

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	111BR-1 & 111BR-2	POPE	69	1
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 78033	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

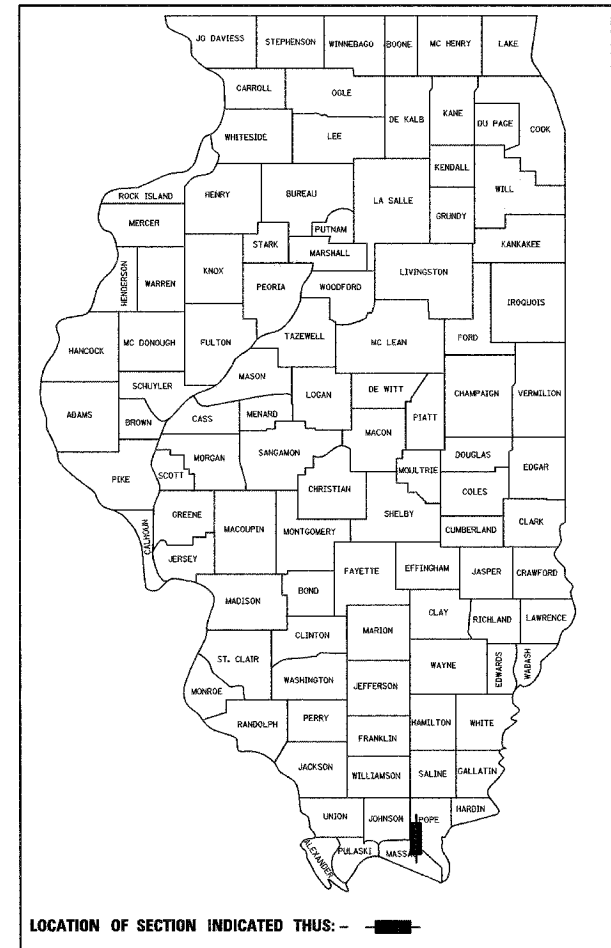
FAP ROUTE 885 (IL ROUTE 146)  
SECTIONS 111BR-1, 111BR-2  
PROJECT: BHF-0885(039)  
POPE COUNTY

C-99-013-08

PPC DECK BEAM SUPERSTRUCTURE REPLACEMENTS  
OVER SUGAR CREEK AND ROOT LICK BRANCH

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

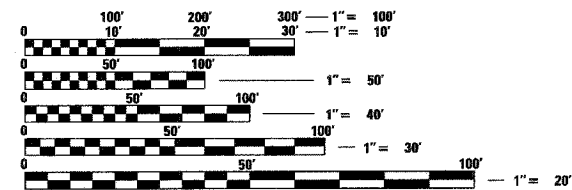
D-99-013-08



LOCATION OF SECTION INDICATED THIS: - ■ -

FAP ROUTE 885  
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (NON-URBAN)  
DESIGN SPEED: 55 MPH  
POSTED SPEED: 55 MPH  
ADT: 1,290 (2007), 2,160 (2007)  
PV: 84%, 84%  
TRUCKS: 16%, 16%

**DESIGN DESIGNATION  
N.A.**



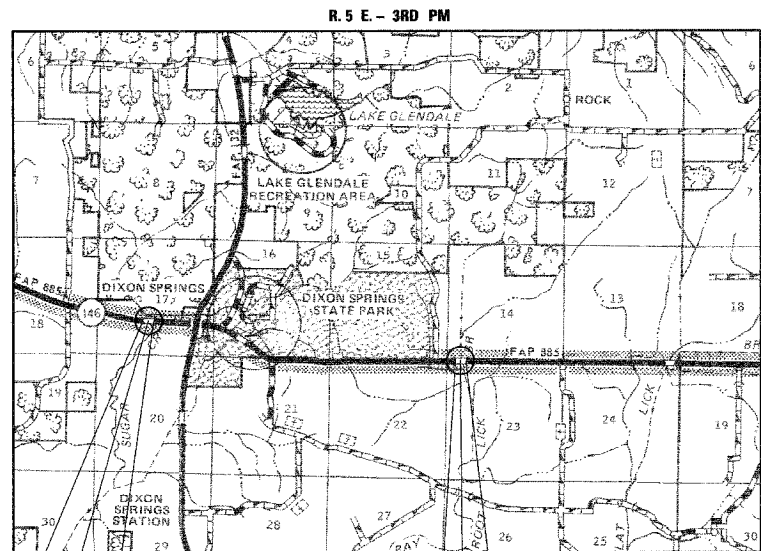
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

DISTRICT 9 NO. (618) 549-2171  
PROJECT ENGINEER: DAVID PICHE

TOWNSHIPS: WEBSTER AND COLUMBUS

CONTRACT NO. 78033



SECTION 111BR-1 BEGINS  
STATION 669+45.00

SECTION 111BR-1  
S.N. 076-0006  
STATION 671+76.00  
REMOVAL AND REPLACEMENT OF  
EXISTING SUPERSTRUCTURE  
OF A TWO SPAN BRIDGE  
91'-8" BK. TO BK. ABUTMENTS

SECTION 111BR-1 ENDS  
STATION 674+15.00

SECTION 111BR-2 ENDS  
STATION 819+90.00

SECTION 111BR-2  
S.N. 076-0008  
STATION 818+03.50  
REMOVAL AND REPLACEMENT OF  
EXISTING SUPERSTRUCTURE  
OF A SINGLE SPAN BRIDGE  
44'-9" BK. TO BK. ABUTMENTS

SECTION 111BR-2 BEGINS  
STATION 816+05.00

**LOCATION MAPS**

TOTAL LENGTH OF SECTION & PROJECT = 855.00 FEET = 0.162 MILES  
NET LENGTH OF SECTION & PROJECT = 855.00 FEET = 0.162 MILES



*David W. Petermeier 4/23/08*  
DAVID W. PETERMEIER  
EDWARDSVILLE, ILLINOIS  
ENGINEER NO. 062-052553  
EXPIRES NOV. 30, 2009



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED May 1, 2008  
Man C. Ramie  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 27, 2008  
Eria E. Harms  
Interim ENGINEER OF DESIGN AND ENVIRONMENT

June 27, 2008  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

APRIL 2008

**GENERAL NOTES:**

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES. ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.

TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.

AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS. FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

		BITUMINOUS MATERIALS:	
ALL HOT MIX ASPHALT	2.016 TONS/CU.YD.	ON PAVEMENT	0.09 GAL./SQ.YD.
ALL AGGREGATE	2.05 TONS/CU.YD.	INTERMEDIATE LIFTS (FOG COAT)	0.04 GAL./SQ.YD.
AGGREGATE (PRIME COAT)	0.0015 TONS/SQ.YD.	ON AGGREGATE SURFACE	0.32 GAL./SQ.YD.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.17 REGARDLESS IF TRACK MOUNTED OR WHEELED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED.

ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDDED WILL BE DETERMINED BY THE ENGINEER.

ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 1-800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.

TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 300 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHALL APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

WHILE SIGNAL HEADS ARE MOUNTED IN PLACE, BUT NOT YET IN OPERATION, THEY SHALL BE SECURELY COVERED IN WHITE PLASTIC.

THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHALL BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED OR AS NOTED IN THE PLANS. TEMPORARY EDGE LINES SHALL BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE RAILING. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

"NARROW BRIDGE" SIGNS WITH ADVISORY TAGS "11 FT 0 IN" STAGE I AND "10 FT 6 IN" STAGE II SHALL BE ERECTED BETWEEN THE ROAD CONSTRUCTION AHEAD AND THE SIGNAL AHEAD SIGNS. THIS WORK SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION FOR THE INITIAL OPENING OF THE COMPLETED STRUCTURE TO TWO LANE TRAFFIC. THE QUANTITY OF TEMPORARY PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION FOR STAGE I AND STAGE II CONSTRUCTION.

PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS, THE ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

COMMITMENTS:  
NONE AS OF MAY 9, 2008



FILE NAME =	USER NAME = #USER#	DESIGNED - JMH	REVISED -
*FILEL#		DRAWN - AEC	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JMH	REVISED -
	PLOT DATE = #DATE#	DATE - 04/22/08	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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5	FAP ROUTE 885 (IL 146) SCHEDULE OF QUANTITIES
6	FAP ROUTE 885 (IL 146) PLAN AND PROFILE
7	FAP ROUTE 885 (IL 146) STAGE I CONSTRUCTION
8	FAP ROUTE 885 (IL 146) STAGE II CONSTRUCTION
9	FAP ROUTE 885 (IL 146) WIDE LOAD DETOUR
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21	EXPANSION JOINT AND SIDE RETAINER DETAILS
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**LIST OF ILLINOIS DOT HIGHWAY STANDARDS**

STANDARD NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-04	TEMPORARY EROSION CONTROL SYSTEM
420001-07	PAVEMENT JOINTS
515001-02	NAME PLATE FOR BRIDGES
630001-07	STEEL PLATE BEAM GUARDRAIL
631032-03	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
701006-02	OFF-RD OPERATIONS, 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701011-01	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-09	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

PREPARED BY: *Joe Zdanewicz*  
DISTRICT STUDIES & PLANNING ENGINEER

EXAMINED BY: *James Lewis Emery*  
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: *Carrie Nelson*  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: *Kevin Hammer*  
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: *Joseph Lynn*  
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: *Bruce W. Peoples*  
DISTRICT MATERIALS ENGINEER

EXAMINED BY: *John Amos*  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: *Danah D. Dantzer*  
ASSISTANT REGIONAL ENGINEER

APPROVED BY: *May C. Lami*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

DATE: *May 1* 20 *08*

SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
885	111BR-1 & 111BR-2	POPE	69	2	
CONTRACT NO. 78033					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES				POPE COUNTY	POPE COUNTY
				F.A.P. 885	F.A.P. 885
				S.N. 076-0006	S.N. 076-0008
				HBP FUNDING 80% FEDERAL 20% STATE	HBP FUNDING 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE X080-2A	CONSTRUCTION TYPE CODE X080-2A
20200500	EARTH EXCAVATION (WIDENING)	CU YD	108	56	52
25000210	SEEDING, CLASS 2A	ACRE	0.16	0.08	0.08
25000350	SEEDING, CLASS 7	ACRE	0.16	0.08	0.08
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	14.4	7.2	7.2
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	14.4	7.2	7.2
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	14.4	7.2	7.2
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.32	0.16	0.16
25100115	MULCH, METHOD 2	ACRE	0.32	0.16	0.16
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	32	16	16
28000400	PERIMETER EROSION BARRIER	FOOT	1,538	778	760
35300500	PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	40	20	20
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	440	228	212
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	193	105	88
40600300	AGGREGATE (PRIME COAT)	TON	1.4	0.8	0.6
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	476	303	173
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	101.8	64.2	37.6
44000100	PAVEMENT REMOVAL	SQ YD	40	20	20
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	1	1
50300225	CONCRETE STRUCTURES	CU YD	2.6	2.6	0
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	598	299	299
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,422	0	1,422
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	2,921	2,921	0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	360	360	0
50800515	BAR SPLICERS	EACH	6	6	0
50901050	STEEL RAILING, TYPE SM	FOOT	425	258	167
51500100	NAME PLATES	EACH	2	1	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	58	58	0
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	525	352	173
58700300	CONCRETE SEALER	SQ FT	26	26	0

SUMMARY OF QUANTITIES				POPE COUNTY	POPE COUNTY
				F.A.P. 885	F.A.P. 885
				S.N. 076-0006	S.N. 076-0008
				HBP FUNDING 80% FEDERAL 20% STATE	HBP FUNDING 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE X080-2A	CONSTRUCTION TYPE CODE X080-2A
59000200	EPOXY CRACK INJECTION	FOOT	37	31	6
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	4	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	2	2
63200310	GUARDRAIL REMOVAL	FOOT	360	180	180
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	3
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20	10	10
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	9	3	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	6	6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	151	80	71
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5,314	2,674	2,640
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1,822	918	904
70400100	TEMPORARY CONCRETE BARRIER	FOOT	837.5	462.5	375
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	837.5	462.5	375
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2,614	1,236	1,378
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8	4	4
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	8	4	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	471	248	223
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	5	3	2
86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	2	1	1
X0324744	REMOVAL OF EXISTING PRECAST CONCRETE UNITS	SQ FT	598	299	299
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	26	26	0
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	52	52	0
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2



FILE NAME =  
#FILE#

USER NAME = #USER#

PLOT SCALE = #SCALE#

PLOT DATE = #DATE#

DESIGNED - JMH

DRAWN - AEC

CHECKED - JMH

DATE - 04/09/08

REVISED -

REVISED -

REVISED -

REVISED -

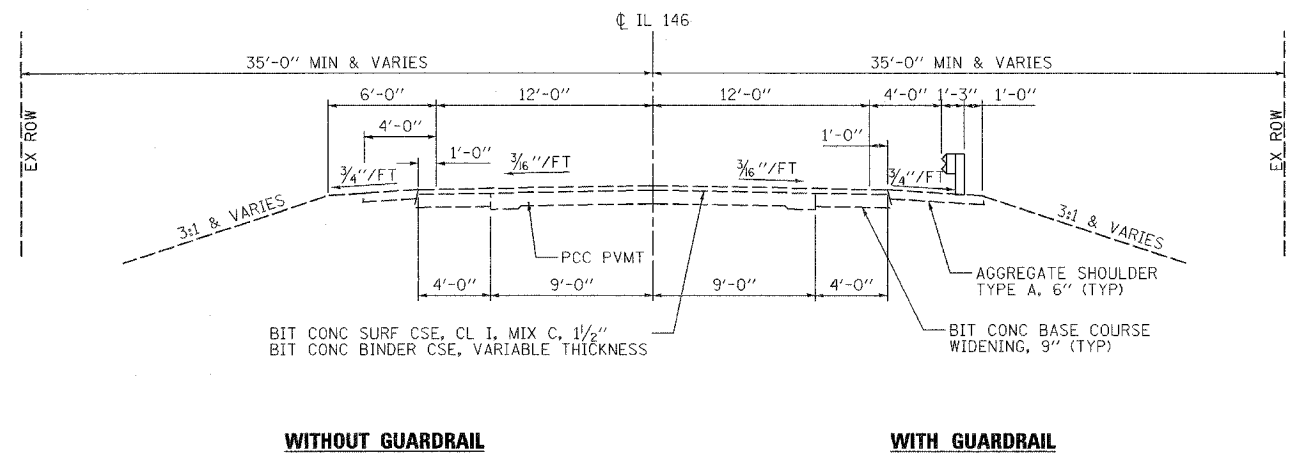
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\*Specialty Items

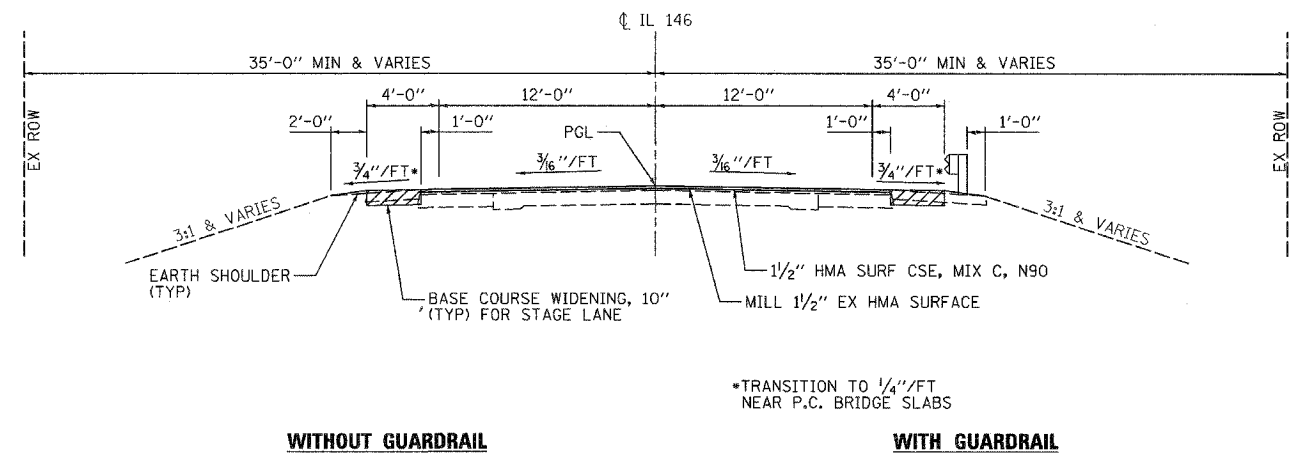
SUMMARY OF QUANTITIES

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

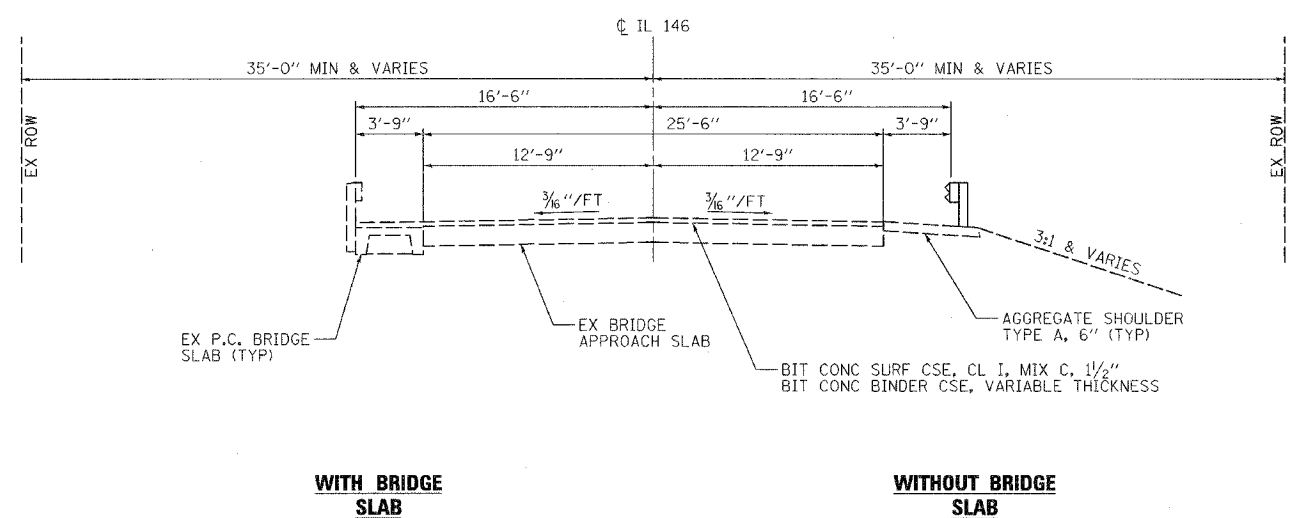
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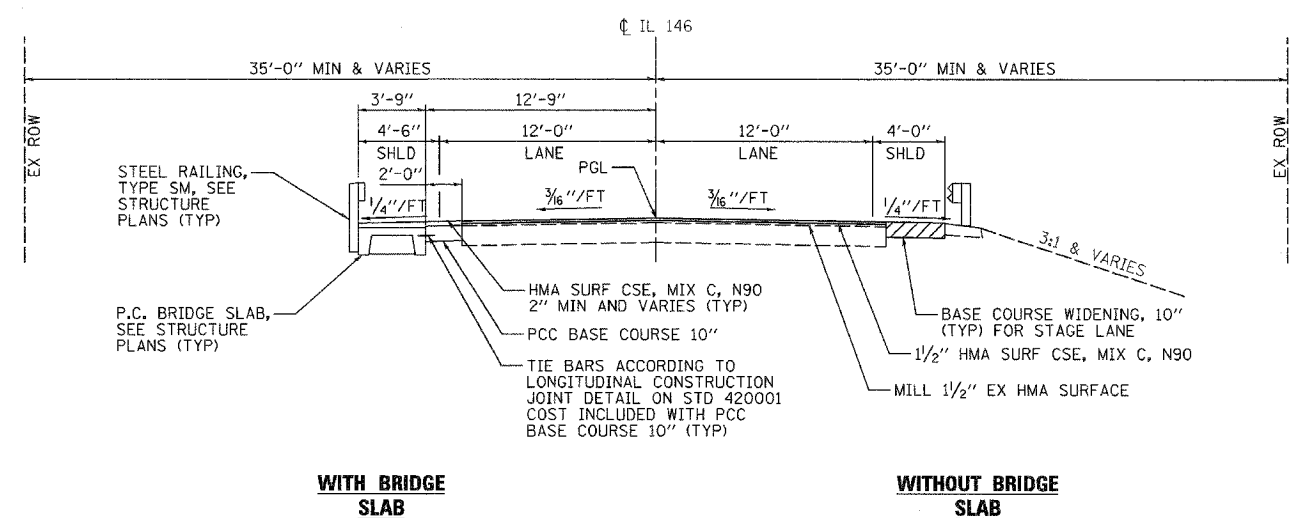
**EXISTING TYPICAL ROADWAY SECTION**  
 STA 669+45 TO STA 670+88  
 STA 672+64 TO STA 674+15



**PROPOSED TYPICAL ROADWAY SECTION**  
 STA 669+45 TO STA 670+88  
 STA 672+64 TO STA 674+15



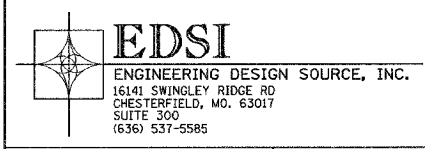
**EXISTING BRIDGE APPROACH SECTION**  
 STA 670+88 TO BRIDGE  
 BRIDGE TO STA 672+64



**PROPOSED BRIDGE APPROACH SECTION**  
 STA 670+88 TO BRIDGE  
 BRIDGE TO STA 672+64

**HMA MIXTURE REQUIREMENTS**

LOCATION(S):	BASE COURSE WIDENING	HOT MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT MIX ASPHALT BINDER COURSE, N90, IL-19.0	HOT MIX ASPHALT SURFACE COURSE, MIX C, N90
AC/PG:	PG64-22	PG64-22
RAP % (MAX):	10	10
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0 mm	IL-9.5 mm OR IL-12.5 mm
FRICTION AGGREGATE:	NONE	C SURFACE



PAVEMENT MARKING SCHEDULE				
LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING	PAINT PAVEMENT MARKING - LINE	TEMP PAVEMENT MARKING - LINE
			4"	4"
		FOOT	FOOT	FOOT
STA 669+62 TO STA 673+96.5 LT	SOLID WHITE EDGE LINE			435
STA 668+01.5 TO STA 675+13 RT	SOLID WHITE EDGE LINE			712
STA 668+38.5 TO STA 675+64 LT	SOLID WHITE EDGE LINE			726
STA 669+62 TO STA 673+96.5 RT	SOLID WHITE EDGE LINE			435
STA 667+78.5 TO STA 675+74	SKIP DASH YELLOW CENTERLINE	80		
STA 667+78.5 TO STA 675+74	SKIP DASH YELLOW CENTERLINE			199
STA 667+78.5 TO STA 669+45	SOLID YELLOW CENTERLINE			167
STA 669+62 TO STA 673+96.5 LT	SOLID WHITE EDGE LINE		435	
STA 669+62 TO STA 673+96.5 RT	SOLID WHITE EDGE LINE		435	
STA 667+78.5 TO STA 675+74	SKIP DASH YELLOW CENTERLINE		199	
STA 667+78.5 TO STA 669+45	SOLID YELLOW CENTERLINE		167	
TOTALS		80	1236	2674

GUARDRAIL SCHEDULE						
LOCATION	TRAFFIC BARRIER TERMINAL TYPE 6A	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	STEEL RAILING, TYPE SM	
	EACH	EACH	EACH	EACH	FOOT	
NE QUADRANT	1		1			
NW QUADRANT	1	1	1			
SE QUADRANT	1	1	1			
SW QUADRANT	1		1			
BRIDGE				4	258	
TOTALS		4	2	4	4	258

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	FOOT
NE QUADRANT	45*
NW QUADRANT	45*
SE QUADRANT	45*
SW QUADRANT	45*
TOTALS	180*

BASE COURSE SCHEDULE		
LOCATION	PCC BASE COURSE, 10"	BASE COURSE WIDENING, 10"
	SQ YD	SQ YD
NE QUADRANT	5	65
NW QUADRANT	5	49
SE QUADRANT	5	51
SW QUADRANT	5	63
TOTALS	20	228

PAVEMENT MARKER SCHEDULE	
LOCATION	RRPM REMOVAL
	EACH
STA 670+90	1
STA 671+70	1
STA 672+50	1
TOTALS	3

EROSION CONTROL SCHEDULE		
LOCATION	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)
	FOOT	POUND
NE QUADRANT	230	4
NW QUADRANT	170	4
SE QUADRANT	175	4
SW QUADRANT	203	4
TOTALS	778	16

\* QUANTITY MAY VARY DEPENDING ON LAYOUT PROPOSED BY THE CONTRACTOR. SEE MISCELLANEOUS DETAILS SHEET FOR DETAILS.

WORK ZONE AND PAVEMENT MARKING REMOVAL SCHEDULE			
LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
STA 667+78.5 TO STA 669+45	CENTER LINE		14
STA 674+15 TO STA 675+74	CENTER LINE		13
STA 669+62 TO STA 673+96.5 LT	EDGE LINE		145
PHASE 1 EDGE LINES	TEMPORARY	382	
STA 669+62 TO STA 670+73 RT	EDGE LINE		37
STA 672+79 TO STA 673+96.5 RT	EDGE LINE		39
PHASE 2 EDGE LINES	TEMPORARY	387	
CENTER LINE	SHORT-TERM		27
CENTER LINE	TEMPORARY		122
TOTALS		918	248

SEEDING SCHEDULE							
LOCATION	SEEDING CLASS 2A	SEEDING CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NE QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
NW QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
SE QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
SW QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
TOTALS	0.08	0.08	7.2	7.2	7.2	0.16	0.16

HMA SURF REMOVAL SCHEDULE		
LOCATION	BUTT JOINT	2"
	SQ YD	SQ YD
STA 670+73 TO WEST ABUTMENT	153	8
STA 672+79 TO EAST ABUTMENT	150	8
TOTALS	303	16

NOTE: HMA SURFACE REMOVAL (2") IS INCLUDED IN THE COST OF REMOVAL OF EXISTING SUPERSTRUCTURE.

