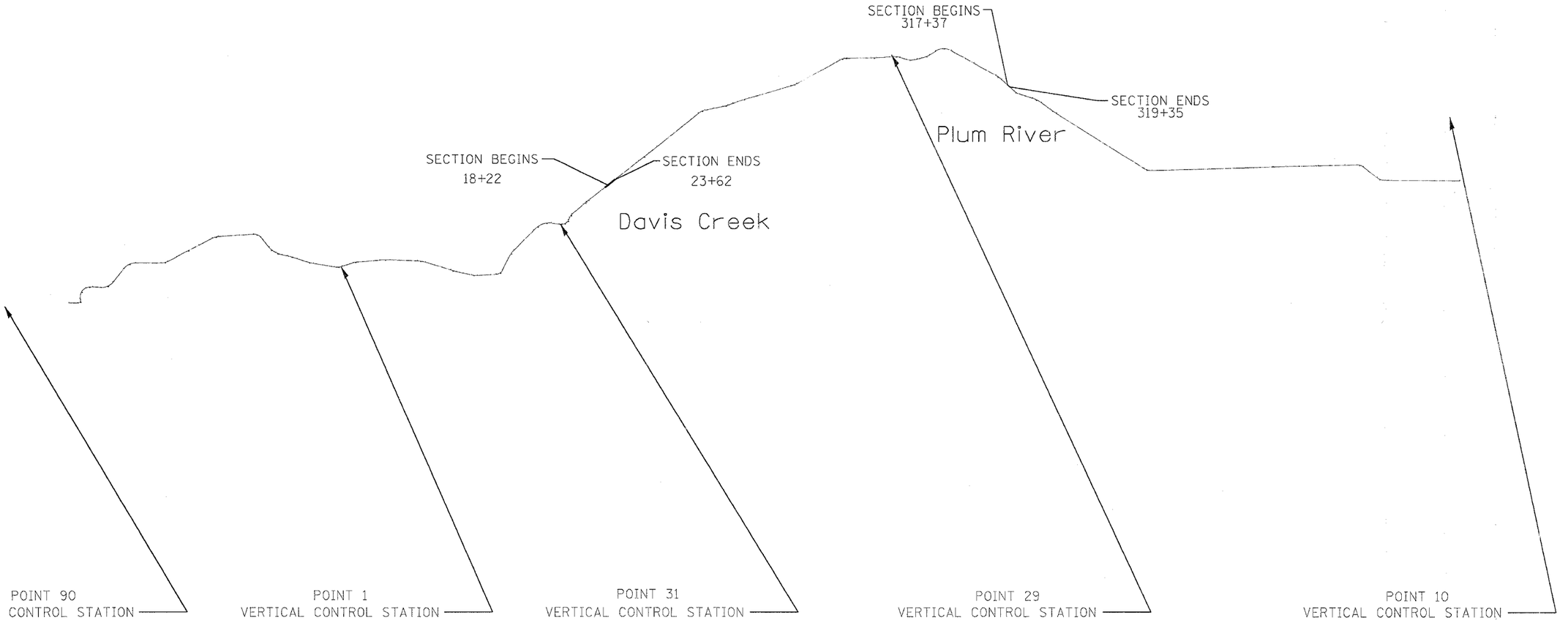
USER NAME = reynor!

CONTRACT NO. 64827

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

EXISTING HORIZONTAL AND VERTICAL CONTROL



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

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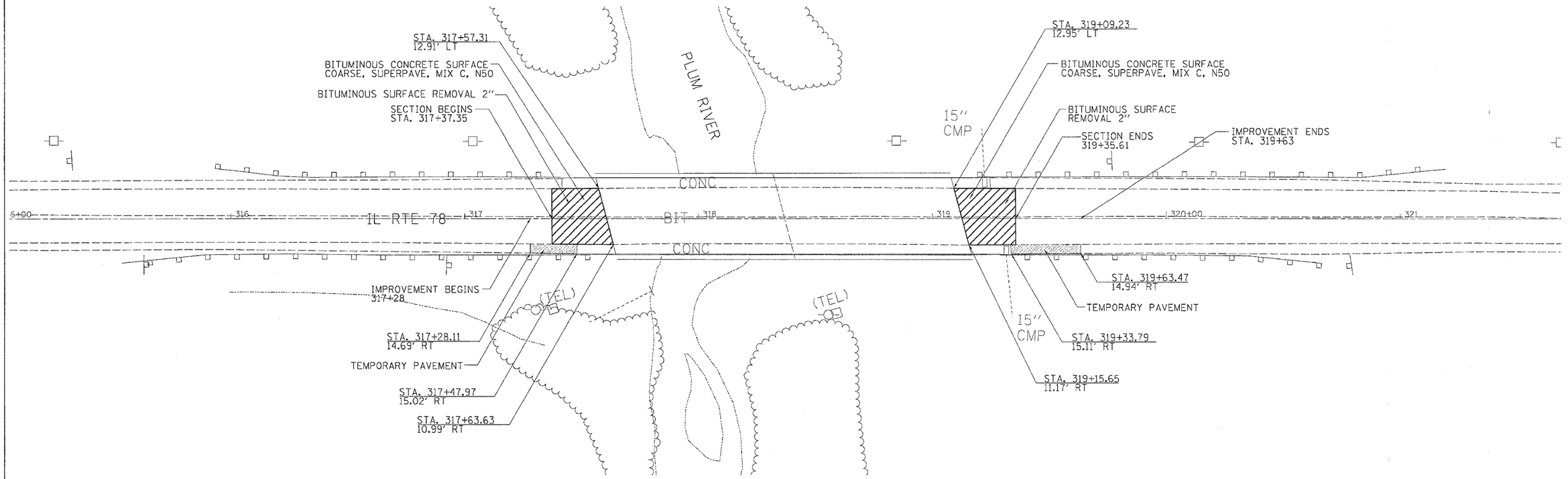
CONTRACT NO. 64827

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-310 & 11BR-8

PLAN SHEET
(SN # 043004D)
PLUM RIVER



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

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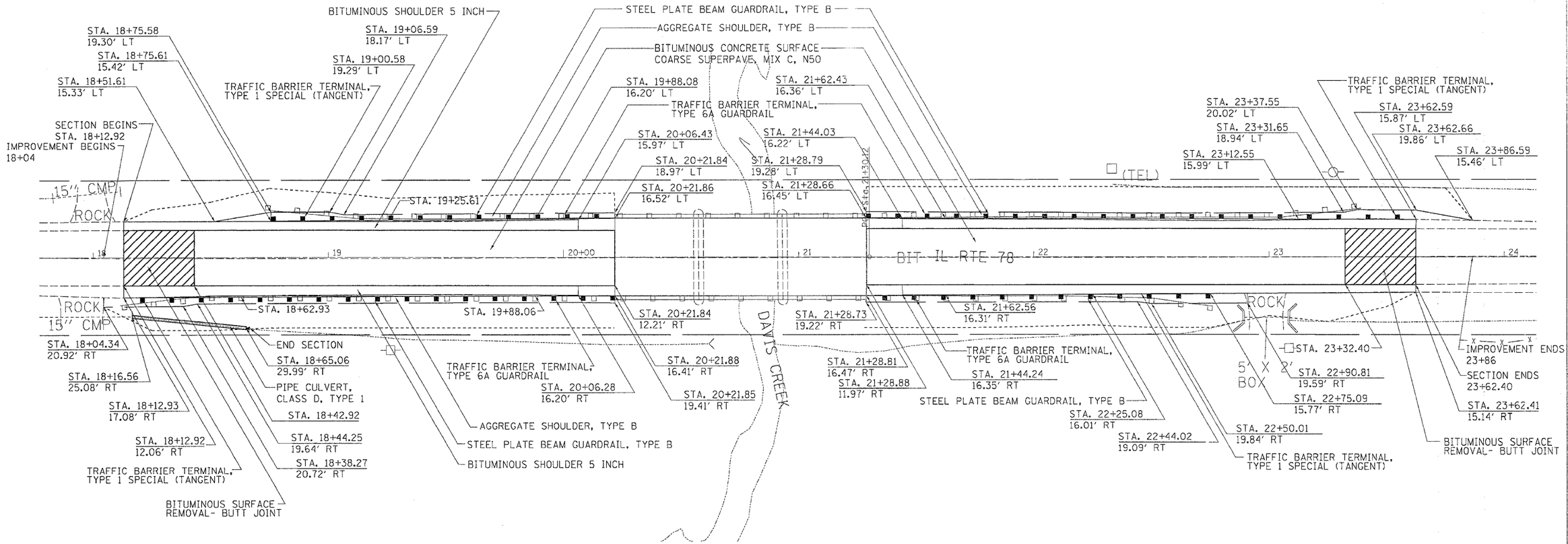
CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

PLAN SHEET
(SN # 043-0042)
DAVIS CREEK



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

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CONTRACT NO. 64B27

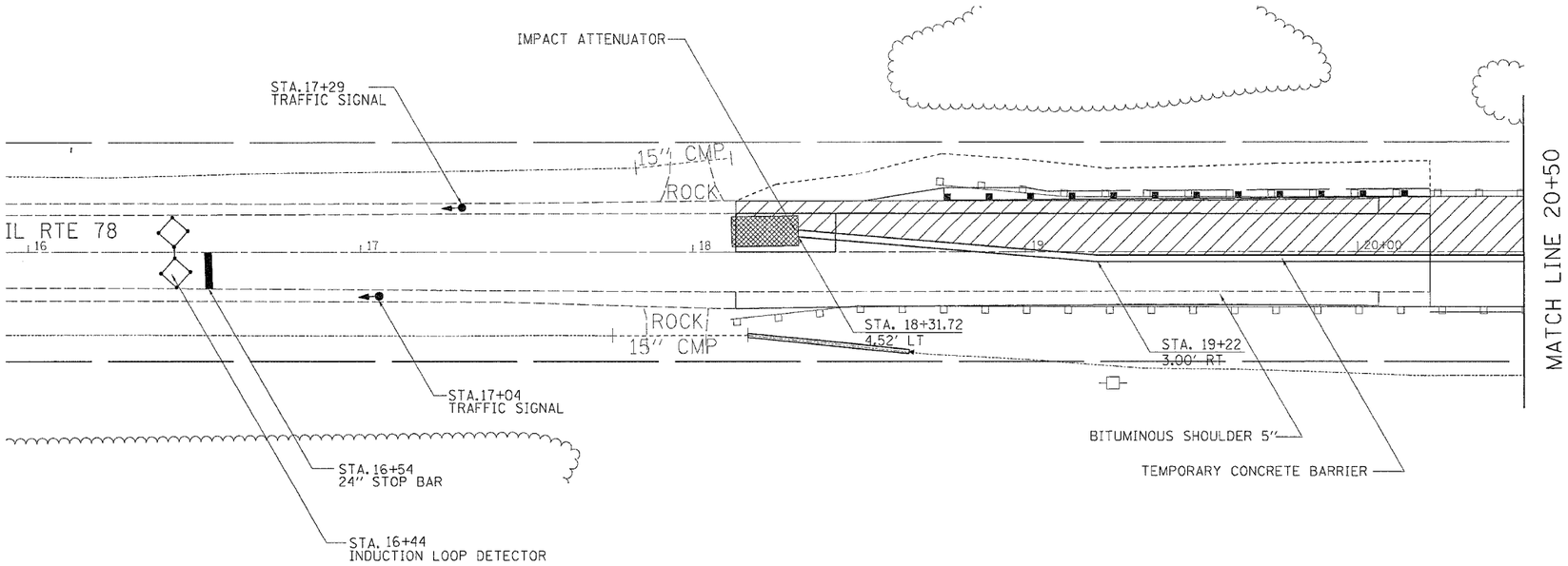
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

STAGE DETAILS

(SN # 0430042)

STAGE 1



= WORK ZONE

= TRAFFIC SIGNAL

= INDUCTION LOOP DETECTOR

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

NOTE:

THIS TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO STANDARD 701321 & ALL BITUMINOUS SHOULDER SHALL BE CONSTRUCTED PRIOR TO STAGE 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

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CONTRACT NO. 64827

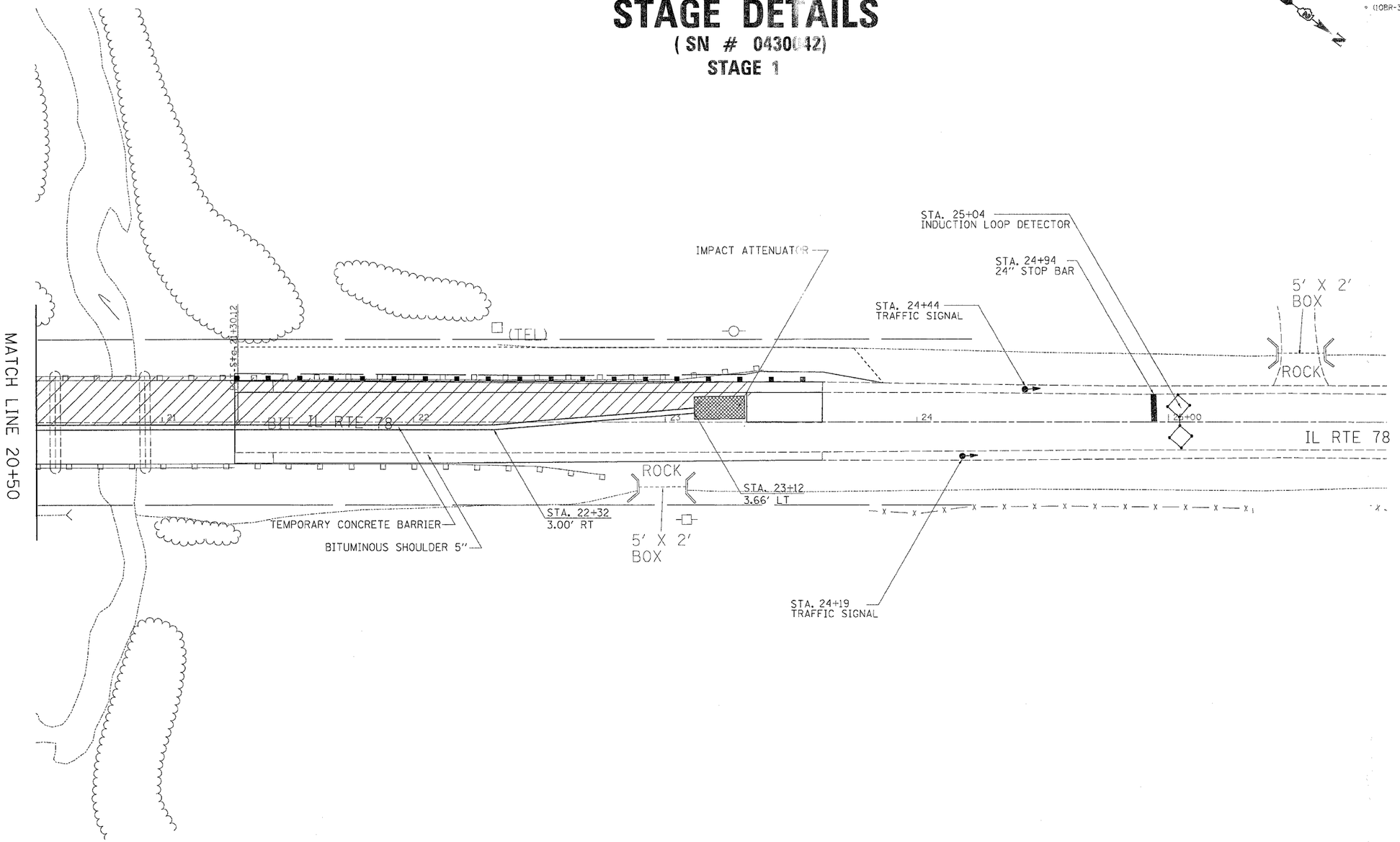
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-30) & 11BR-8

STAGE DETAILS

(SN # 0430042)

STAGE 1



= WORK ZONE

= TRAFFIC SIGNAL

= INDUCTION LOOP DETECTOR

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

NOTE:

THIS TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO STANDARD 701321 & ALL BITUMINOUS SHOULDER SHALL BE CONSTRUCTED PRIOR TO STAGE 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

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CONTRACT NO. 64B27

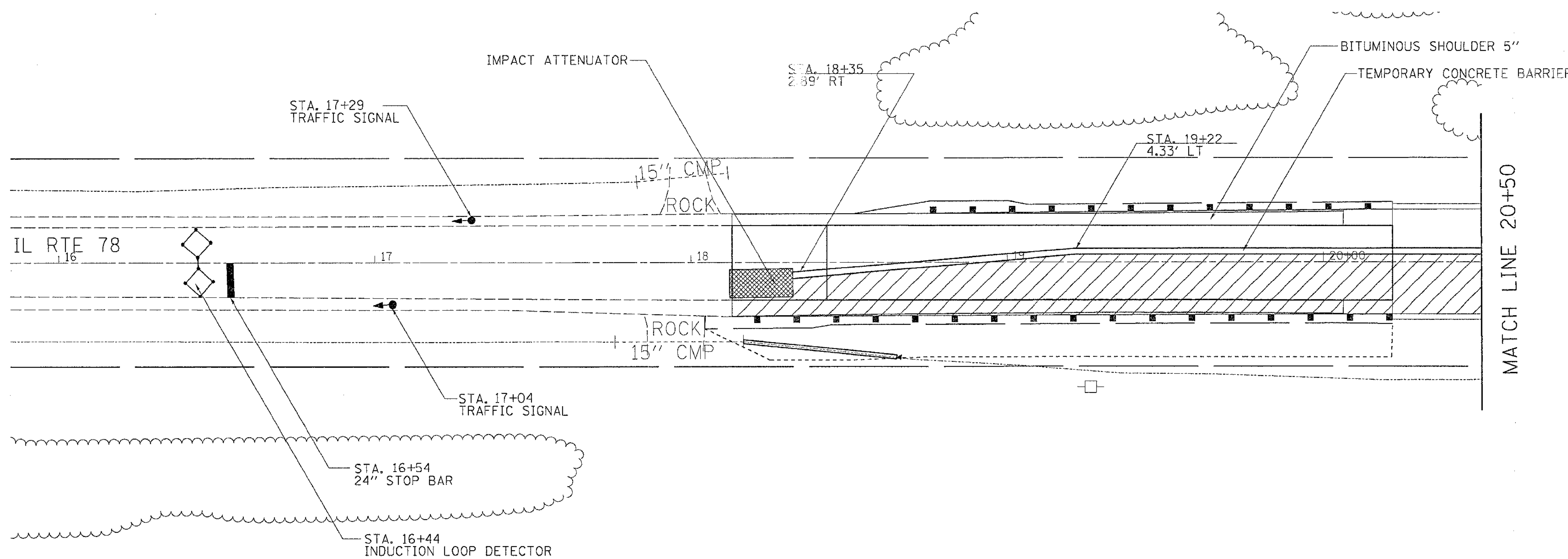
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	16
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

STAGE DETAILS

(SN # 0430042)

STAGE 2



= WORK ZONE

= TRAFFIC SIGNAL

= INDUCTION LOOP DETECTOR

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

NOTE:

THIS TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO STANDARD 701321 & ALL BITUMINOUS SHOULDER SHALL BE CONSTRUCTED PRIOR TO STAGE 1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

CONTRACT NO. 64B27

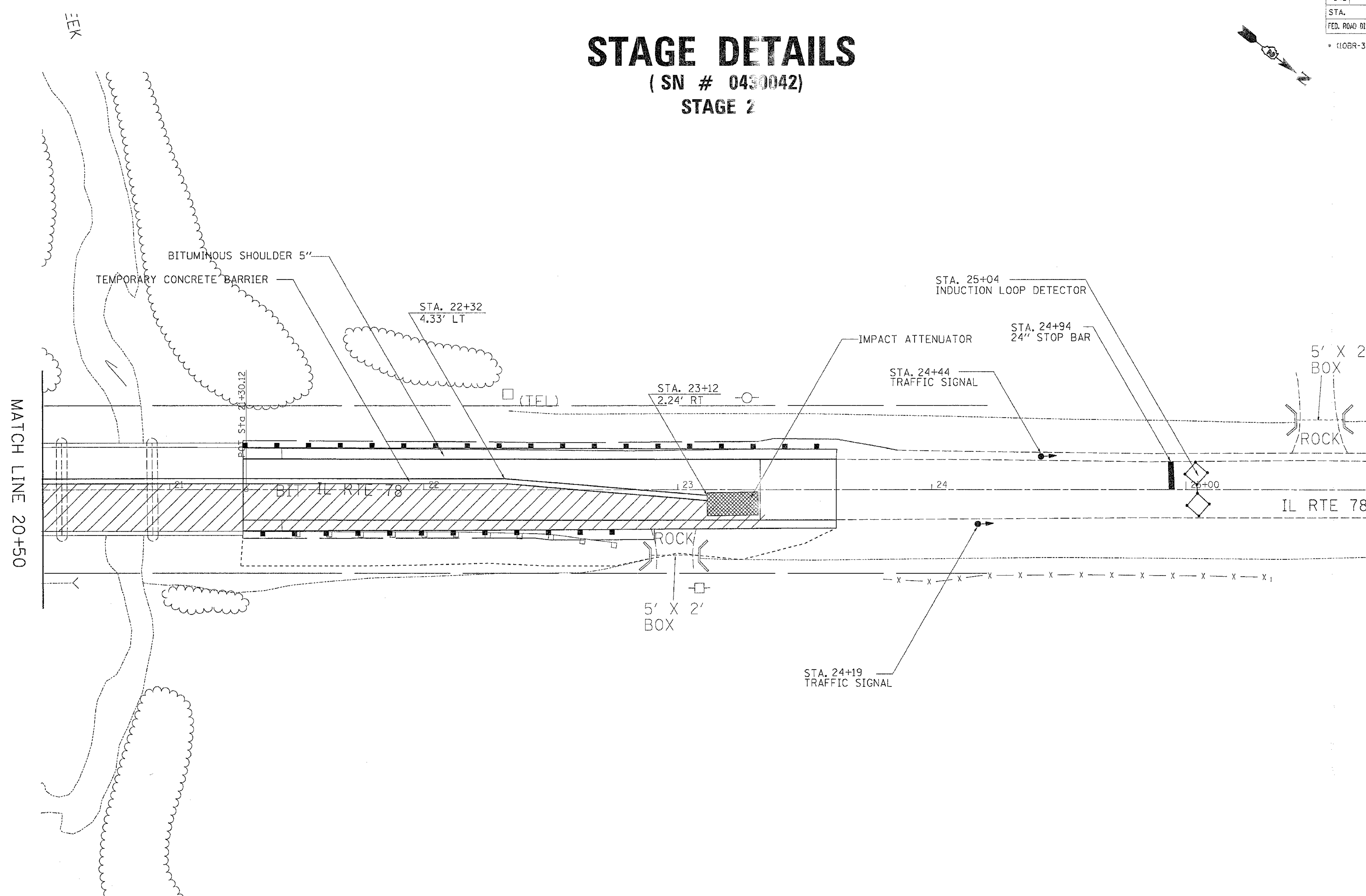
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	45	17
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-3)D & 11BR-8

STAGE DETAILS

(SN # 0430042)

STAGE 2



(hatched)	= WORK ZONE
(signal symbol)	= TRAFFIC SIGNAL
(diamond)	= INDUCTION LOOP DETECTOR
(cross-hatched)	= IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

NOTE:

THIS TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO STANDARD 701321 & ALL BITUMINOUS SHOULDER SHALL BE CONSTRUCTED PRIOR TO STAGE 1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