REMOVAL SCHEDULE	
LOCATION	PAVEMENT REMOVAL SQ YD
NE QUADRANT	5
NW QUADRANT	5
SE QUADRANT	5
SW QUADRANT	5
TOTALS	20

EARTHWORK SCHEDULE				
LOCATION	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
NE QUADRANT	14	11	1	+10
NW QUADRANT	13	10	5	+5
SE QUADRANT	13	10	2	+8
SW QUADRANT	16	12	1	+11
TOTALS	56	43	9	+34

NOTE:  
1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE INCIDENTAL EXCAVATION) x 0.75

PAVING SCHEDULE			
LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	HMA SURFACE COURSE, MIX C, N90
	GALLON	TON	TON
WEST APPROACH	52	0.4	15.2
EAST APPROACH	53	0.4	15.0
TOTALS	105	0.8	30.2

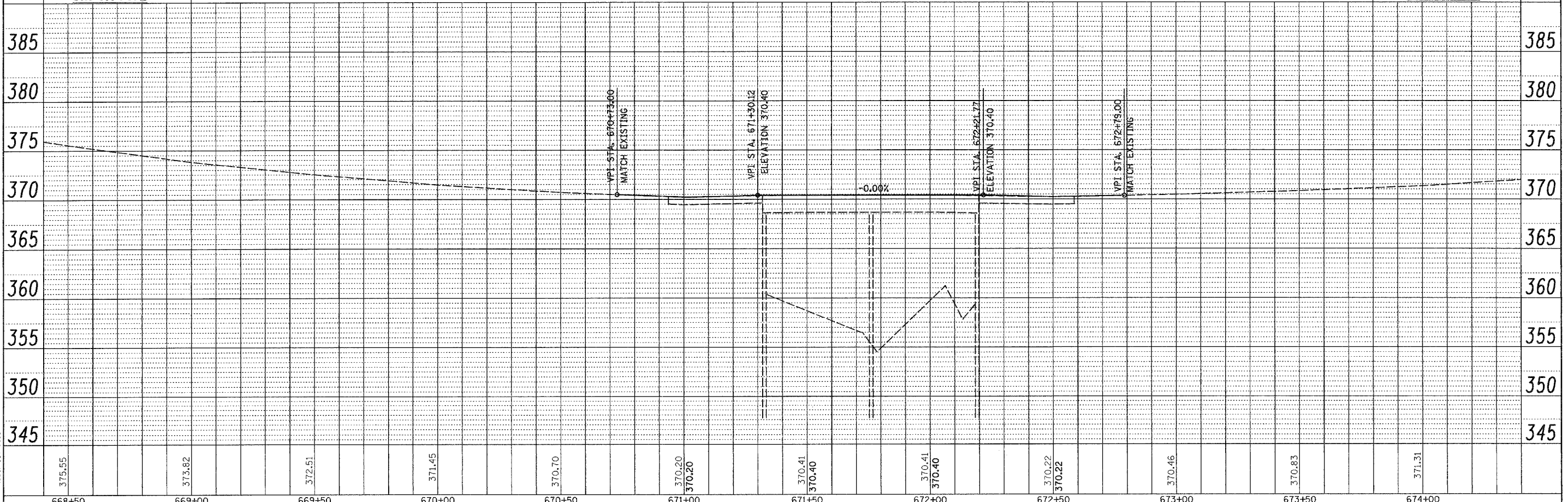
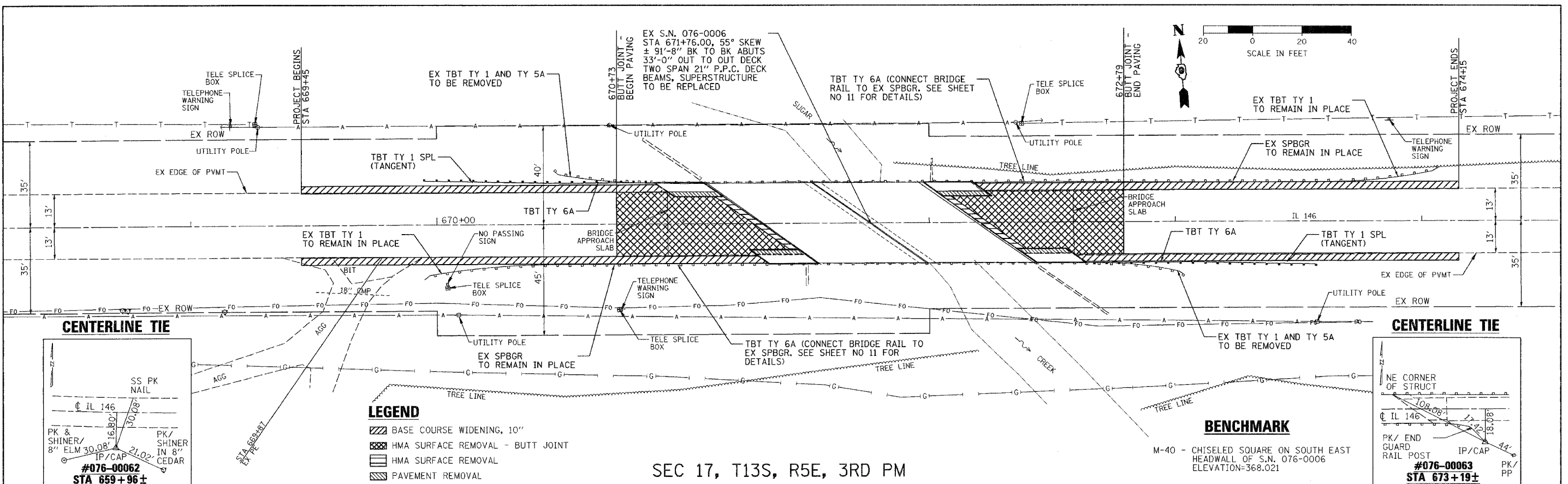


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	PLOT SCALE = #SCALE#	CHECKED - JAH	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 78033	
	PLOT DATE = #DATE#	DATE -	REVISED -			FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT					

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_  
 ALIGNED: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_  
 PLANNING CHECKED: \_\_\_\_\_  
 ROAD FILE NAME: \_\_\_\_\_

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_  
 GRADES CHECKED: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_  
 STRUCTURE NOTATIONS: \_\_\_\_\_

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 CHESTERFIELD, MO. 63070  
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 (636) 537-5985



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#FILES#		DRAWN - GDO	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JAH	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

FAP ROUTE 885 (IL 146) PLAN AND PROFILE

F.A.P. RTE. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 6
CONTRACT NO. 78033				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

SCALE: 1"=20' SHEET NO. 1 OF 1 SHEETS STA. 668+50 TO STA. 674+00

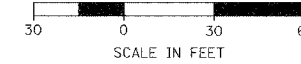
**SCHEDULE OF QUANTITIES**

TEMPORARY CONCRETE BARRIER	STATION TO STATION	FEET
	669+48 674+10.5	462.5

TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH

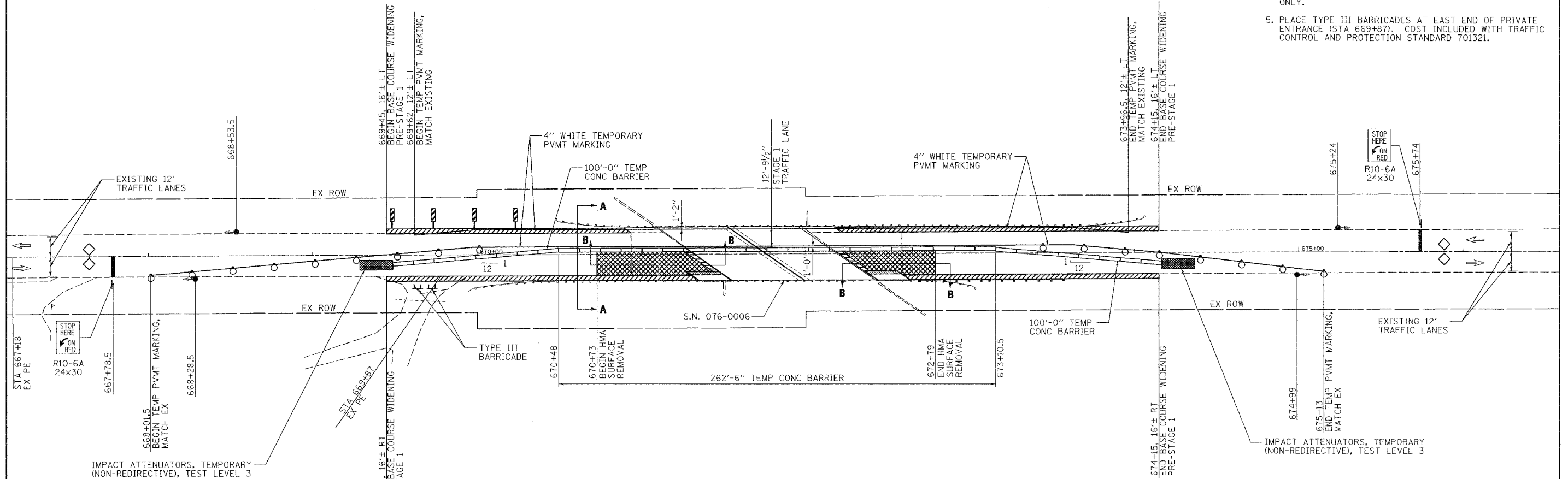
TEMPORARY RUMBLE STRIPS - 3 EACH

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH



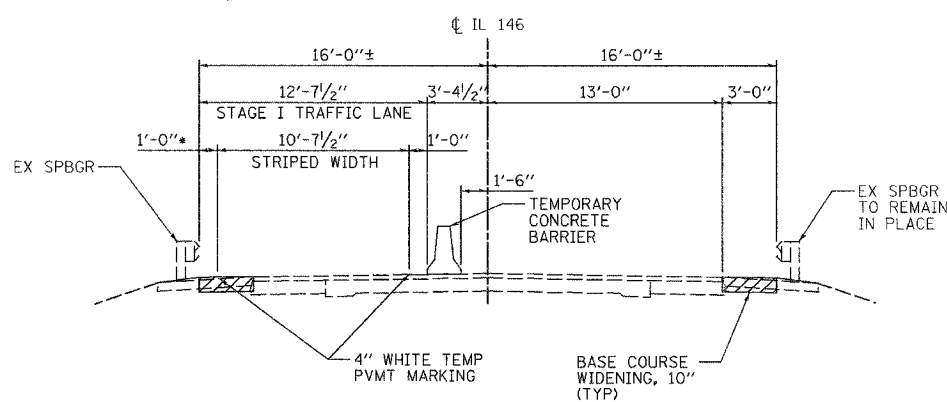
**NOTES:**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321 AT WEST END OF PROJECT ONLY.
5. PLACE TYPE III BARRICADES AT EAST END OF PRIVATE ENTRANCE (STA 669+87). COST INCLUDED WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

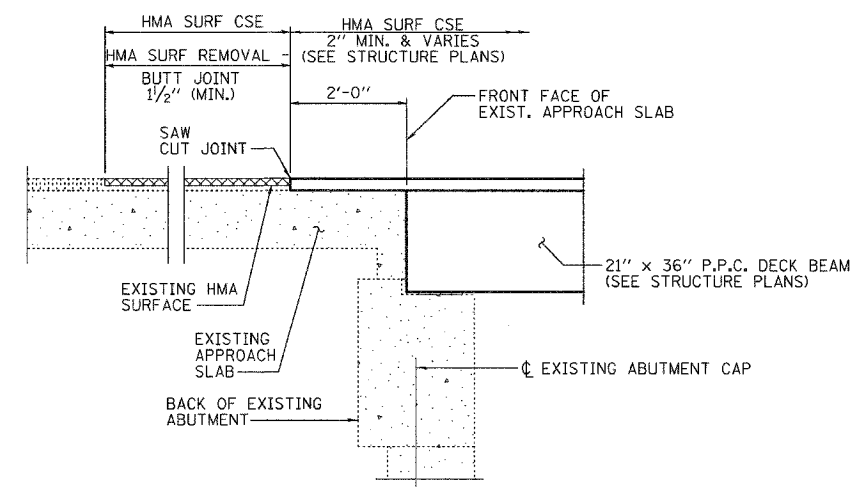


**LEGEND**

- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ▨ BASE COURSE WIDENING, 10"
- ▩ HMA SURFACE REMOVAL - BUTT JOINT
- ▧ HMA SURFACE REMOVAL (2" MIN & VARIES)
- ▦ PAVEMENT REMOVAL



**SECTION A-A**  
• 1'-2" ON STRUCTURE



**SECTION B-B**

NOTE:  
HORIZONTAL DIMENSION SHOWN IS AT RIGHT ANGLES TO BEAM ENDS.

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FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) STAGE I CONSTRUCTION</b>	F.A.P. RTE. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 7	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			CONTRACT NO. 78033					
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			SCALE: 1"=30'					
		DATE -	REVISED -			SHEET NO. 1 OF 2 SHEETS STA. 667+15 TO STA. 676+50					

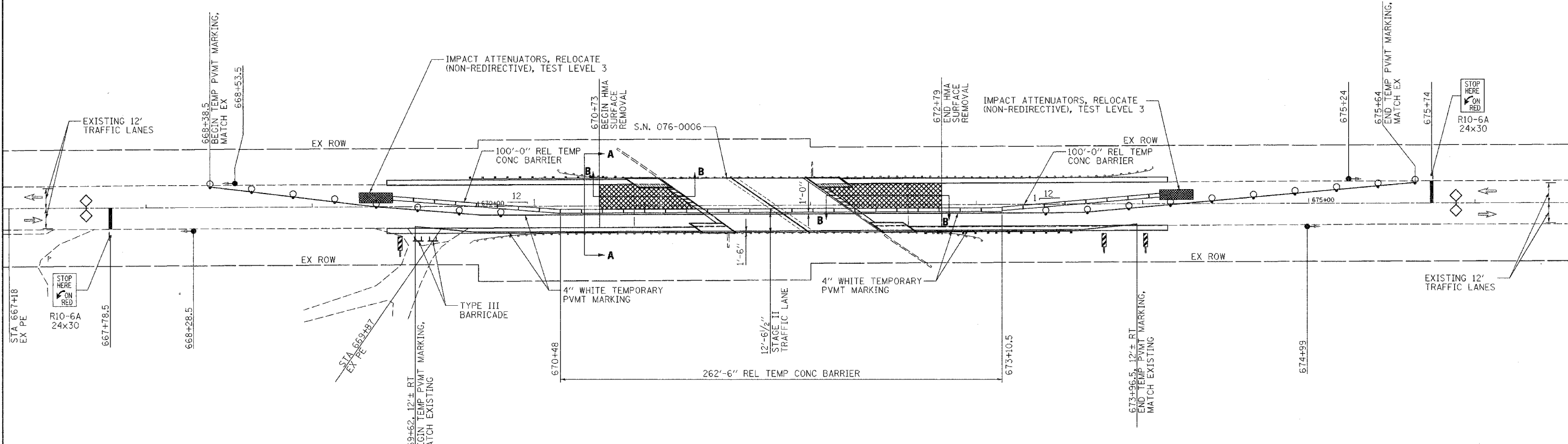
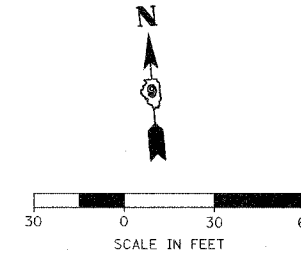
**SCHEDULE OF QUANTITIES**

RELOCATE TEMPORARY CONCRETE BARRIER	STATION TO	STATION	FEET
	669+48	674+10.5	462.5

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

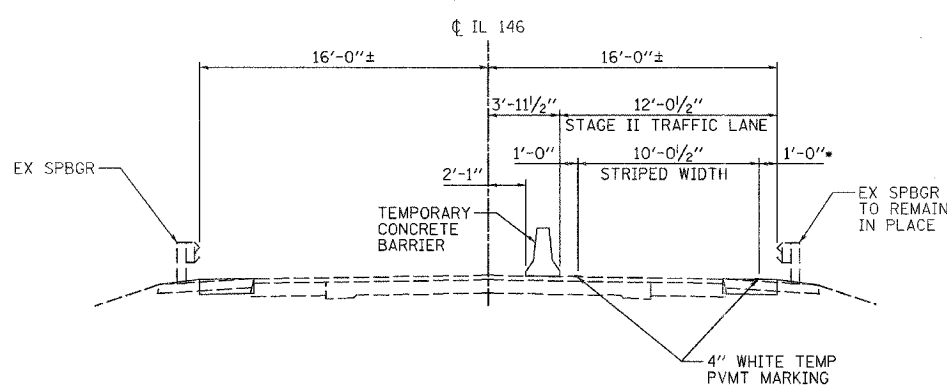
**NOTES:**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. MAINTAIN TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321 AT WEST END OF PROJECT ONLY.
5. MAINTAIN TYPE III BARRICADES AT EAST END OF PRIVATE ENTRANCE (STA 669+87). COST INCLUDED WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.



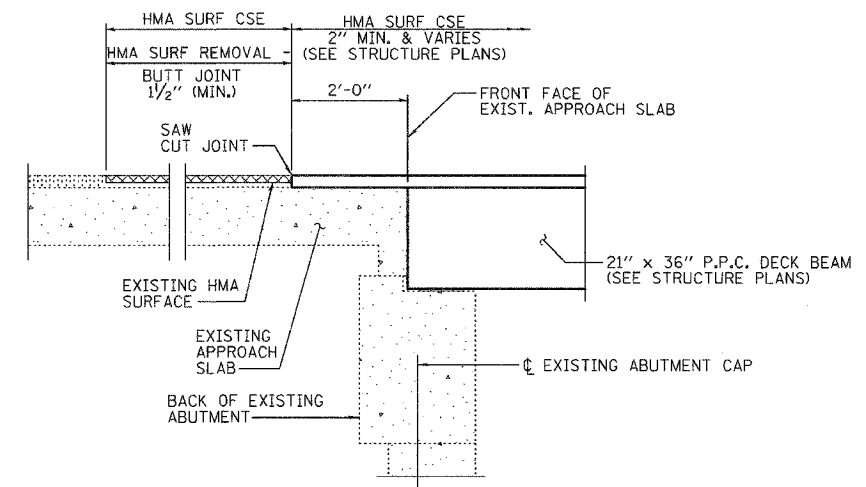
**LEGEND**

- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ▨ BASE COURSE WIDENING, 10"
- ▩ HMA SURFACE REMOVAL - BUTT JOINT
- ▧ HMA SURFACE REMOVAL (2" MIN & VARIES)
- ▦ PAVEMENT REMOVAL



**SECTION A-A**

• 1'-6" ON STRUCTURE



**SECTION B-B**

NOTE:  
HORIZONTAL DIMENSION SHOWN IS AT RIGHT ANGLES TO BEAM ENDS.

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SUITE 300  
6361 537-5585

FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) STAGE II CONSTRUCTION</b>	F.A.P. RTE. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 8	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			SCALE: 1"=30'	SHEET NO. 2 OF 2 SHEETS	STA. 667+15 TO STA. 676+50	CONTRACT NO. 78033		
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
		DATE -	REVISED -								





**SIGN LEGEND  
STAGE I**

**MAX WIDTH  
11'-0"  
1/2 MILE  
AHEAD**

**MAX WIDTH  
11'-0"  
11 MILES  
AHEAD**

①  
48"x48"

②  
48"x48"

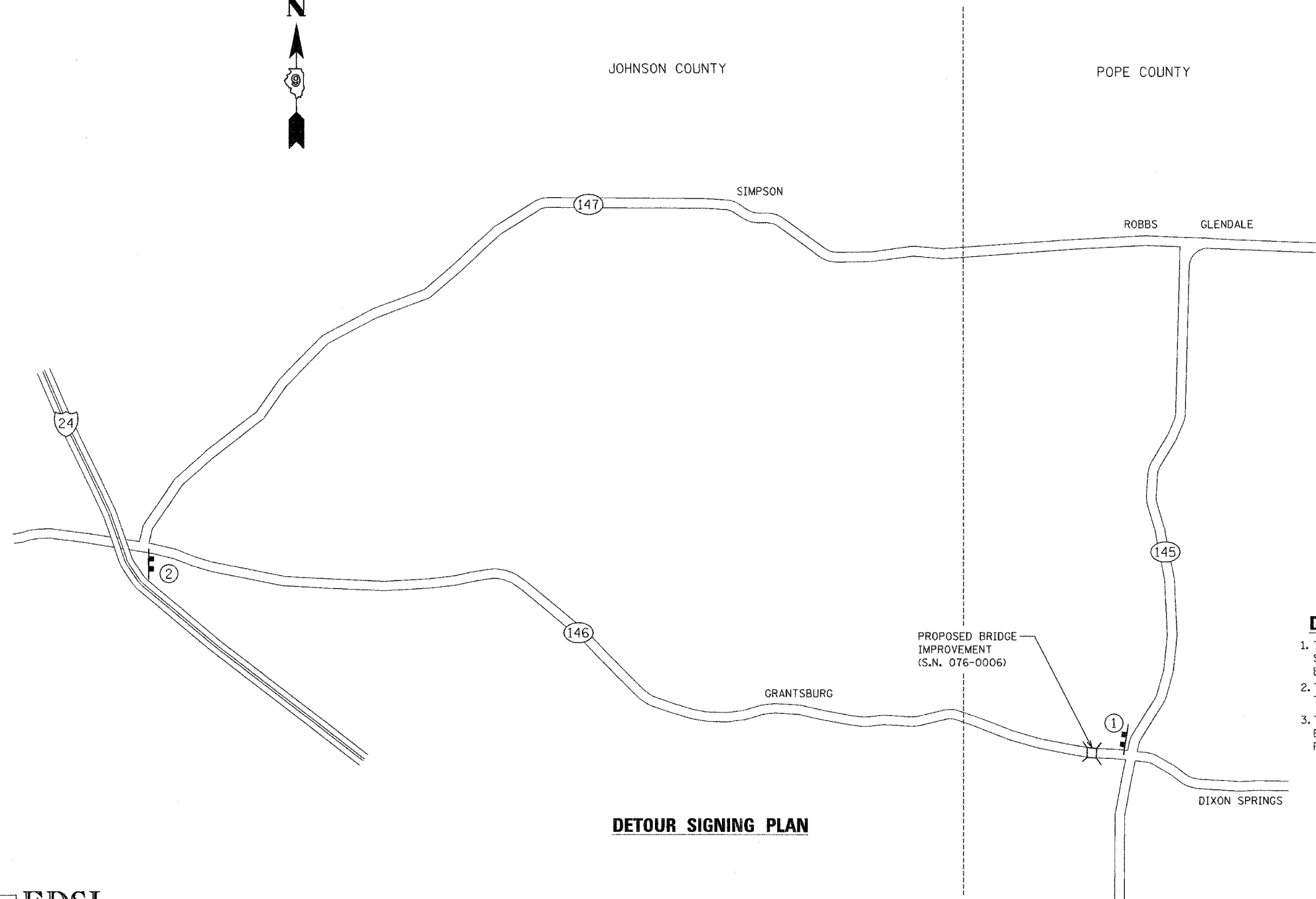
**SIGN LEGEND  
STAGE II**

**MAX WIDTH  
10'-6"  
1/2 MILE  
AHEAD**

**MAX WIDTH  
10'-6"  
11 MILES  
AHEAD**

①  
48"x48"

②  
48"x48"



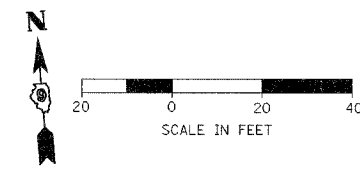
**DETOUR SIGNING PLAN**

**DETOUR NOTES**

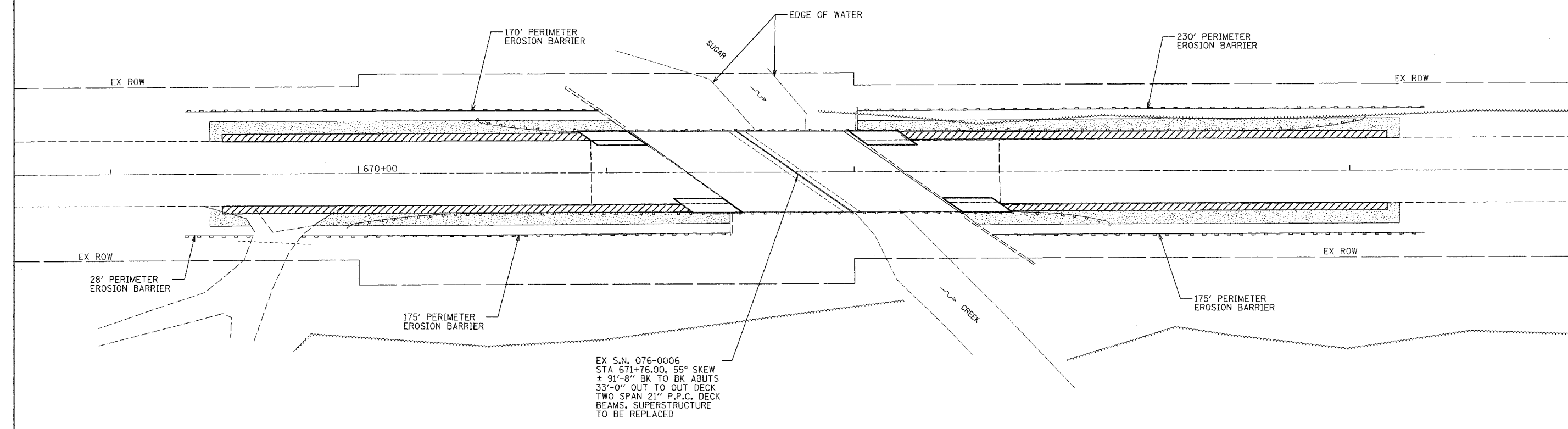
1. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE POSTS AND SIGNS AT THE LOCATIONS SHOWN AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE CONTRACTOR SHALL GIVE I.D.O.T. BUREAU OF OPERATIONS, PERMITS SECTION, TWO WEEKS NOTICE BEFORE IMPLEMENTING ANY LANE WIDTH RESTRICTIONS.
3. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.

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#FILES#		DRAWN - GDO	REVISED -			885	111BR-1	POPE	69	9	
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	PLOT DATE = #DATE#	DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
				SCALE: NO SCALE		SHEET NO. 1 OF 1 SHEETS		STA.		TO STA.	



- LEGEND**
- PERIMETER EROSION BARRIER
  - ▨ BASE COURSE WIDENING
  - ▤ APPROXIMATE SEEDING AND MULCH AREAS

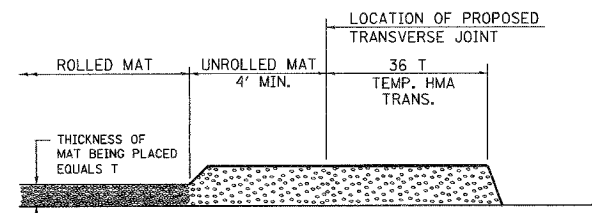


EX S.N. 076-0006  
 STA 671+76.00, 55° SKEW  
 ± 91'-8" BK TO BK ABUTS  
 33'-0" OUT TO OUT DECK  
 TWO SPAN 21" P.P.C. DECK  
 BEAMS, SUPERSTRUCTURE  
 TO BE REPLACED

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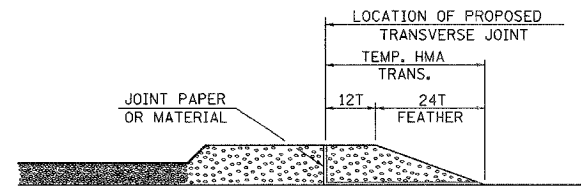
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#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			885	111BR-1	POPE	69	10	
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT					
					SCALE: 1"=20'	SHEET NO. 1 OF 1 SHEETS	STA. 668+65	TO STA. 674+90			

## TEMPORARY HOT-MIX ASPHALT TRANSITIONS



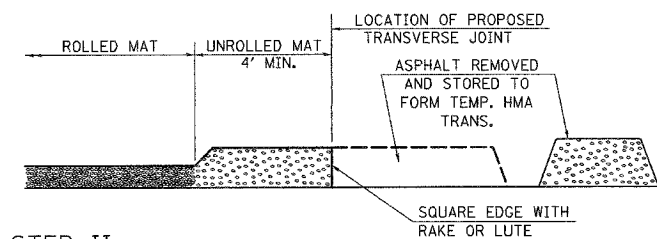
### STEP I

1. PLACE HOT-MIX ASPHALT MAT, LENGTH 36 TIMES THE THICKNESS OF THE MAT BEING PLACED PAST THE PROPOSED TRANSVERSE JOINT LOCATION USING NORMAL OPERATING PROCEDURES.
2. EXTREME CARE SHOULD BE TAKEN TO MAINTAIN ENOUGH MATERIAL IN FRONT OF THE SCREED TO MAINTAIN REQUIRED PAVING DEPTH.



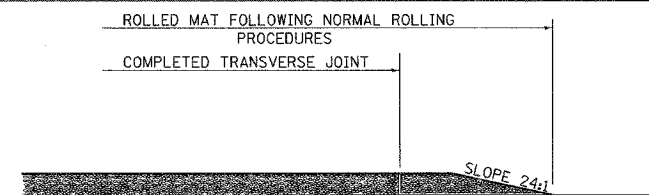
### STEP III

1. JOINT PAPER OR OTHER PRESELECTED JOINT MATERIAL IS THEN PLACED IN THE CLEARED AREA AND THE EXCESS ASPHALT USED TO HAND FORM A TRANSITION TO THE DIMENSIONS SHOWN ABOVE.
2. NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



### STEP II

1. MOVE THE PAVER OUT OF THE WAY AND REMOVE THE ASPHALT FROM THE AREA OF THE PROPOSED TEMPORARY HOT-MIX ASPHALT TRANSITION.
2. SQUARE UP THE END OF THE MAT WITH A RAKE OR LUTE.
3. NOTE THAT THE MAT WITHIN 4' OF THE END OF JOINT IS NOT TO BE ROLLED AT THIS TIME.