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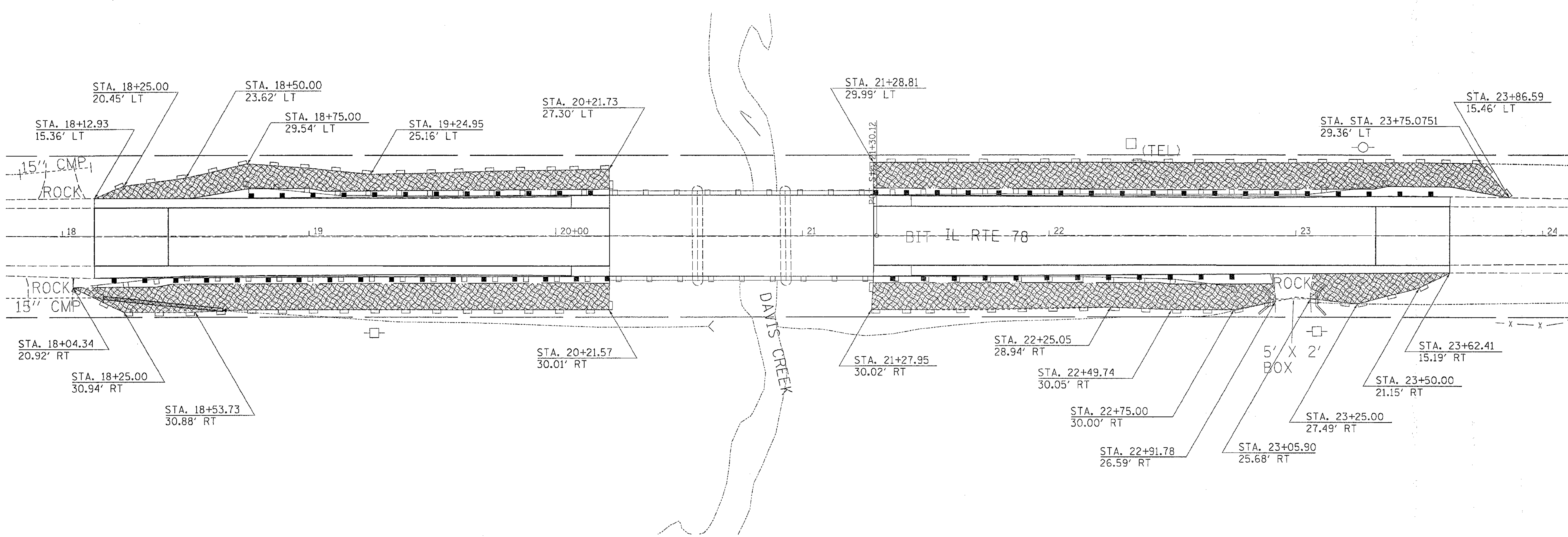
CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	JODAVIESS	42	18
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (108R-3)D & 118R-8

EROSION CONTROL DETAILS
(SN # 043-0842)
DAVIS CREEK



LEGEND

- = SEEDING
- = EROSION CONTROL BLANKET
- = PERIMETER EROSION BARRIER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

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FILE NAME = c:\projects\...dgn
PLOT SCALE = 20.0000 ' / IN.
USER NAME = reynarl

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	10 BR-3)D & 11BR-8	JO DAVIESS	45	19

SHEET NO. 1
9 SHEETS

Contract # 64B27

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCH MARK

R.R. Spike in P.P. on E. Side of IL Rte. 78.
(±) 1500' south of Bridge. Elev. 742.88

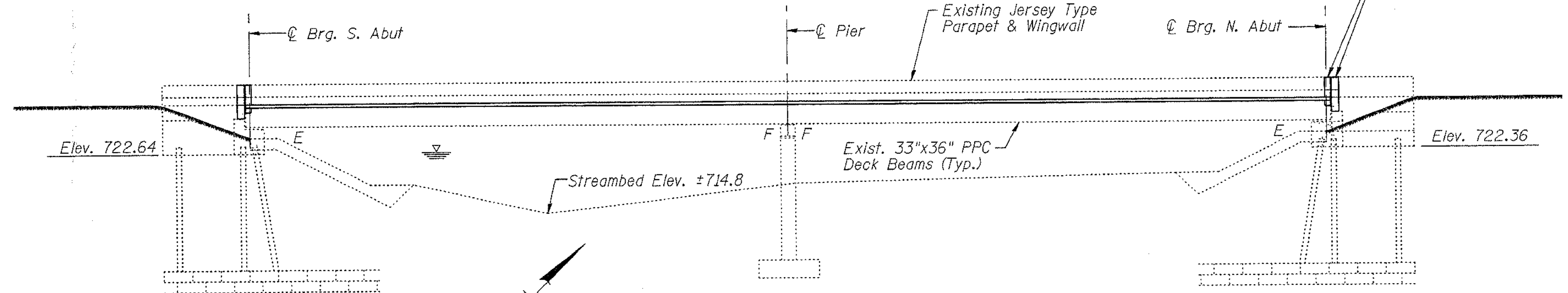
Existing Structure: SN 043-0040 was built in 1982 as FA Rte 642 Section 10 BR-3 at Sta. 779+14.00

The structure consist of two simple span PPC Deck Beams on pile bent abutments and solid pier on spread footing. The back to back abutment dimension is 155'-6" while the out to out width measures 36'-0".

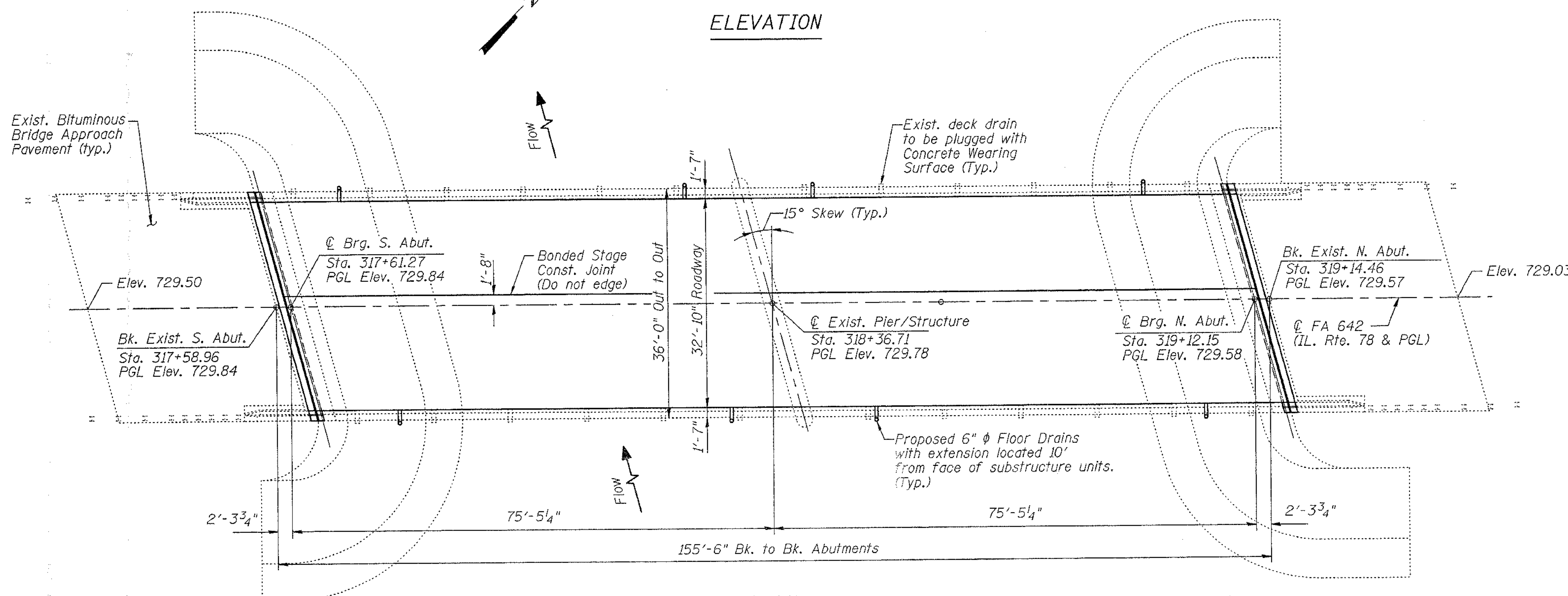
The wearing surface of the existing superstructure is to be replaced with 5" (min.) concrete wearing surface.

Traffic is to be maintained by utilizing Stage construction. One lane of traffic for both direction will be provided.

No salvage.



ELEVATION



PLAN

Index of Sheets

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	2.1	6.0	8.1
Concrete Structure	Cu. Yd.	-	6.3	6.3
Concrete Superstructure	Cu. Yd.	2.7	-	2.7
Formed Concrete Repair (D>5")	Sq. Ft.	-	21.0	21.0
Reinforcement Bars, Epoxy Coated	Pound	7350	780	8130
Concrete Wearing Surface, 5"	Sq. Yd.	548.5	-	548.5
Bridge Deck Grooving	Sq. Yd.	515	-	515
Protective Coat	Sq. Yd.	556	10	566
Bit. Conc. Surface Removal Complete	Sq. Yd.	555.0	-	555.0
Bar Splicer	Ea.	153	8	161
Bridge Joint System (Expansion) -1"	Foot	74.6	-	74.6
Floor Drain Extension	Each	8	-	8
Floor Drains	Each	8		8

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

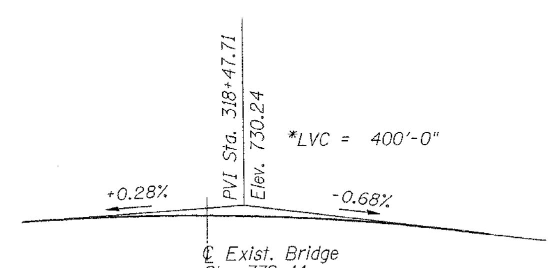
2002 AASHTO

DESIGN STRESSES

NEW & EXISTING CONSTRUCTION
FIELD UNITS

f'c = 5,000 psi (concrete wearing surface)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

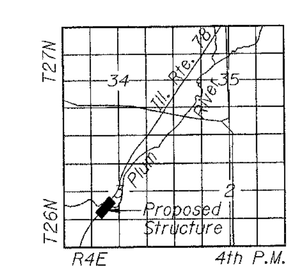
STATE OF ILLINOIS
EFREN M. MIRANDA
81-3957
CHICAGO ILLINOIS
LICENSED STRUCTURAL ENGINEER
12/23/05
Exp. 11/30/06



PROFILE GRADE

(Along ℄ of Rte 78)

*Vertical Curve data is only valid from Sta. 317+58.96 to Sta. 319+14.46
Beyond those limits, see Roadway Plans for bituminous tapes to meet existing grades.



LOCATION SKETCH

GENERAL PLAN & ELEVATION

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE: 12-21-05

DESIGNED	JPM
CHECKED	EMM
DRAWN	R.L.H., JPM
CHECKED	EMM

\- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

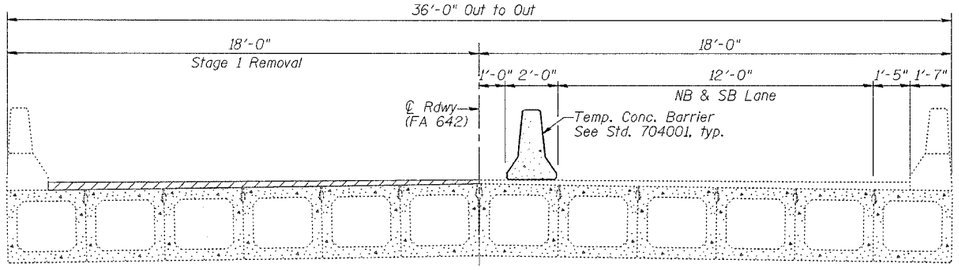
default 12/23/2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

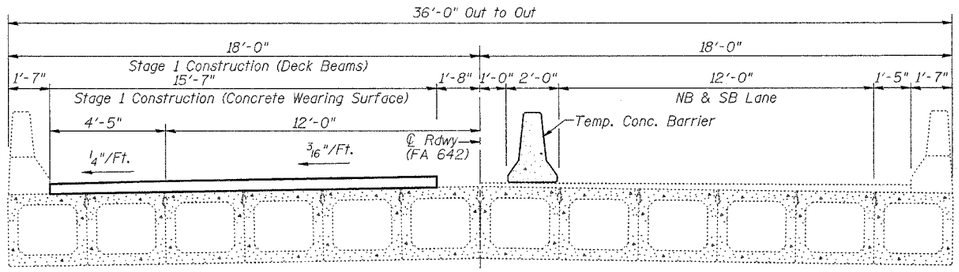
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	10BR-3)D & 11BR-8	JO DAVIESS	45	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
9 SHEETS

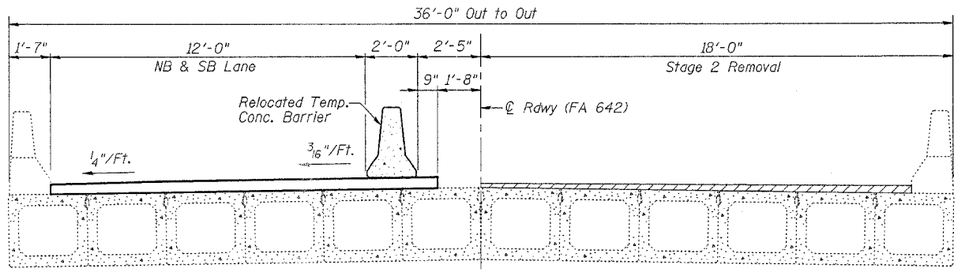
Contract # 64B27



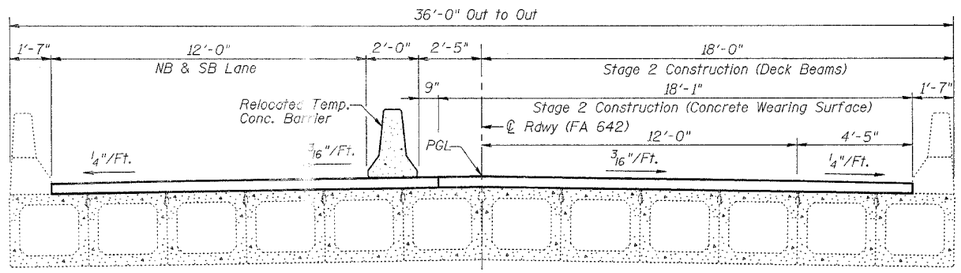
STAGE 1 REMOVAL



STAGE 1 CONSTRUCTION



STAGE 2 REMOVAL



STAGE 2 CONSTRUCTION

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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 for the work.

All construction joint shall be bonded.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
No instream work will be allowed on this project.
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.
If the contractor's procedure involves placement of cranes or other heavy equipment on existing superstructure, detailed procedure shall be submitted to the Engineer for approval.

CONSTRUCTION STAGING

1. Hatched area indicate removal of existing bituminous surface.
2. See Roadway plans for quantity of Temporary Concrete Barriers.
3. All sections taken looking North.

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

default
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CONSTRUCTION STAGING

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

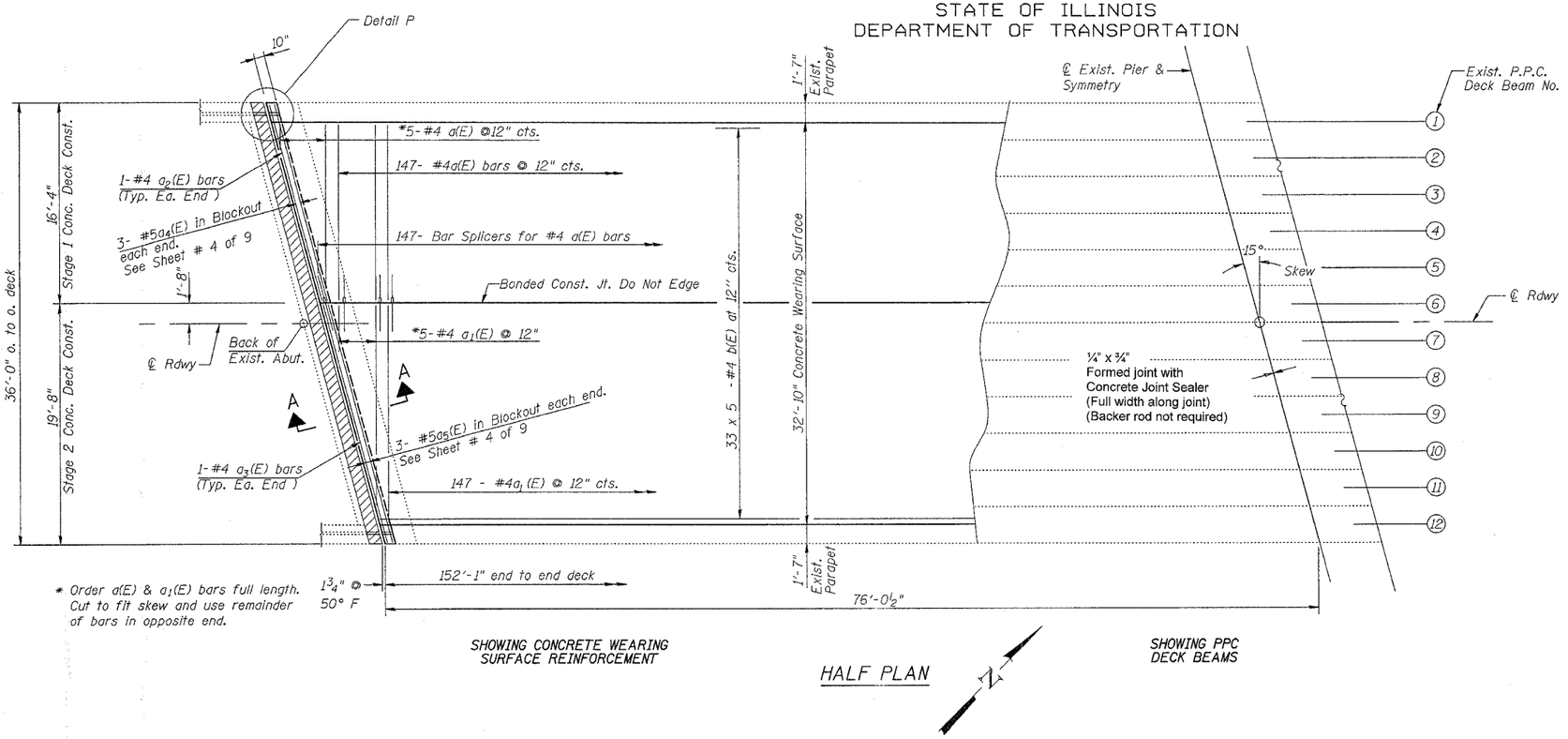
DATE : 12-21-05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
9 SHEETS

Contract # 64B27



* Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

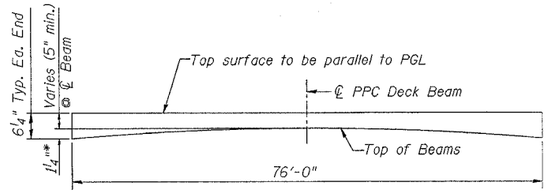
SHOWING CONCRETE WEARING SURFACE REINFORCEMENT

SHOWING PPC DECK BEAMS

HALF PLAN

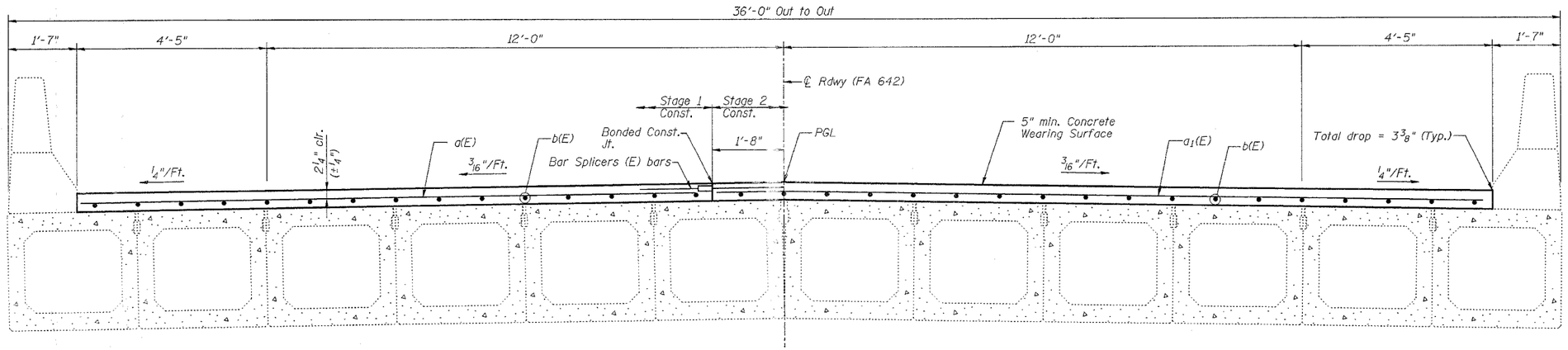
CONCRETE WEARING SURFACE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	152	#4	14'-7"	——
a1(E)	152	#4	17'-11"	——
a2(E)	2	#4	15'-2"	——
a3(E)	2	#4	18'-7"	——
a4(E)	6	#5	16'-9"	——
a5(E)	6	#5	20'-2"	——
b(E)	175	#4	31'-9"	——
Reinforcement Bars, Epoxy Coated			Pound	7290
Concrete Wearing Surface			Sq. Yd.	548.5
Protective Coat			Sq. Yd.	566



REINFORCED CONCRETE WEARING SURFACE PROFILE

* Theoretical camber to be field verified



CROSS SECTION
(Looking North)

Notes:
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars indicated thus 33 x 5-#4 etc. indicates 33 lines of bars with 5 lengths per line.
3. For Section A-A, See Sheet # 8 of 9.
4. For Detail P, See Sheet # 4 of 9.
5. For location of Floor Drain with extension, See Sheet # 1 of 9. For Details, see Sheet # 4 of 9.

MIN. BAR LAP

#4 bar - 1'-8"
#5 bar - 2'-2"

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

\- 200

EXAMINED

PASSED

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE PLAN

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

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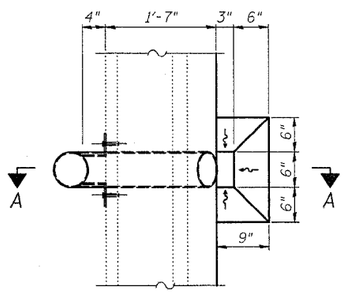
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

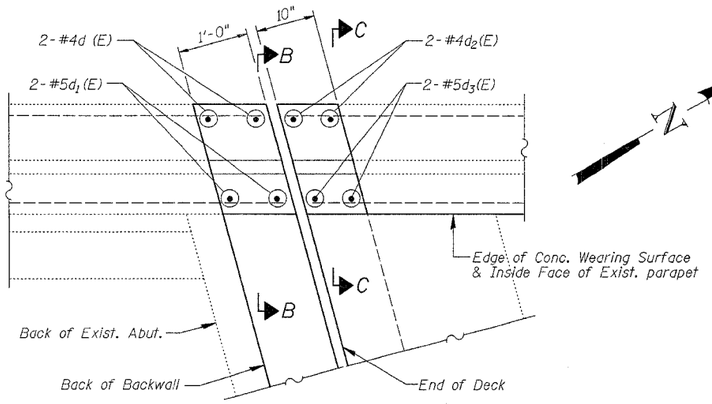
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR 3)D & 11BR-8	JO DAVIESS	45	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
9 SHEETS

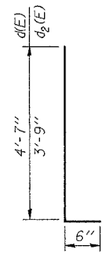
Contract # 64B27



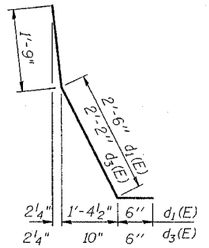
PLAN VIEW AT DRAIN



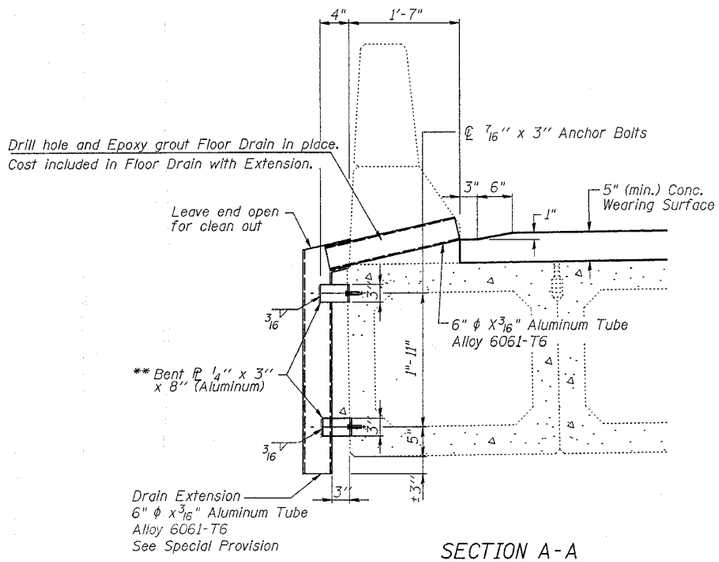
DETAIL P
(Typical for 4 corners)



BARS d(E) & d2(E)

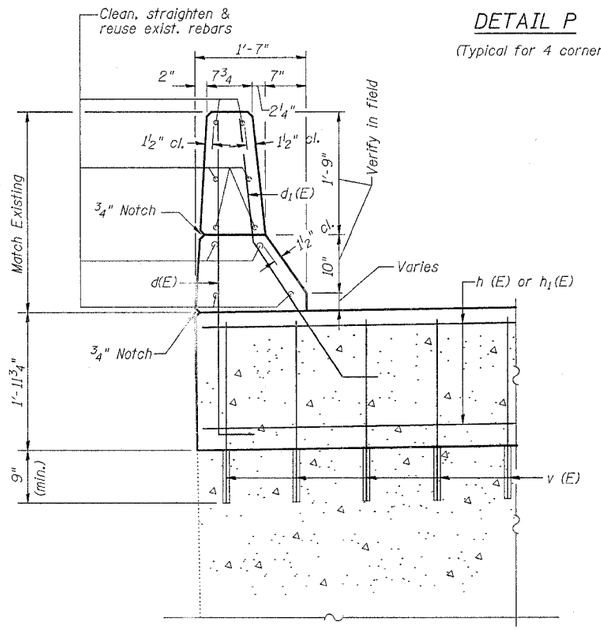


BARS d1(E) & d3(E)

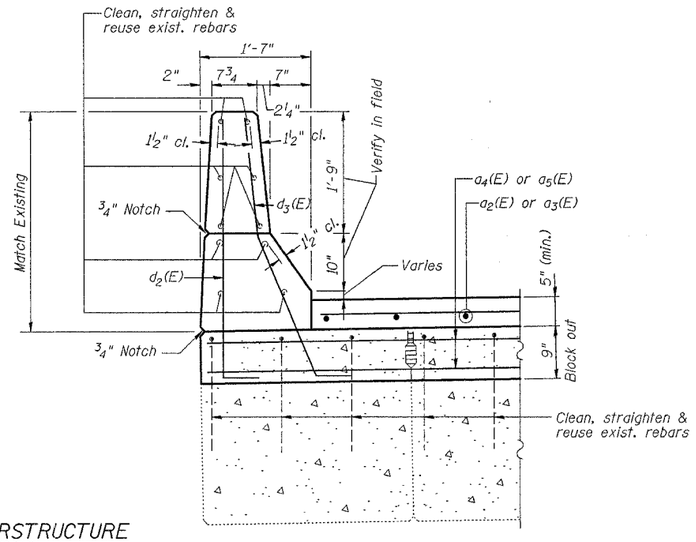


SECTION A-A

** Prestressing strands located at 1 ¾", 3 ¼", 6" and 9" from bottom of beam. Contractor must ensure no damage is done to the strands



SECTION B-B



SECTION C-C

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d2(E)	4	#4	4'-3"	
d3(E)	4	#5	4'-5"	
* Concrete Superstructures			Cu. Yd.	2.7
Reinforcement Bars, Epoxy Coated			Pound	60
Floor Drain with Extension			Each	8
* Concrete Removal			Cu. Yd.	2.1

* Includes parapet over deck and deck beam block out

SUPERSTRUCTURE DETAILS - 1

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

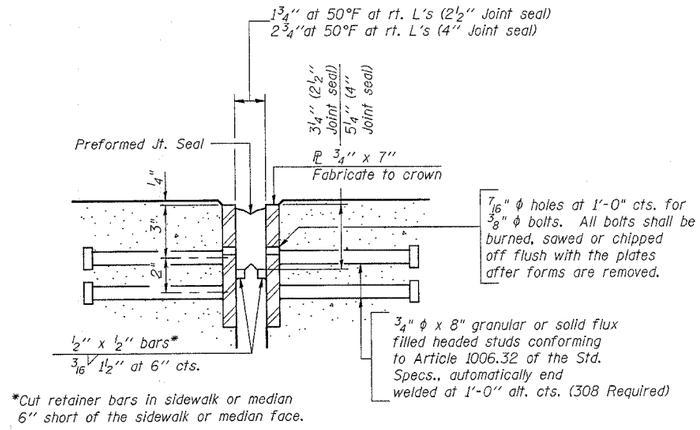
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
9 SHEETS

Contract # 64B27



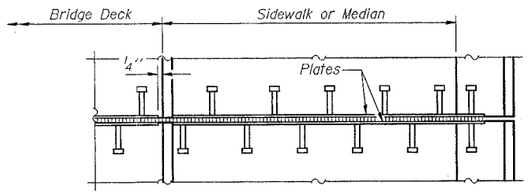
*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

SECTION THRU EXPANSION JOINT
(2 1/2" and 4" joint seals)

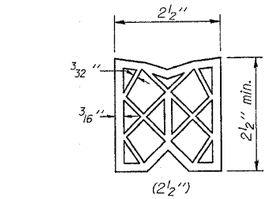
Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"
1 5/8"	4"	2"

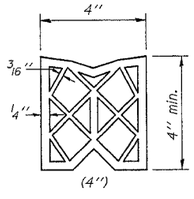
GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.

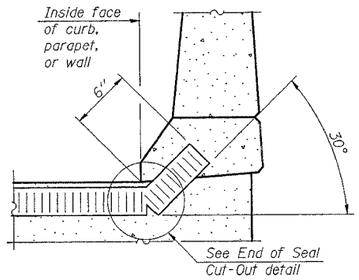


PLAN AT SIDEWALK OR MEDIAN

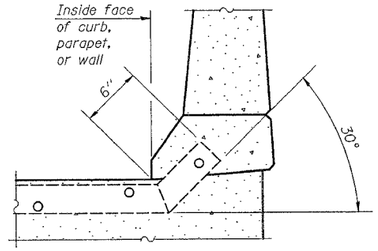




PREFORMED JOINT SEAL

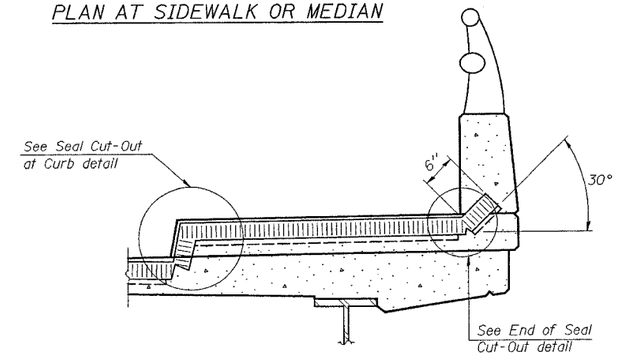


AT CURB, PARAPET, OR WALL
(Showing seal)



AT CURB, PARAPET, OR WALL
(Showing plate)

TYPICAL END TREATMENTS

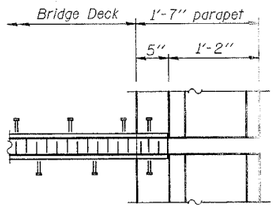


AT SIDEWALK OR MEDIAN*
(Showing plate and seal)

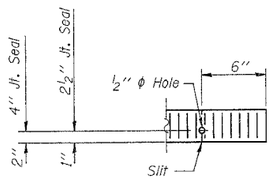
* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

BILL OF MATERIAL

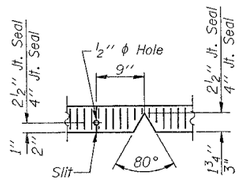
Item	Unit	Total
Bridge Joint System (Expansion) -1"	foot	74.6



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

(Sheet 1 of 2)

BRIDGE JOINT SYSTEM - EXPANSION (PREFORMED JOINT SEAL)

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71.00
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

EJ-BJS

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

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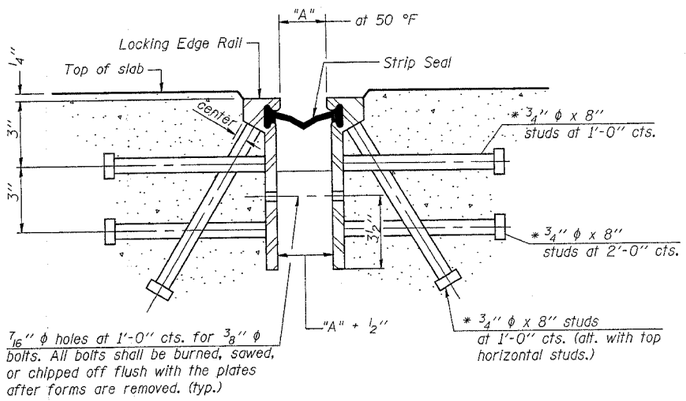
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

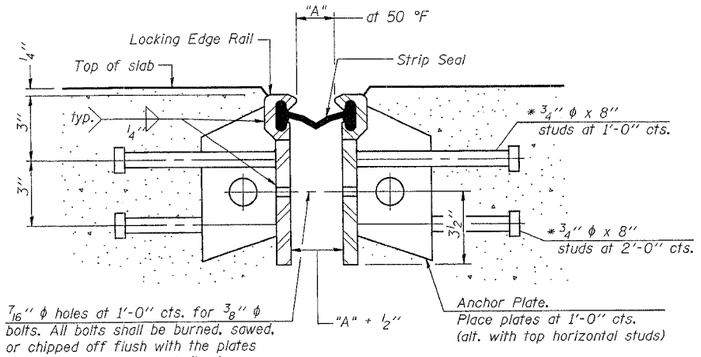
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
9 SHEETS

Contract # 64B27



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

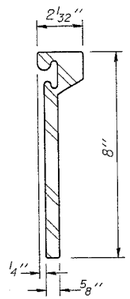
SECTION THRU ROLLED RAIL EXP. JOINT

(392 Studs Required)

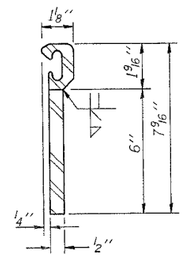
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

SECTION THRU WELDED RAIL EXP. JOINT

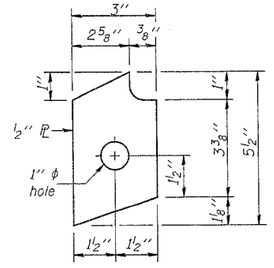
(236 Studs Required)
(156 Anchor Plates Required)



ROLLED (EXTRUDED) RAIL

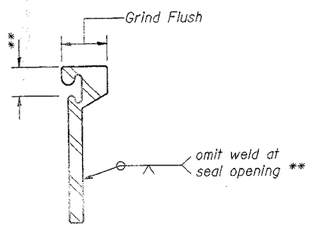


WELDED RAIL



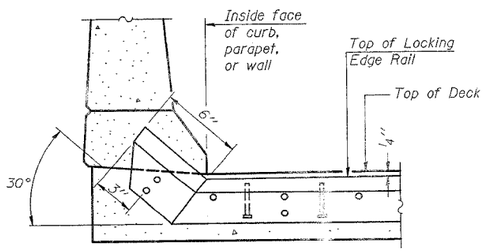
ANCHOR ℄
(for welded rail)

LOCKING EDGE RAILS

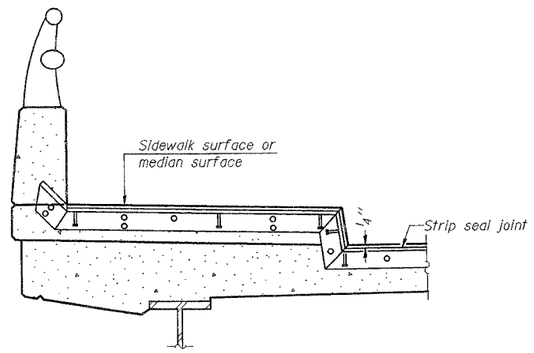


LOCKING EDGE RAIL SPLICE

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



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

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EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

EJ-BJS

(Sheet 2 of 2)

BRIDGE JOINT SYSTEM - EXPANSION (ALTERNATE-STRIP SEAL)

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

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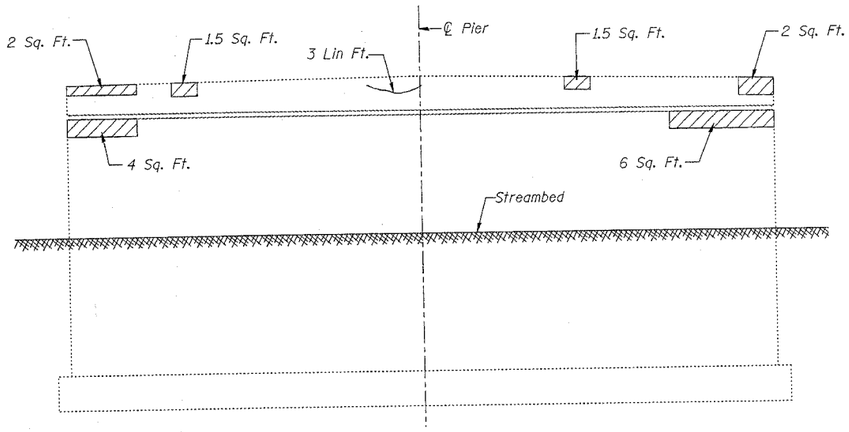
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

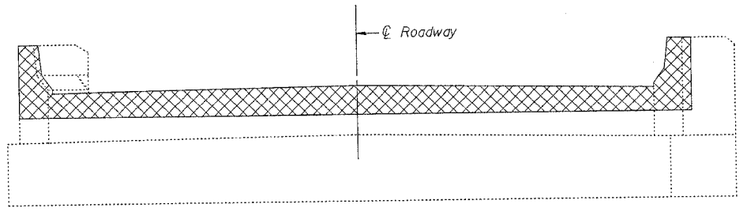
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	10BR-3)D & 11BR-8	JO DAVIESS	45	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
9 SHEETS

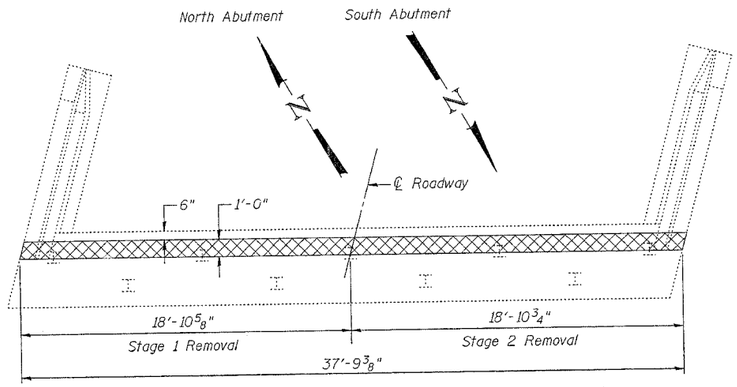
Contract # 64B27



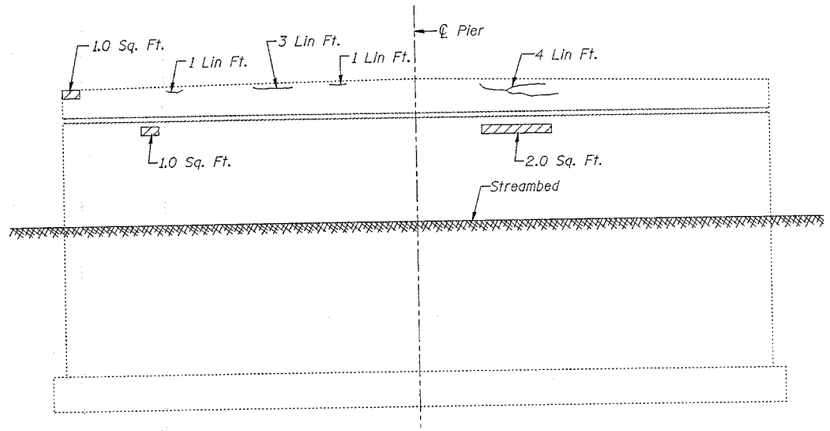
PIER SOUTH FACE ELEVATION



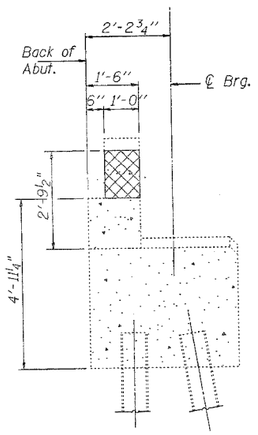
ABUTMENT ELEVATION



ABUTMENT PLAN



PIER NORTH FACE ELEVATION



SEC. THRU ABUT.

LEGEND

- Concrete Removal
- Delaminated and/or Spalling Concrete to be repaired as Formed Concrete Repair (D>5")
- Leaching Crack - No work required

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	6.0
Formed Concrete Repair (D > 5")	Sq. Ft.	21.0

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

SUBSTRUCTURE CONCRETE
REMOVAL, REPAIR & DETAILS

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

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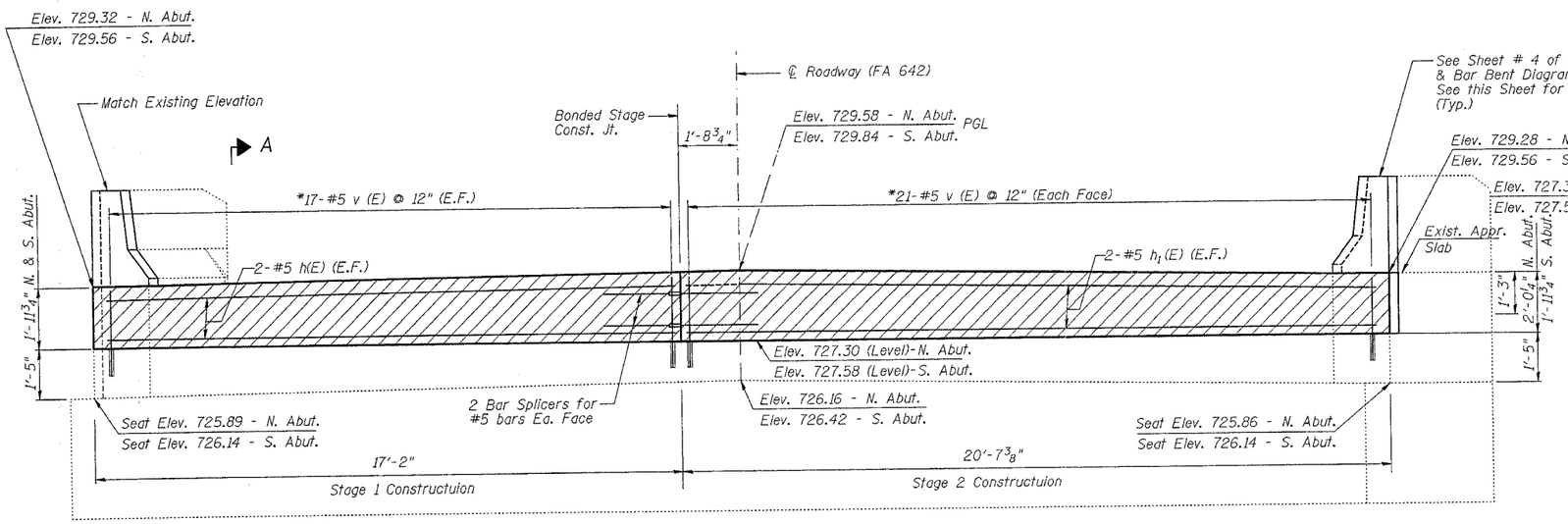
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

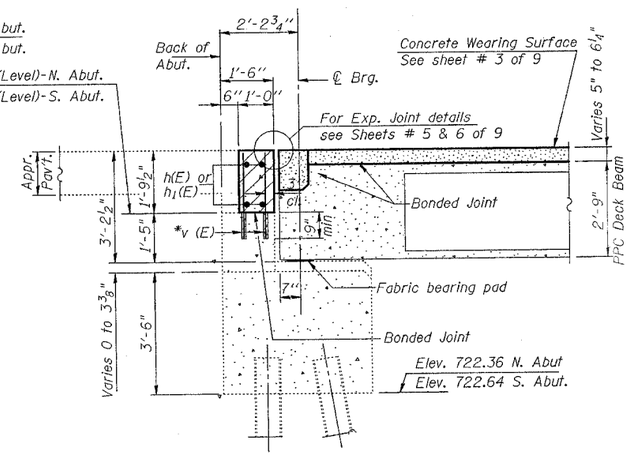
SHEET NO. 8
9 SHEETS

Contract # 64B27



ELEVATION

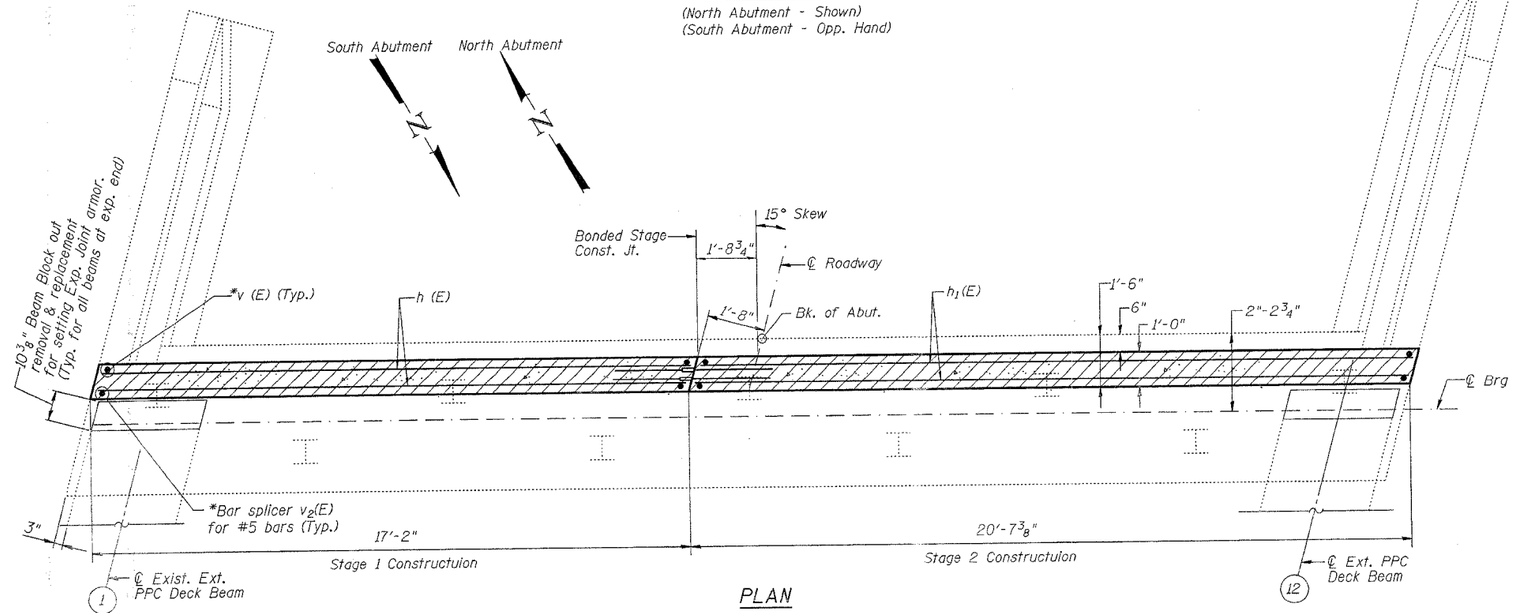
(North Abutment - Shown)
(South Abutment - Opp. Hand)



SECTION A-A

℄ Rt. Angle

Notes :
All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after concrete wearing surface is in place.
See Sheet 5 of 10 for bearing pad details.