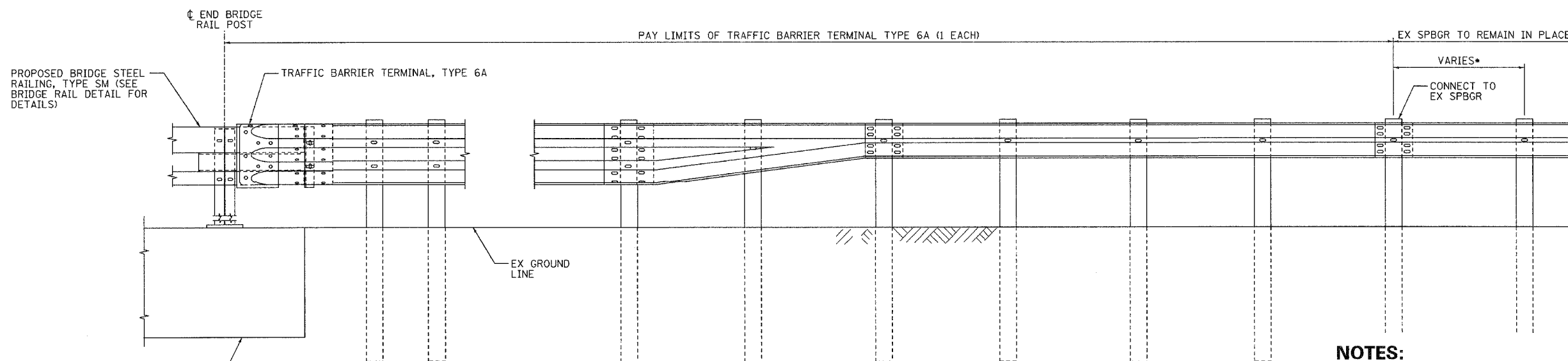
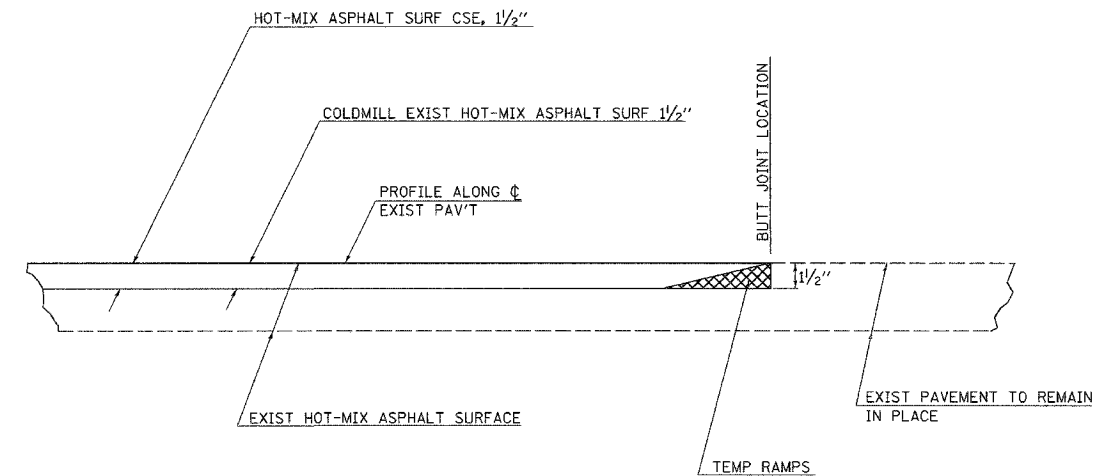
### STEP IV

1. COMPLETE TEMPORARY TRANSITION BY ROLLING.
2. TO RESUME PAVING, AT THE JOINT, REMOVE TEMPORARY TRANSITION AND DISPOSE OF THE MATERIAL ACCORDING TO ART. 202.03 OF THE STD. SPECS. (COST INCLUDED IN THE CONTRACT).
3. CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 406.14 OF THE STANDARD SPECIFICATIONS.

REVISIONS
REDRAWN 2-15-89
REVISED 8-16-94
REVISED 01-09-07
REVISED

STD. 9-26

## BUTT JOINT DETAIL



### GUARDRAIL CONNECTION DETAIL

\* POST SPACING AS REQUIRED TO MATCH TBT TYPE 6A TO EX SPBGR (6'-3" MAX)

### NOTES:

1. REMOVE AND REPLACE EX TBT TY 5A AND SPBGR WITH TBT TYPE 6A TO CONNECT PROPOSED BRIDGE STEEL RAILING, TYPE SM, TO EX SPBGR.
2. CONTRACTOR MAY USE EXISTING STEEL POSTS OR INSTALL NEW/ADDITIONAL POSTS AS REQUIRED. THE ENGINEER SHALL APPROVE TBT TYPE 6A LAYOUT PRIOR TO INSTALLATION.
3. GUARDRAIL HEIGHT SHALL BE SET TO THAT REQUIRED BY THE FINAL PROFILE.
4. UNLESS OTHERWISE NOTED, DETAILS SHALL BE AS SHOWN ON "TRAFFIC BARRIER TERMINAL, TYPE 6A, STANDARD 631032".
5. COST OF WORK SHOWN TO BE INCLUDED IN TRAFFIC BARRIER TERMINAL, TYPE 6A.

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#FILES#		DRAWN - GDO	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JAH	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 885 (IL 146) MISCELLANEOUS DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	111BR-1	POPE	69	11
CONTRACT NO. 78033				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

Bench Mark: Chiseled square in S.E. headwall of SN 076-0006, Elevation 368.02.

Existing Structure: The original two-span structure was built in 1929 with a reinforced concrete deck girder on reinforced concrete closed abutments and pier with a length of 90'-5 1/2" back-to-back of abutments. The structure was rehabilitated in 1981. The superstructure was replaced with P.P.C. deck beam with a total width of 33'-0" out-to-out of superstructure and substructure was modified accordingly.

Proposed Improvements: The existing superstructure is to be replaced with P.P.C. deck beams and a HMA surface course and waterproofing. Minor substructure repairs are required. Traffic to be maintained at all times utilizing stage construction.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 1 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	12	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78033

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specifications, 4th Edition

**LOADING HL-93**

No allowance for Future Wearing Surface.

**DESIGN STRESSES**

**FIELD UNITS**

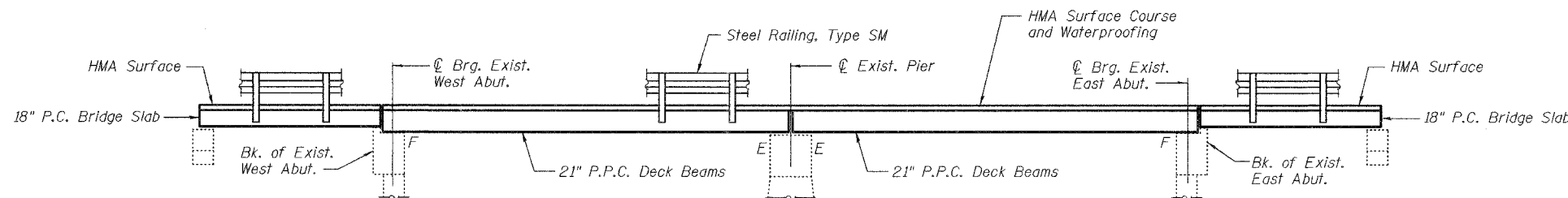
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

**PRECAST PRESTRESSED UNITS**

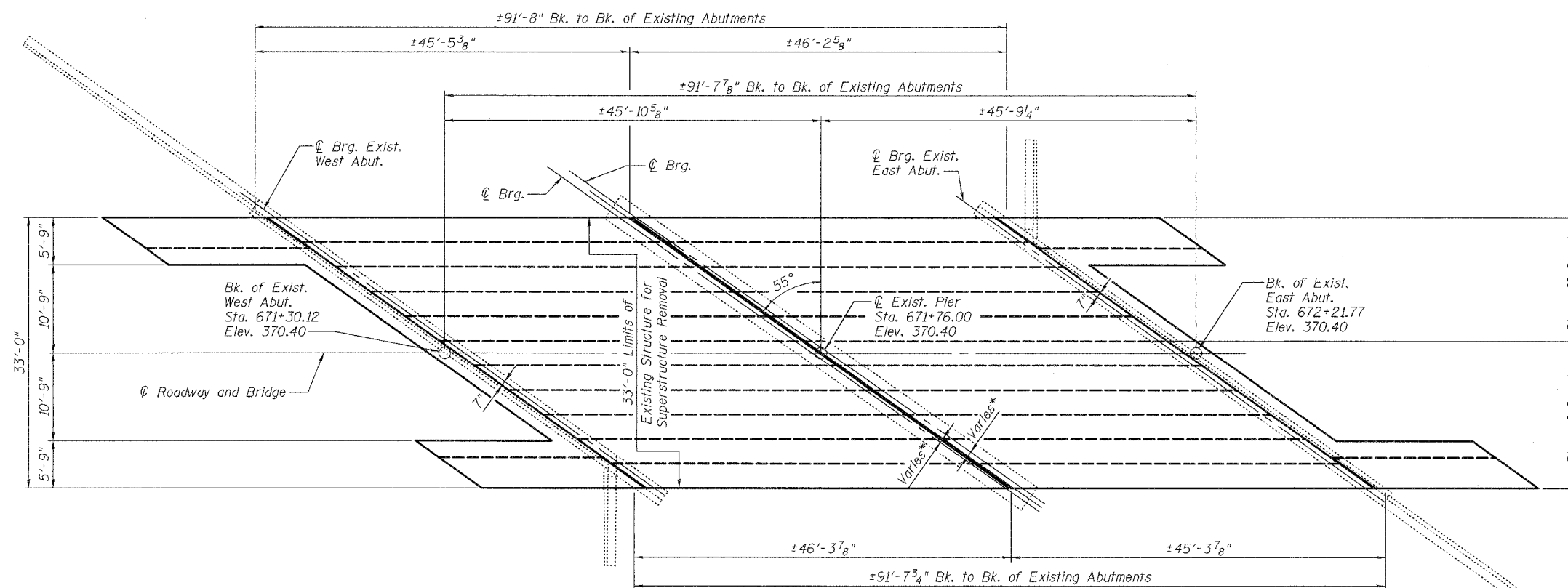
$f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi (1/2"  $\phi$  low lax. strands)  
 $f_{pb} = 201,960$  psi (1/2"  $\phi$  low lax. strands)

**PRECAST UNITS**

$f'_c = 4,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

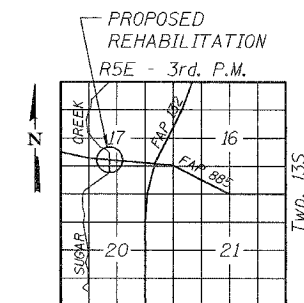


**ELEVATION**



**PLAN**

\* See Sheet 14 of 15 for details.



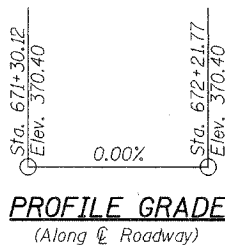
**LOCATION SKETCH**



STATION 671+76.00  
REBUILT 200\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 885 SEC. 111BR-1  
LOADING HL93  
STR. NO. 076-0006

**NAME PLATE**  
See Std. 515001

Notes:  
Existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates.  
Locate name plates at outside face of top steel railing tube at southwest corner of bridge.



**PROFILE GRADE**  
(Along  $\phi$  Roadway)

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Ralph E. Anderson (top)*  
ENGINEER OF BRIDGES AND STRUCTURES



*David W. Petermeier 4/23/08*  
DAVID W. PETERMEIER  
EDWARDSVILLE, ILLINOIS  
ILLINOIS LICENSED STRUCTURAL  
ENGINEER NO. 081-005642  
EXPIRES NOV. 30, 2008

**GENERAL PLAN AND ELEVATION**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**

DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

04/22/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	13	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #78033

**SCOPE OF WORK**

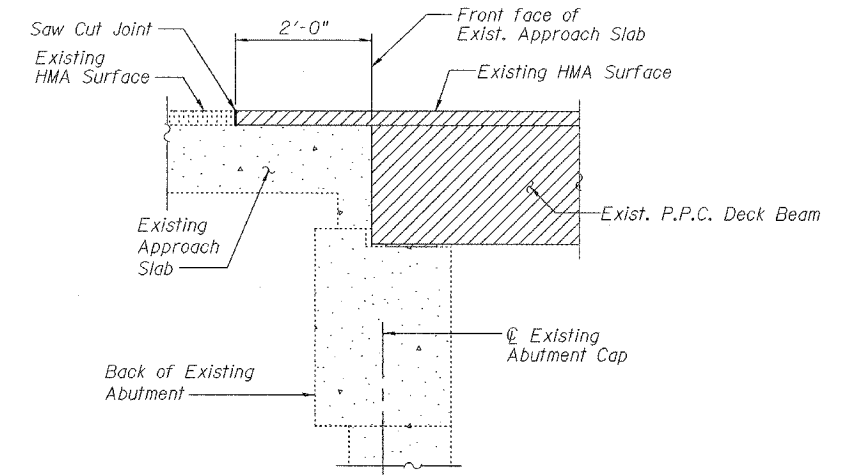
1. Remove existing surface, steel railing, deck beams, approach shoulder channel beams, and bearing pads.
2. Repair bearing seats and perform other repairs at abutments and pier as required.
3. Reconstruct a two-span P.P.C. deck beam superstructure with bituminous wearing surface and steel railing, Type SM. Reconstruct approach shoulders with P.C. bridge slabs with bituminous wearing surface and steel railing, Type SM.

**GENERAL NOTES**

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
4. Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
5. Concrete Sealer shall be applied to the abutments and pier where concrete repairs are performed.
6. No in-stream work will be allowed on this project.
7. 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.
8. If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (21" Depth).
9. The minimum thickness of the HMA surface course shall be 1 1/2" and varies as required to adjust for the existing profile grade and beam camber.
10. Repair of the substructure shall be completed prior to placement of the new deck beams.

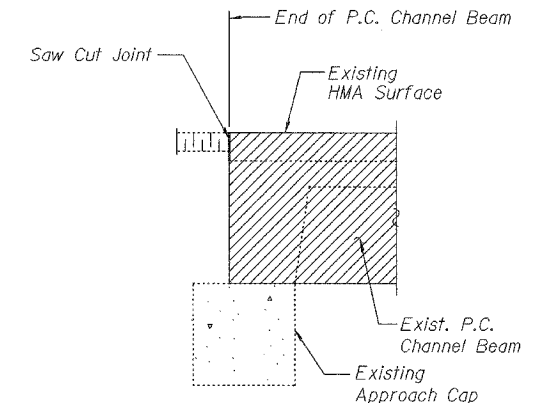
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Surface Course, Mix "C", N90	Ton	34	-	34
Removal of Existing Superstructures	Each	1	-	1
Concrete Structures	Cu. Yd.	2.6	-	2.6
Precast Concrete Bridge Slab	Sq. Ft.	299	-	299
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2,921	-	2,921
Reinforcement Bars, Epoxy Coated	Pound	360	-	360
Bar Splicers	Each	6	-	6
Steel Railing, Type SM	Foot	258	-	258
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	58	-	58
Waterproofing Membrane System	Sq. Yd.	352	-	352
Concrete Sealer	Sq. Ft.	-	26	26
Epoxy Crack Injection	Foot	-	31	31
Removal of Existing Precast Concrete Units	Sq. Ft.	299	-	299
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	-	26	26
Asbestos Bearing Pad Removal	Each	-	52	52



**SECTION AT CENTERLINE ROADWAY**

Note:  
Horizontal dimension shown is at right angles to beam ends.



**SECTION AT APPROACH SHOULDER**

**LIMITS OF EXISTING STRUCTURE FOR SUPERSTRUCTURE REMOVAL**

Notes:  
HMA removal over approach slab included in the cost of Removal of Existing Superstructures.  
HMA removal over approach shoulder channel beam and removal of P.C. channel beams included in the cost of Removal of Existing Precast Concrete Units.  
Existing bearing pads at pier are made of graphited asbestos. The Contractor shall take appropriate precautions during the removal and disposal of these bearing pads.



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

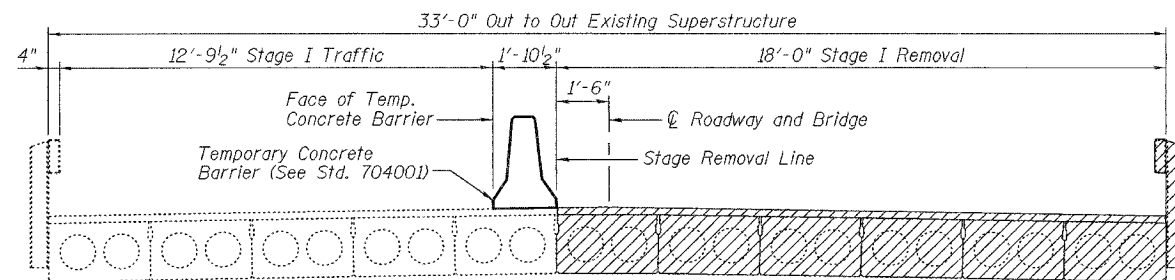
03/18/08

**GENERAL STRUCTURE DATA**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

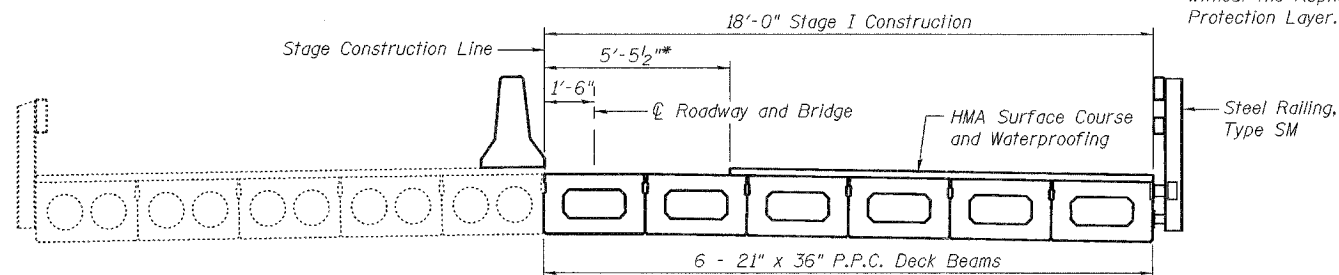
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	14	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #78033

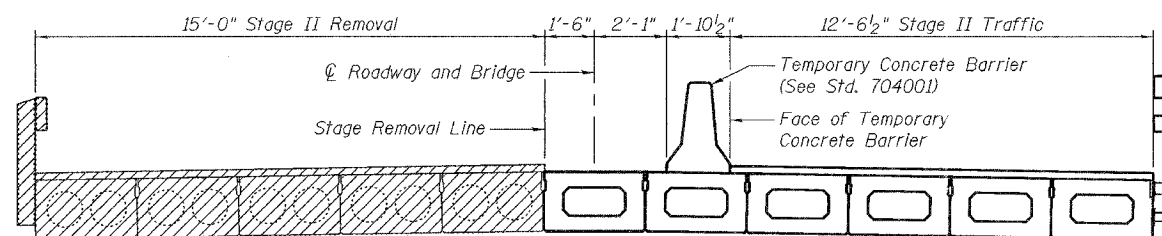


**STAGE I REMOVAL**  
(Looking Upstation)

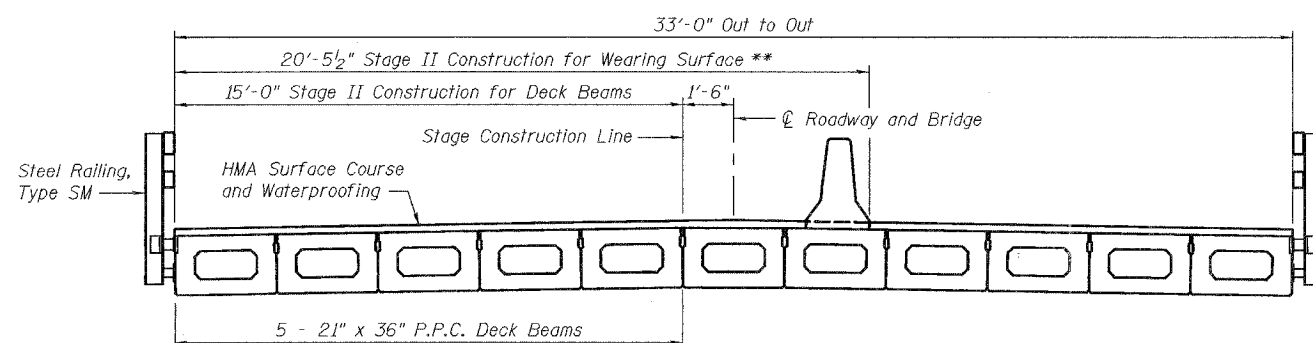
\* Waterproofing Membrane System without the Asphalt Sand Seal Protection Layer.



**STAGE I CONSTRUCTION**  
(Looking Upstation)



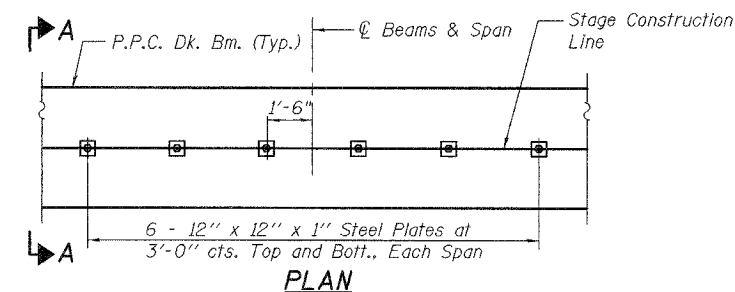
**STAGE II REMOVAL**  
(Looking Upstation)



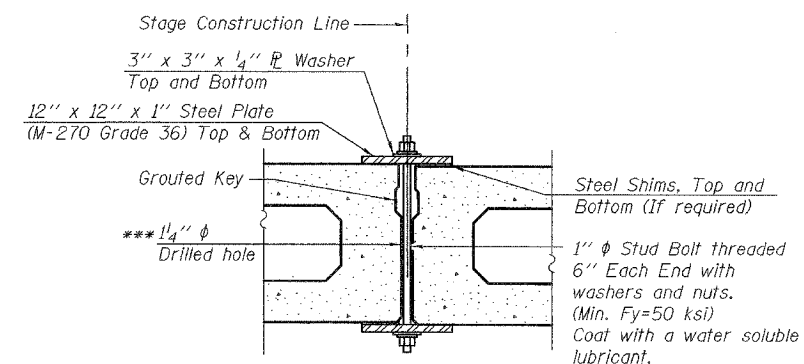
**STAGE II CONSTRUCTION**  
(Looking Upstation)

See Roadway Plans for quantity of Temporary Concrete Barrier.

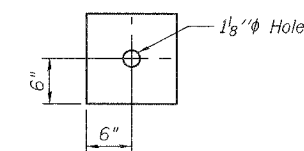
\*\* The Temporary Concrete Barrier for Stage II Traffic shall be removed after the Stage II Construction shear keys are grouted and cured and immediately prior to placement of the HMA wearing surface. Once the Temporary Concrete Barrier has been removed, the penetrating primer, coal tar emulsion membrane, fiber-glass fabric and coal tar emulsion slurry layers of the Waterproofing Membrane shall be lapped 6". The asphalt sand seal protection layer shall then be applied according to Section 581 of the Standard Specifications.



**PLAN**



**SECTION A-A**



**CLAMPING PLATE**

**SHEAR KEY CLAMPING DETAILS**

See Article 504.06 of the Standard Specifications for Stage Construction of Precast Prestressed Concrete Deck Beams.  
Cost included with Precast Prestressed Concrete Deck Beams (21" Depth).

\*\*\* As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

**STAGE CONSTRUCTION DETAILS**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

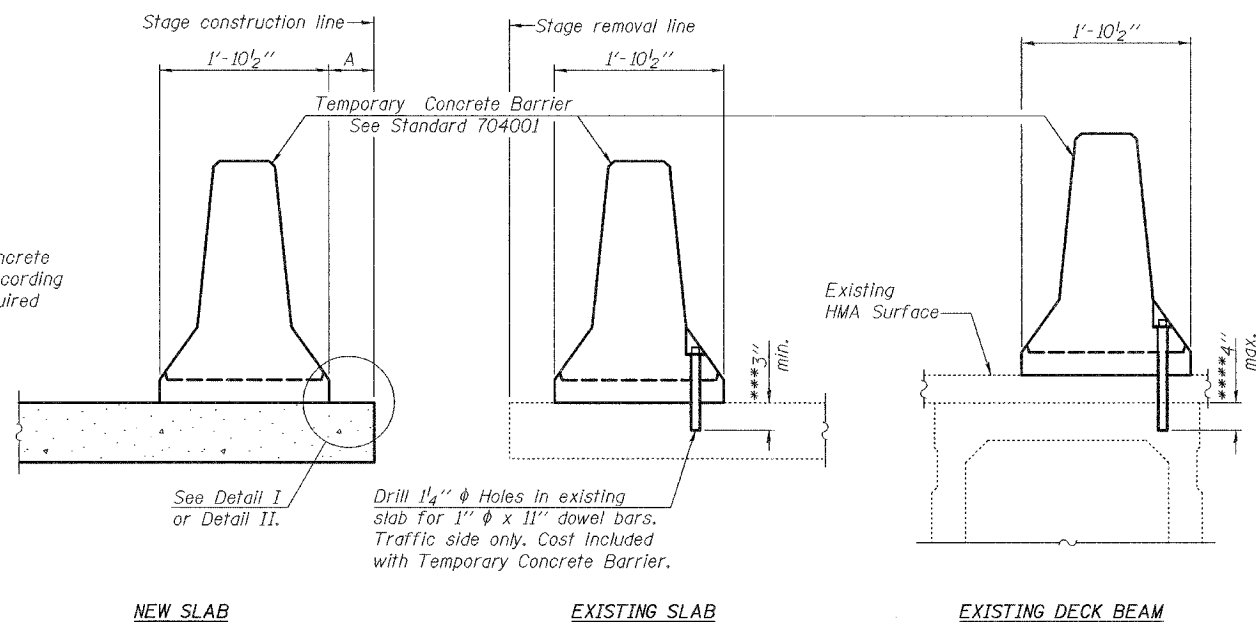
04/22/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	15	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #78033

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



NEW SLAB

EXISTING SLAB

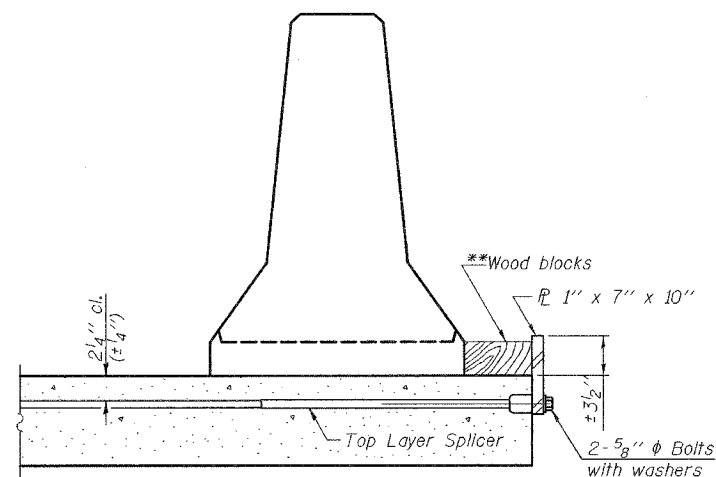
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

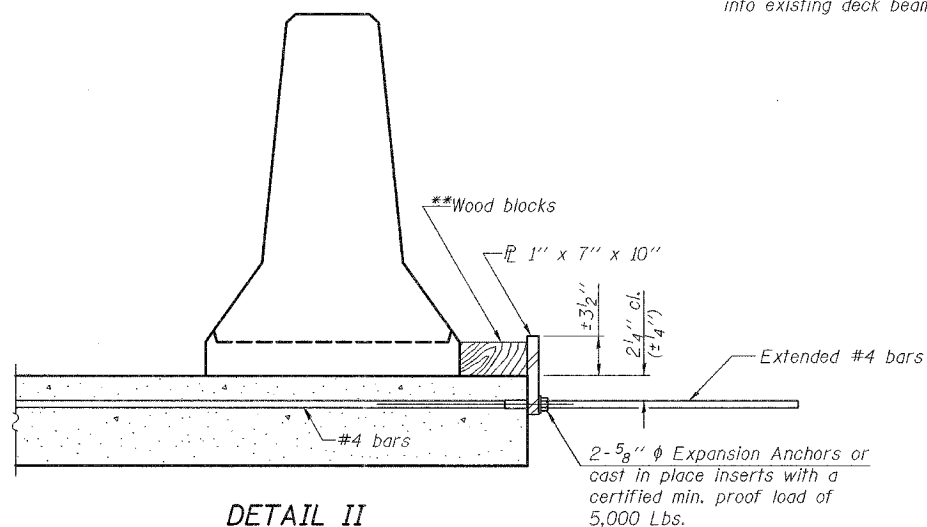
NOTES

- Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.
- Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.  
See Roadway Plans for quantity of Temporary Concrete Barrier.