PLAN

(North Abutment - Shown)
(South Abutment - Rotate 180°)

Notes:
Hatched area shall be poured after Concrete Wearing Surface (including blockout) is in place and cured.
Cost of temporary retainers and accessories are included with Precast Prestressed Concrete Deck Beams.(33" Depth.)

*Epoxy grout v(E), v_1(E), and Bar Splicer v_2(E) bars in 9" min. drilled holes according to Section 584 of the Standard Specifications.

ONE ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	4	#5	17'-6"	
	h_1(E)	4	#5	20'-6"	
	d(E)	4	#4	5'-1"	
	d1(E)	4	#5	4'-9"	
*	v(E)	76	#5	2'-5"	
	Concrete Structures			Cu. Yd.	3.2
**	Reinforcement Bars, Epoxy Coated			Pound	390

** Includes backwall and parapet over backwall

Reinforcement bars designated (E) shall be epoxy coated.
For details of Bar Splicers, see sheet 9 of 9.

ABUTMENT DETAILS

IL. RTE. 78 OVER PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

- 200

EXAMINED

PASSED

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

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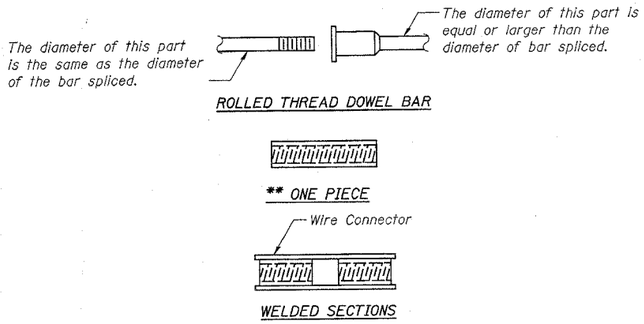
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

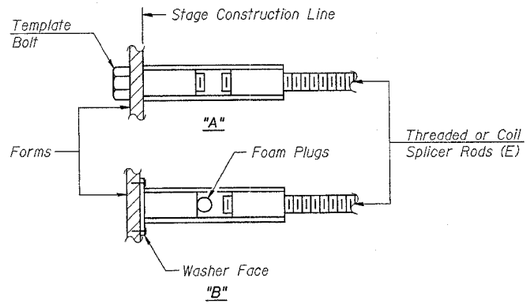
SHEET NO. 9
9 SHEETS

Contract # 64B27



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

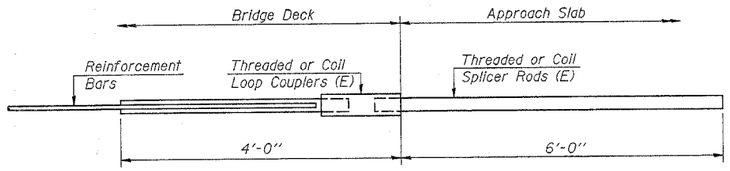
1. Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$
2. Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES

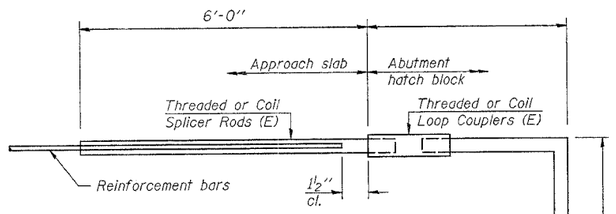
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



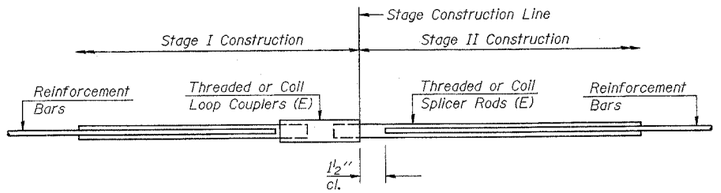
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 70



STANDARD

Bar Size	No. Assemblies Required	Location
#4	147	Deck
#5	6	Deck Bm Blockout
#5	4	South Abutment
#5	4	North Abutment

BAR SPLICER ASSEMBLY DETAILS

IL. RTE. 78 OVER
PLUM RIVER
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 318+36.71
STRUCTURE NUMBER 043-0040

DATE : 12-21-05

DESIGNED	JPM
CHECKED	EMM
DRAWN	JPM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-22-04

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	28
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
12 SHEETS

Contract # 64B27

BENCH MARK

Chiseled "□" on top of N.W. concrete wing wall (near North end) on Bridge 11-BR-6, Sta. 481+25*, Elev. 647.75

Existing Structure: SN 043-0042 was built in 1982 as FA Rte 642 Section 10 BR-6 at Sta. 480+80.00

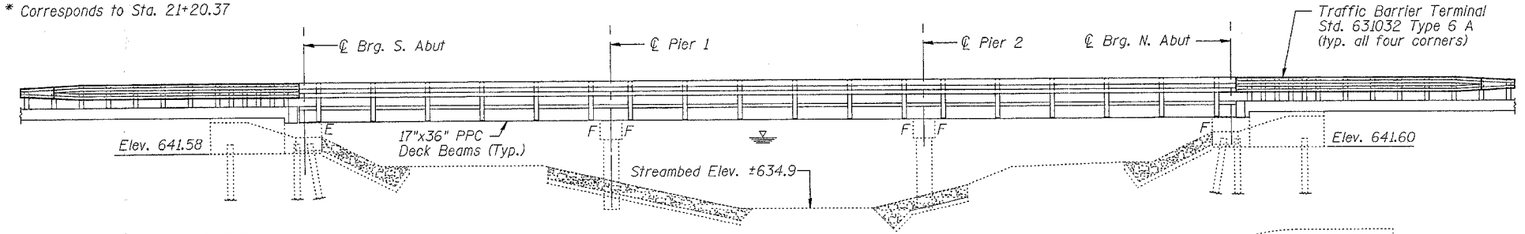
The structure consist of three simple span PPC Deck Beams on pile bent abutments and solid piers on spread footing. The back to back abutment dimension is 110'-4 3/4" while the out to out width measures 36'-0".

The existing superstructure is to be replaced with PPC Deck Beams and 5" (min.) concrete wearing surface.

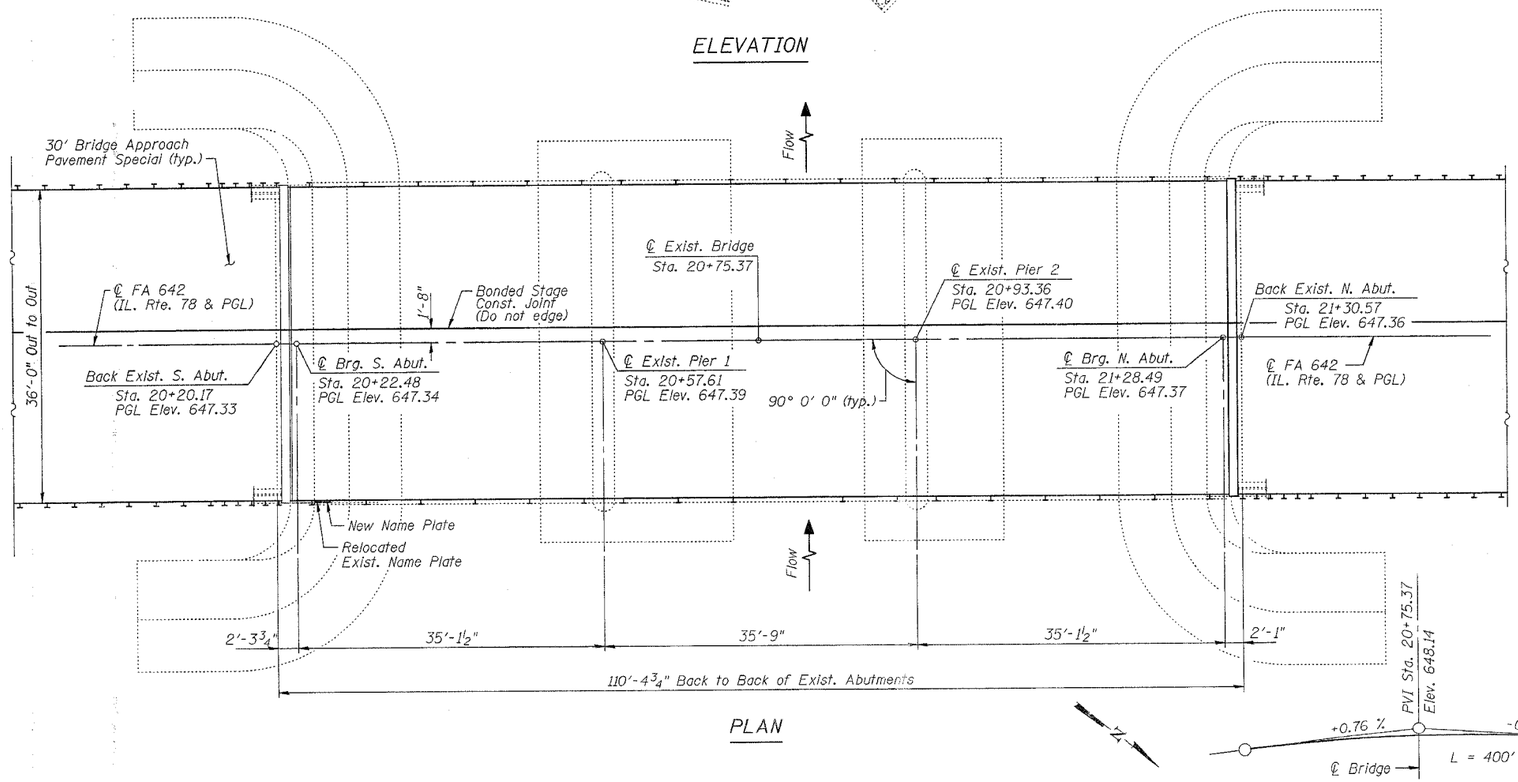
Traffic is to be maintained by utilizing Stage construction. One lane of traffic for both direction will be provided.

No salvage.

* Corresponds to Sta. 21+20.37



ELEVATION



PLAN

PROFILE GRADE

(Along ℄ of Rte 78)

* Vertical curve data is only valid from Sta. 20+20+17 Sta. 21+30.57 Beyond those limits, see roadway plans for bituminous taper to meet existing grades.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1	-	1
Concrete Removal	Cu. Yd.	-	12.6	12.6
Concrete Structures	Cu. Yd.	5.4	-	5.4
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	3852	-	3852
Reinforcement Bars, Epoxy Coated	Pound	5580	820	6400
Concrete Wearing Surface, 5"	Sq. Yd.	428.7	-	428.7
Bridge Deck Grooving	Sq. Yd.	409	-	409
Protective Coat	Sq. Yd.	447.0	-	447.0
Steel Bridge Rail, Type SM	Foot	214.5	-	214.5
Name Plates	Each	1	-	1
Bridge Joint System (Expansion), 1 5/8"	Foot	36	-	36
Bar Splicers	Each	111	86	197
Asbestos Bearing Pad Removal	Each	-	72	72

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

NEW & EXISTING CONSTRUCTION FIELD UNITS

f'c = 5,000 psi (Concrete Wearing Surface)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2" ϕ low relax strands)
f'si = 201,960 psi (1/2" ϕ low relax strands)

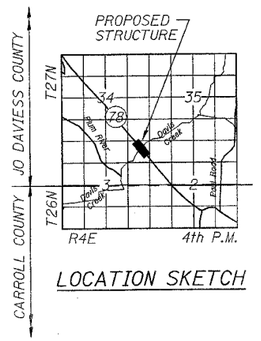
STATION 20+75.37
REBUILT 200_ BY
STATE OF ILLINOIS
F.A. RT. 642 SEC 11BR-8
LOADING HS20
STR. NO. 043-0042

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plates.

Index of Sheets



LOCATION SKETCH

STATE OF ILLINOIS
EFREN M. MIRANDA
81-3957
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER
12/23/05
EFM. 11/30/05

GENERAL PLAN
IL. RTE. 78 OVER DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

DESIGNED	COM
CHECKED	EMM
DRAWN	COM
CHECKED	EMM

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

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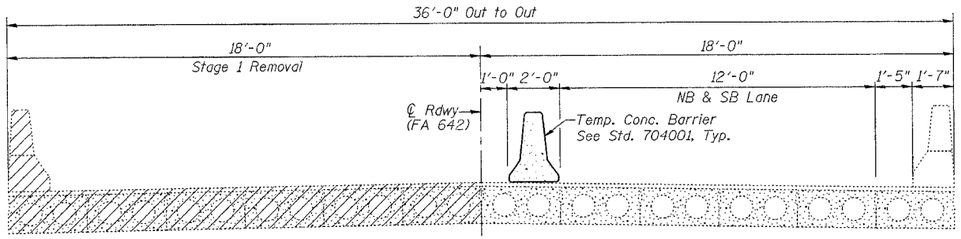
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

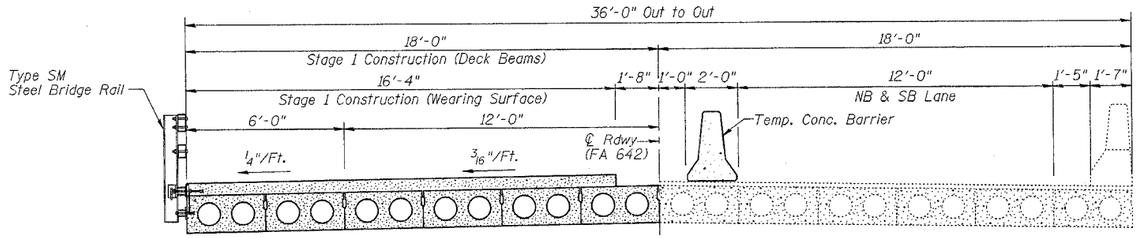
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	29
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
12 SHEETS

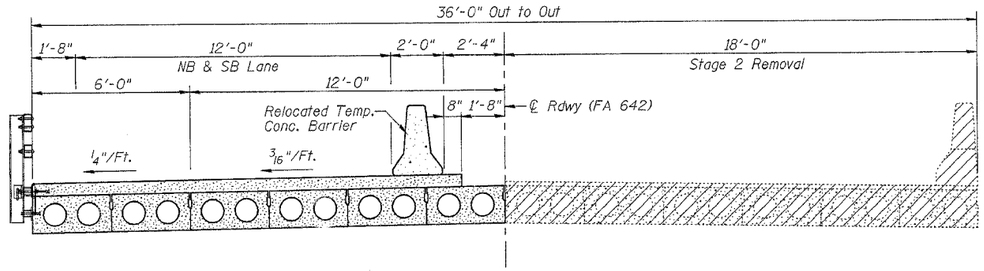
Contract # 64B27



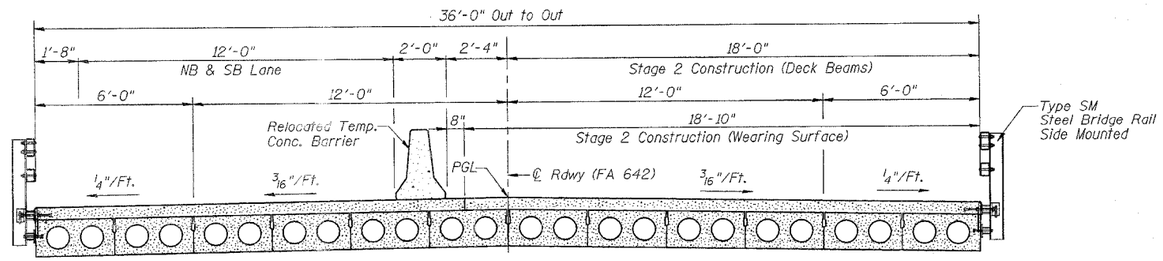
STAGE 1 REMOVAL



STAGE 1 CONSTRUCTION



STAGE 2 REMOVAL



STAGE 2 CONSTRUCTION

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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 for the work.

Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plate.

All construction joint shall be bonded.

Repair of pier caps shall be completed prior to placement of the new deck beams.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

No instream work will be allowed on this project.

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 for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, 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 new beams. To distribute load to multiple beams and protect the concrete, 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. Prior to placement of the timber mats, the following shall be done: grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

CONSTRUCTION STAGING

1. Hatched area indicate removal of existing Superstructure.
2. See Roadway plans for quantity of Temporary Concrete Barriers.
3. All sections taken looking North.

CONSTRUCTION STAGING

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

DESIGNED	CQM
CHECKED	EMM
DRAWN	CQM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

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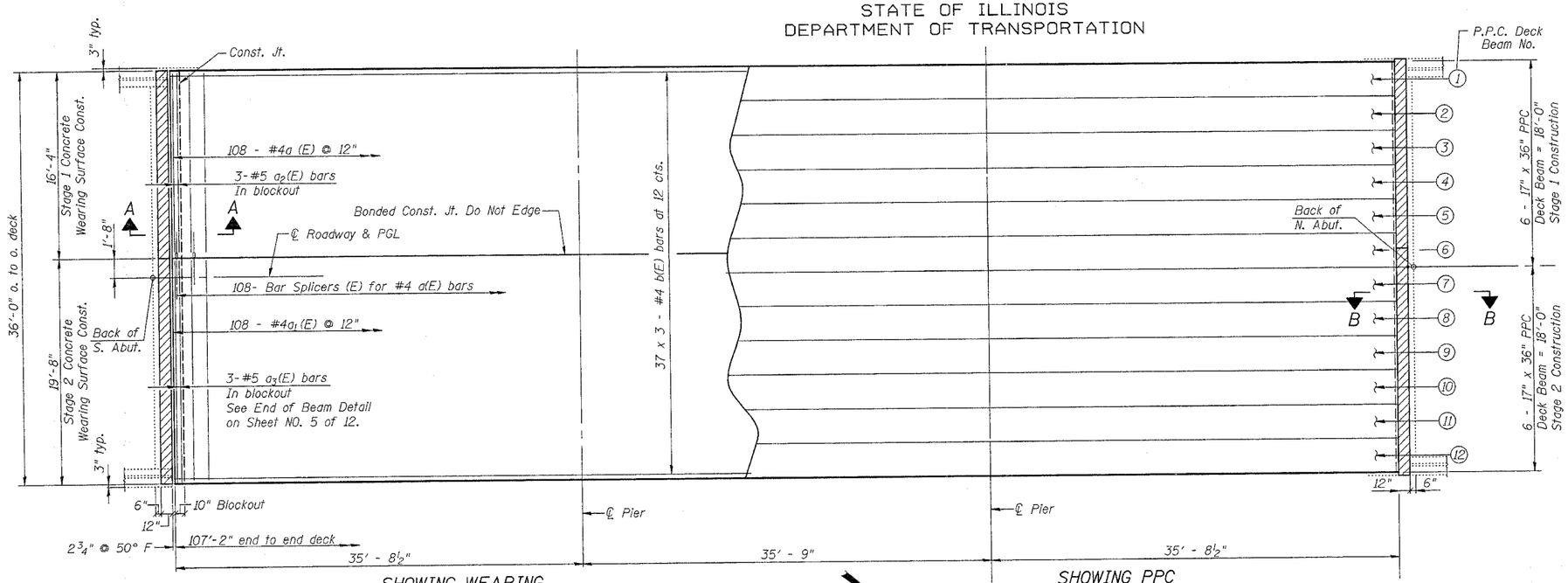
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
12 SHEETS

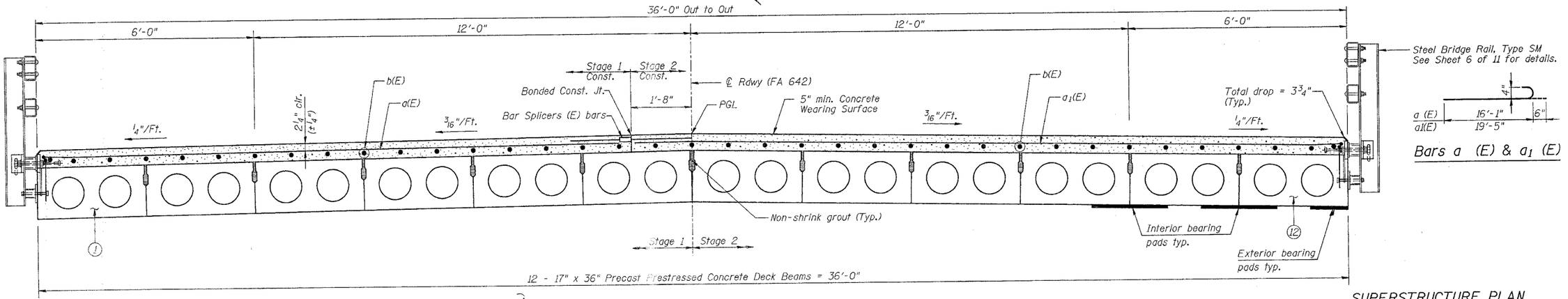
Contract # 64B27



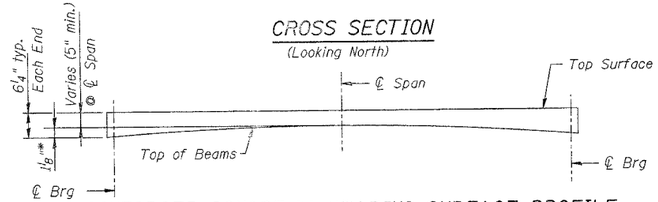
SHOWING WEARING SURFACE REINFORCEMENT

PLAN

SHOWING PPC DECK BEAMS



Bars a (E) & a1 (E)



CROSS SECTION
(Looking North)

REINFORCED CONCRETE WEARING SURFACE PROFILE

* Theoretical camber to be field verified after beams are in place.

Notes:
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars indicated thus 37 x 3-#4 etc. indicates 37 lines of bars with 3 lengths per line.
3. For PPC Deck Beam Details, see Sheet # 5 of 12.
4. For Section A-A, See Sheet # 10 of 12.
5. For Section B-B, See Sheet # 11 of 12.

CONCRETE WEARING SURFACE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	108	#4	16'-7"	
a1(E)	108	#4	19'-11"	
a2(E)	3	#5	16'-1"	
a3(E)	3	#5	19'-5"	
b(E)	111	#4	36'-9"	
Reinforcement Bars, Epoxy Coated			Pound	5580
Concrete Wearing Surface			Sq. Yd.	428.7

MIN. BAR LAP

#4 bar - 1'-8"
#5 bar - 2'-2"

DESIGNED	COM
CHECKED	EMM
DRAWN	COM
CHECKED	EMM

\- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE PLAN

IL. RTE.78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

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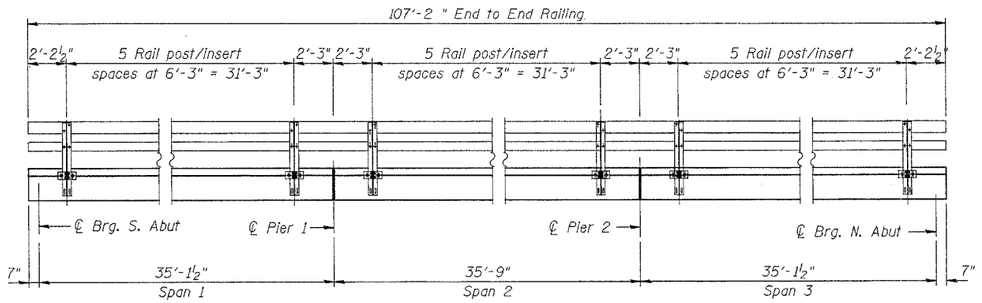
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

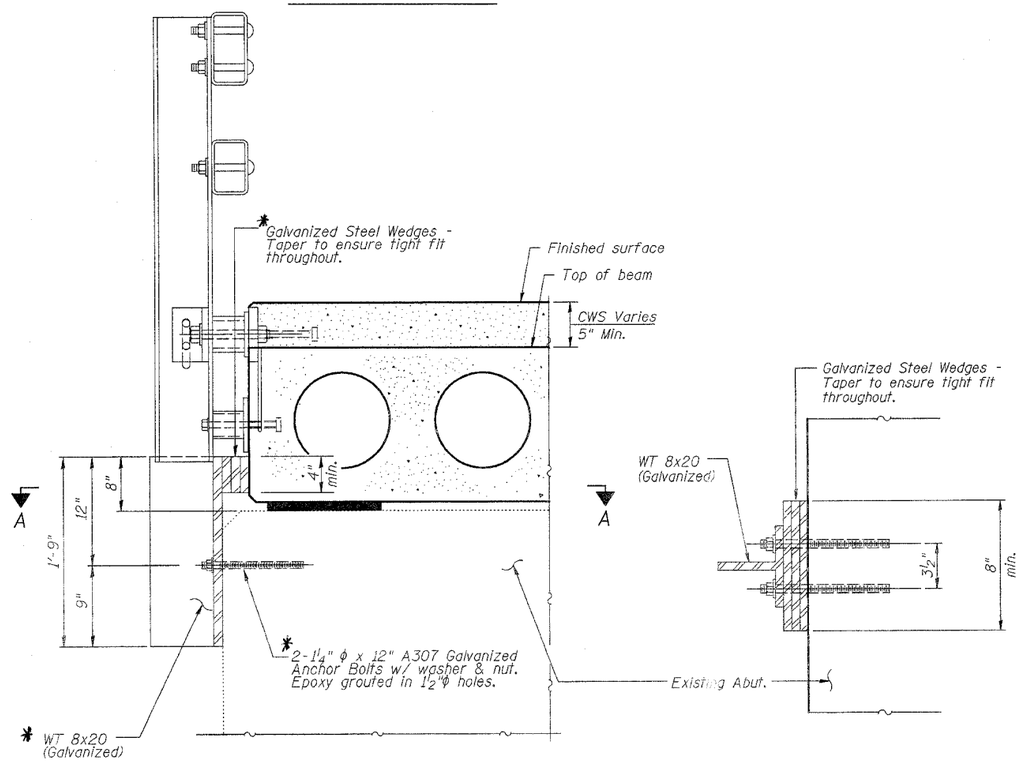
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
12 SHEETS

Contract # 64B27

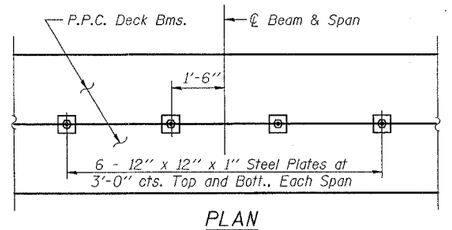


RAIL POST SPACING

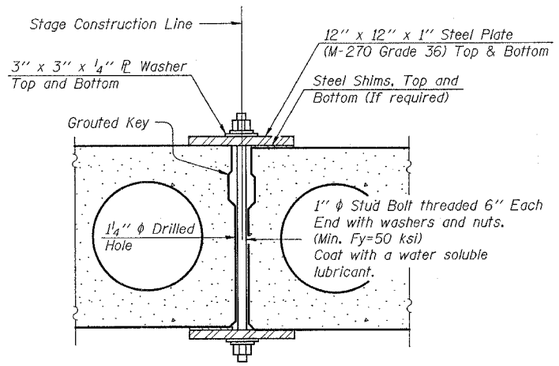


SIDE RETAINER AT SOUTH ABUTMENT

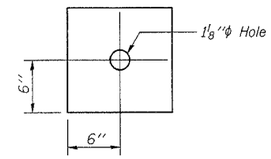
SECTION A-A



PLAN



SECTION



CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams. Cost included with "Precast Prestressed Concrete Deck Beams".
See Stage Construction Details for traffic lanes on Sheet 2 of 12

DESIGNED	COM
CHECKED	EMM
DRAWN	COM
CHECKED	EMM

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

* AFTER THE BLOCK-OUTS ARE POURED AND CURED THE RETAINER AND SHIMS SHALL BE REMOVED. ANCHOR BOLTS SHALL BE CUT, GRIND SMOOTH AND SEALED WITH EPOXY.

SUPERSTRUCTURE DETAILS - 1

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

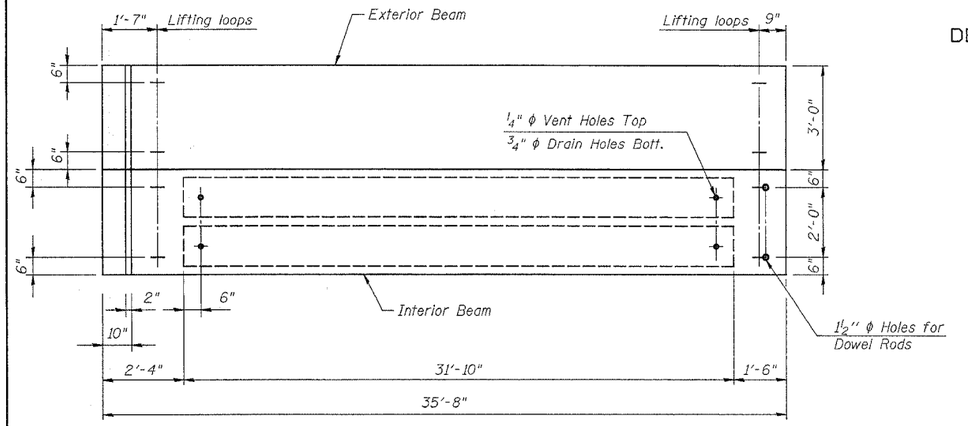
10/5/42.dgn K:\structure\ILRTE 78\OVER DAVIS CREEK\SHEETS FILE\SUPSTRDETAIL01.dgn
dw'ault's 12/23/2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
12 SHEETS

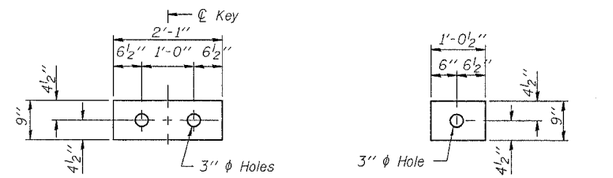
Contract # 64B27



EXP. END
(S. Abut. only)

PLAN
(Span 1 only)

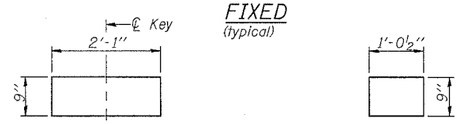
TYP. FIXED END



FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

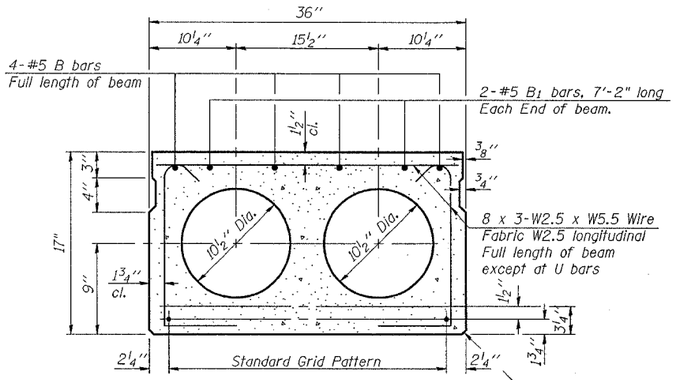
FIXED
(typical)



FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

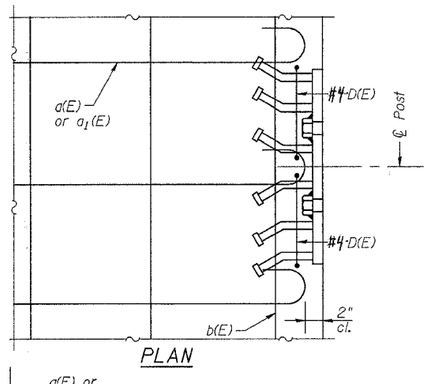
EXPANSION
(S. Abut. only)



SECTION THRU INTERIOR BEAMS

13-1/2 " ϕ Strands. Each Strand Stressed to 30,900 Lbs.
9-Strands 1 3/4" up, 4-Strands 3 1/4" up, 2 strands @ 12" up

Note:
Place strands symmetrically about ℄ of beam.

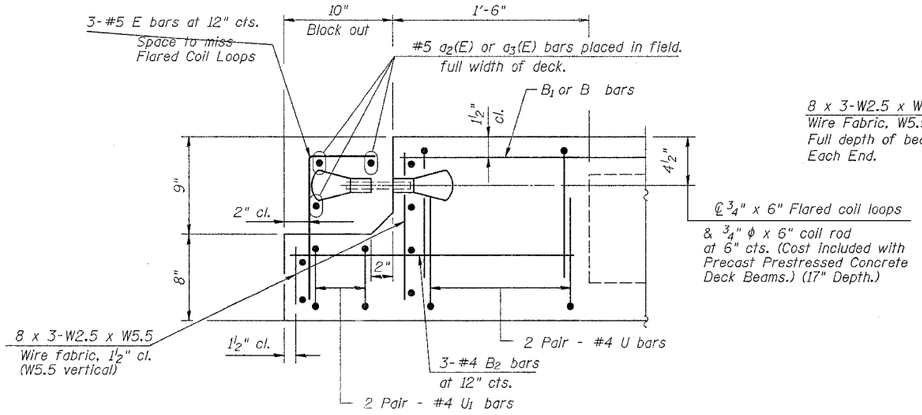


PLAN

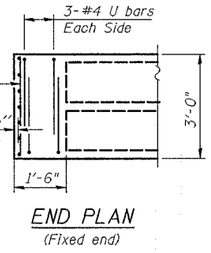
SECTION THRU EXTERIOR BEAMS

See Section Thru Interior Beams (this Sheet) for strand pattern, dimensions and bar call outs.

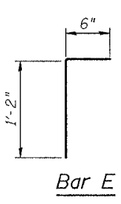
Notes:
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into beam. Drilling into the beam will not be permitted.



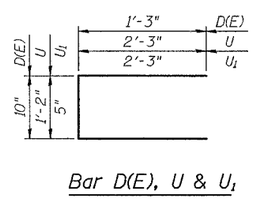
END OF BEAM (EXP. END)
(S. Abut. only)



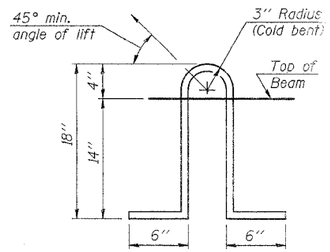
END PLAN
(Fixed end)



Bar E



Bar D(E), U & U1



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 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 2 - 1/2" ϕ-270 ksi strands, as shown.

Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.
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 the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4,000 p.s.i.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specification prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" Depth)	Sq. Ft.	3852

SUPERSTRUCTURE DETAILS-2
IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

DESIGNED	CQW
CHECKED	EMM
DRAWN	CQW
CHECKED	EMM

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

PD-3-S 10-22-04

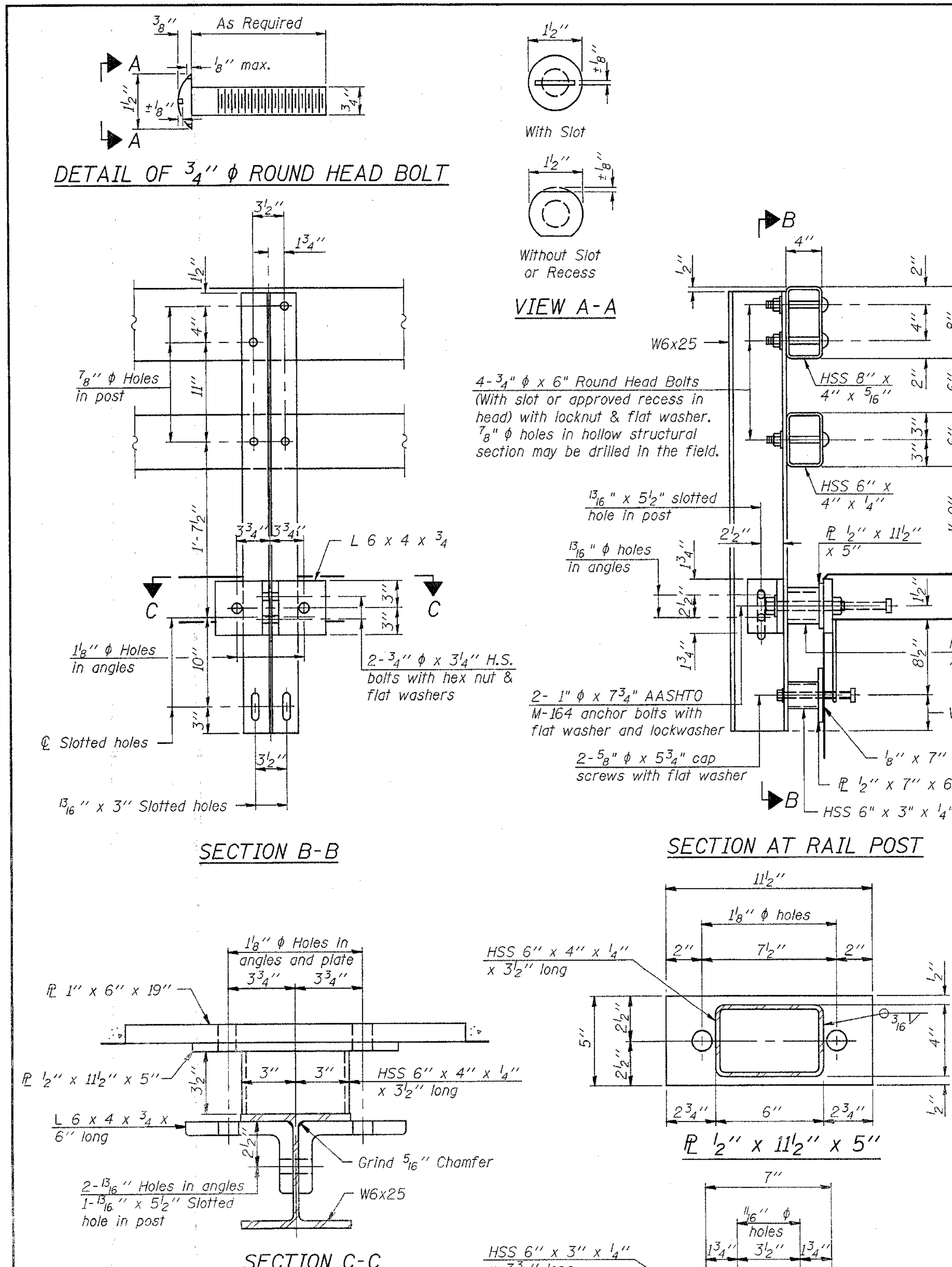
dgn Path: 12/21/2005 10:50:08 AM N:\structural\IL RTE. 78 OVER DAVIS CREEK\SHEETS FILE\DAVISWORK SUPERDETAILS2.dgn

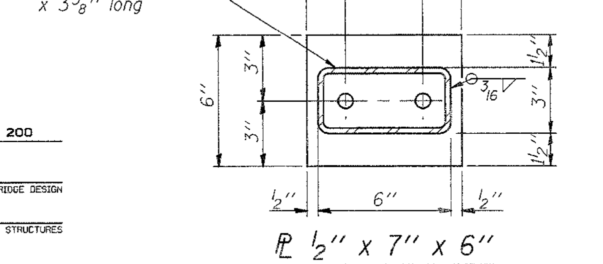
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

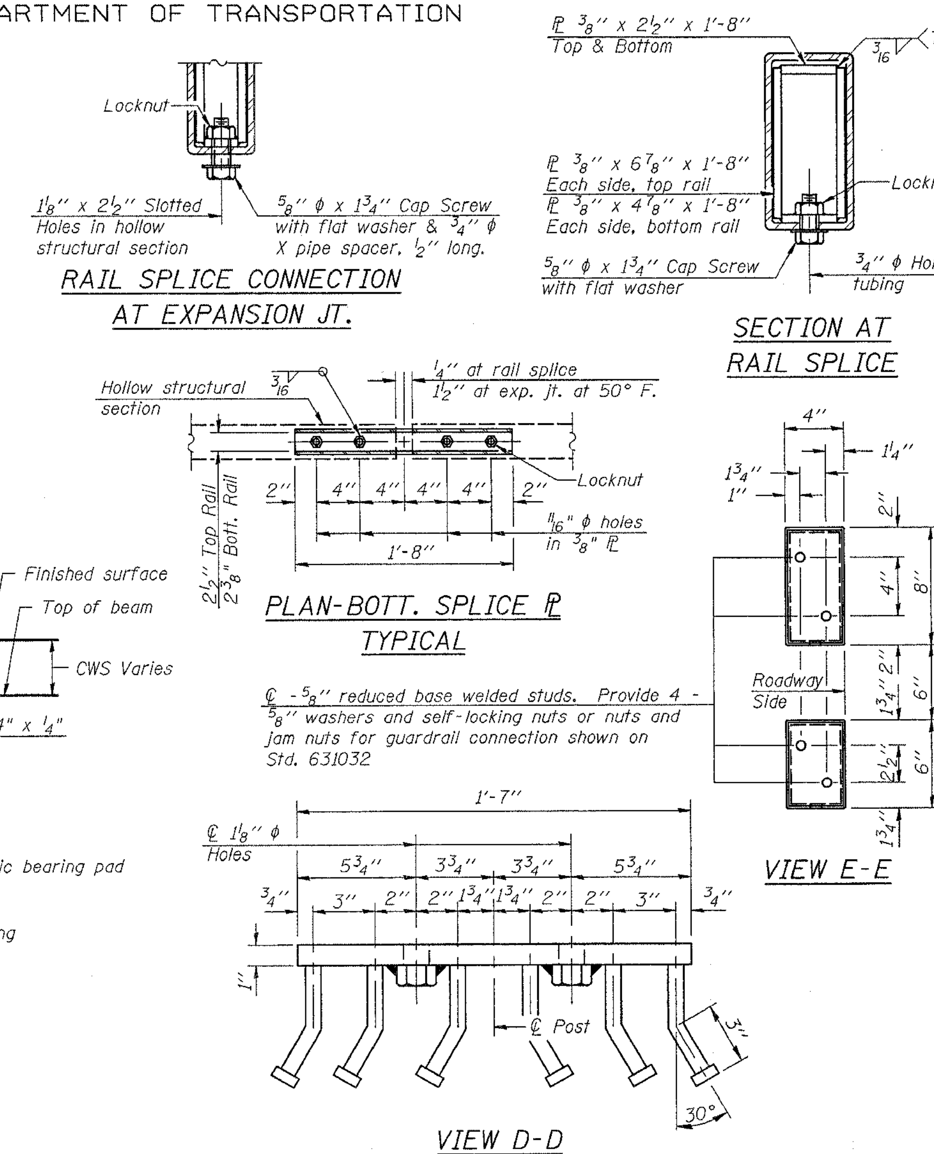
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

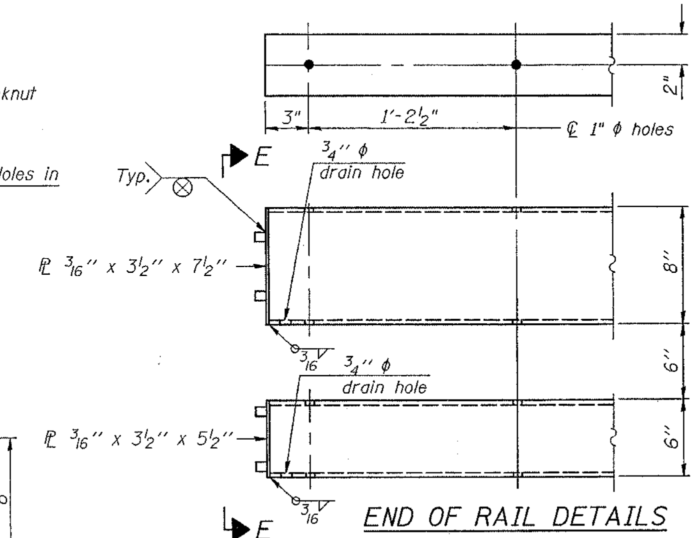
SHEET NO. 6
12 SHEETS

Contract # 64B27









NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements 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 according to AASHTO M 232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

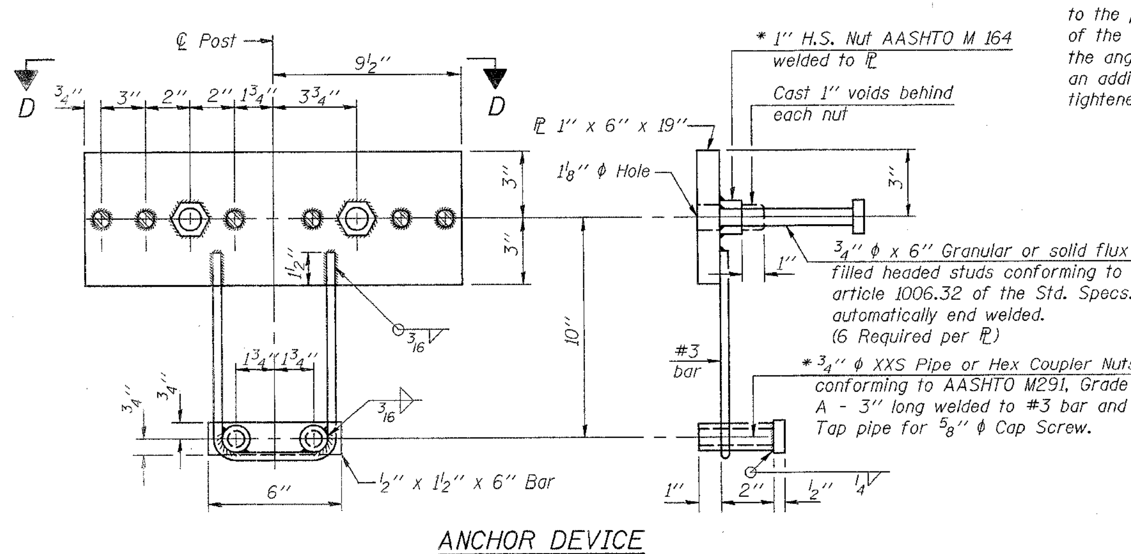
All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient ¼" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

The ¾" ϕ high strength bolts used to connect the 6 x 4 x ¾ angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional ⅛ turn. The ⅝" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	214.5



* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED
WITH CONCRETE WEARING SURFACE

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DESIGNED	CGM
CHECKED	EMM
DRAWN	CGM
CHECKED	EMM

EXAMINED ______ 200__
ENGINEER OF BRIDGE DESIGN
PASSED ______
ENGINEER OF BRIDGES AND STRUCTURES

R-34CWS   10-28-05   (6'-3" Maximum Post Spacing)   (5" minimum to 7⅛" maximum CWS thickness)

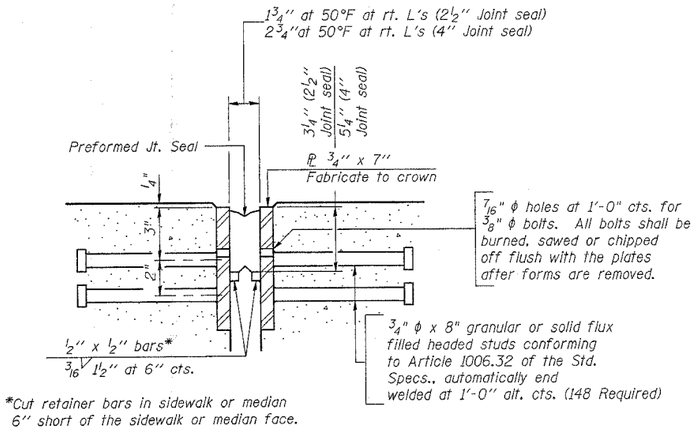
DATE : 12-21-05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
12 SHEETS

Contract # 64B27



*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

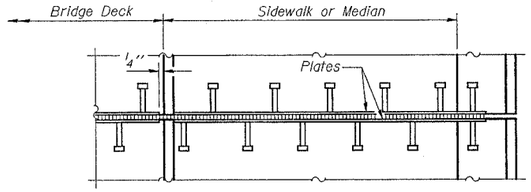
SECTION THRU EXPANSION JOINT

(2½" and 4" joint seals)

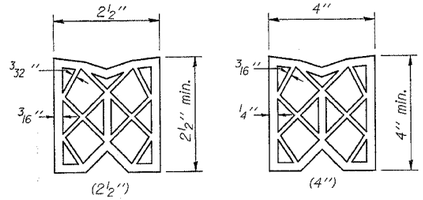
Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2½"	1"
1⅝"	4"	2"

GENERAL NOTES

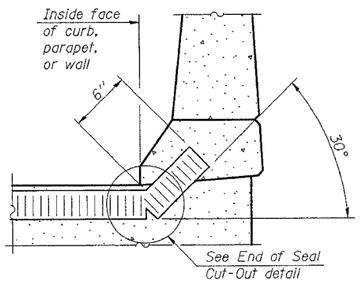
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.