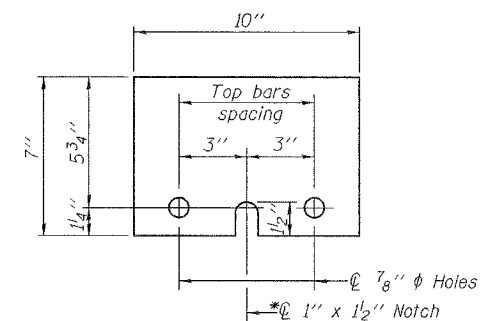
- \*\*\*Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- \*\*\*If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER  $\bar{P}$  1" x 7" x 10"

\* Required only with Detail II

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



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

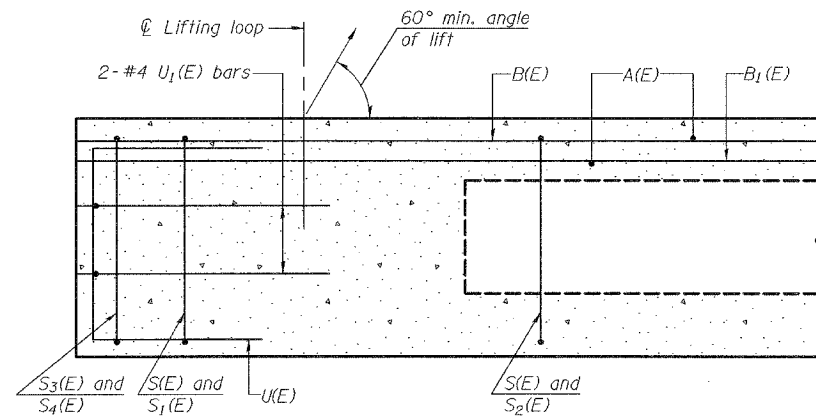
03/18/08

TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
ILL. ROUTE 146 OVER SUGAR CREEK  
F.A.P. ROUTE 885 - SECTION 111BR-1  
POPE COUNTY  
STATION 671+76.00  
STRUCTURE NO. 076-0006

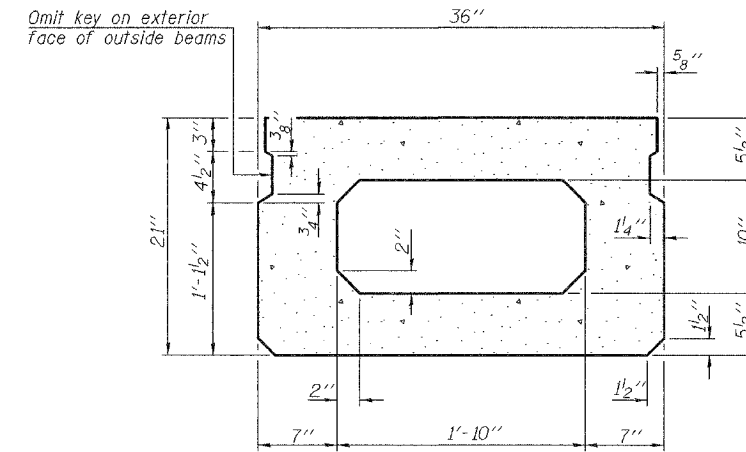
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 15	SHEET NO. 5 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	

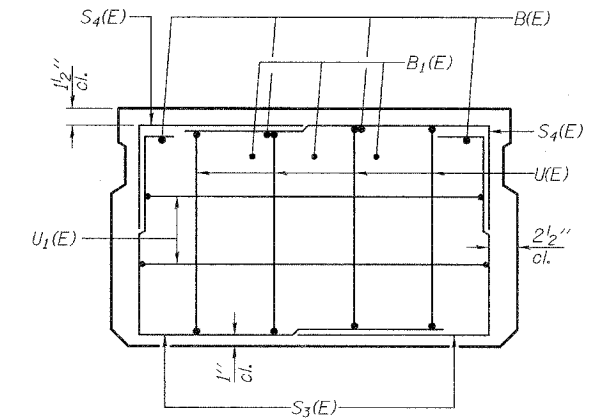
Contract #78033



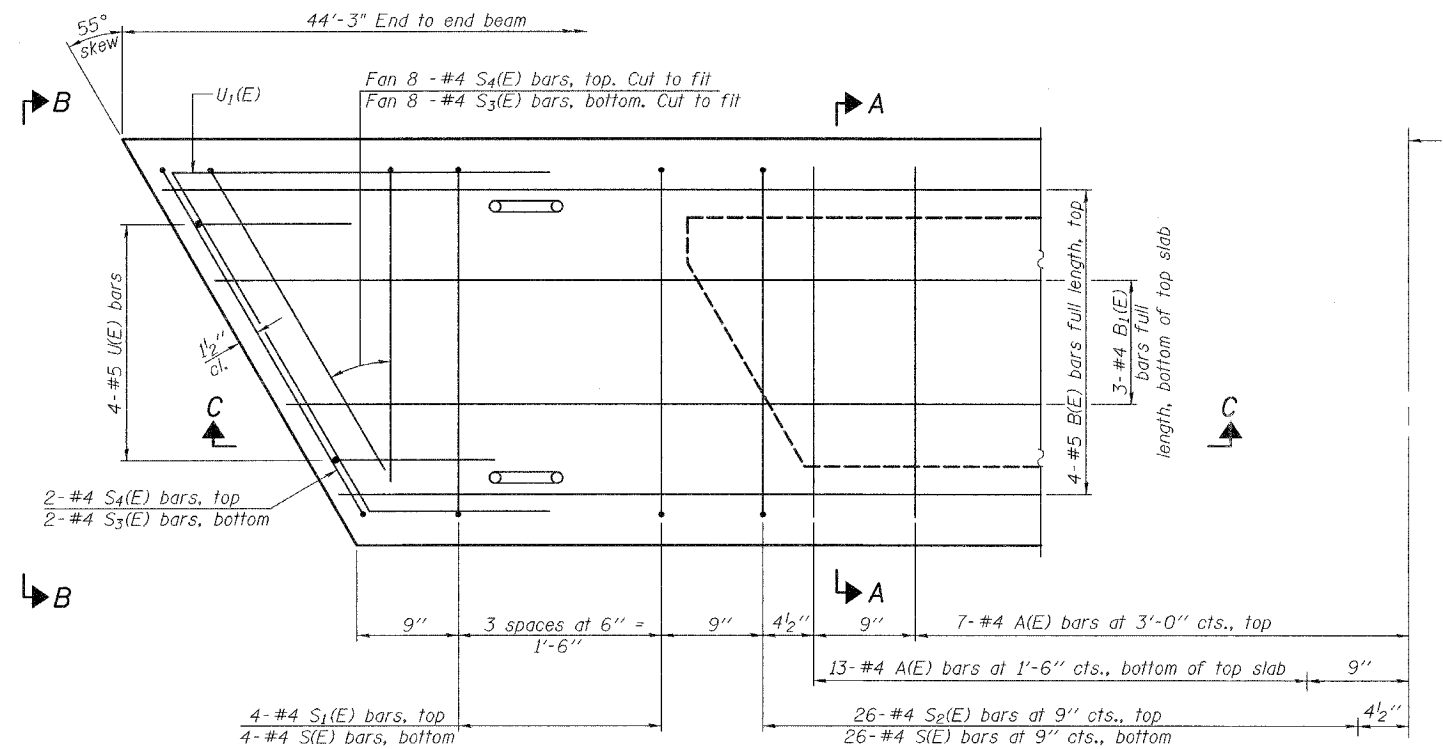
SECTION C-C



SECTION A-A  
(Showing dimensions)

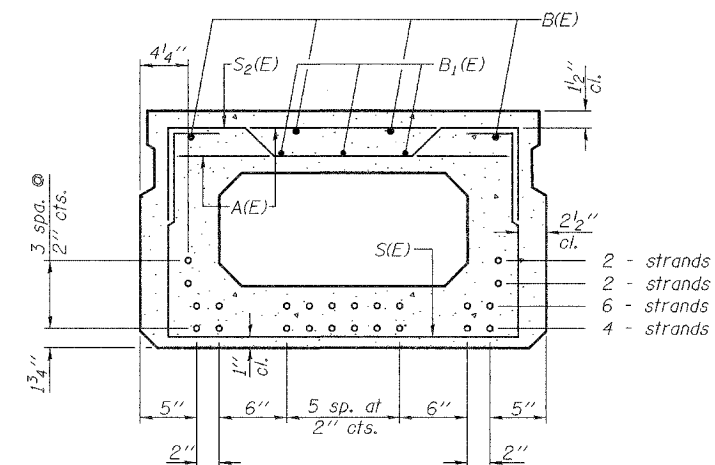


VIEW B-B



PLAN VIEW AT FIXED END

See sheet 6 of 15 for Expansion End Detail.



SECTION A-A

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST  
ONE BEAM ONLY  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	39	#4	2'-7"	—
B(E)	4	#5	43'-1"	—
B1(E)	3	#4	43'-1"	—
C(E)	5	#5	2'-8"	⌋
E(E)	3	#5	2'-0"	⌋
S(E)	57	#4	6'-5"	⌋
S1(E)	5	#4	5'-7"	⌋
S2(E)	52	#4	5'-10"	⌋
S3(E)	20	#4	6'-5"	⌋
S4(E)	20	#4	6'-0"	⌋
S5(E)	4	#4	5'-8"	⌋
S6(E)	4	#4	5'-3"	⌋
U(E)	4	#5	4'-0"	⌋
U1(E)	4	#4	10'-5"	⌋
U2(E)	4	#5	3'-3"	⌋

Notes: See sheet 6 and 7 of 15 for additional details.

See sheet 7 of 15 for Bill of Material.



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

03/18/08

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

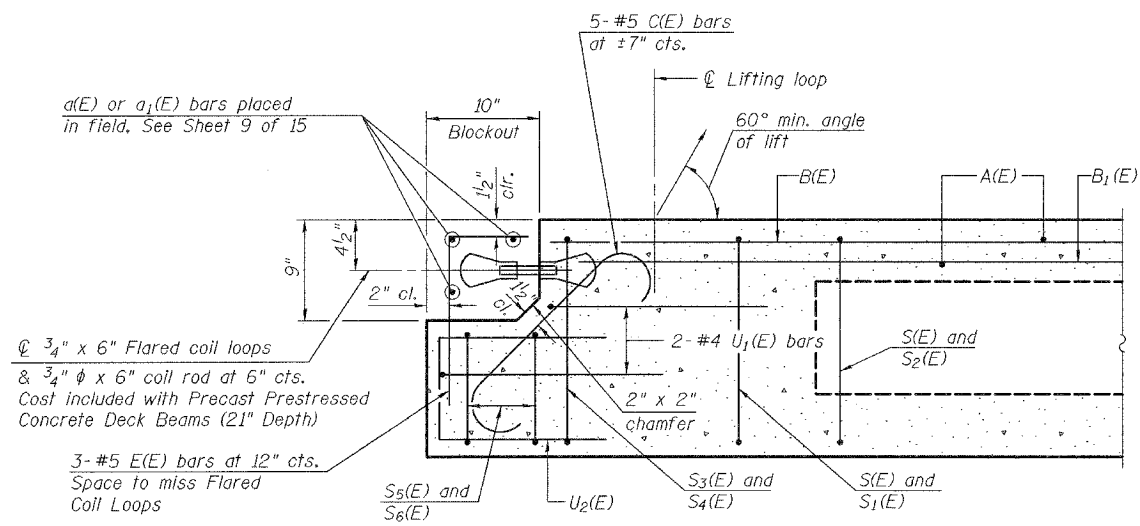
21" X 36" DECK BEAM  
ILL. ROUTE 146 OVER SUGAR CREEK  
F.A.P. ROUTE 885 - SECTION 111BR-1  
POPE COUNTY  
STATION 671+76.00  
STRUCTURE NO. 076-0006



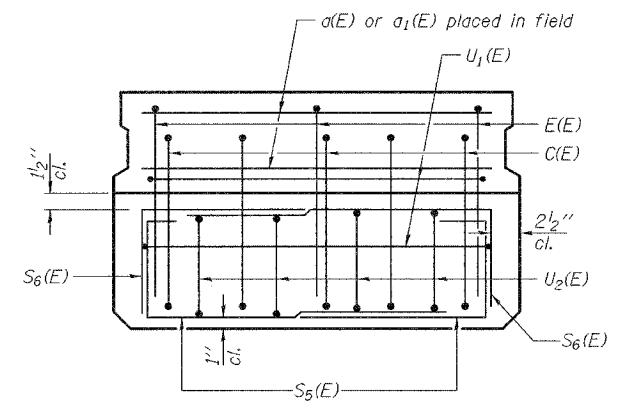
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	17	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78033

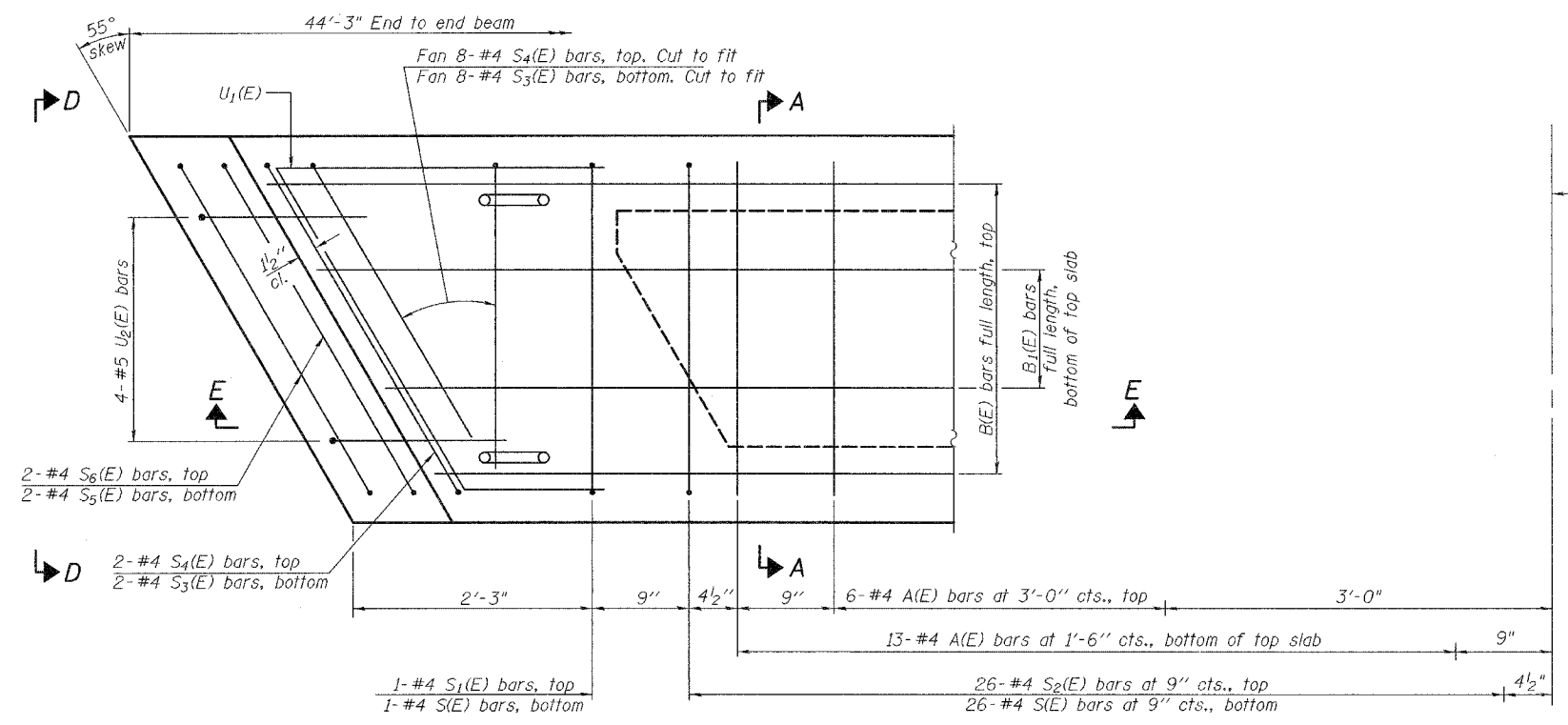


**SECTION E-E**  
Horizontal dimensions at right angles.



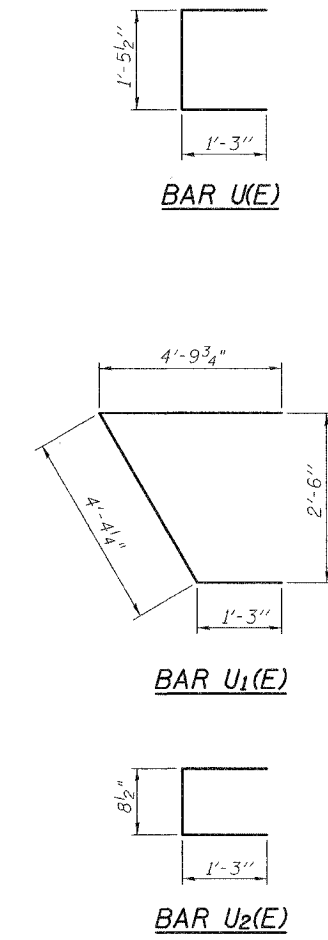
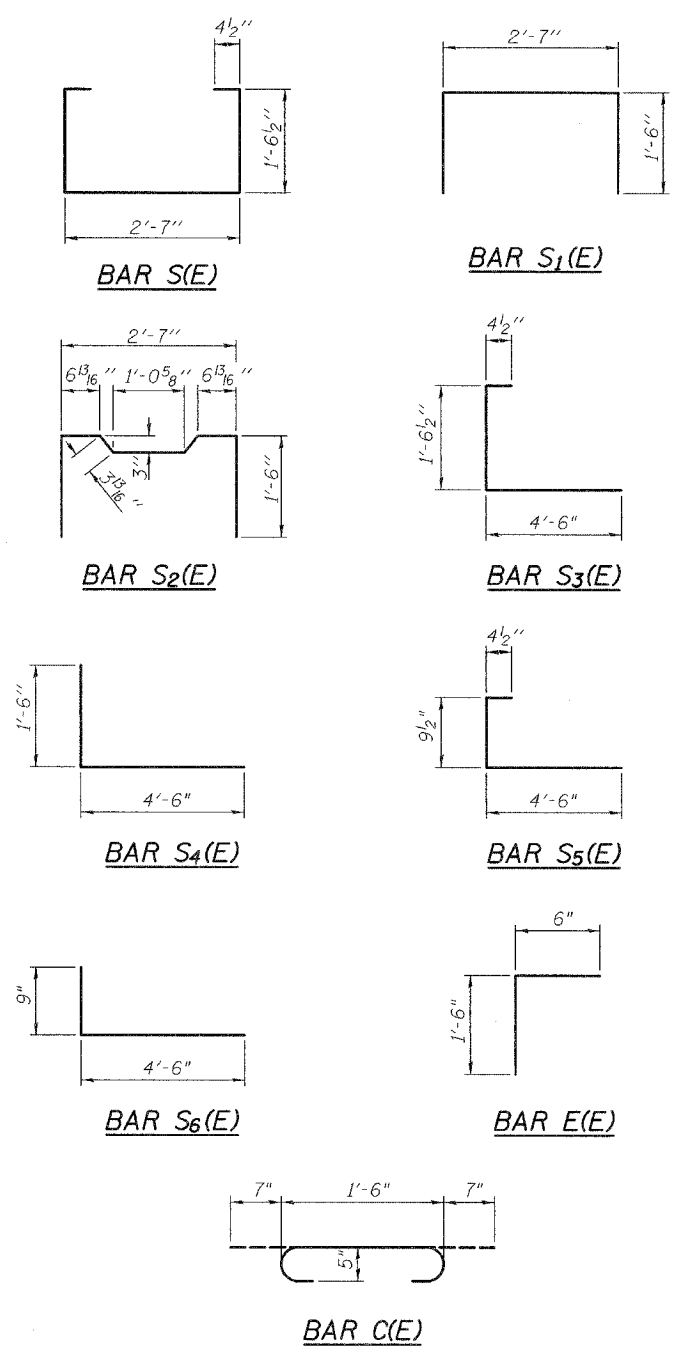
**VIEW D-D**

B(E), B<sub>1</sub>(E), S<sub>3</sub>(E) and S<sub>4</sub>(E) bars not shown, see Sheet 5 of 15.



**PLAN VIEW AT EXP. END**  
See Sheet 5 of 15 for Section A-A

Note: Spacing of S(E) and S<sub>2</sub>(E) bars may be adjusted up to 4\"/>



**21" X 36" DECK BEAM DETAILS - 1**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**

Notes: See sheet 5 of 15 for Bar List.  
See sheet 7 of 15 for Bill of Material.



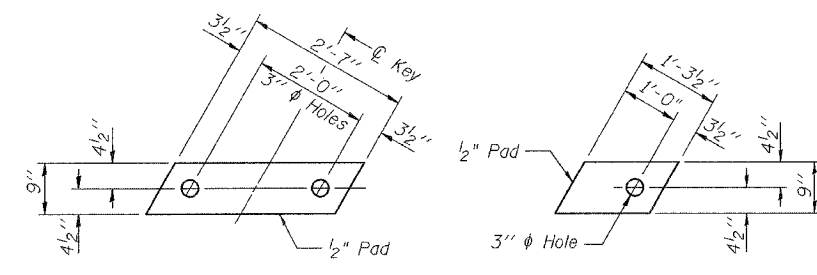
DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

03/18/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 18	SHEET NO. 7 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

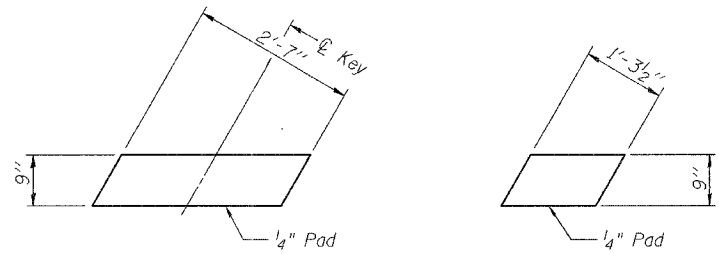
Contract #78033



**FABRIC BEARING PAD**  
(Interior)  
(18 Required)

**FABRIC BEARING PAD**  
(Exterior and Stage Constr. Line)  
(8 Required)

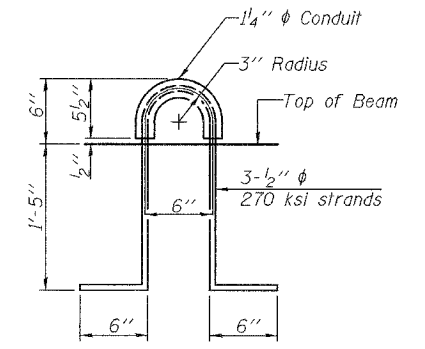
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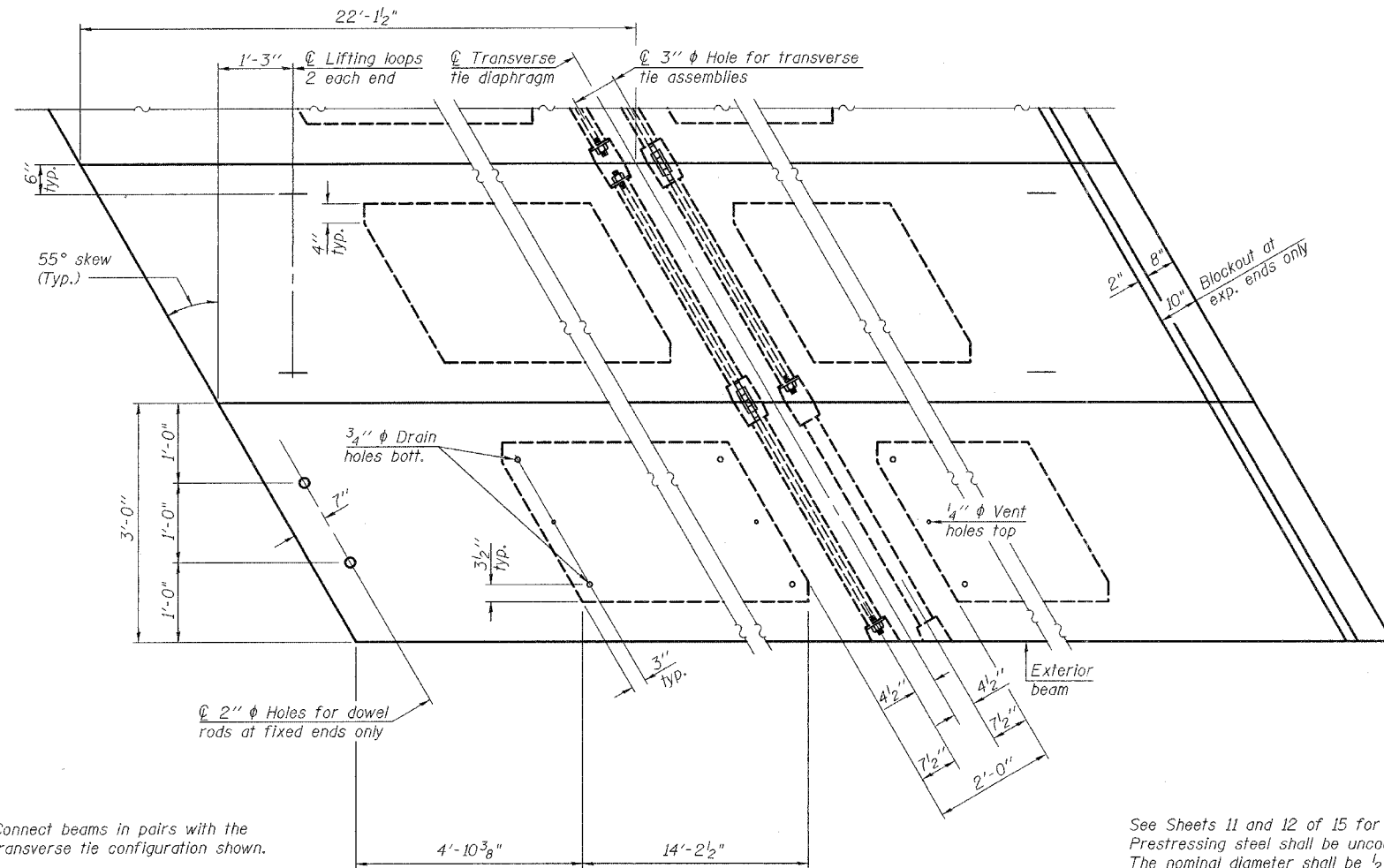
**FABRIC BEARING PAD**  
(Interior)  
(36 Required)

**FABRIC BEARING PAD**  
(Exterior and Stage Constr. Line)  
(16 Required)

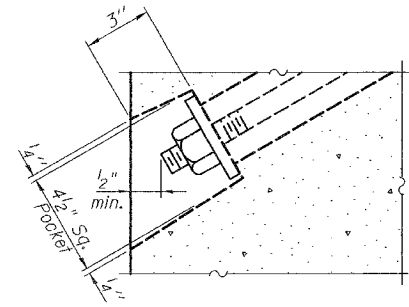
**EXPANSION**



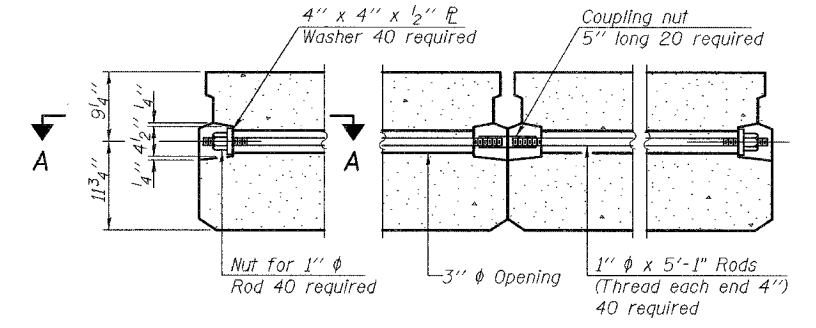
**LIFTING LOOP DETAIL**



**PLAN VIEW**



**SECTION A-A**



**TYPICAL TRANSVERSE TIE ASSEMBLY**

Note: Connect beams in pairs with the transverse tie configuration shown.

**NOTES**

See Sheets 11 and 12 of 15 for fascia beam modifications for rail post anchorage.  
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. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.  
Lifting loops shall be burned off after beams have been erected.  
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.  
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (21" Depth)	Sq. Ft.	2,921
---	---------	-------

**21" X 36" DECK BEAM DETAILS - 2**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**



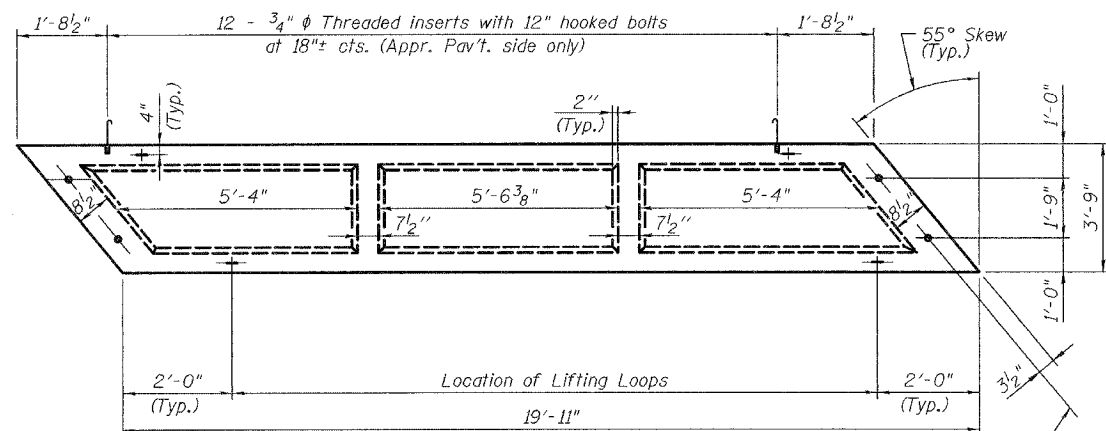
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DRAWN	PRC
CHECKED	YSS

04/29/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

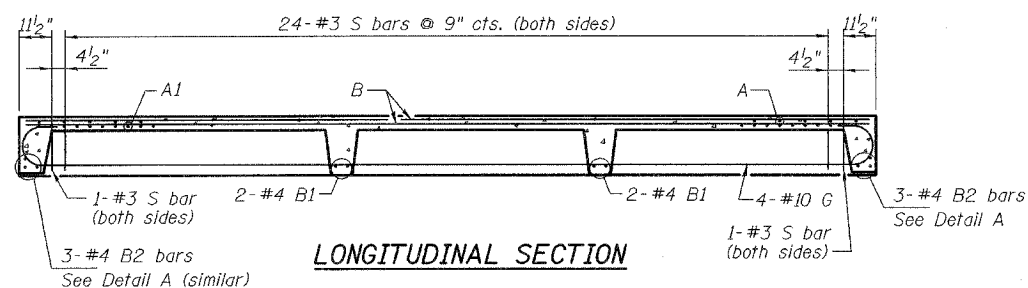
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	19	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78033

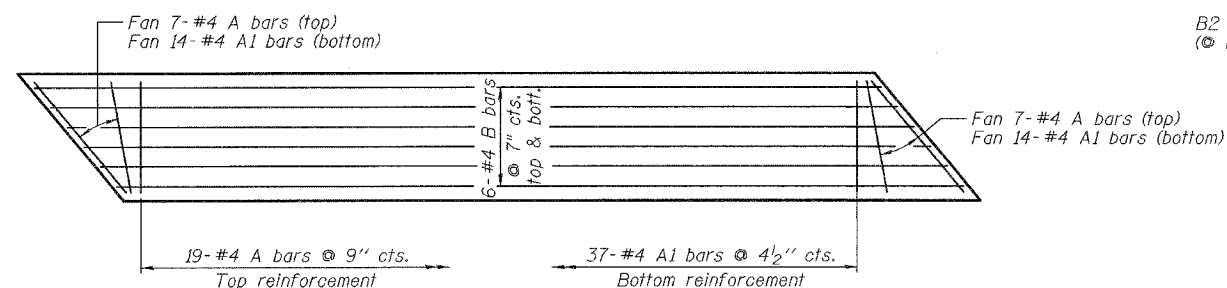


**TYPICAL PLAN OF BRIDGE SLAB**

(4 Required: 2 Right Hand Units and 2 Left Hand Units)

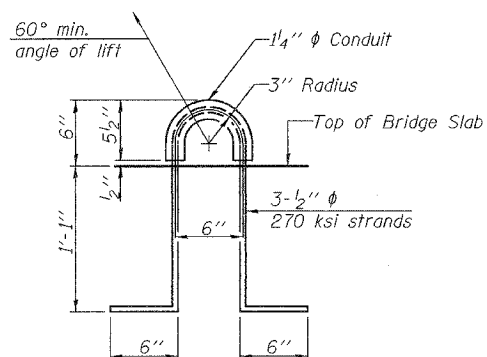


**LONGITUDINAL SECTION**

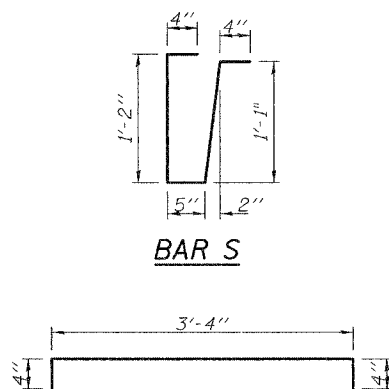


**PLAN**

Showing Slab Reinforcement



**LIFTING LOOP DETAIL**

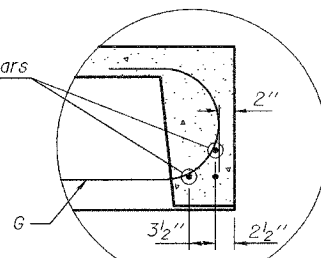


**BAR A**

**BAR G**

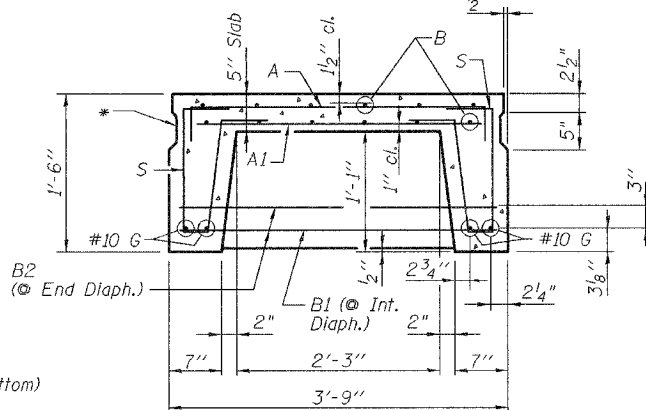
Notes:  
Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer.

Weld ends of G bars to B2 bars with full bead weld



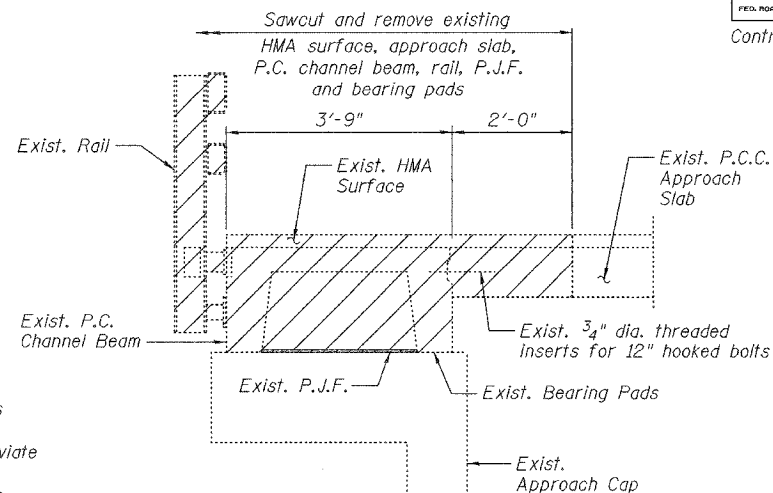
**DETAIL A**

Notes:  
Horizontal dimensions are at right angles to slab ends.  
The surface of the member shall not deviate more than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface.

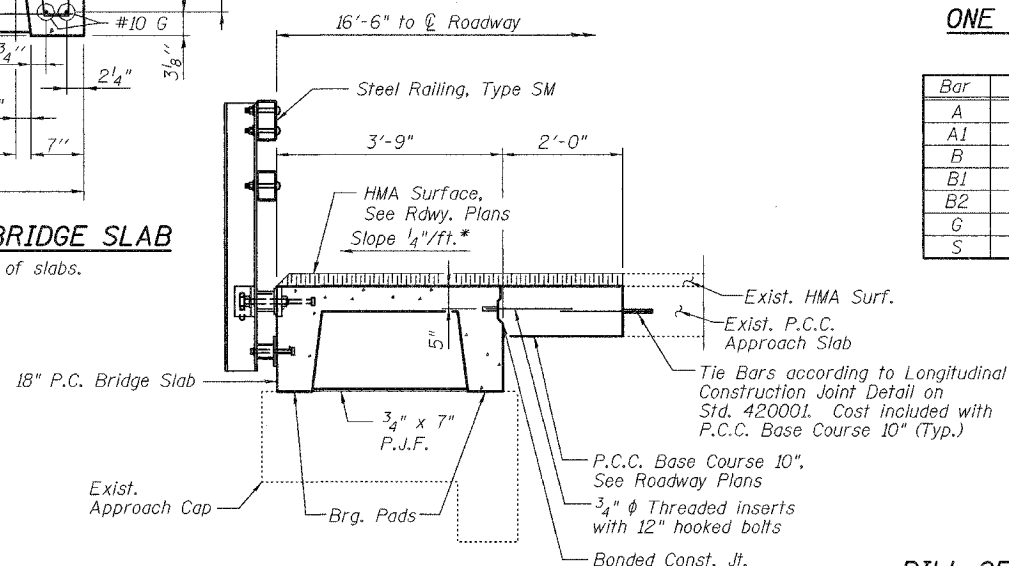


**TYPICAL SECTION THRU BRIDGE SLAB**

\* Omit key on exterior face of slabs.

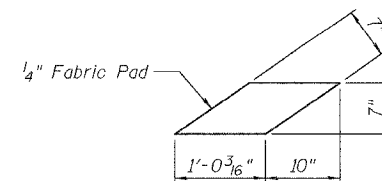


**LIMITS OF REMOVAL AT APPROACH SHOULDERS**



**PROPOSED CROSS SECTION**

\* Cross slope shown applies to HMA Surface



**BEARING PAD**

(16 Required)

**NOTES**

Lifting loops shall be burned off after bridge slabs have been erected.  
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8 inch fabric adjusting shims of the dimensions of the 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 bridge slabs. Cleaning shall be done by sandblasting the keyway areas between the top of the bridge slabs and the bottom edge of the key.  
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs.  
See Sheets 11 and 12 of 15 for required modifications for rail anchorage.  
The precast concrete bridge slab shall be erected and aligned with the exterior face of the fascia deck beam after deck beams are in final position.  
Cost of removing exist. P.C. channel beam, HMA Surface, and rail included with Removal of Exist. Precast Concrete Units. See Roadway Plans for measurements and payment for Approach Slab Removal and Replacement.

**BAR LIST**  
**ONE BRIDGE SLAB ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A	33	#4	4'-0"	□
A1	65	#4	3'-3"	—
B	12	#4	19'-4"	—
B1	4	#4	3'-6"	—
B2	6	#4	6'-1"	—
G	4	#10	22'-6"	⌋
S	52	#3	3'-4"	⌋

**BILL OF MATERIAL**

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299

**PRECAST CONCRETE BRIDGE SLAB**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**



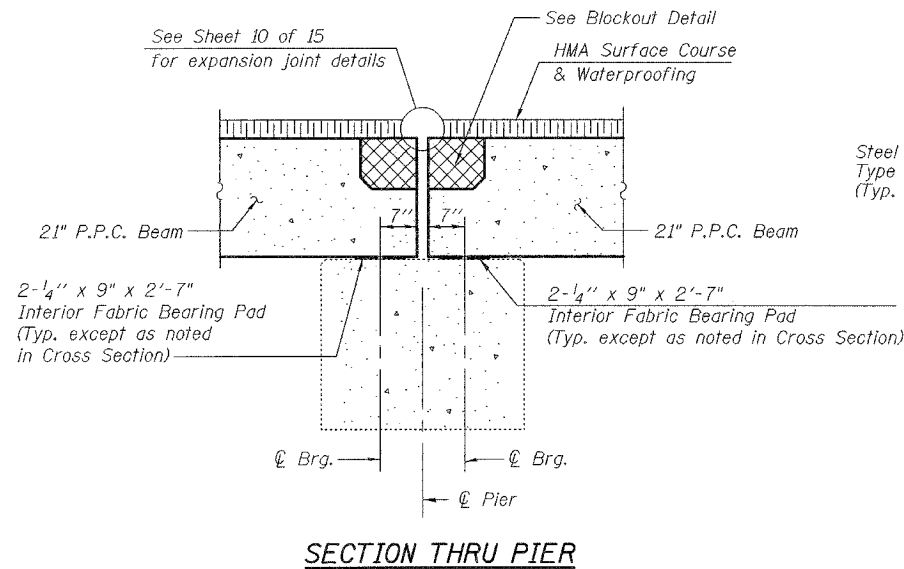
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CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

04/22/08

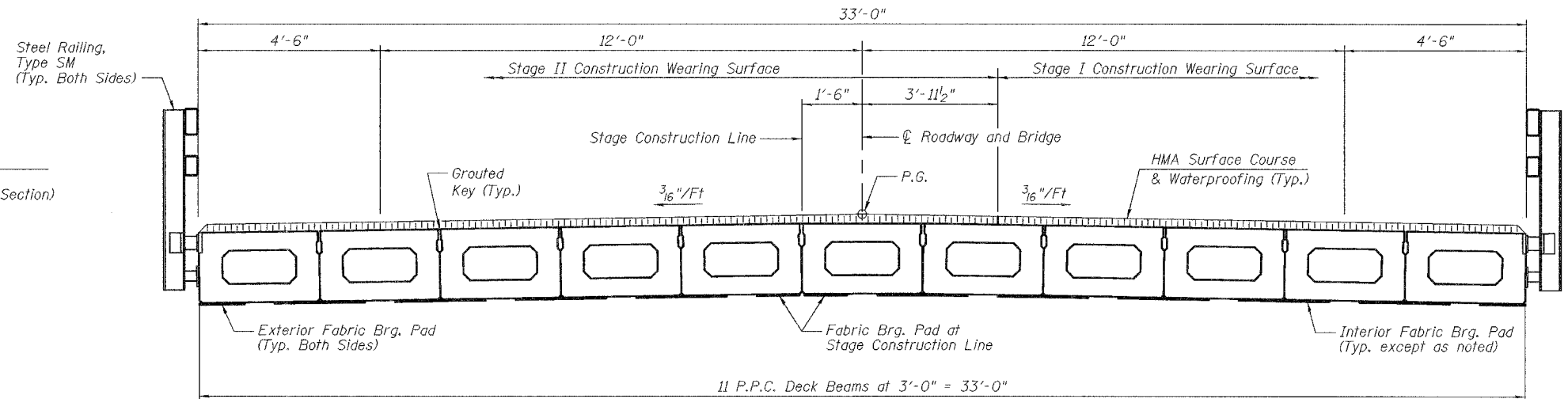
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	SHEET NO. 69	SHEET 20	SHEET NO. 9 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

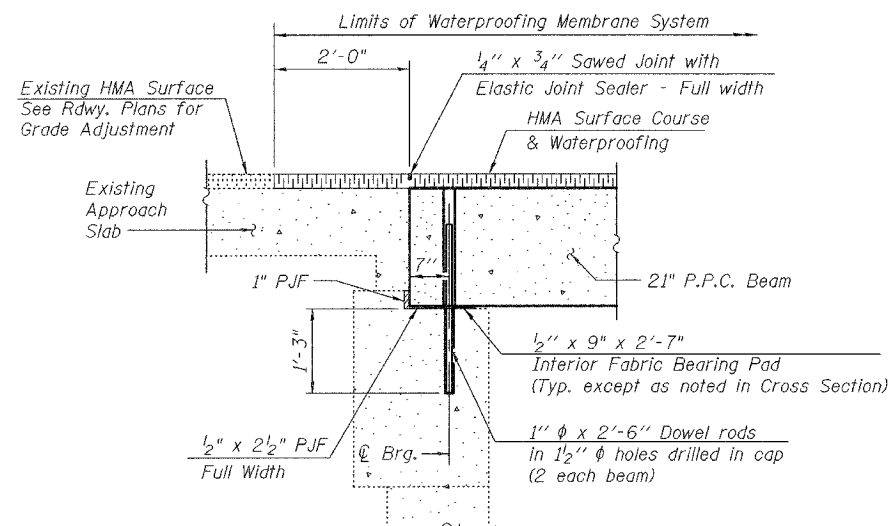
Contract #78033



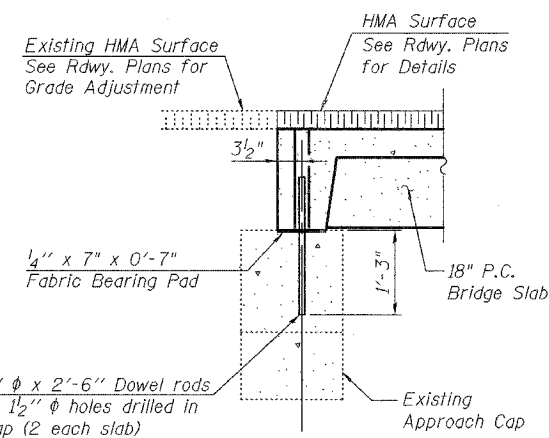
SECTION THRU PIER



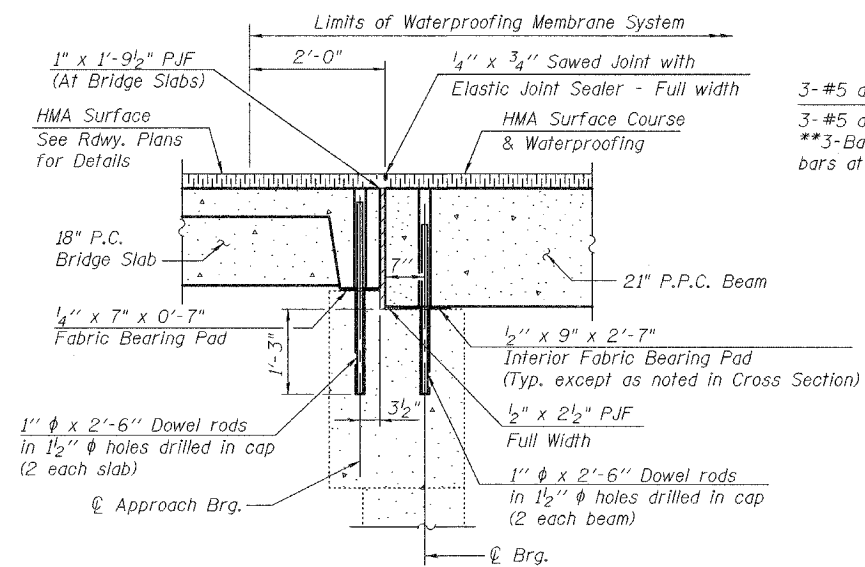
CROSS SECTION  
(Looking Upstation)



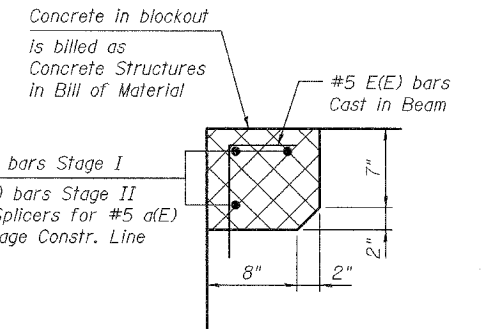
SECTION THRU ABUTMENT  
AT APPROACH SLAB



SECTION THRU  
APPROACH CAP



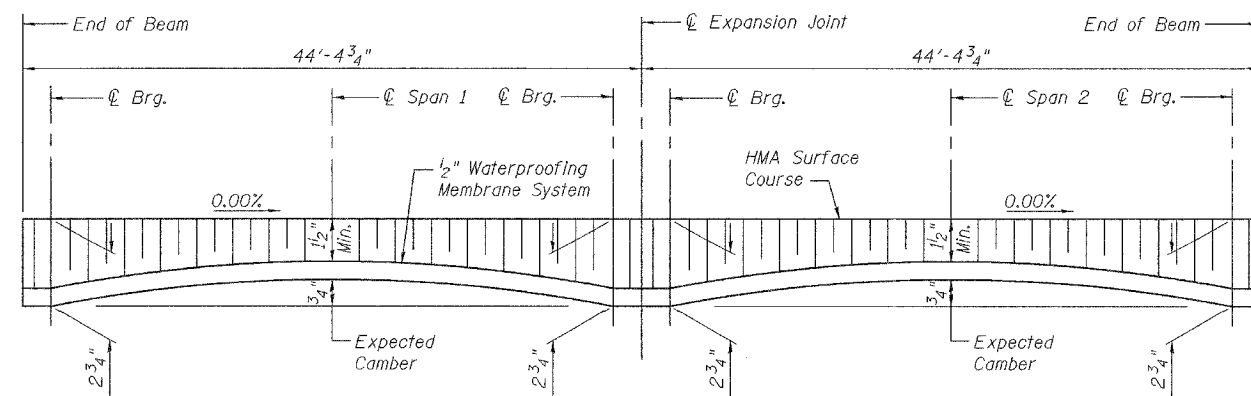
SECTION THRU ABUTMENT  
AT SHOULDER



BLOCKOUT DETAIL  
\*\*At Pier

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	6	#5	31'-2"	—
a1(E)	6	#5	25'-11"	—
Reinforcement Bars, Epoxy Coated			Pound	360
Concrete Structures			Cu. Yd.	2.6
Hot-Mix Asphalt Surface Course, Mix "C", N90			Ton	34
Waterproofing Membrane System			Sq. Yd.	352



HMA WEARING SURFACE PROFILE

Notes: Thickness shown for bridge spans is for all deck beams except the center deck beam. Thickness for the center deck beam will vary from those shown at beam edges to 5/16" additional at Expansion Joint.

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. Crosshatched areas to be poured after P.P.C. deck beams are in place and shear keys are grouted and cured.  
See Sheets 7 and 8 of 15 for bearing pad details.  
See Section 581 of the Standard Specifications for Waterproofing Membrane System.  
See Roadway Plans for HMA surface course, Mix "C", N90 mixture requirements. The HMA surface course shall be placed according to Section 582 of the Standard Specifications.

SUPERSTRUCTURE DETAILS  
ILL. ROUTE 146 OVER SUGAR CREEK  
F.A.P. ROUTE 885 - SECTION 111BR-1  
POPE COUNTY  
STATION 671+76.00  
STRUCTURE NO. 076-0006



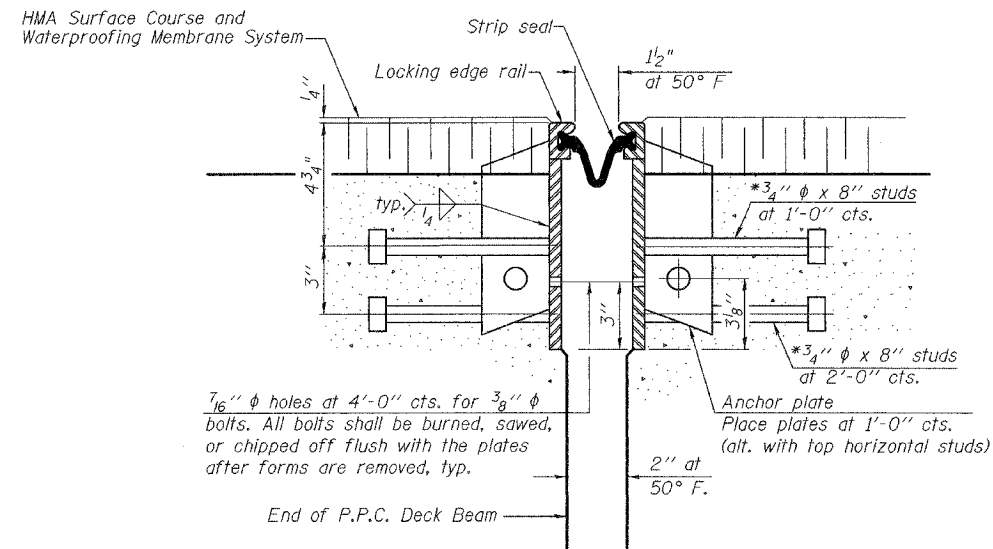
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CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

03/18/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

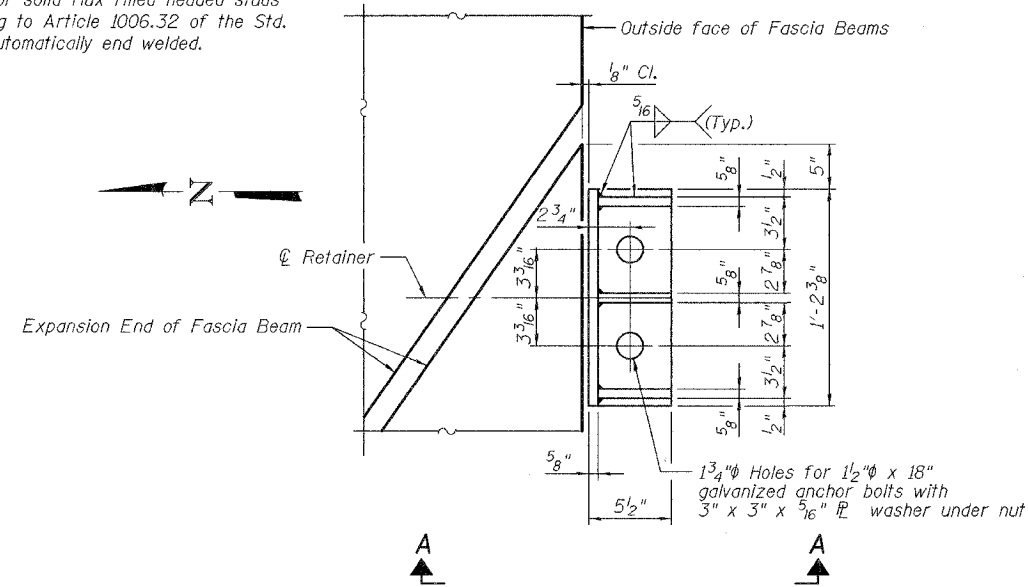
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	21	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78033

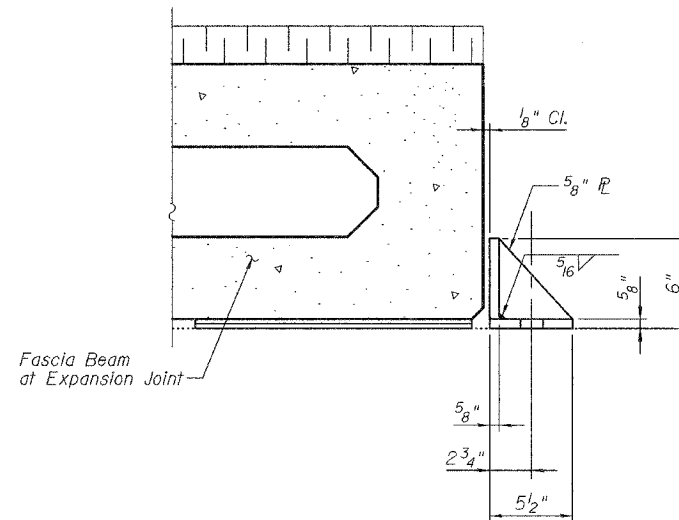


SECTION THRU STRIP SEAL JOINT

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



PLAN  
(Southwest corner shown, others similar)

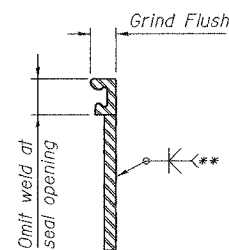


SECTION A-A  
SIDE RETAINER

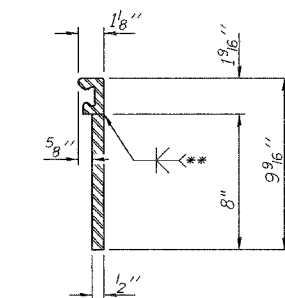
(4 Required)

Notes:  
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.  
Fill 1/8" gap with shim PL to provide temporary lateral support until shear keys have been grouted and block-out has been poured and cured.  
Anchor bolts shall be ASTM F1554 Gr. 55 all-thread.  
The corresponding specified grade of AASHTO M 314 anchor bolts may be used in lieu of ASTM F1554.  
Side retainers, anchor bolts, nuts and washers shall be galvanized according to AASHTO M 111 or M 232 (as applicable).  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Cost of retainer angles, anchor bolts, and accessories are included with Precast Prestressed Concrete Deck Beams (21" Depth).

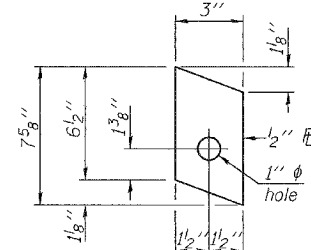
**EXPANSION JOINT AND  
SIDE RETAINER DETAILS**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**



LOCKING EDGE  
RAIL SPLICE DETAIL



LOCKING EDGE RAIL



ANCHOR PL

\*\* Back gouge not required if complete joint penetration is verified by mock-up.

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. Open or "Webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.  
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.  
The inside of the Locking Edge Rail groove shall be free of weld residue.  
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.  
The manufacturer's recommended installation methods shall be followed.