PLAN AT SIDEWALK OR MEDIAN

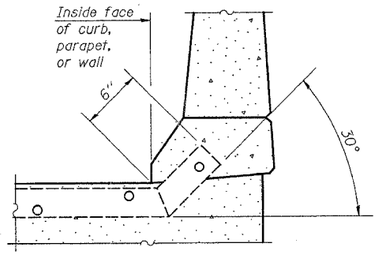


PREFORMED JOINT SEAL



AT CURB, PARAPET, OR WALL

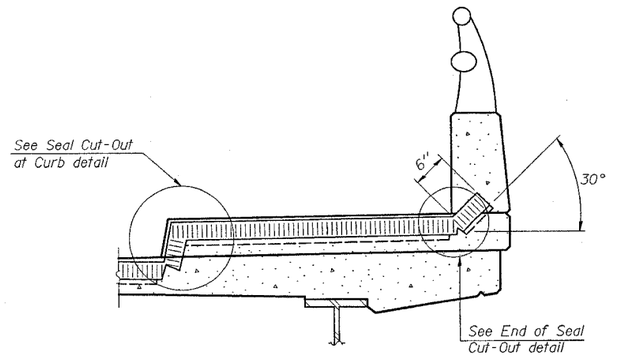
(Showing seal)



AT CURB, PARAPET, OR WALL

(Showing plate)

TYPICAL END TREATMENTS



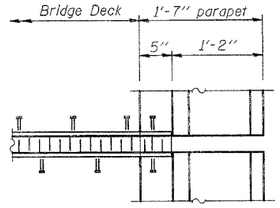
AT SIDEWALK OR MEDIAN*

(Showing plate and seal)

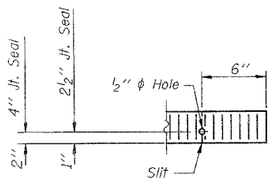
* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

BILL OF MATERIAL

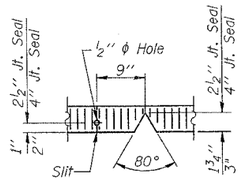
Item	Unit	Total
Bridge Joint System (Expansion) 1⅝"	foot	36



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

(Sheet 1 of 2)

BRIDGE JOINT SYSTEM - EXPANSION (PREFORMED JOINT SEAL)

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

DESIGNED	COM
CHECKED	EMM
DRAWN	COM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

EJ-BJS 10-22-04

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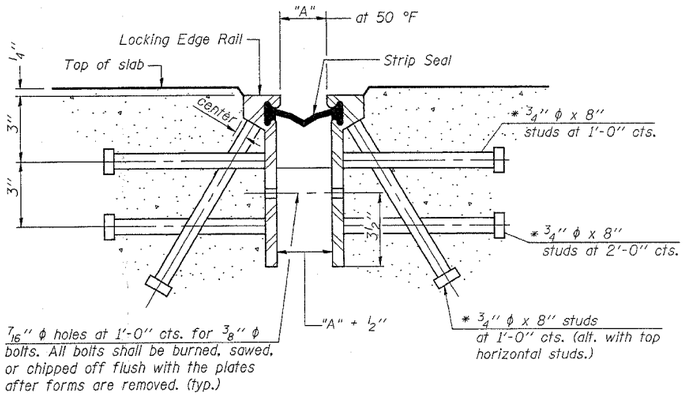
12/23/2005 10:03:49 AM K:\Engineering\IL RTE 78\OVER DAVIS CREEK\SHEETS FILE\DAVIS\STRC\EXPJT.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

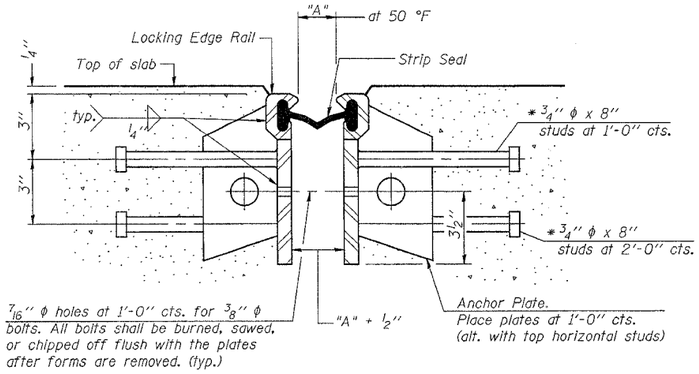
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 8
12 SHEETS

Contract # 64B27



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

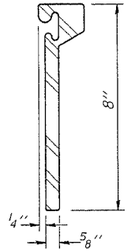
SECTION THRU ROLLED RAIL EXP. JOINT

(186 Studs Required)

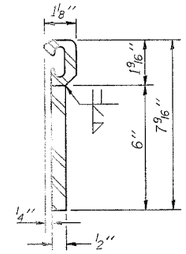
SECTION THRU WELDED RAIL EXP. JOINT

(112 Studs Required)
(74 Anchor Plates Required)

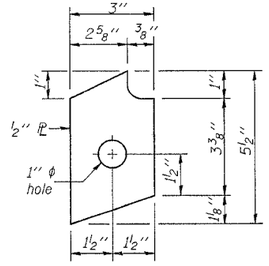
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED (EXTRUDED) RAIL

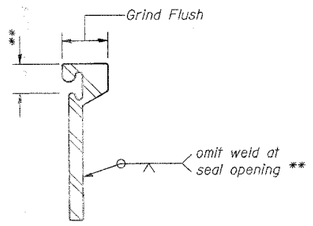


WELDED RAIL



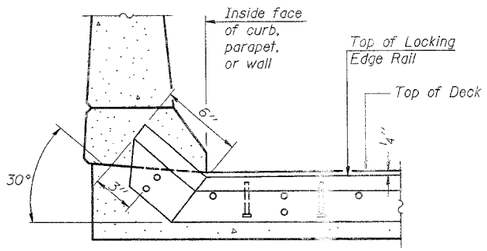
ANCHOR ℄
(for welded rail)

LOCKING EDGE RAILS

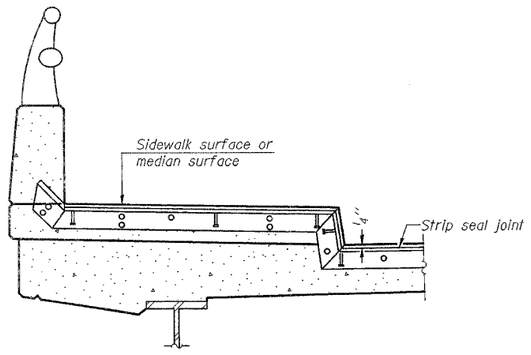


LOCKING EDGE RAIL SPLICE

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



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

DESIGNED	CQM
CHECKED	EMM
DRAWN	CQM
CHECKED	EMM

EJ-BJS 10-22-04

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

(Sheet 2 of 2)

BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE-STRIP SEAL)

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

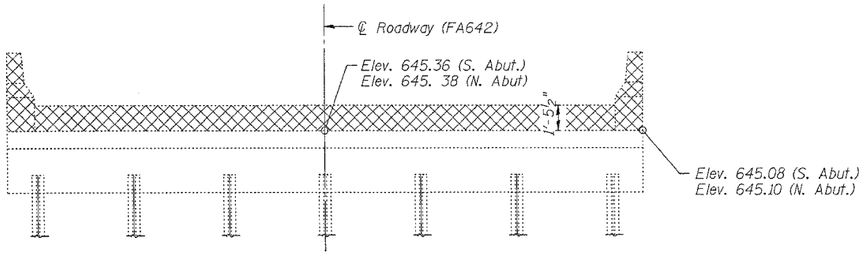
default 12/23/2005 10:48:18 AM K:\structure\ILRTE 78\DAVIS CREEK\SHEETS\ FILE:DAVISVR9DE EXP3T2.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

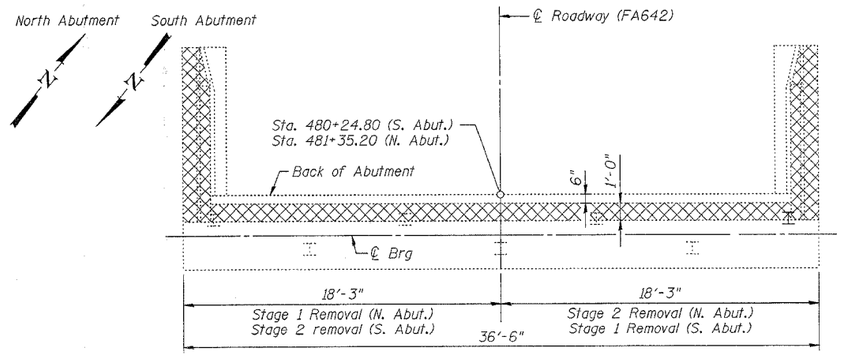
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	10BR-3D & 11BR-8	JO DAVIESS	45	36
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 9
12 SHEETS

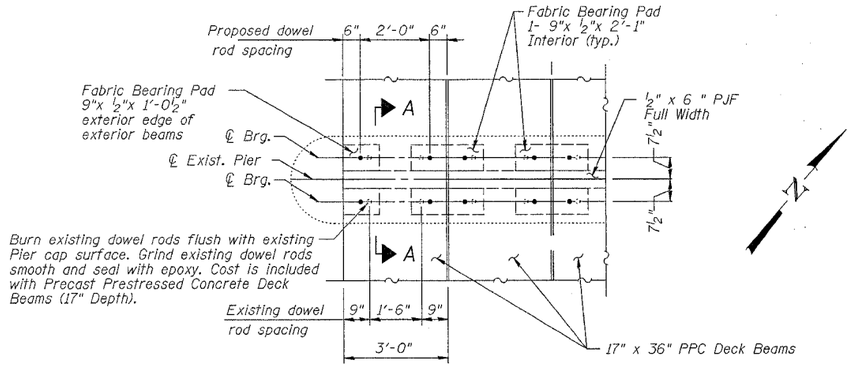
Contract # 64B27



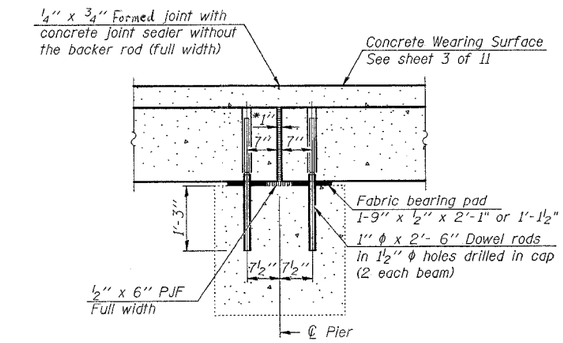
ABUTMENT ELEVATION



ABUTMENT PLAN



PIER TOP PLAN
(Pier 1 & 2)



SECTION A-A

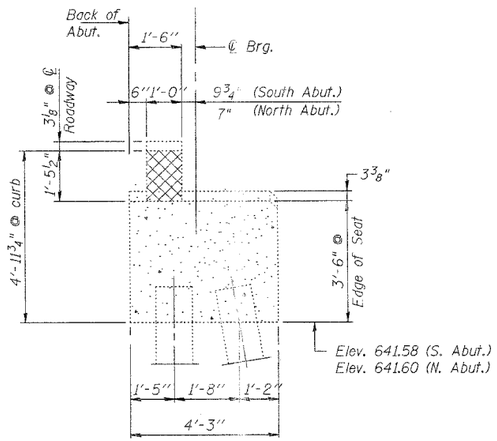
*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

Notes :
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	12.6



SEC. THRU ABUT.

LEGEND

Concrete Removal

DESIGNED	COM
CHECKED	EMM
DRAWN	CQM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

SUBSTRUCTURE CONCRETE REMOVAL
IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

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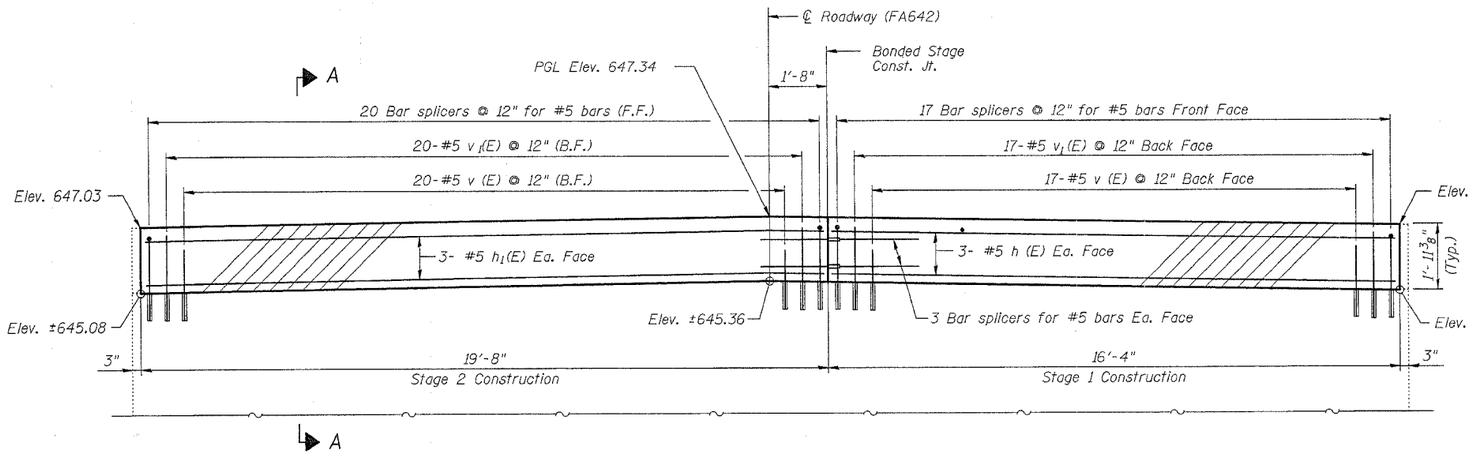
12/23/2005 10:44:45 AM K:\Watershed\IL RTE ...\JO\DAVIS CREEK\SHEETS FILE DAVIS\PROC_SUBCONPRESHEET.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

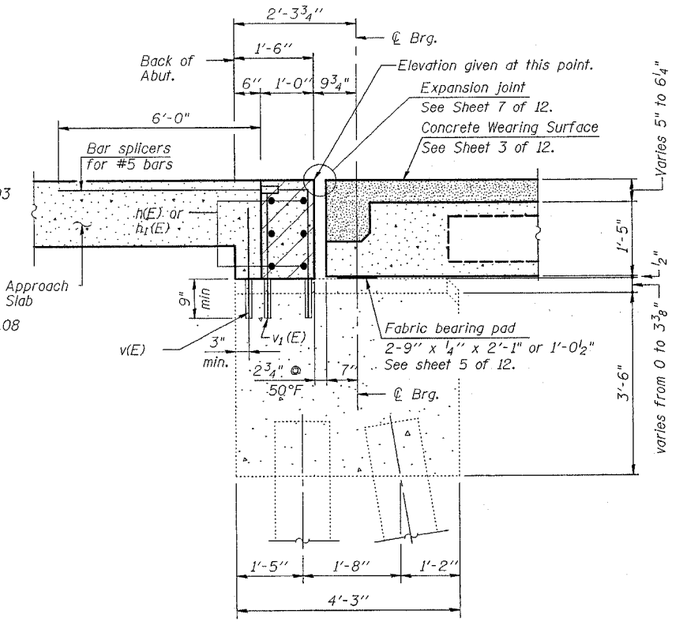
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
12 SHEETS

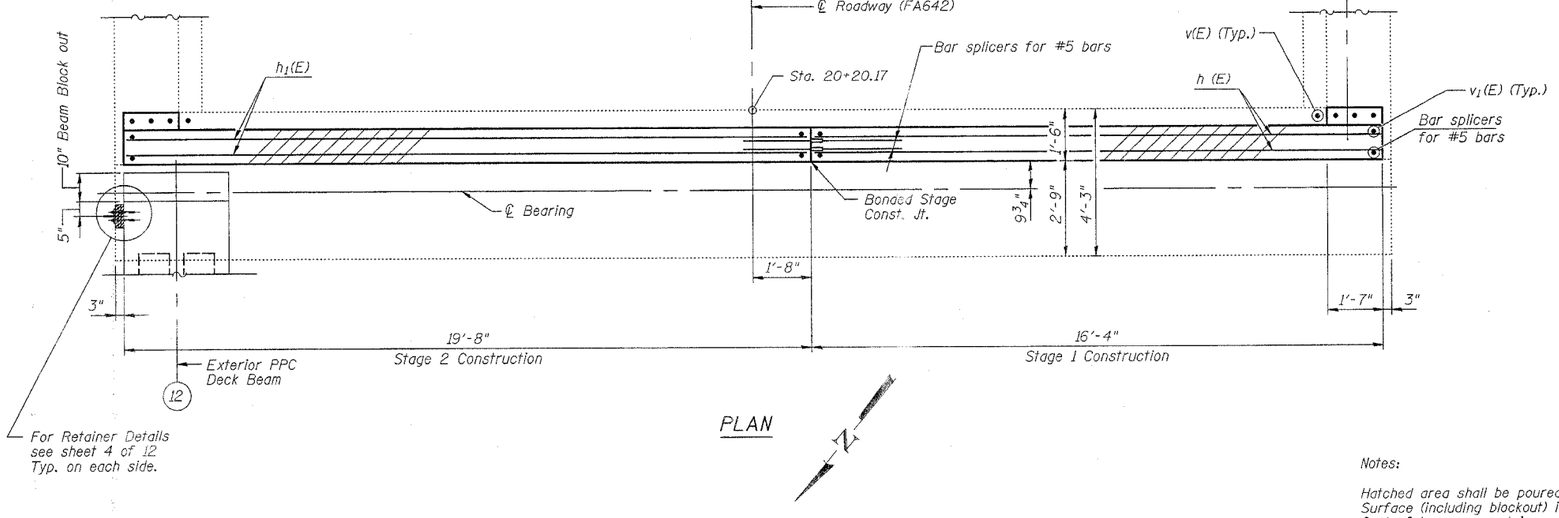
Contract # 64B27



ELEVATION



SEC. A-A



PLAN

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	6	#5	16'-1"	
	h1(E)	6	#5	19'-5"	
*	v(E)	37	#5	2'-3"	
*	v1(E)	37	#5	2'-6"	
	Concrete Structures			Cu. Yd.	2.7
	Reinforcement Bars, Epoxy Coated			Pound	410

Notes:

Hatched area shall be poured after Concrete Wearing Surface (including blockout) is in place and cured.
Cost of temporary retainers, and accessories are included with Precast Prestressed Concrete Deck Beams (17" Depth).