BILL OF MATERIAL

Item	Unit	Quantity
Preformed Joint	Foot	58
Strip Seal		



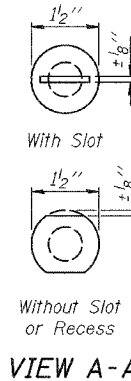
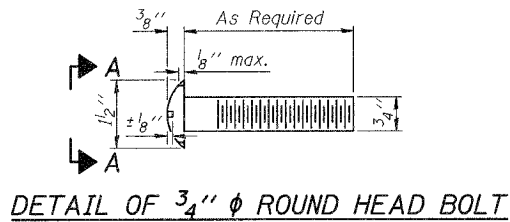
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DRAWN	PRC
CHECKED	YSS

03/18/08

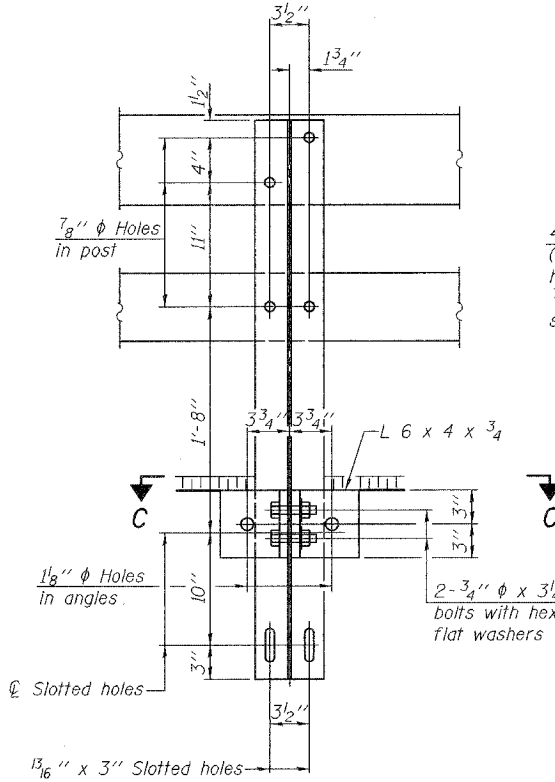
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET 22	SHEET NO. 11 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

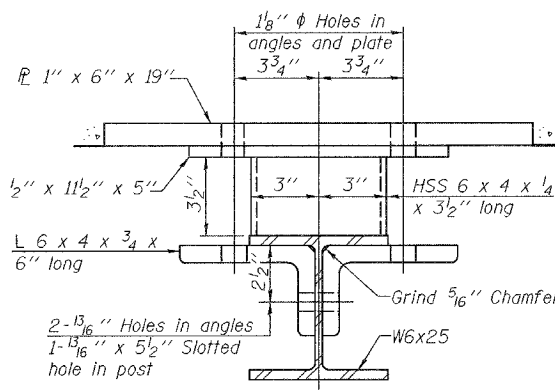
Contract #78033



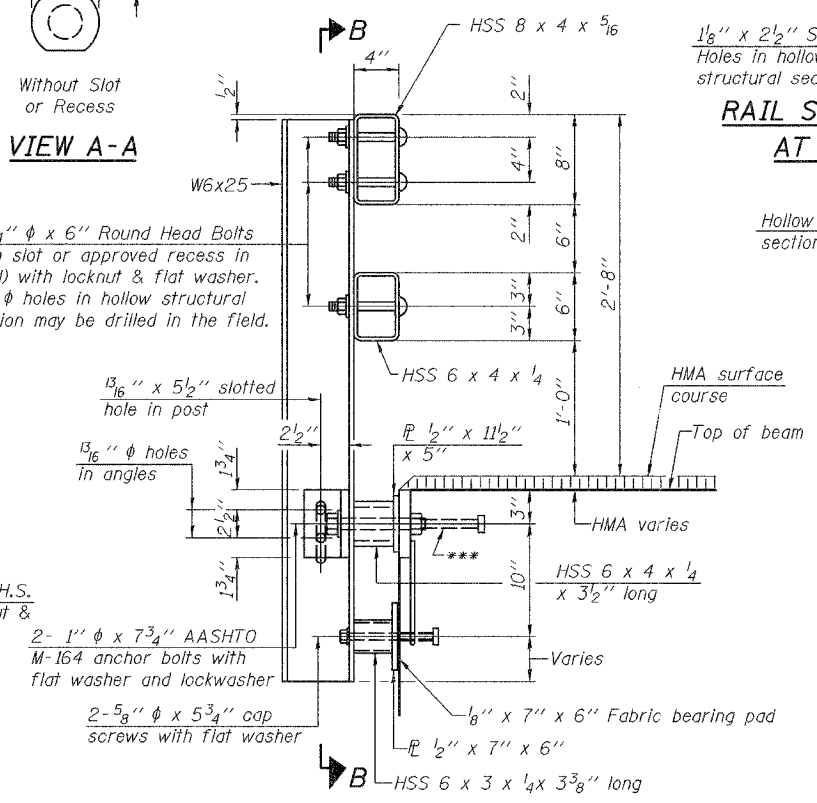
4-3/4"  $\phi$  x 6" Round Head Bolts  
(With slot or approved recess in head) with locknut & flat washer.  
7/8"  $\phi$  holes in hollow structural section may be drilled in the field.



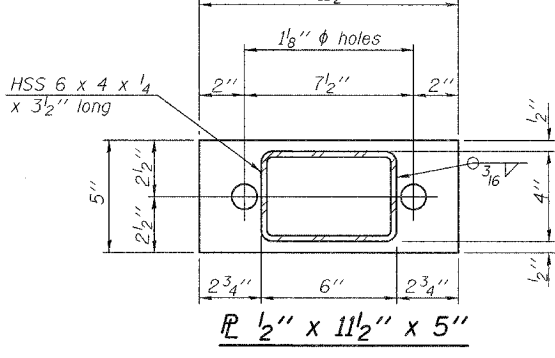
SECTION B-B



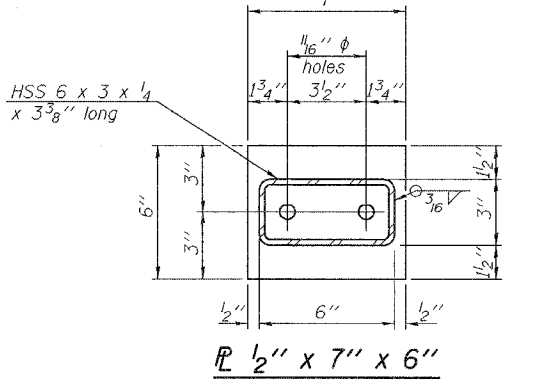
SECTION C-C



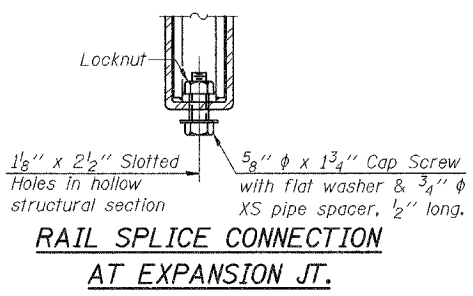
SECTION AT RAIL POST



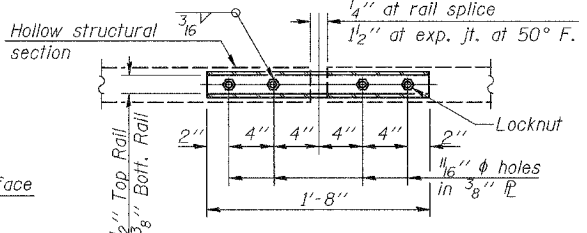
$\phi$  1/2" x 11 1/2" x 5"



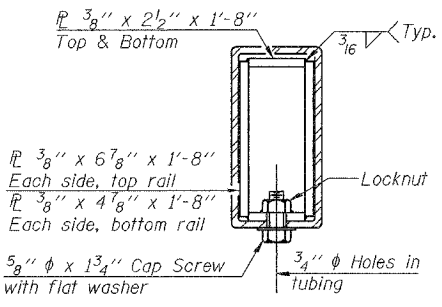
$\phi$  1/2" x 7" x 6"



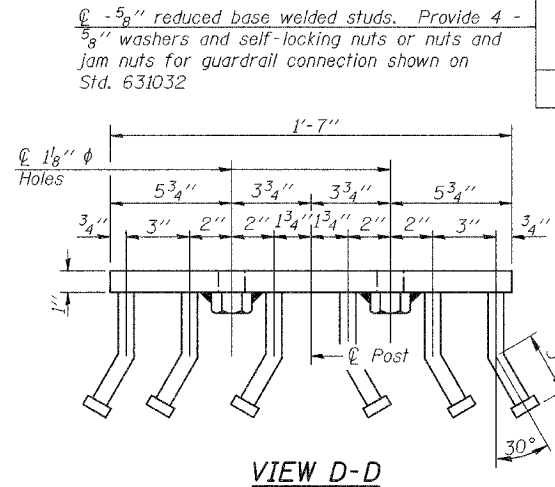
RAIL SPLICE CONNECTION  
AT EXPANSION JT.



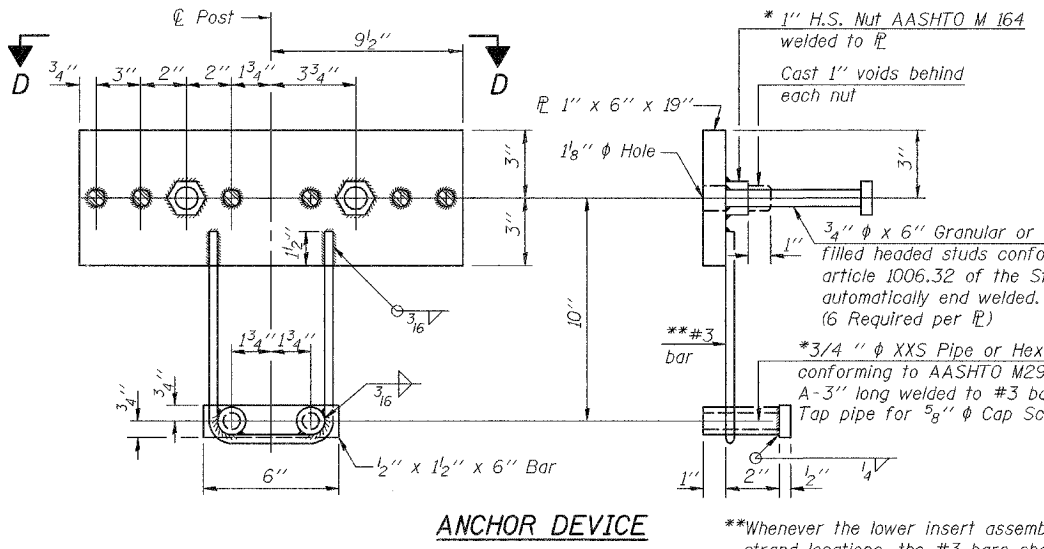
PLAN-BOTT. SPLICE  $\phi$   
TYPICAL



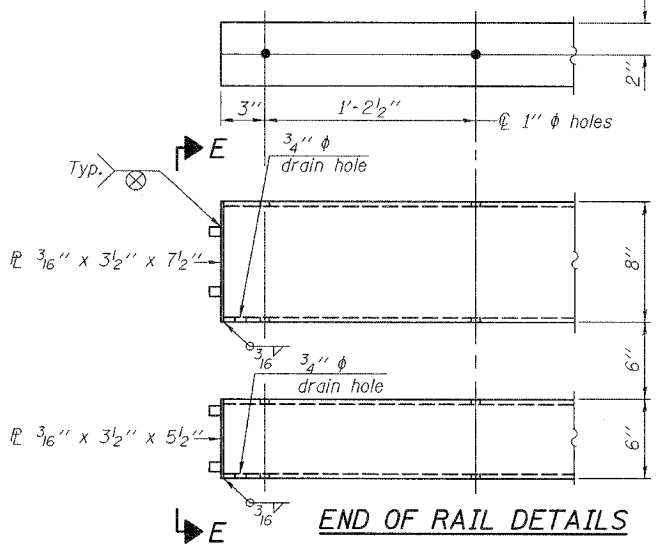
SECTION AT  
RAIL SPLICE



VIEW D-D



ANCHOR DEVICE



END OF RAIL DETAILS

Notes:  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.  
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.  
\*\*\*The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.  
See Sheet 12 of 15 for rail post locations.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	258

STEEL RAILING, TYPE SM  
ILL. ROUTE 146 OVER SUGAR CREEK  
F.A.P. ROUTE 885 - SECTION 111BR-1  
POPE COUNTY  
STATION 671+76.00  
STRUCTURE NO. 076-0006



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

R-34HMAWS

9-3-07

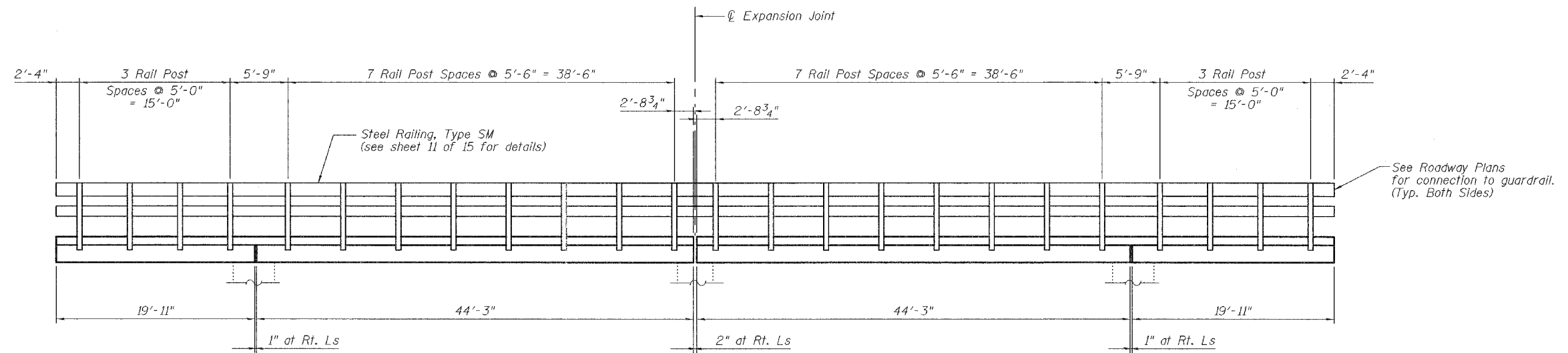
(6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum HMA thickness)

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

\*\*Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 23	SHEET NO. 12 15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #78033		



**RAIL POST SPACING DETAIL**  
South Elevation shown, North Elevation similar



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

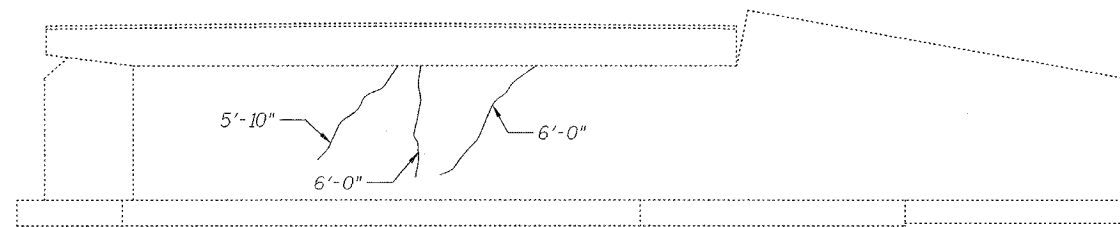
03/18/08

**RAIL POST SPACING**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**

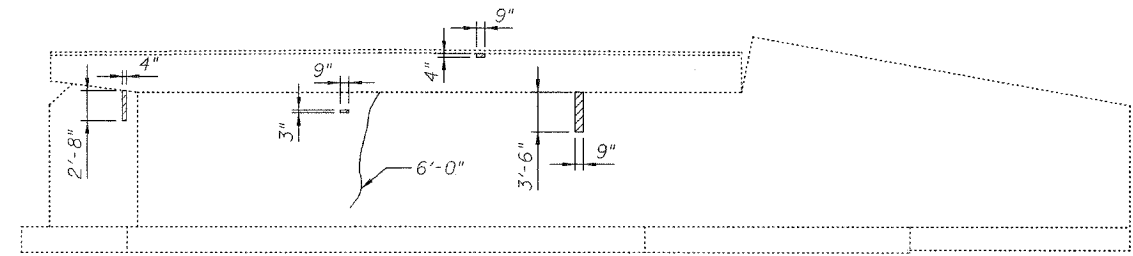
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 24	SHEET NO. 13 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

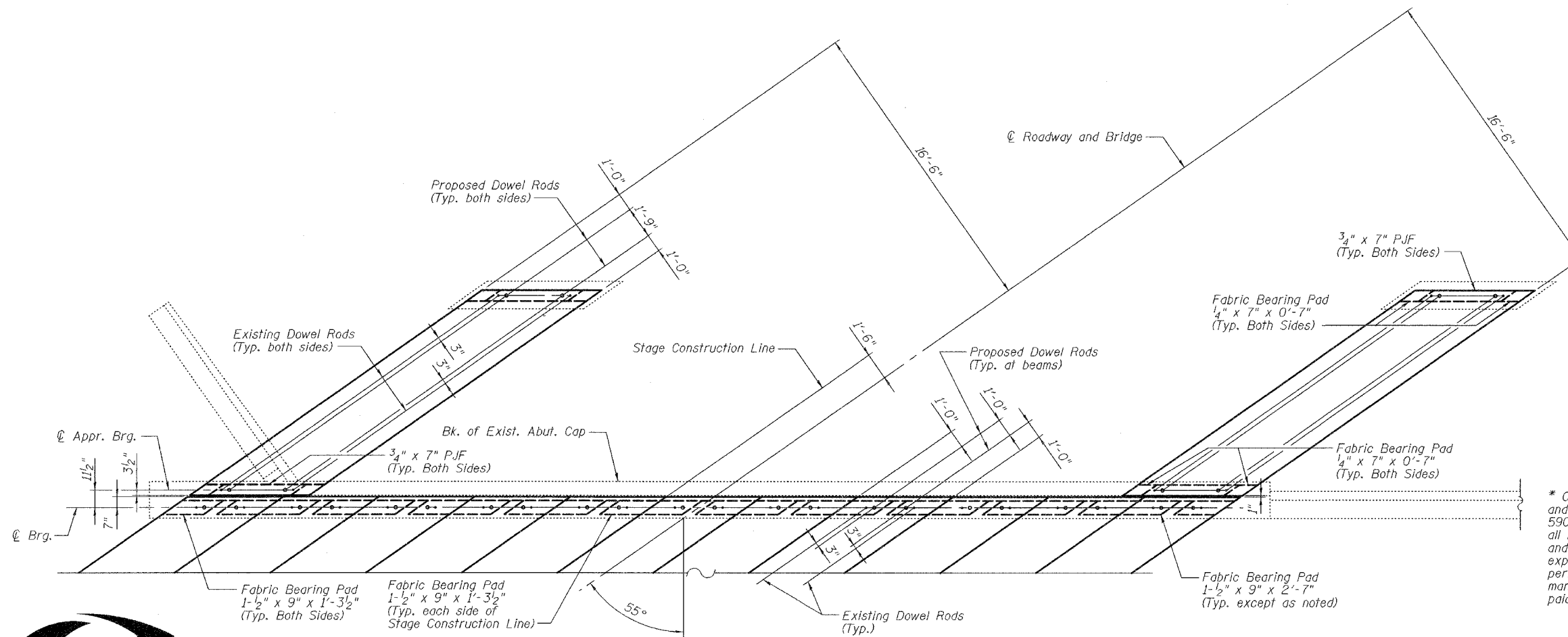
Contract #78033



**ELEVATION - EAST ABUTMENT**  
(Looking East)



**ELEVATION - WEST ABUTMENT**  
(Looking West)



Notes:  
Existing dowel rods shall be burned off flush with the existing concrete face, ground smooth, and sealed with epoxy. Costs are included with Removal of Existing Superstructure and Removal of Existing Precast Concrete Units, respectively. Concrete sealer shall be applied to concrete repair areas. See Sheet 14 of 15 for Substructure Repair Bill of Material.

**LEGEND**

- Structural Repair of Concrete (Depth equal to or less than 5")
- Crack Length
- Epoxy Crack Injection\*
- Existing Dowel Rod
- Proposed Dowel Rod

\* Cracks with openings greater than 1/2 inch shall be prepared and sealed according to the applicable requirements of Section 590 of the Standard Specifications with the following exceptions: all loose material along the edges of the crack shall also be removed and the crack shall be sealed with an expansive cement grout. The expansive cement grout shall be approved by the Engineer prior to performing repairs and shall be installed according to the manufacturer's recommendations. This work shall be measured and paid for according to Articles 590.04 and 590.05, respectively.



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

03/18/08

**PLAN - EAST ABUTMENT BEARING SEAT**

(East Abutment shown, West Abutment similar)

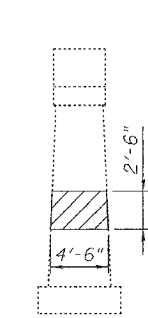
Bituminous wearing surface and existing approach pavement not shown for clarity.

**ABUTMENT REPAIRS**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**

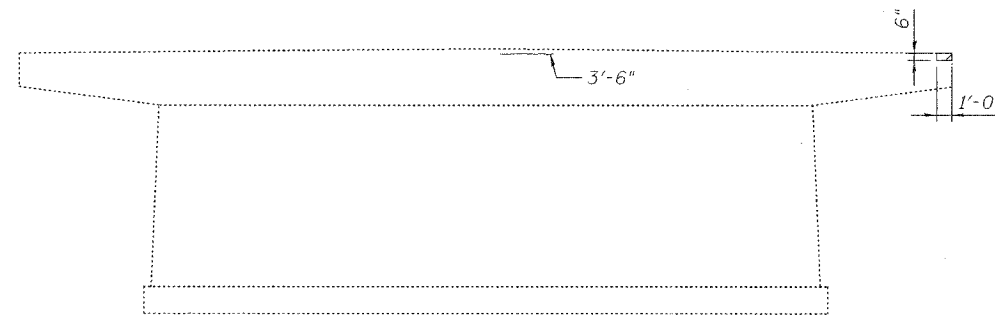


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

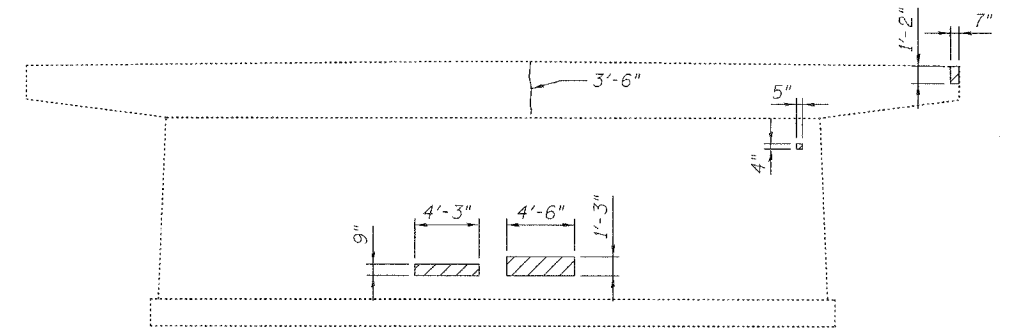
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A.P. 885	111BR-1	POPE	69	25	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #78033		



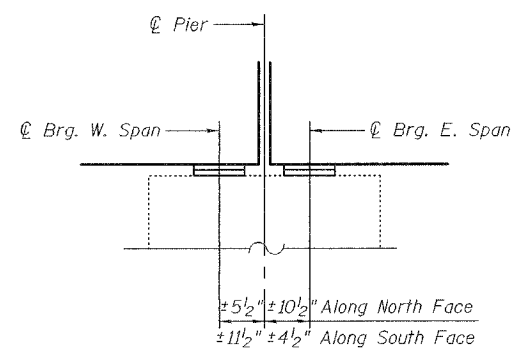
**SOUTH  
END VIEW**



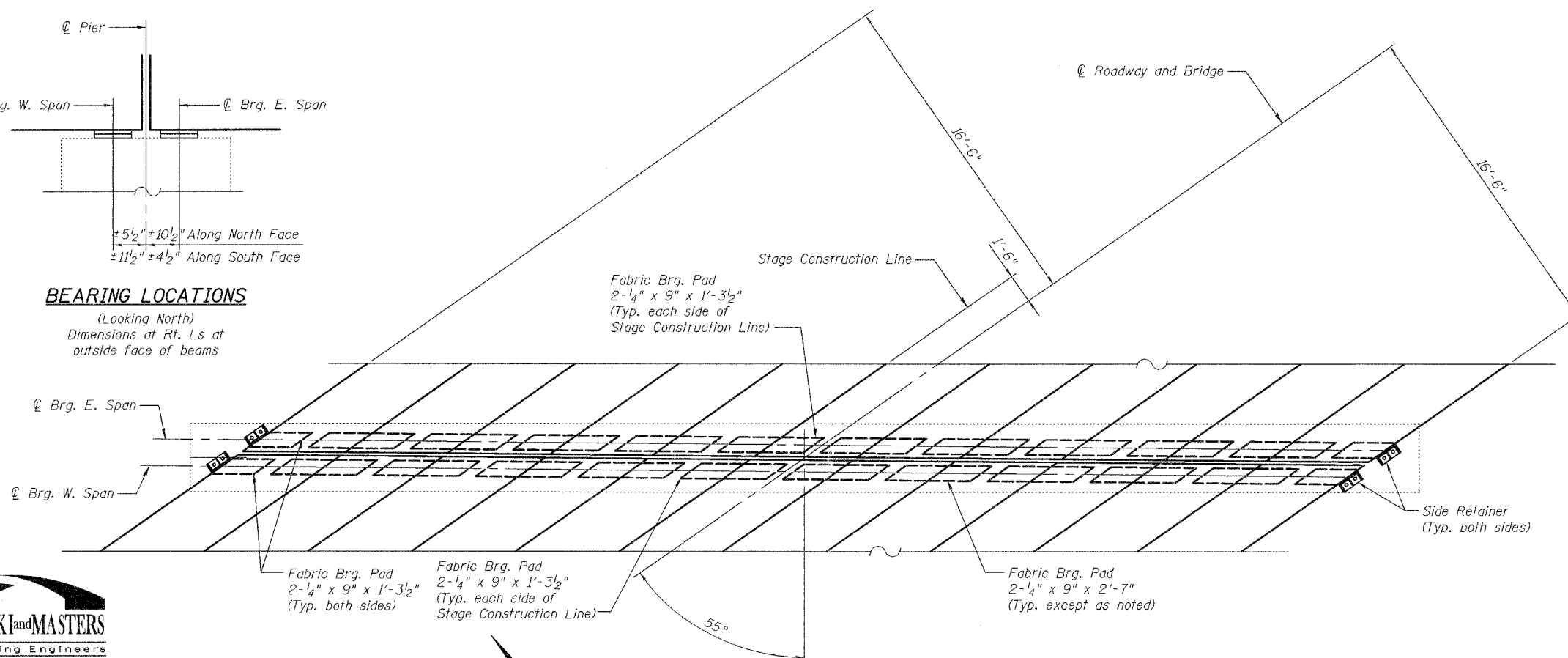
**ELEVATION - PIER - EAST FACE**  
(Looking West)



**ELEVATION - PIER - WEST FACE**  
(Looking East)



**BEARING LOCATIONS**  
(Looking North)  
Dimensions at Rt. Ls at  
outside face of beams



**PLAN - PIER BEARING SEAT**  
Bituminous wearing surface not shown for clarity.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5 inches)	Sq. Ft.	26
Concrete Sealer	Sq. Ft.	26
Epoxy Crack Injection	Foot	31

**LEGEND**

- Structural Repair of Concrete (Depth equal to or less than 5")
- Crack Length
- Epoxy Crack Injection

Note:  
Concrete sealer shall be applied to concrete repair areas.

**PIER REPAIR**  
**ILL. ROUTE 146 OVER SUGAR CREEK**  
**F.A.P. ROUTE 885 - SECTION 111BR-1**  
**POPE COUNTY**  
**STATION 671+76.00**  
**STRUCTURE NO. 076-0006**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

03/18/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15 15 SHEETS
F.A.P. 885	111BR-1	POPE	69	26	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78033

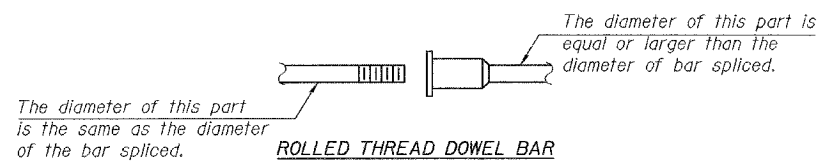
**NOTES**

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) =  $1.25 \times f_y \times A_t$
- ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_t$

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

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	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



\*\* ONE PIECE

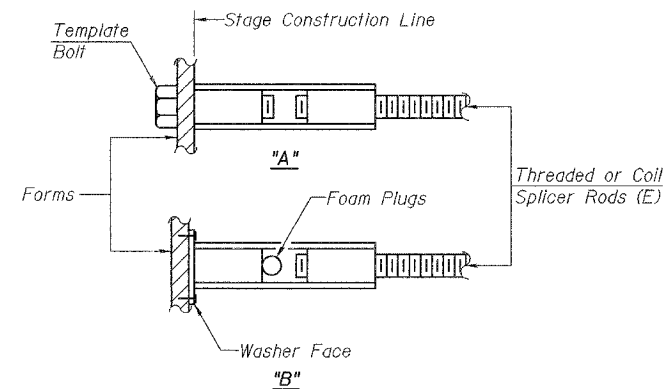
Wire Connector



WELDED SECTIONS

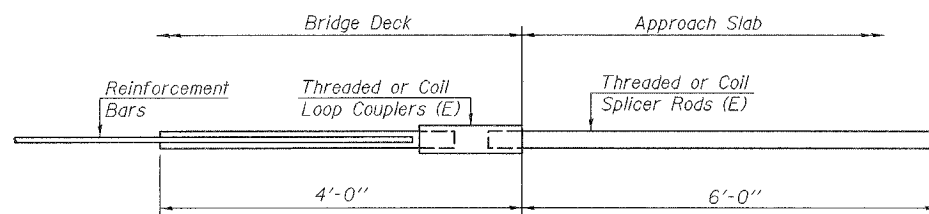
**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



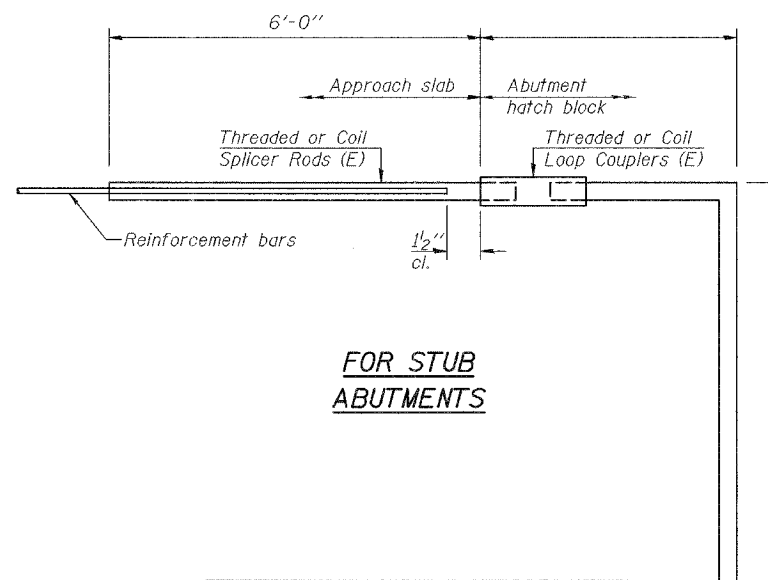
**INSTALLATION AND SETTING METHODS**

"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.



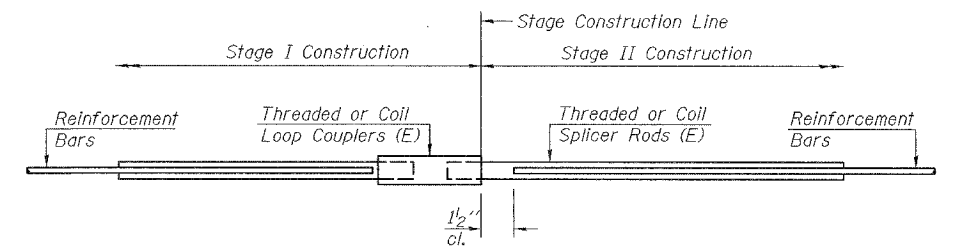
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	6	Blockouts

**BAR SPLICER ASSEMBLY DETAILS**  
ILL. ROUTE 146 OVER SUGAR CREEK  
F.A.P. ROUTE 885 - SECTION 111BR-1  
POPE COUNTY  
STATION 671+76.00  
STRUCTURE NO. 076-0006



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	YSS

BSD-1

11-1-06

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Project No.	885	Sheet No.	27
Section	111BR-1	County	POPE
Contract No.	78033		

B.M. Sq. Cor. S.W. Corner Bridge wing wall  
Rt. Sta. 671+50 Elev. 370.34.  
Existing Structure: Simple R.C.D. Girders  
at 45'-2 1/4" with RC closed abutments  
built as SBI RTE 146 sec. 11B in 1929  
at station 671+76 Superstructure  
to be removed and replaced a  
portion at a time by contractor  
utilizing stage construction as  
shown.  
Existing Structure Number: 076-0006.

GENERAL NOTES

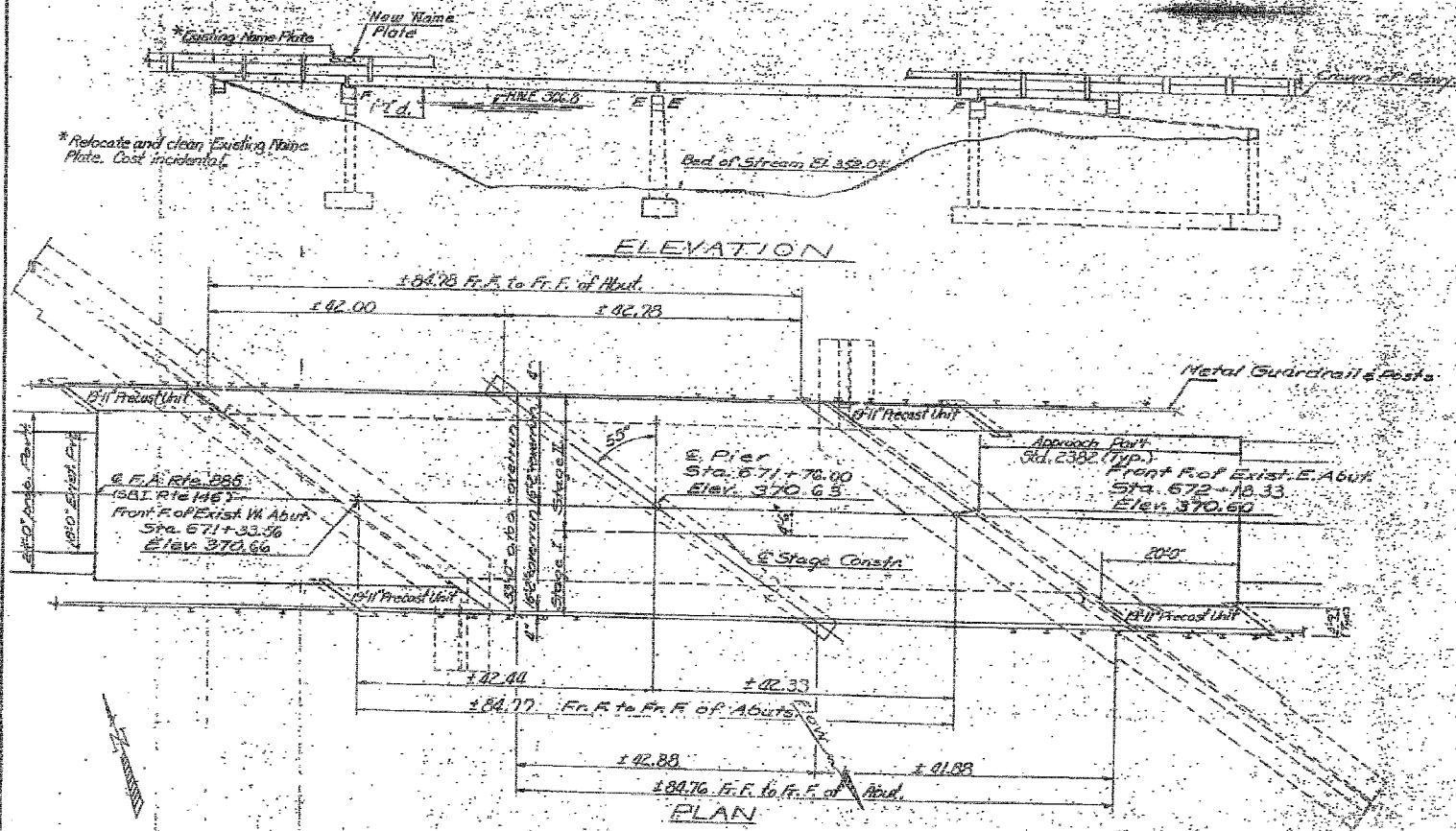
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to removal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The top surface of the beams shall be finished in accordance with article 505.06 of the Standard Specification except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

Limits of Bituminous Concrete Surface Course Class I and Waterproofing Membrane System shall be out to out of deck and 2'-0" beyond each end of deck.

A Calcium Nitrate Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

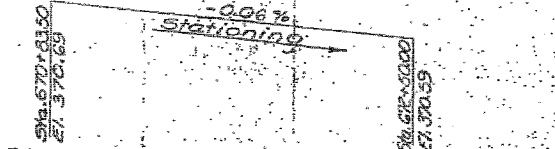


STATION 671+76.00  
REBUILT BY  
STATE OF ILLINOIS  
FA. RT. 885 SEC. 11B-DR-1  
FA. PROJ. BH-F-885(4)  
LOADING HS-20  
SIB. NO.

NAME PLATE  
Sd. 2113  
\* Structure Number to be supplied by District.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Conc. Surface course Class I	Sq. Yd.	33		33
Removal of Existing Superstructure	Each	1		1
Concrete Removal	Cu. Yd.		35	35
Class I Concrete	Cu. Yd.	2.6	608	610.6
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Conc. Deck Beams (Type 5-1)	Sq. Ft.	230		230
Steel Reinforcing Type 5-1	Lin. Ft.	258		258
Reinforcement Bars	Pound	530	6820	7350
Waterproofing Membrane System	Sq. Yd.	337		337
Temporary Bridge Deck	Lin. Ft.	163		163
Expansion Joint	Each	50		50
Name Plates	Each	1		1
Portland Cement Mortar Painted Course	Lin. Ft.	283		283



PROPOSED GRADE PART 885 (SBI RTE 146)  
2d of Class I

WATERWAY INFORMATION

Drainage Area: 137 sq. mi. Low Grade Elev. 370.50 @ Sta. 673+00

Flood	Req. Q	Overl. Op. Ft.	Mat. H.W.L.	Head - Ft.	Headwater El.	Headwater El.
Yr.	C.F.S.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	50 3633	568 568	366.8 190	1.90	368.7	368.7
Base	100 4403	578 578	367.1 2.40	2.40	369.5	369.5
Max. Calc.	300 5711	587 587	367.8 2.30	2.30	370.1	370.1

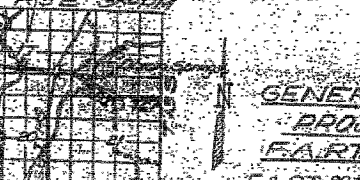
PRECAST PRESTRESSED UNITS

f'c = 5000 psi  
f'cs = 4200 psi  
f'ps = 270,000 psi (Strands)  
f'ps = 188,000 psi (Strands)

FIELD UNITS PRECAST UNITS

f'c = 3500 psi  
f'ps = 60,000 psi (Reinf.)

Proposed Improvement



GENERAL PLAN & ELEVATION

PROJECT  
FA. RT. 885 OVER SUGAR CREEK  
FA. RT. 885 (SBI RTE 146) SEC. 11B-DR-1  
POPE COUNTY  
STATION 671+76.00

DESIGNED	Ch. Tom Ch.	EXAMINED	J. J. [Signature]
CHECKED	B. R. [Signature]	PAASSED	[Signature]
DRAWN	A. H. [Signature]	APPROVED	[Signature]
CHECKED	[Signature]		

Revised 7-15-81 J.T.D. Revised 10-1-81 J.R.S. Revised 3-18-83 J.R.S.

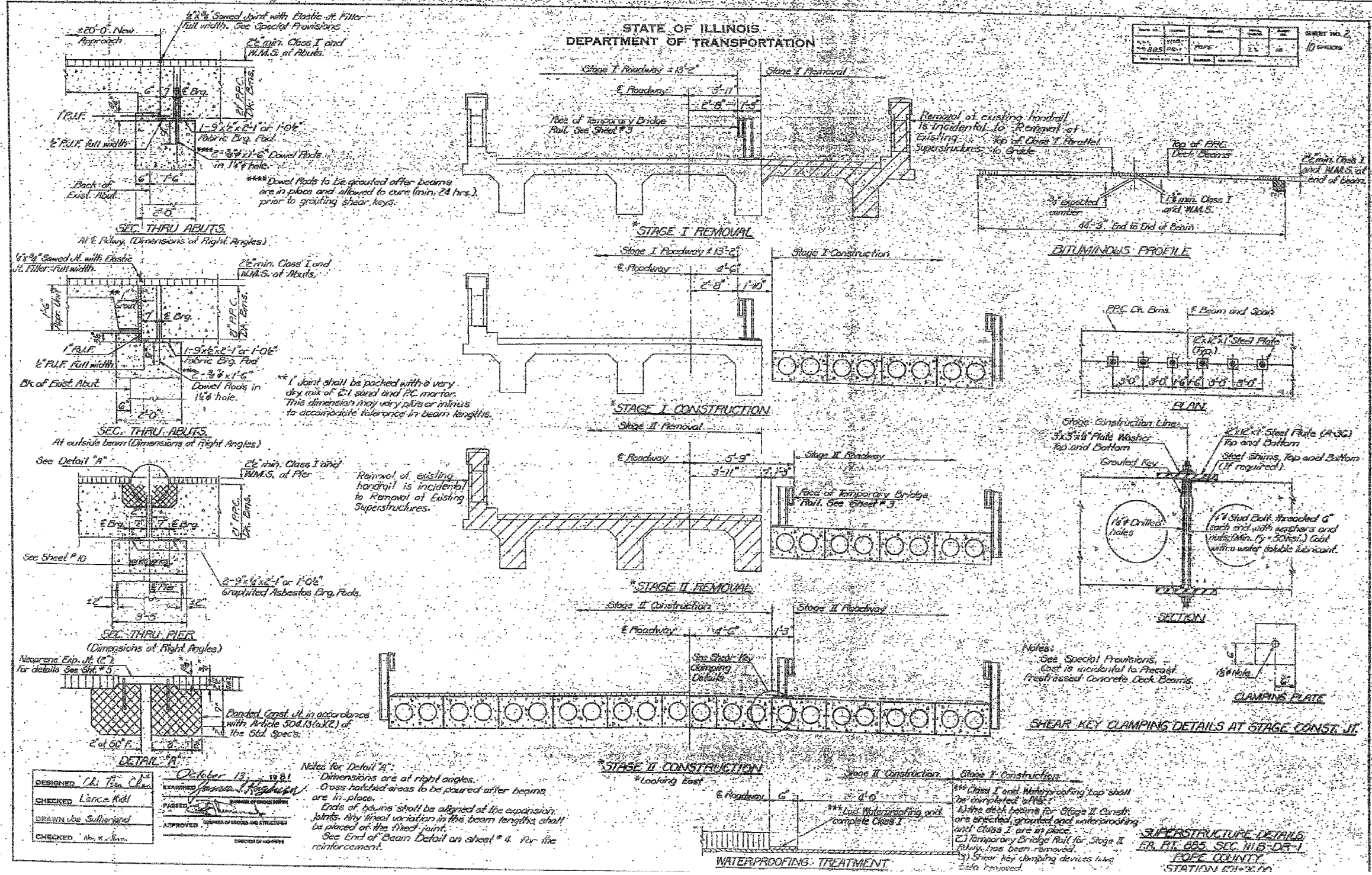


FOR INFORMATION ONLY

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NO.	DATE	BY	CHKD.	APP'D.
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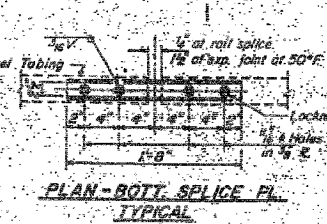
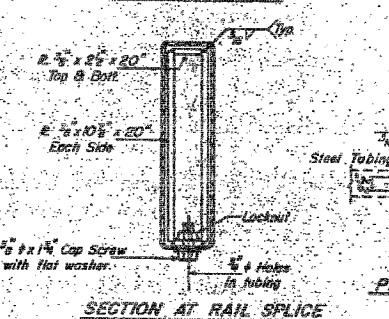
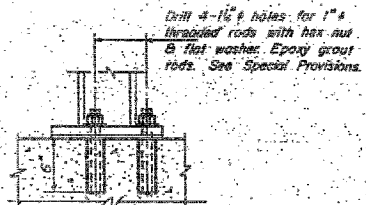
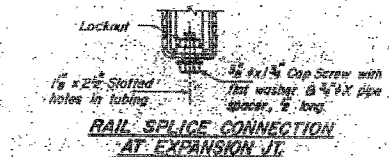
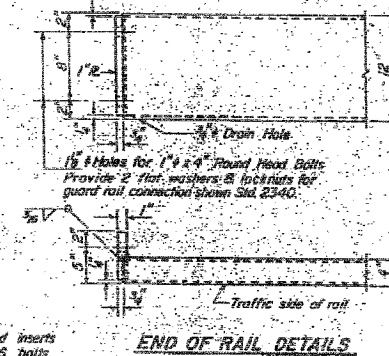
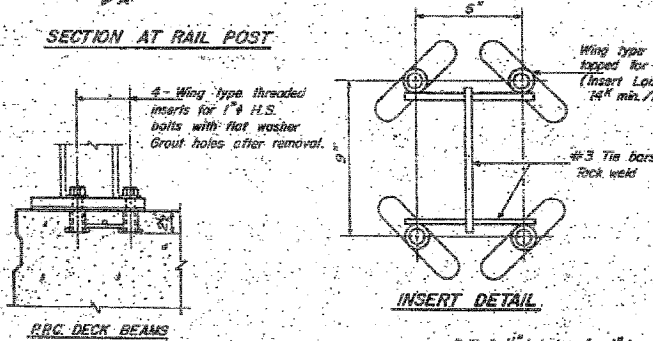
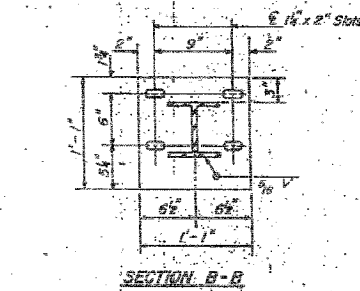
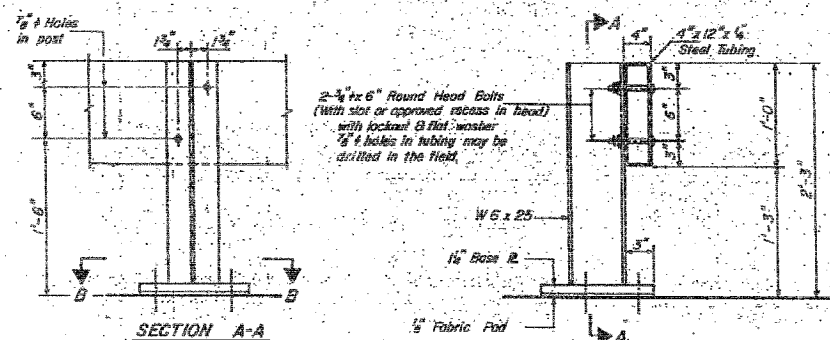
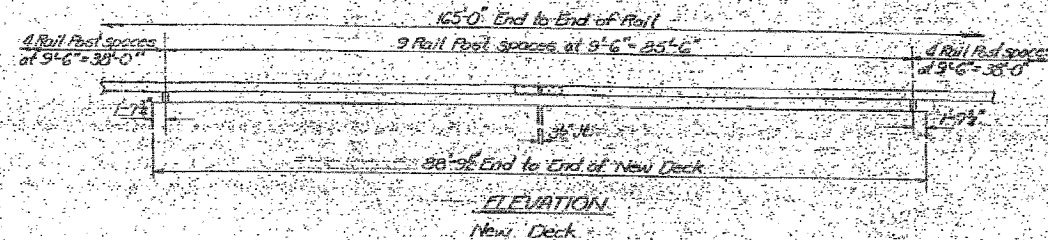
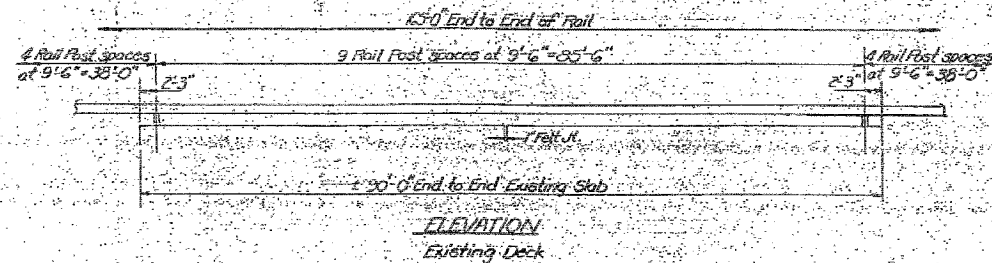


FOR INFORMATION ONLY

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	885	SECTION	111BR-1	COUNTY	POPE	TOTAL SHEETS	69	SHEET NO.	29
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**NOTES**

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

All other steel shapes and plates shall conform to the requirements of AASHTO M-193 except posts shall conform to AASHTO M-223 Grade 50. Bolts, nut screws, and nuts shall conform to the requirements of ASTM designation A-307 except for high strength bolts, threaded rods, nuts and washers noted which shall conform to AASHTO M-164.

The bridge rail shall receive one stop coat of a steel prime paint. The 1" high strength bolts or threaded rods used to connect the railposts shall be tightened in accordance with Article 507D4(g)(3) of the Standard Specifications.

See Special Provisions for Temporary Bridge Rail.

**BILL OF MATERIALS**

Item	Unit	Quantity
Temporary Bridge Rail	Ln. Ft.	165

TEMPORARY BRIDGE RAIL  
F.A. RT. 885 - SEC. 111B-DR-1  
POPE COUNTY  
STATION 671+76.00

DESIGNED: *Chi Yen Chen*  
CHECKED: *Lance Kidd*  
DRAWN: *Joe Sutherland*  
CHECKED: *Mac K...*

EXAMINED: *James J. H...*  
PASSED: *[Signature]*  
APPROVED: *[Signature]*

October 13, 1981

R-25 8-30-80 (10'-9" Maximum Post Spacing)

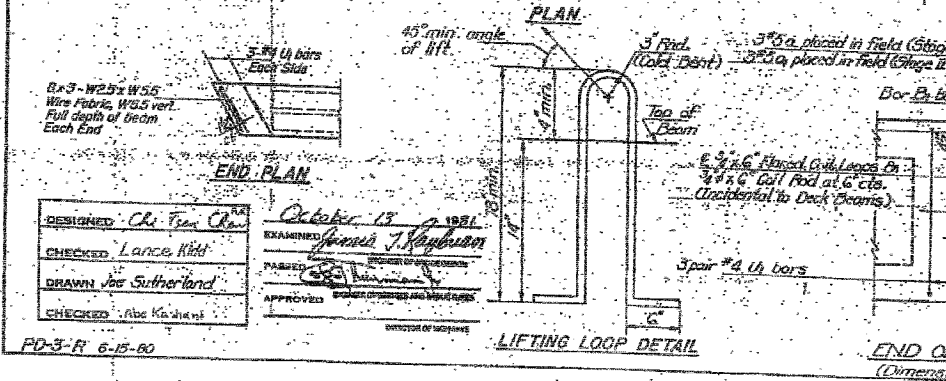
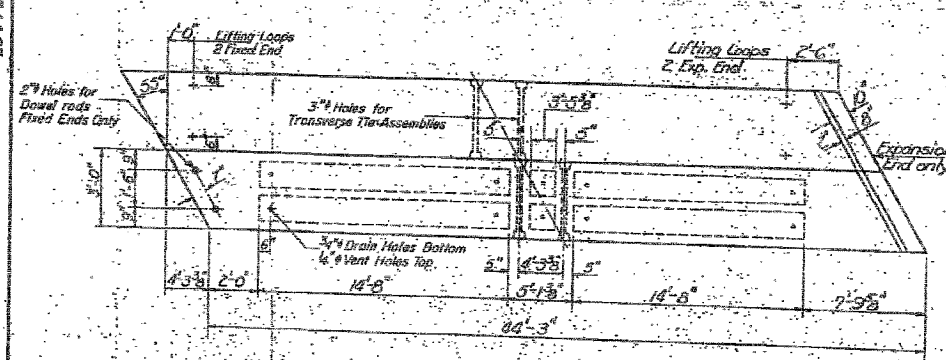
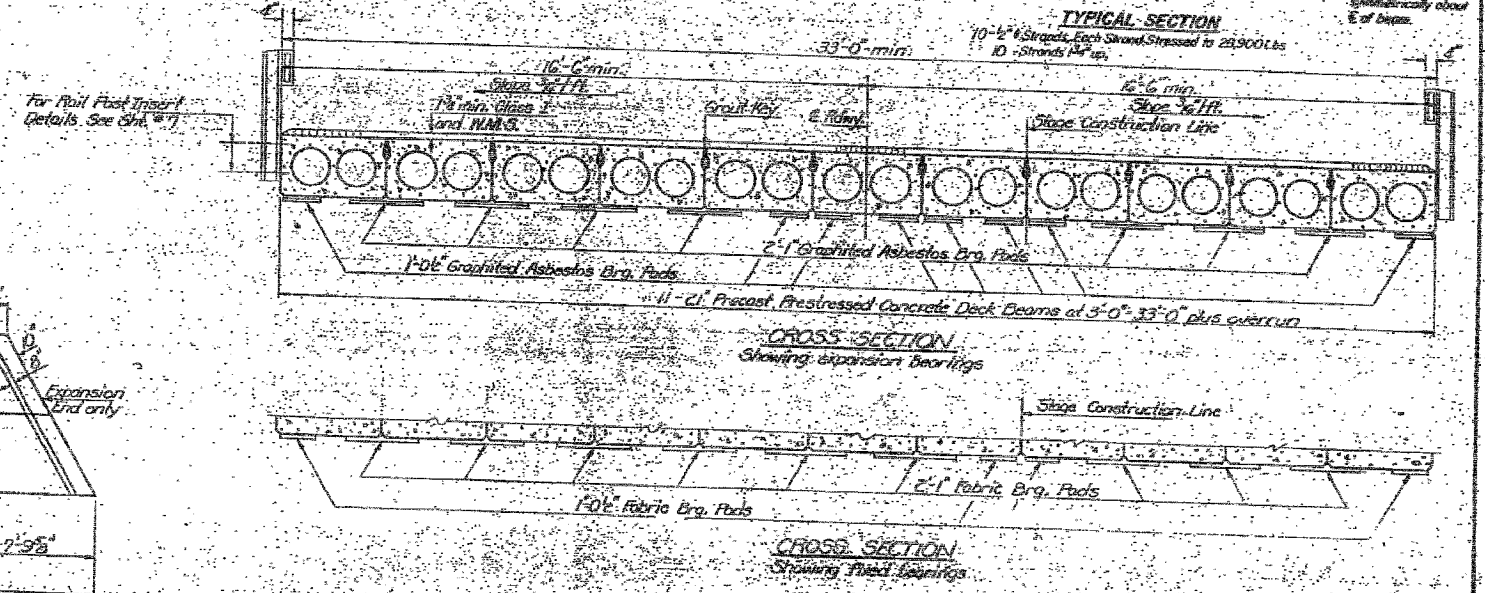
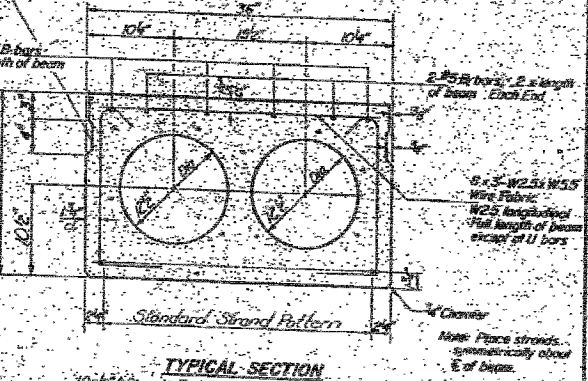
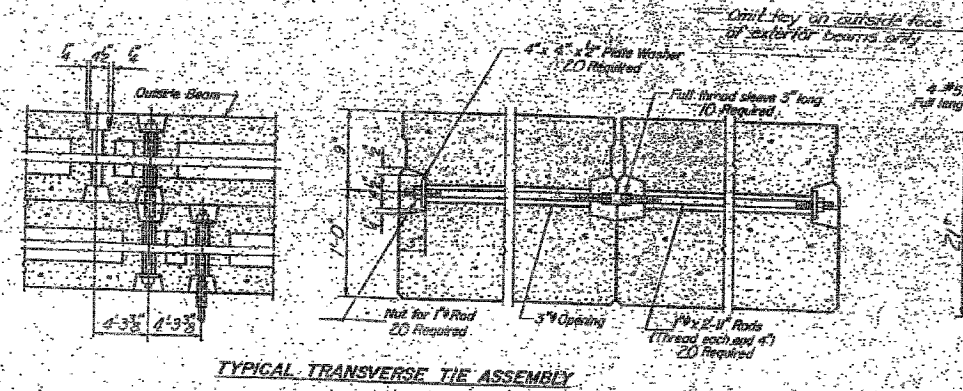
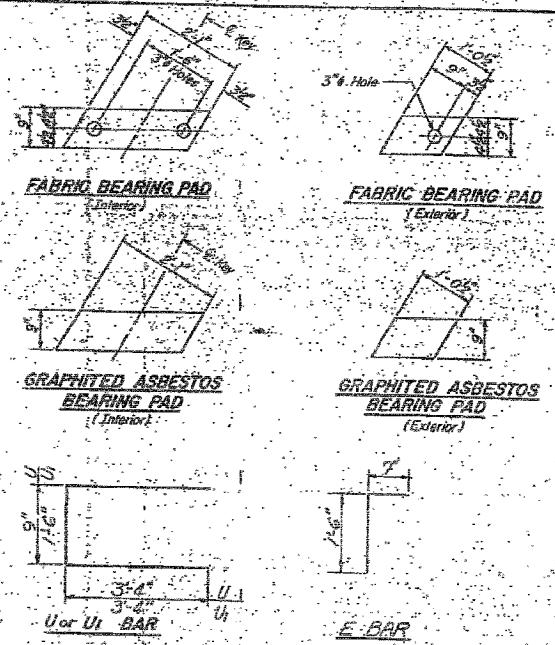


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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Project No.	885	Section	111BR-1	Sheet No.	69	Total Sheets	30
Contract No.	78033	Station	671+20.00	Scale	AS SHOWN	Notes	10



**NOTES**

Reinforcing steel shall be non-powdered high strength, stress-relieved 7-wire strand Grade 270. The lowest diameter shall be #11 and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3/4\"

Prepacked bars shall conform to AASHTO M-31 or M-53, Spec. 60.2. The bearing and surfaces shall be finished by shimming to assure firm and even bearing and to make adjusting joints of the dimension of the Exterior Bearing Face. Sealant shall be provided for each bearing.