* Epoxy grout Bars v(E), v1(E) and Bar Splicers in 9" min. drilled holes according to Section 584 of the Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	CGM
CHECKED	EMW
DRAWN	CGM
CHECKED	EMM

200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

SOUTH ABUTMENT
IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

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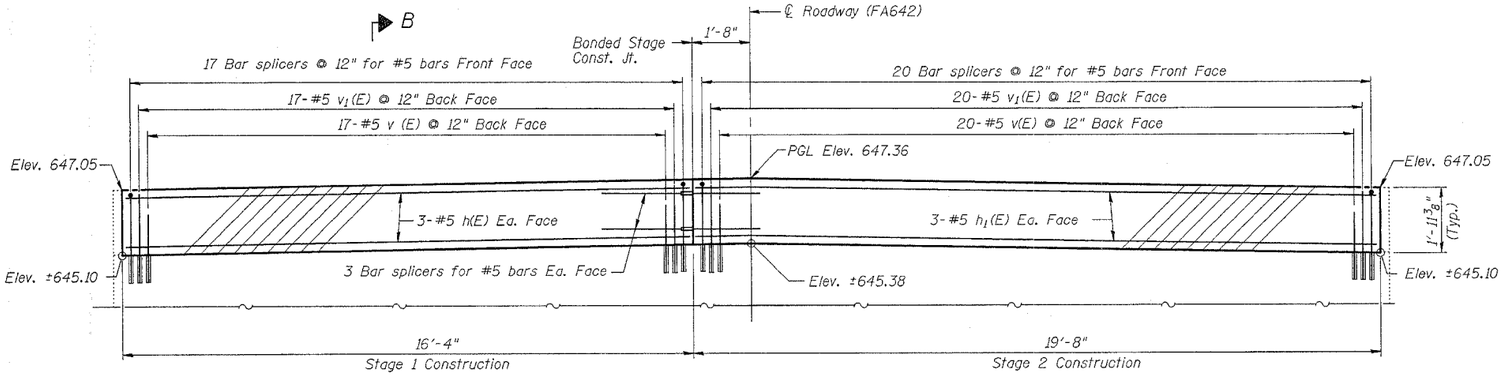
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

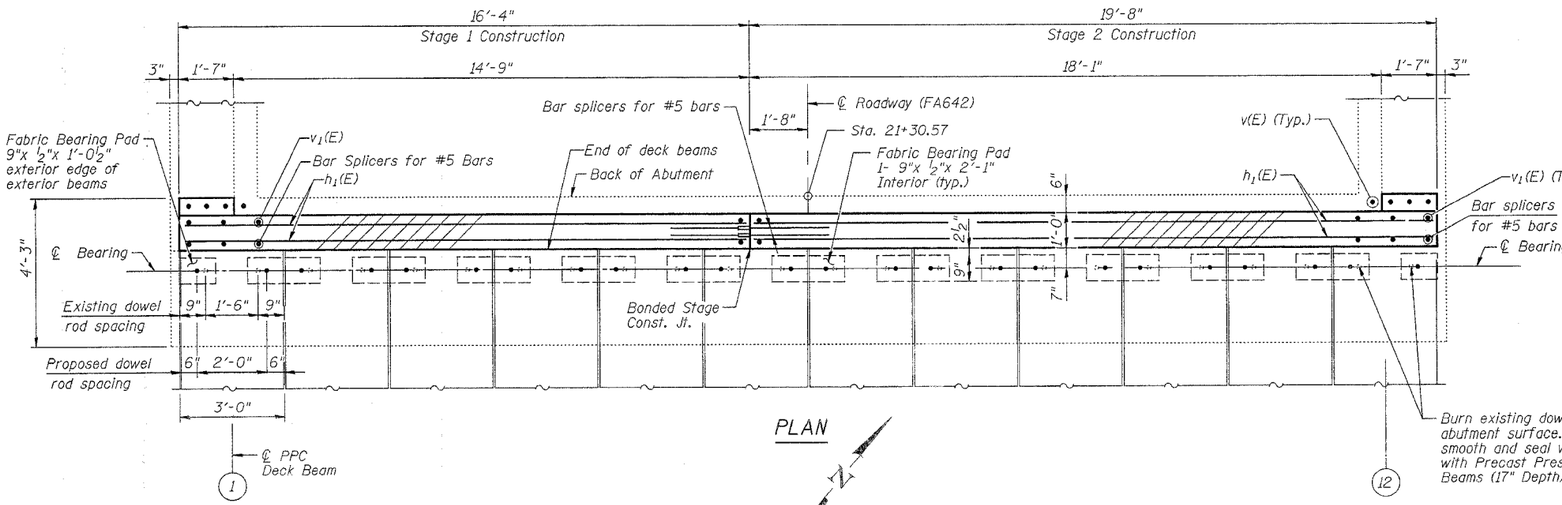
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	38
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11
12 SHEETS

Contract # 64B27



ELEVATION



PLAN

Notes:

Hatched area shall be poured after Concrete Wearing Surface (including blockout) is in place and cured. Cost of temporary retainers, and accessories are included with Precast Prestressed Concrete Deck Beams (17" Depth).

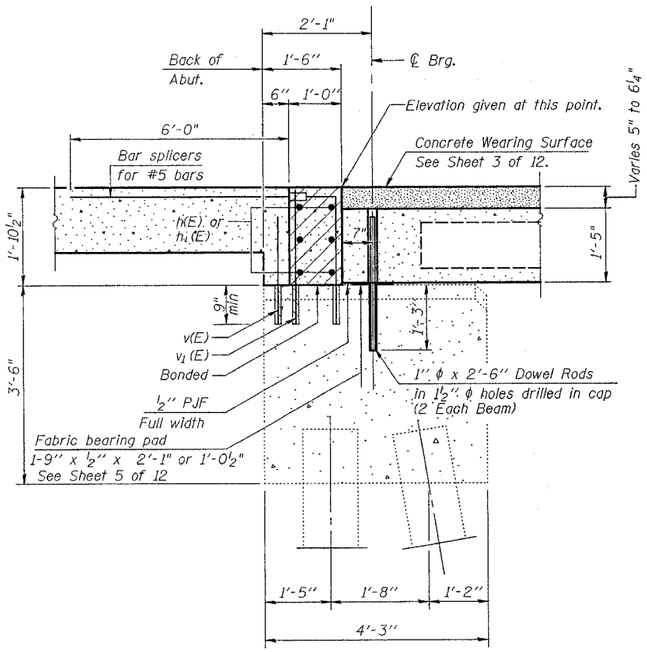
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

* Epoxy grout Bars v(E), v_1(E) and Bar Splicers in 9" min. drilled holes according to Section 584 of the Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

See sheet 5 of 12 for bearing pad details.

Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Precast Prestressed Concrete Deck Beams (17" Depth).



SEC. B-B

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	6	#5	16'-1"	
	h_1(E)	6	#5	19'-5"	
*	v(E)	37	#5	2'-3"	
*	v_1(E)	37	#5	2'-6"	
	Concrete Structures			Cu. Yd.	2.7
	Reinforcement Bars, Epoxy Coated			Pound	410

NORTH ABUTMENT

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

DESIGNED	CQM
CHECKED	EMM
DRAWN	CQM
CHECKED	EMM

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

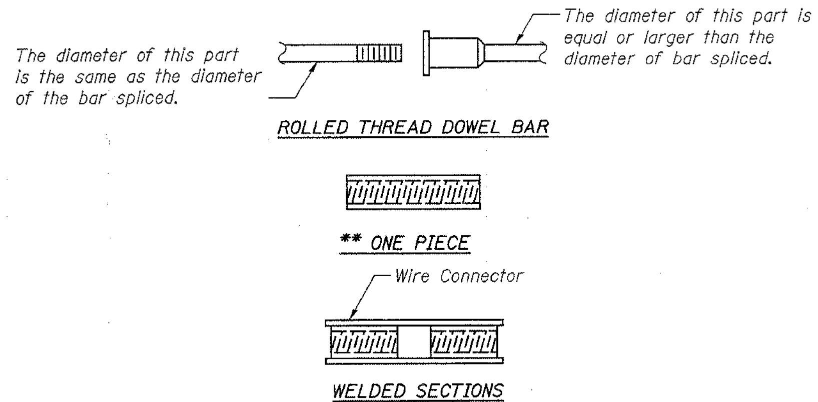
default
12/23/2005
18:56:01
M:\structural\IL RTE 78\OTHER DAVIS CREEK\SHEETS FILE\DAVISSUBC-N ABUTSET.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	(10BR-3)D & 11BR-8	JO DAVIESS	45	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
12 SHEETS

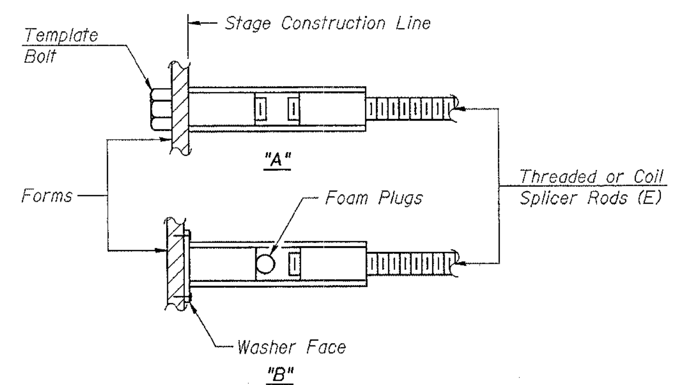
Contract # 64B27

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

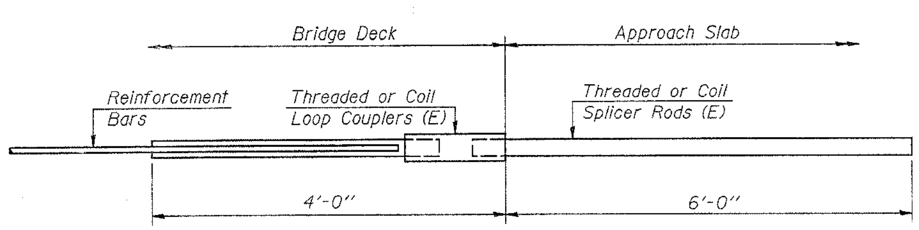
① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

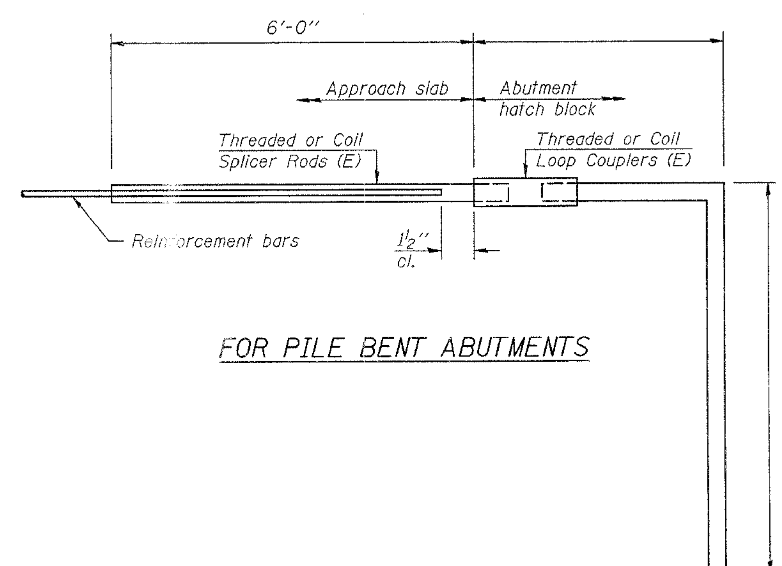
BAR SPLICER ASSEMBLIES			
		Strength Requirements	
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



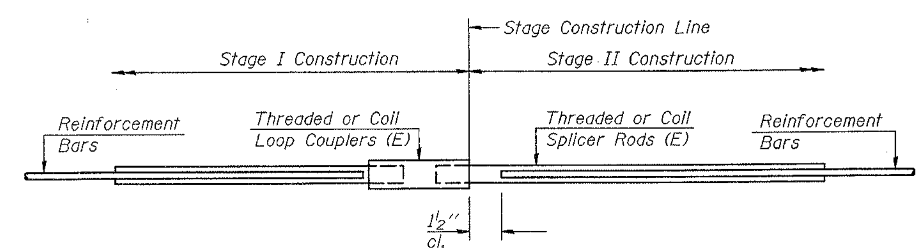
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 74



STANDARD

Bar Size	No. Assemblies Required	Location
#4	108	Deck
#5	3	Deck Bm. Block out
#5	6	South Abutment
#5	6	North Abutment

BAR SPLICER ASSEMBLY DETAILS

IL. RTE. 78 OVER
DAVIS CREEK
F.A. 642 SECTION (10BR-3)D & 11BR-8
JO DAVIESS COUNTY
STA. 20+75.37
STRUCTURE NUMBER 043-0042

DATE : 12-21-05

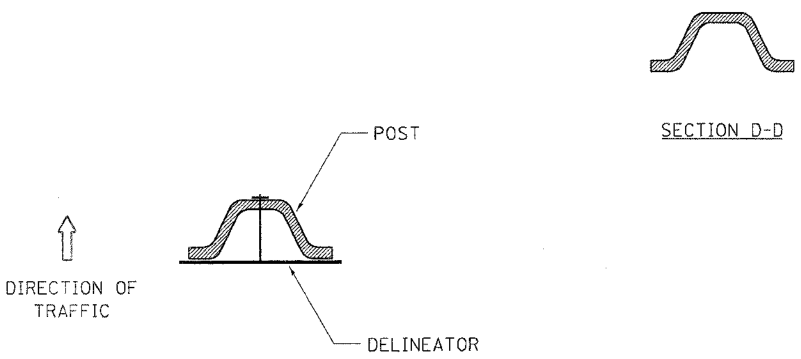
DESIGNED	CQM
CHECKED	EMM
DRAWN	CQM
CHECKED	EMM

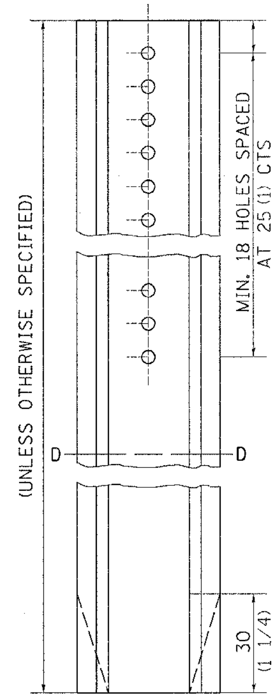
BSD-1 10-22-04

200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

default 12/23/2005

DELINEATOR AND POST ORIENTATION





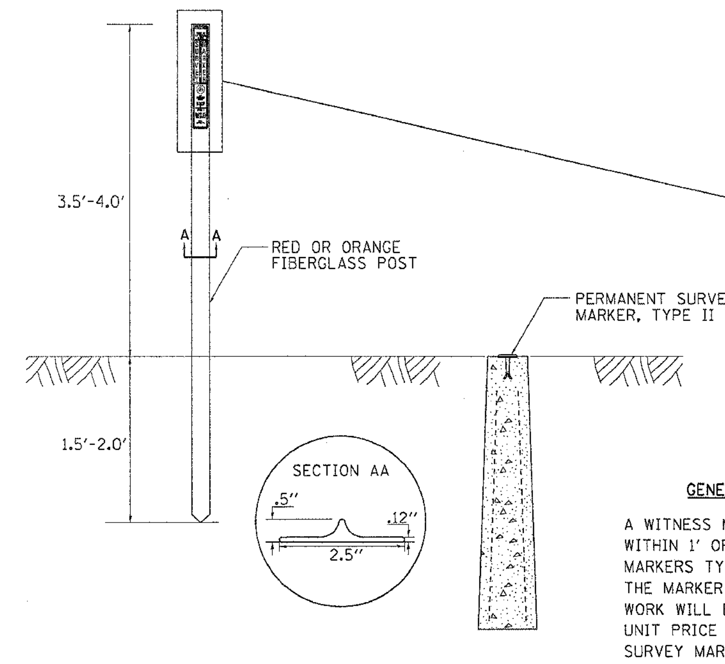
DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHECD AS SHOWN ABOVE.

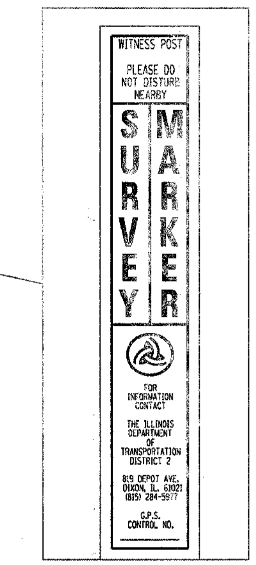
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION 37.4

REVISED 1-31-00

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II





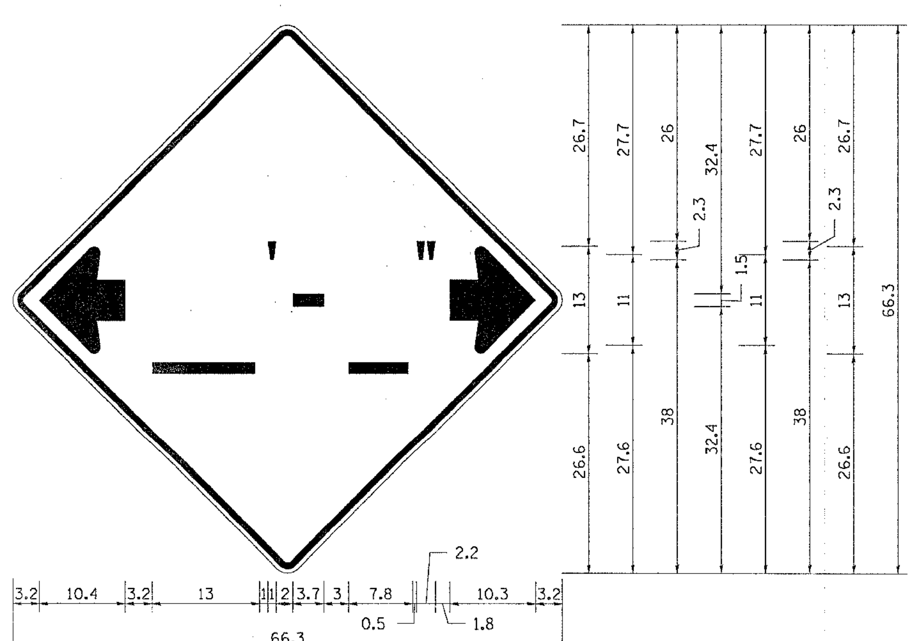
GENERAL NOTES

A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

REVISED 1-31-00

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES

W12-2 - Horizontal Clearance Sign 48.0" across sides, 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange; Standard Arrow Custom 10.4" X 8.1" 180° Black 11 Inch D Series Lettering; Standard Arrow Custom 10.4" X 8.1" 0°

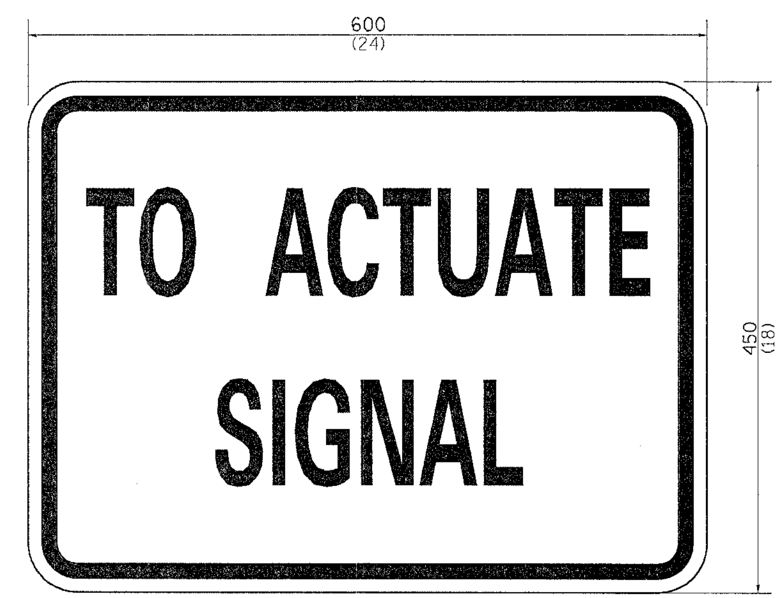
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

REVISED 6-29-05

STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) x 450(18)

100(4) CAPITAL LETTERS - BLACK

13(1/2) BORDER - BLACK

WHITE REFLECTIVE - TYPE B ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STOP LINE SIGN FOR TEMPORARY SIGNALS 99.4

REVISED 8-7-90

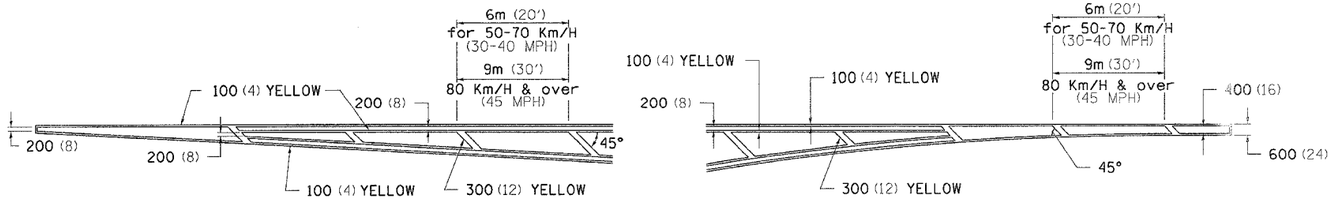
PLOT DATE = Fri Dec 30 2005
FILE NAME = d09005ovr.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

CONTRACT NO. 64B27

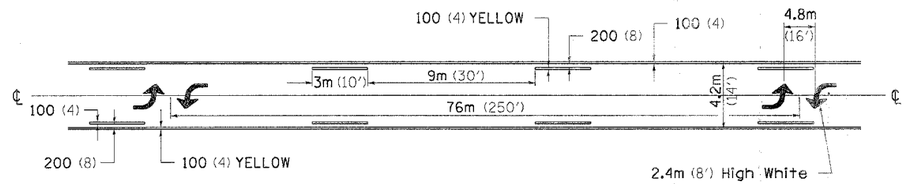
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	(10BR-3)D	JODAVIESS	45	41
STA.	11BR-8	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TYPICAL PAVEMENT MARKINGS

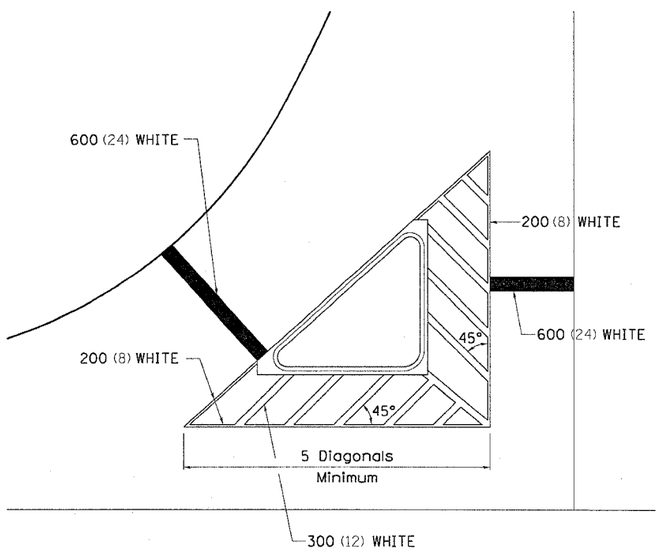
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



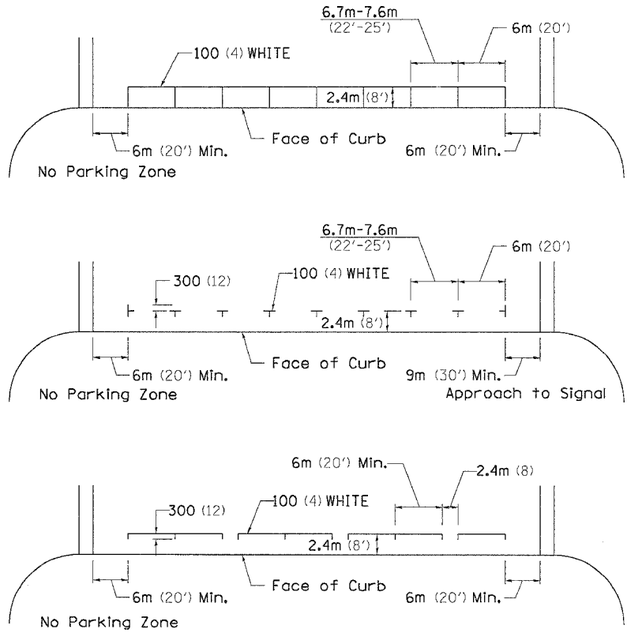
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH



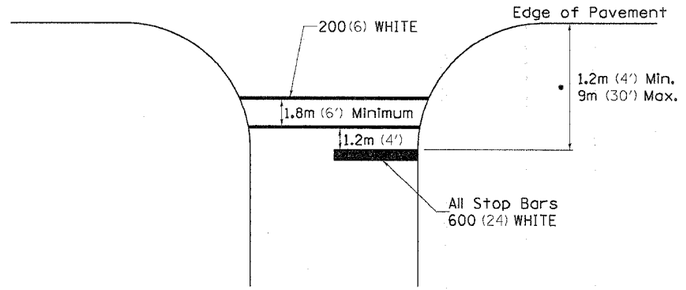
TYPICAL PARKING SPACING



•• ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING

See Schedules for Locations



• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

PLOT DATE = Fri Dec 30 09:02:14 2005
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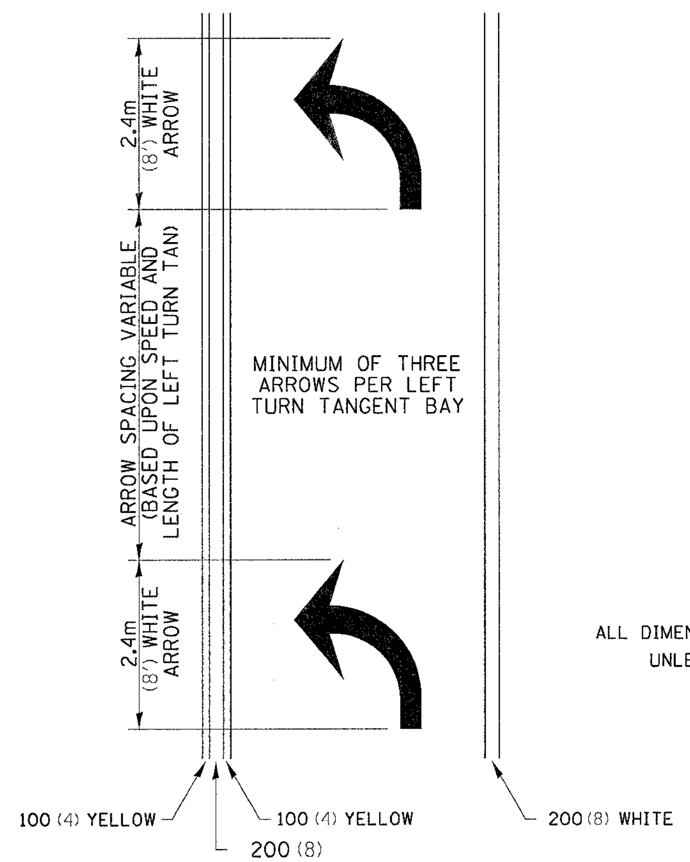
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

TYPICAL PAVEMENT MARKINGS

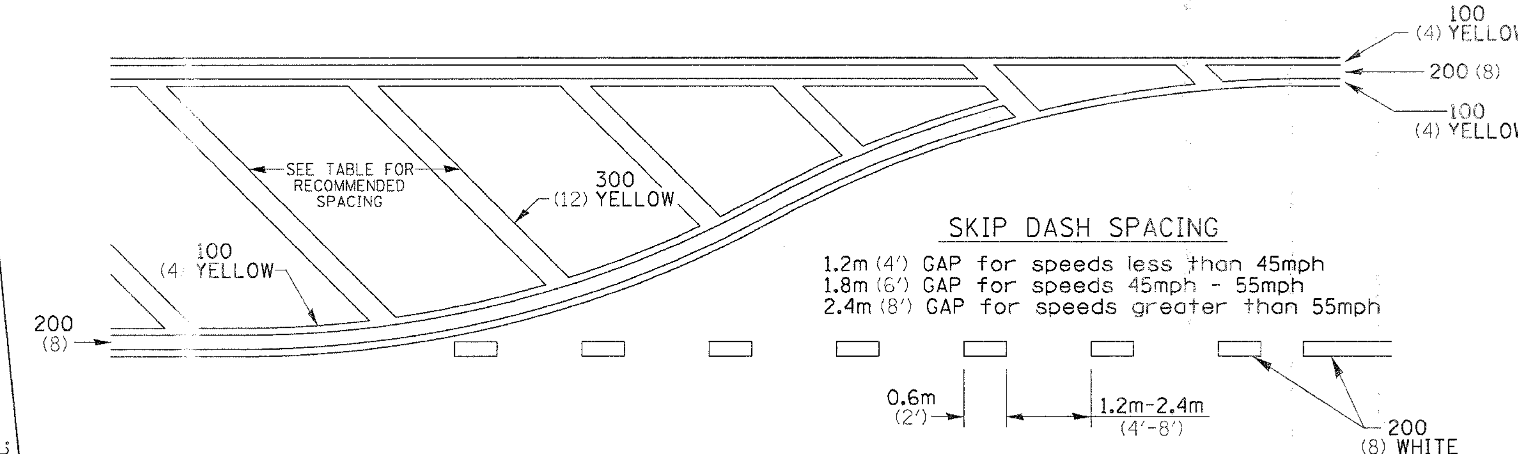
ARROW LAYOUT



◀ ONE-WAY AMBER MARKER
◁ ONE-WAY CRYSTAL MARKER
◆ TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



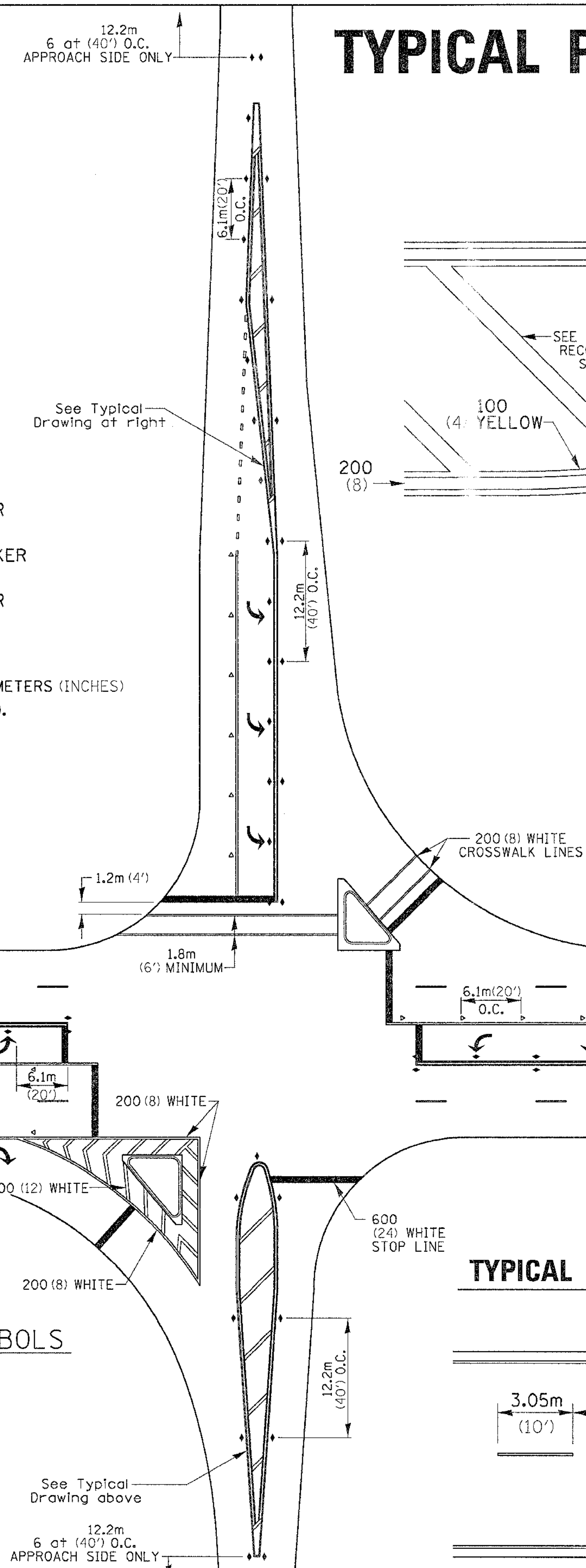
SKIP DASH SPACING

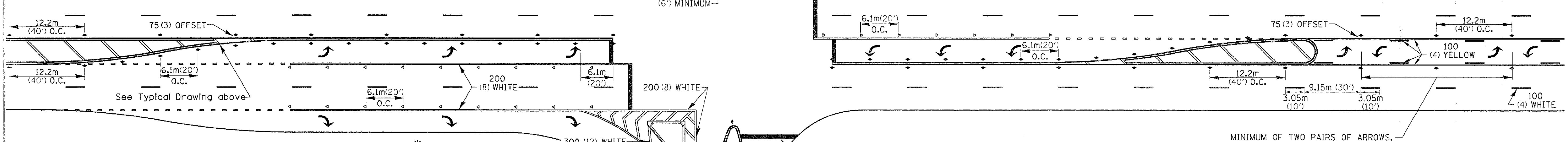
1.2m (4') GAP for speeds less than 45mph
1.8m (6') GAP for speeds 45mph - 55mph
2.4m (8') GAP for speeds greater than 55mph

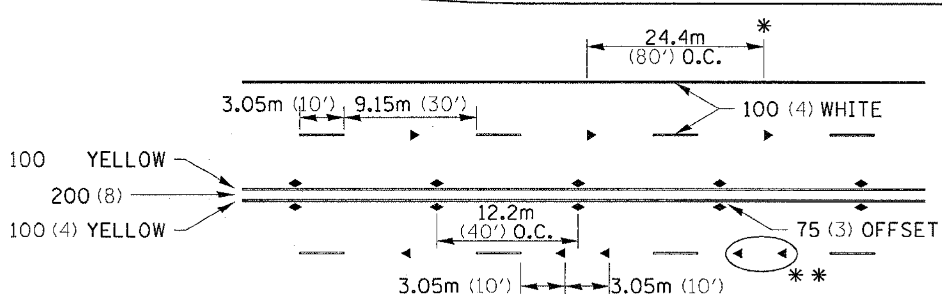
RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

NOTE: If the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.





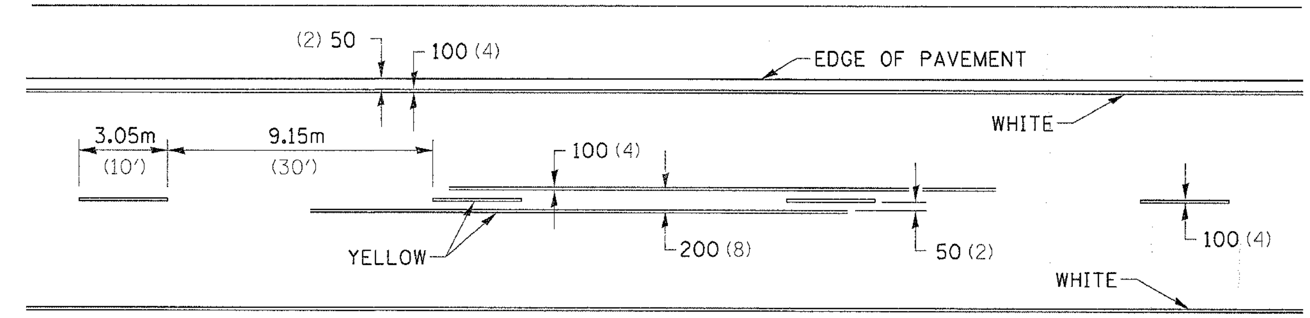


SYMBOLS

* REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.
** USE DOUBLE MARKERS WHEN ADT ≥ 25,000

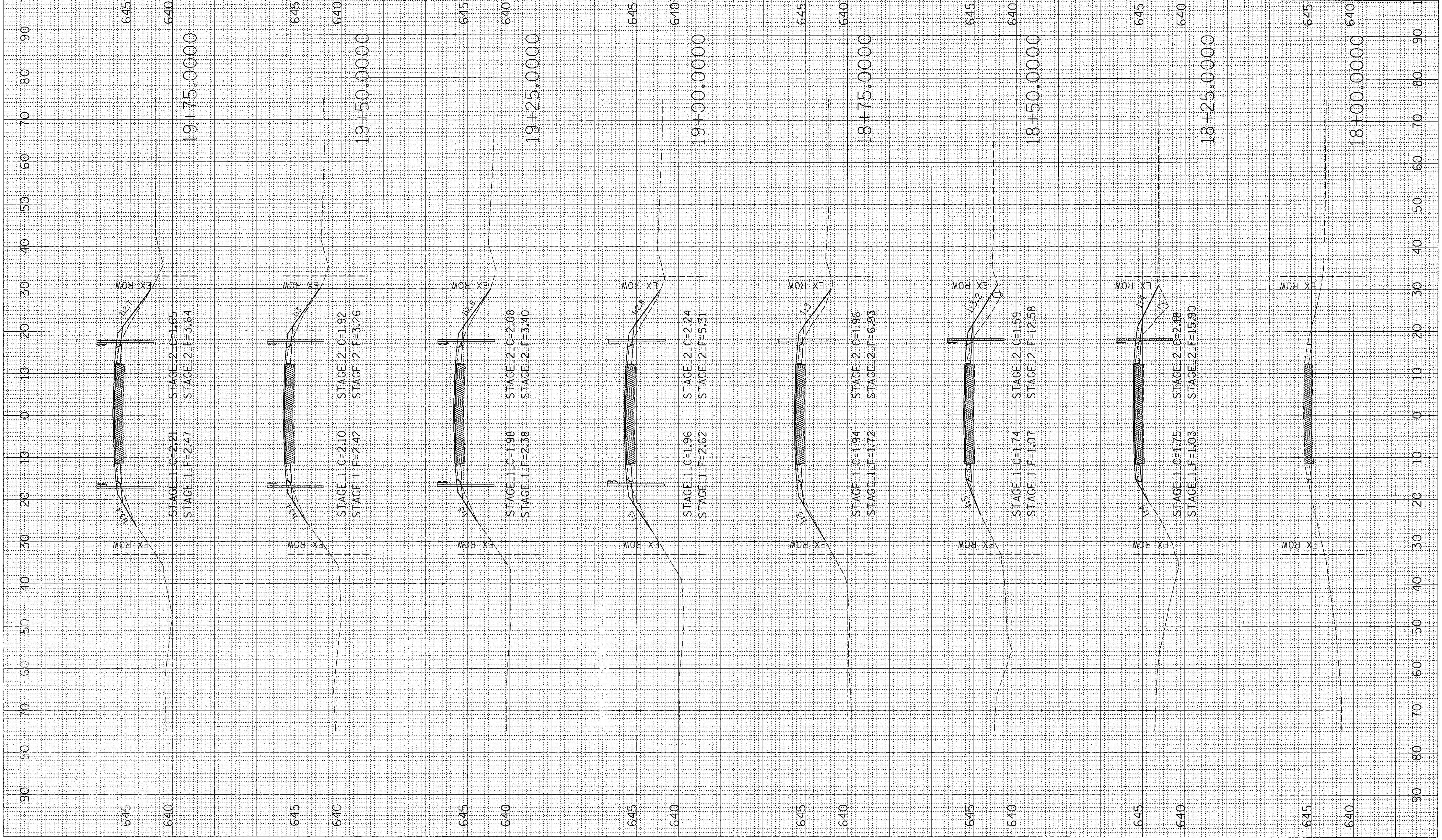
MULTI-LANE / UNDIVIDED

TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



• (10BR-3)D & 11BR-8 CONTRACT NO. 64B27

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	•	JODAVIESS	45	43
STA. 18+00.0000 TO STA. 19+75.0000				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



19+75.0000
STAGE 2 C=1.65
STAGE 2 F=3.64
STAGE 1 C=2.21
STAGE 1 F=2.47
19+50.0000
STAGE 2 C=1.92
STAGE 2 F=3.26
STAGE 1 C=2.10
STAGE 1 F=2.42
19+25.0000
STAGE 2 C=2.08
STAGE 2 F=3.40
STAGE 1 C=1.98
STAGE 1 F=2.38
19+00.0000
STAGE 2 C=2.24
STAGE 2 F=5.31
STAGE 1 C=1.96
STAGE 1 F=2.62
18+75.0000
STAGE 2 C=1.96
STAGE 2 F=6.93
STAGE 1 C=1.94
STAGE 1 F=1.72
18+50.0000
STAGE 2 C=1.59
STAGE 2 F=12.58
STAGE 1 C=1.74
STAGE 1 F=1.07
18+25.0000
STAGE 2 C=2.18
STAGE 2 F=15.90
STAGE 1 C=1.75
STAGE 1 F=1.03
18+00.0000
EX ROW
645
640

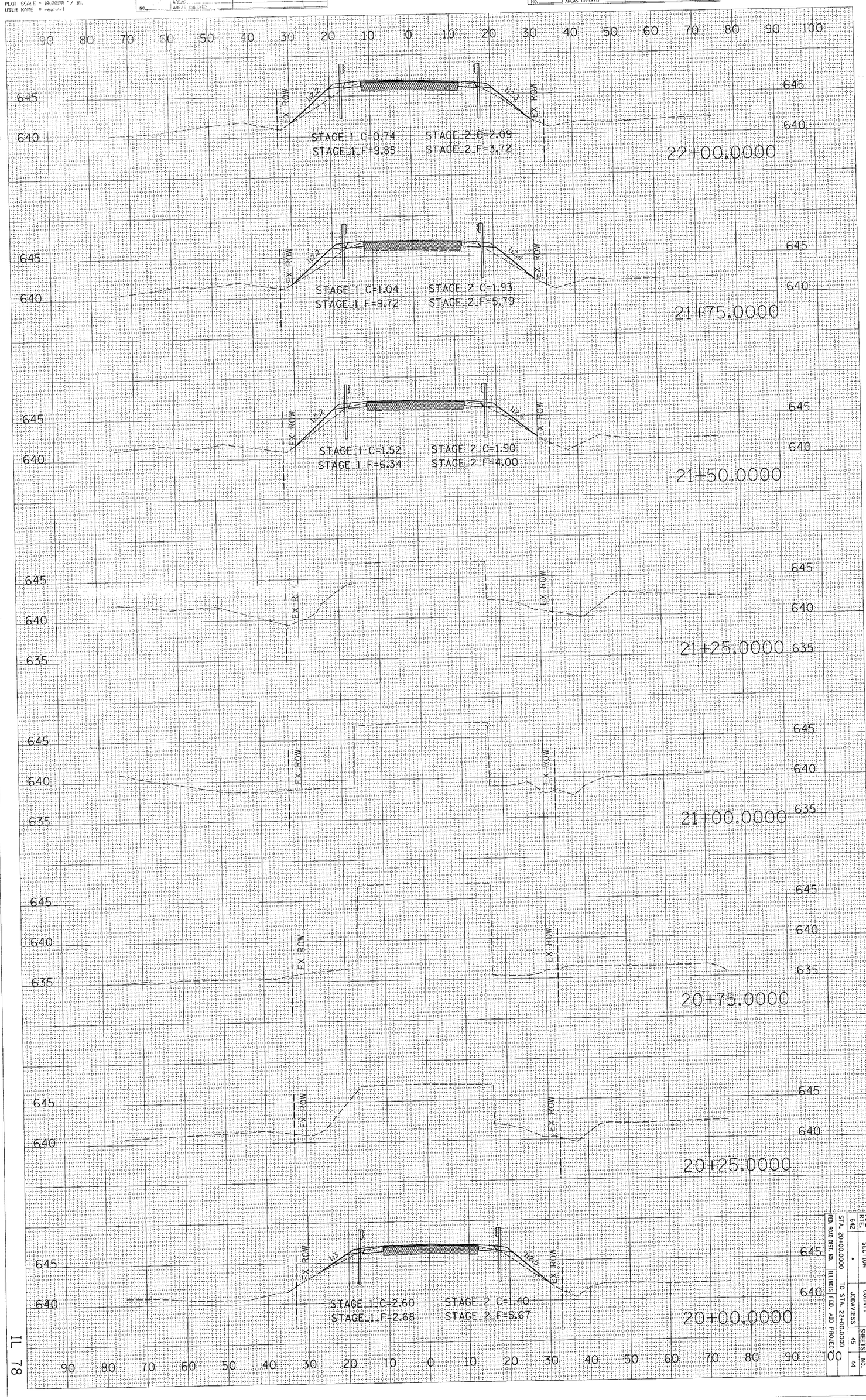
FINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

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

PLOT DATE = Fri Dec 30 09:02:45 2005
FILE NAME = c:\projects\p201025\d88025xml.dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = reynori

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

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



FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	F.A.P. RTE. 642	SECTION *	COUNTY JODAVIESS	TOTAL SHEETS 45	SHEET NO. 44
STA. 20+00.0000		TO STA. 22+00.0000					

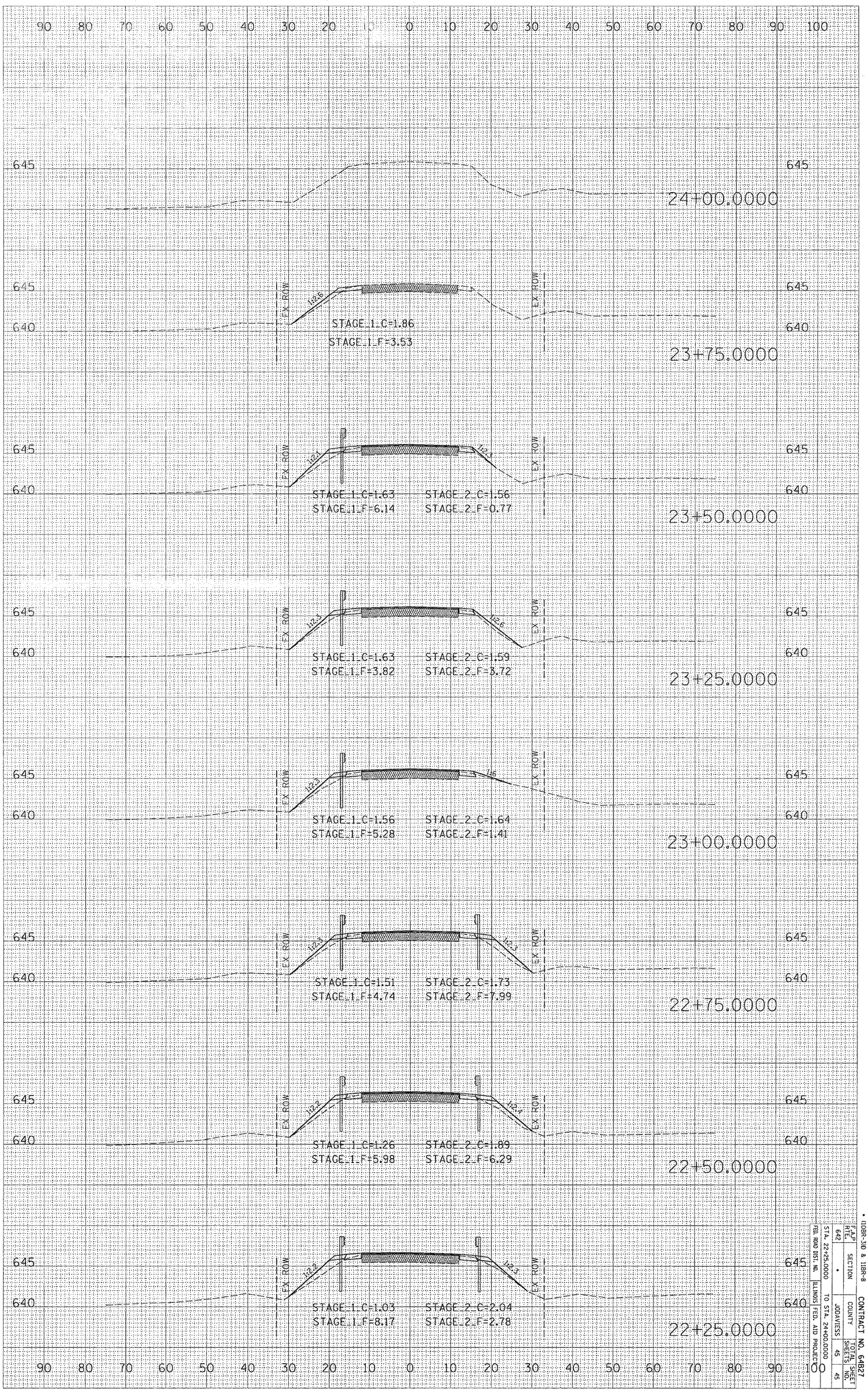
• (108R-3D & 118R-8 CONTRACT NO. 64827

IL 78

PLOT DATE = Fri Dec 30 09:02:46 2005
FILE NAME = c:\projects\p2005\05\d2405sht1.dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = reynarl

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

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



• (10BR-3D & 10BR-8

CONTRACT NO. 64B27

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	•	JODAVIESS	45	45

STA. 22+25.0000 TO STA. 24+00.0000
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

IL 78