Key way surfaces shall be blocked to remove form oil or other bond breaking materials prior to shipment of the beams. Cleaning shall be done by scrubbing the keyway areas between top of the beam and the bottom edge of the key.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	6	#5	22'-0"	
g	6	#5	36'-3"	
Precast Prestressed Concrete Deck Beams (27' Long)	885	27'-0"	2920	
Reinforcement Bars	390		390	
Class X Concrete	101		26	

**SUPERSTRUCTURE**  
PART 885 SEC. 111B-D-1  
POPE COUNTY  
STATION 671+20.00



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS

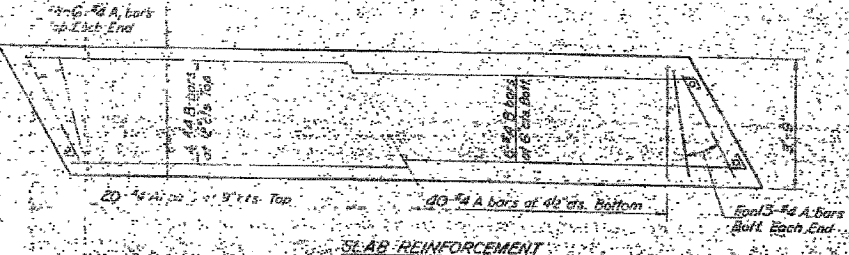
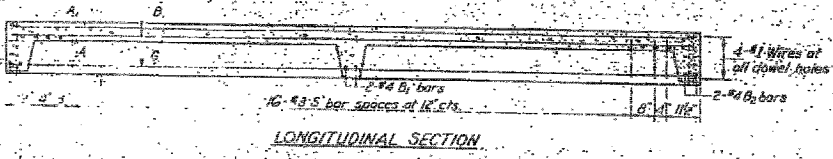
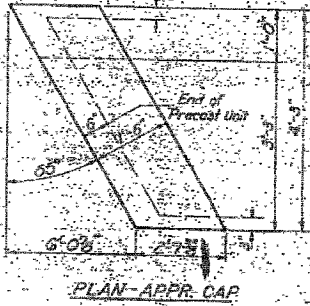
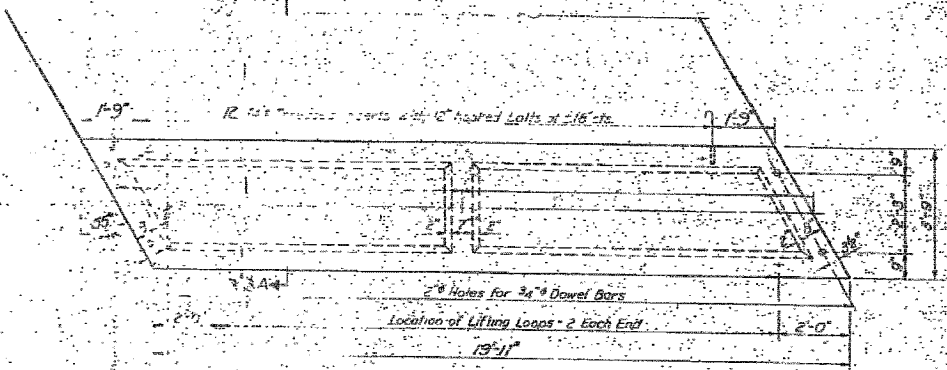
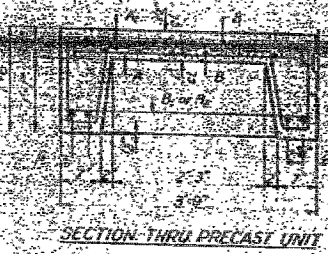
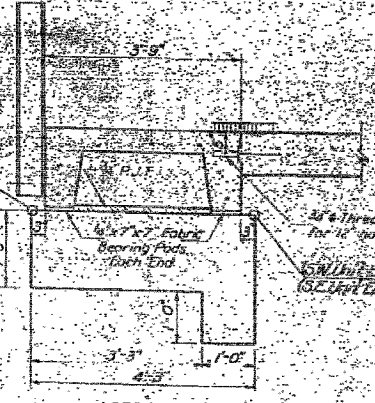
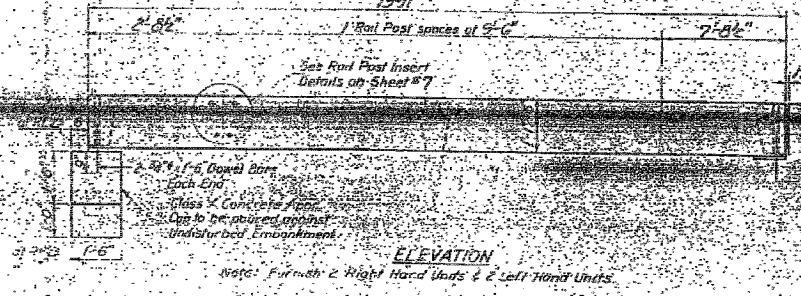
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SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS SHEET NO.
885	111BR-1	POPE	69 30
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			CONTRACT NO. 78033

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Project No.	885	Section	111BR-1	Sheet No.	6
Contract No.	78033	Station	671+76.00	Scale	AS SHOWN



**BAR LIST - ONE UNIT**

Reinforcement to be cast into slab

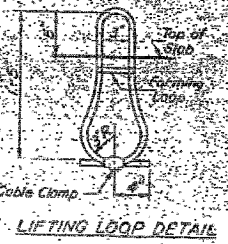
Bar	No.	Size	Length	Shape
A	66	#4	3'-3"	
A1	32	#4	4'-0"	
B	10	#4	1'-0"	
B1	2	#4	3'-0"	
B2	2	#4	6'-3"	
C	4	#10	15'-6"	
S	42	#3	3'-4"	1"

**NOTES**

Unless otherwise approved by the Engineer, lifting loops shall be 3/4" 6x12 class wire rope with fiber core and shall have a minimum ultimate strength of 10,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cast of reinforcement and accessories cast into the slab and bearing pads, furnishing, cutting, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for Precast Concrete Bridge Slab. The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

**BILL OF MATERIAL**

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	239
Class X Concrete	Cu Yds.	2.9



**STRESSES**

f<sub>t</sub> = 4,500 psi  
f<sub>c</sub> = 4,500 psi  
f<sub>s</sub> = 20,000 psi  
n = 8

**APPROACH DETAILS**  
EA. 81.885 SEC. 111B-1  
EDGE COUNTY  
STATION 671+76.00

DESIGNED: *Ch. Tom Clark*  
CHECKED: *Lance Keld*  
DRAWN: *Joe Sutherland*  
DATE: *October 13, 1981*

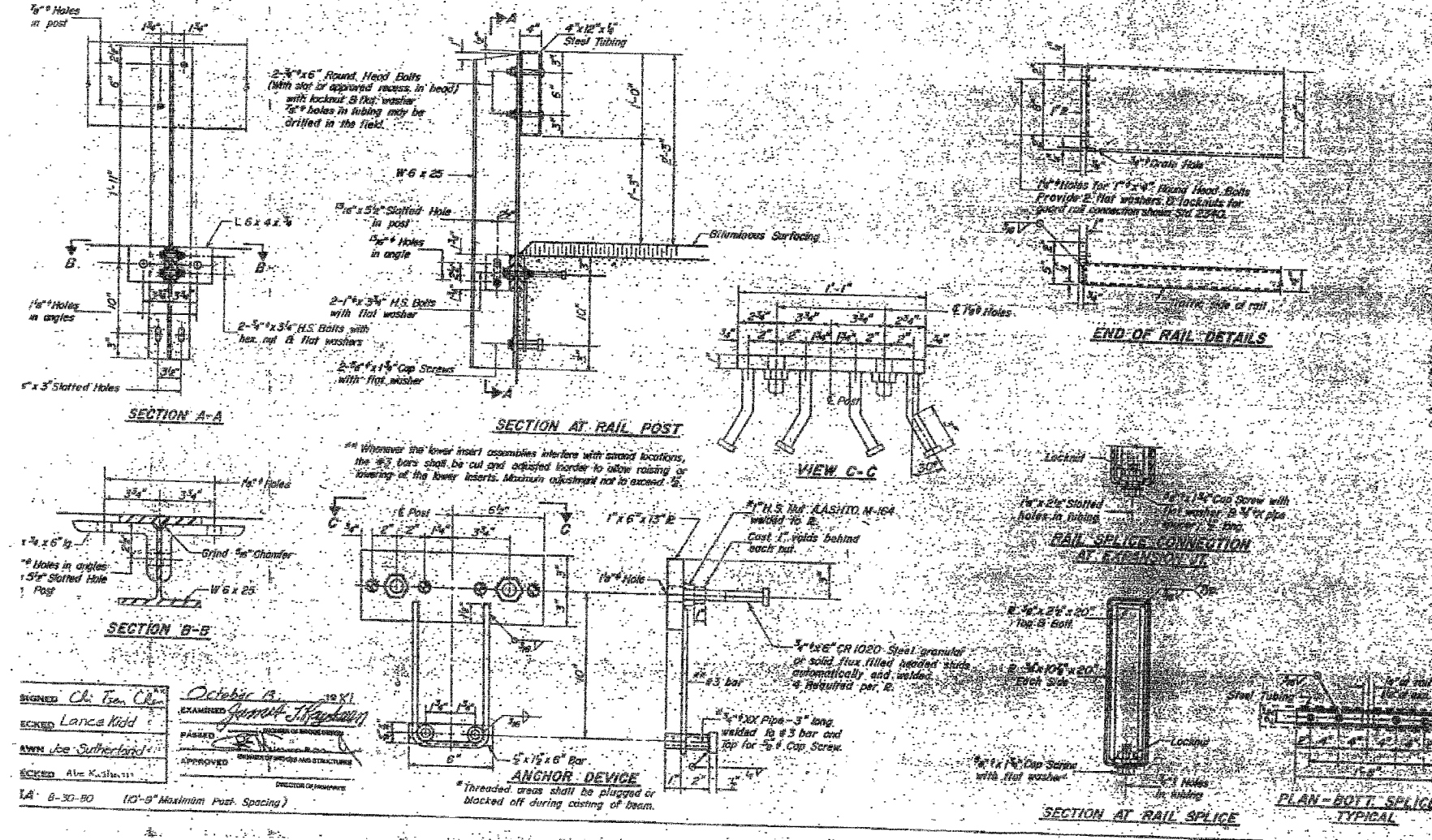
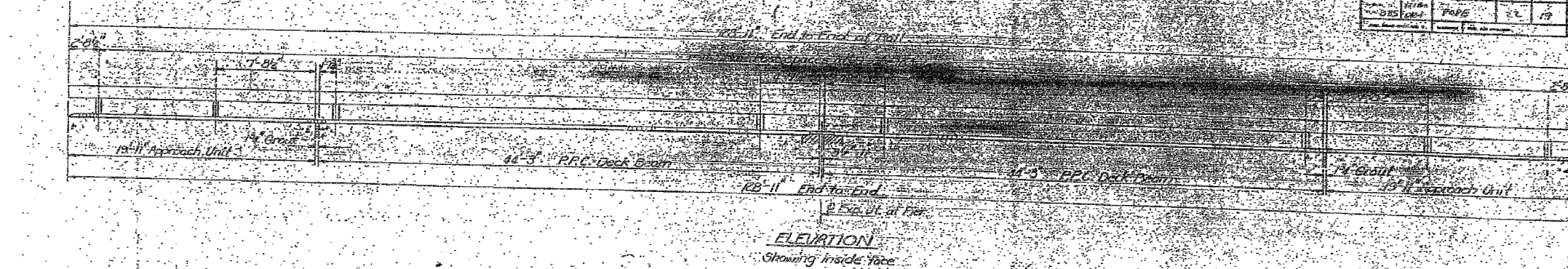


FOR INFORMATION ONLY

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Project No.	111BR-1	Sheet No.	10
Contract No.	885	Stationing	671+74.00
Division	POPE	County	POPE



**NOTES**

Hollow structural steel tubing shall conform to the requirements of AASHTO designation H-300 Grade B Structural Steel.

All other steel shapes and pipes shall conform to the requirements of AASHTO M-593 except covered angles shall conform to AASHTO M-293, Grade 50.

Bolts, cap screws, washers, nuts, lock washers, and anchors shall conform to the requirements of ASTM A307, except for high strength bolts, nuts and washers which shall conform to AASHTO M-593.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-293.

All gusset plates, steel anchor anchor devices and angles shall be galvanized in accordance with AASHTO M-293, with AASHTO M-593 and ASTM A-36.

Unless noted otherwise, Section 308 of the Standard Specifications shall apply for steel railings.

For multi-span bridges, sufficient 4\"/>

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railings, Type S-1	Lin. Ft.	258

**TYPE S-1 STEEL RAILING**  
LA. 111. 885 SEC. 115-DR-1  
POPE COUNTY  
STATION 671+74.00

SIGNED: *Ch. Fran. Chen* October 13, 2001  
CHECKED: *Lance Kidd*  
DRAWN: *Joe Sutherland*  
APPROVED: *Alvin K. Smith*

EXAMINED: *Gary J. ...*  
PASSED: *...*  
APPROVED: *...*

LA. 8-30-80 (10'-0" Maximum Post Spacing)



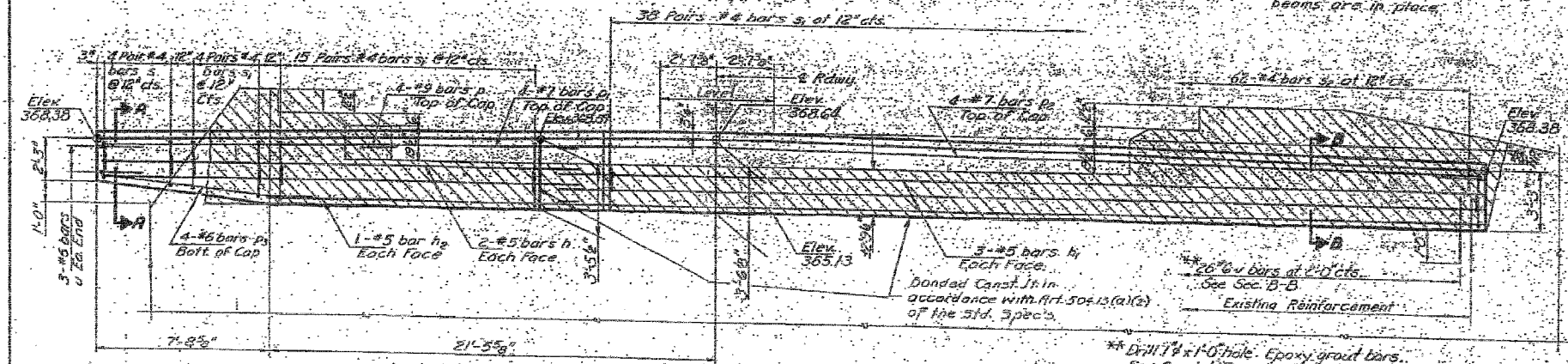
FOR INFORMATION ONLY

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#FILEL#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -	SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 78033				
	PLOT DATE = #DATE#	CHECKED - JMH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				
		DATE - 03/18/08	REVISED -							



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

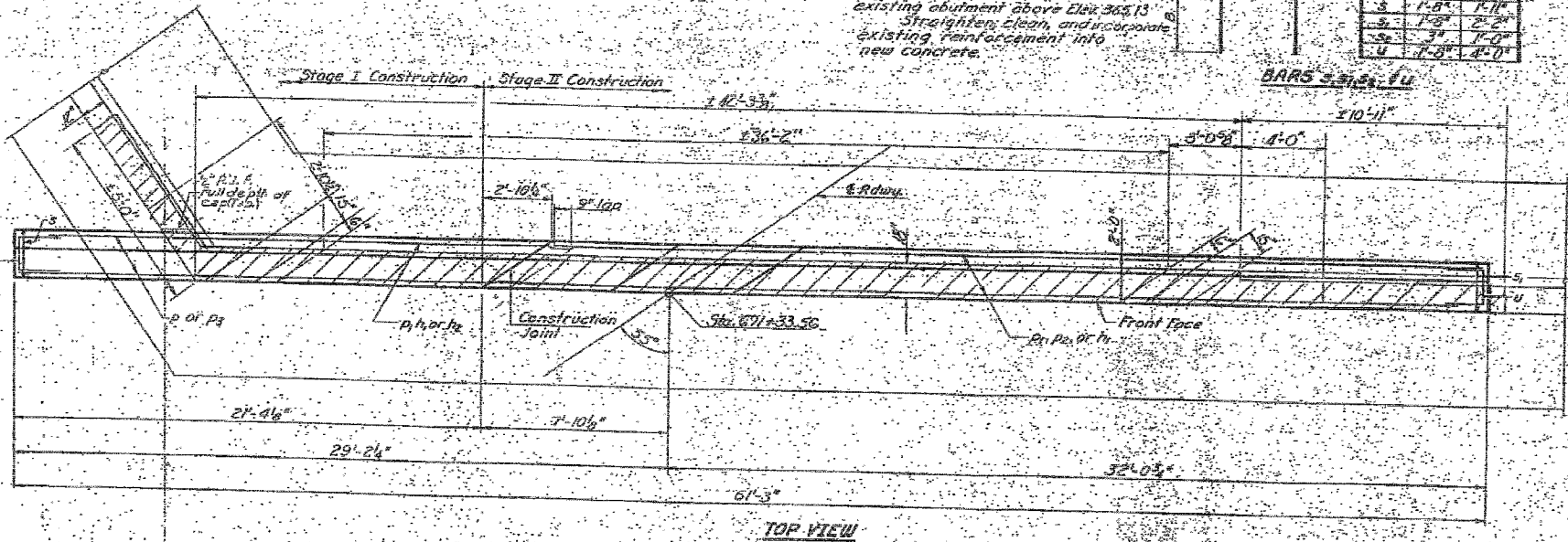
\* Portion of Abut above construction joint shall be poured after the beams are in place.



ELEVATION  
Looking West

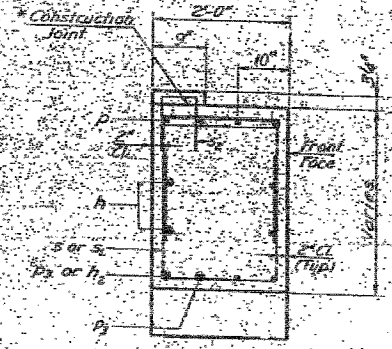
Note: Remove hatched portion of existing abutment above Elev 365.13. Straighten, clean, and incorporate existing reinforcement into new concrete.

Bar	No.	Size	Length	Shape
S	1	#4	1'-0"	U
S	2	#4	2'-0"	U
S	3	#4	1'-0"	U

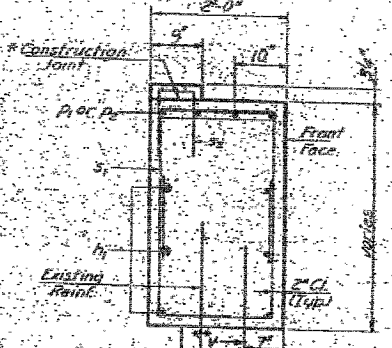


TOP VIEW

Bar	No.	Size	Length	Shape
S	1	#4	1'-0"	U
S	2	#4	2'-0"	U
S	3	#4	1'-0"	U



SECTION A-B



SECTION B-B

WEST ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
H	4	#5	22'-0"	
H	6	#5	30'-0"	
H	2	#5	17'-3"	
P	4	#5	11'-0"	
PL	4	#7	16'-0"	
Pa	4	#7	36'-11"	
Pa	4	#6	10'-0"	
S	8	#4	5'-0"	
S	11A	#4	6'-0"	
S	5B	#4	2'-0"	
U	5	#5	9'-0"	
U	20	#6	2'-0"	

Reinforcement Bars Round #160  
Class 3 Concrete 15000 PSI  
Concrete Removal 100 YD @ 10

WEST ABUTMENT  
F.A.R.T. 885(S.B.T. RT. 145) - SEC. 111B-DR-1  
POPE COUNTY  
STA. 671+76.00

DESIGNED: Ch. Tim Chen  
CHECKED: B. R. Siskin  
DRAWN: A. W. R.  
CHECKED: [Signature]  
October 13, 2008  
EXAMINED: [Signature]  
APPROVED: [Signature]



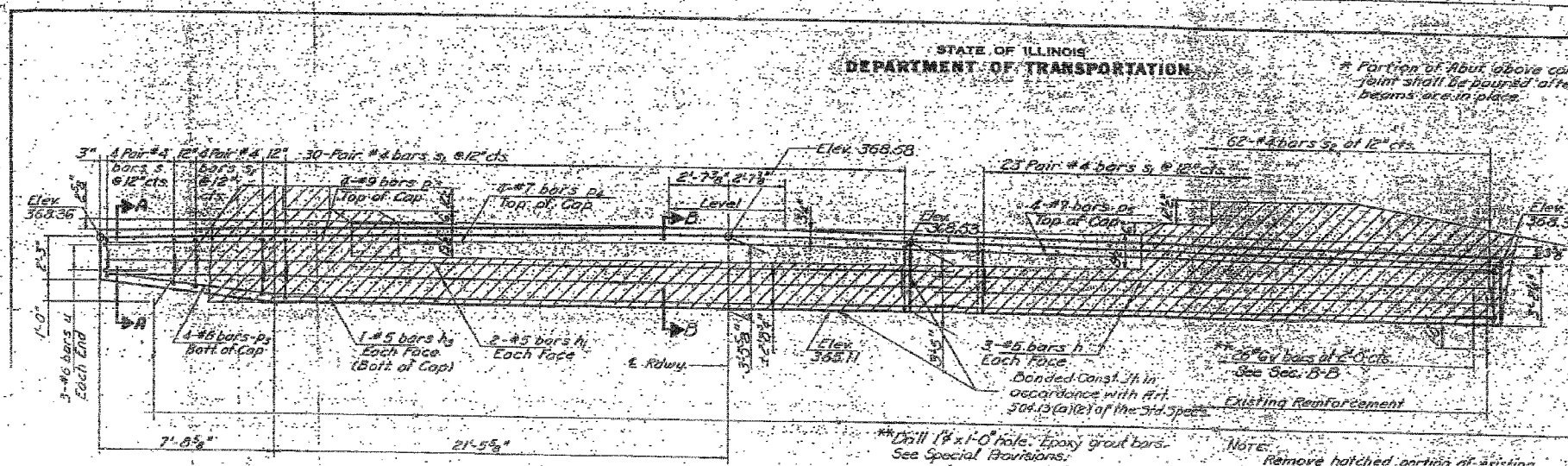
FOR INFORMATION ONLY

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#FILEL#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -			SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 78033				
	PLOT DATE = #DATE#	CHECKED - JMH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT						
		DATE - 03/18/08	REVISED -									

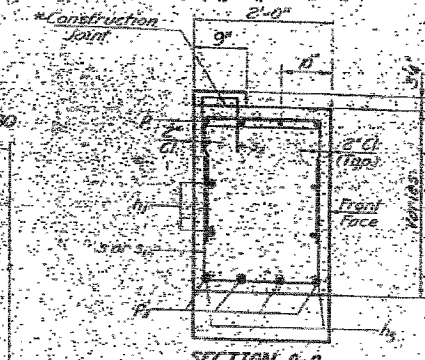
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Portion of Abut. Above construction joint shall be poured after the beams are in place.

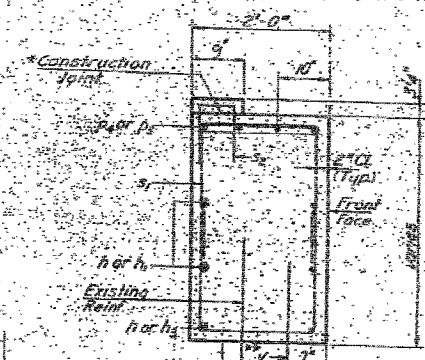
Sheet No. 9	10 Sheets
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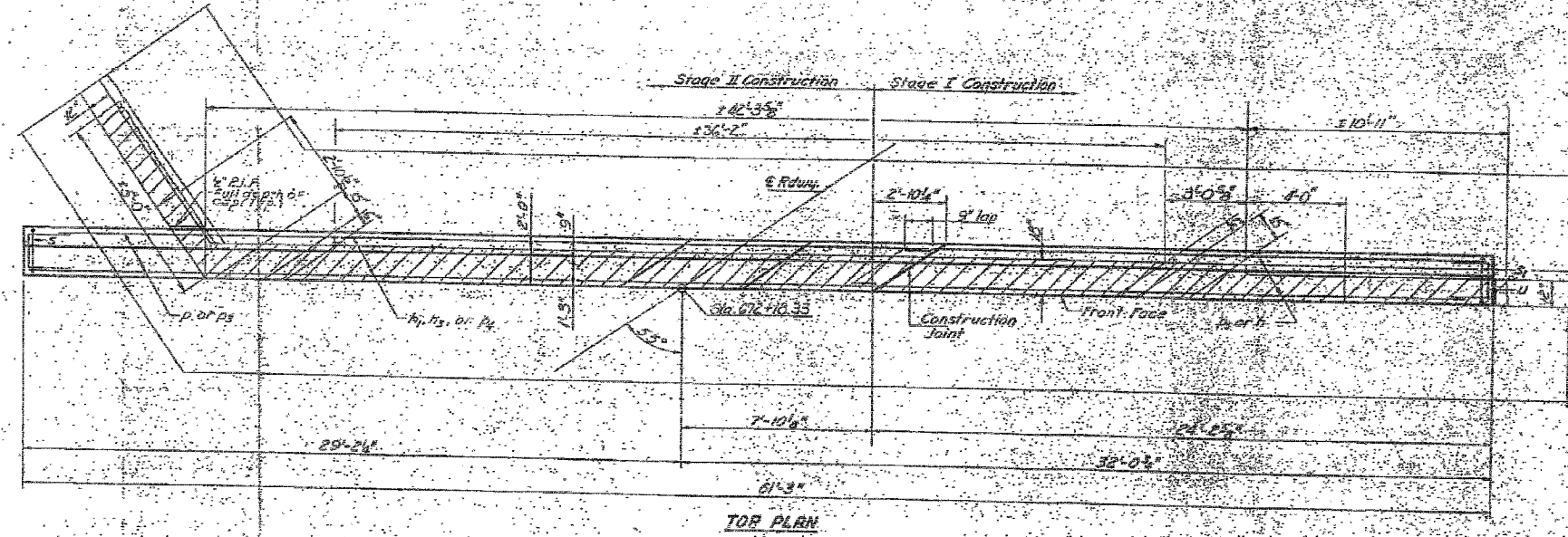
ELEVATION



SECTION A-A



SECTION B-B



TOP PLAN

EAST ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
A	8	#5	22'-0"	U
B	4	#5	36'-9"	U
C	2	#5	32'-0"	U
D	4	#5	11'-0"	U
E	4	#6	10'-0"	U
F	4	#7	31'-0"	U
G	4	#7	22'-0"	U
H	8	#4	2'-5"	U
I	114	#4	6'-0"	U
J	62	#4	2'-3"	U
K	6	#8	9'-8"	U
L	26	#6	2'-6"	U
Reinforcement Bars	Found	176.0		
Class II Concrete	CU Vol.	18.3		
Concrete Removal	CU Vol.	10		

EAST ABUTMENT  
E.R. RT. 6815 BT RT 1465 - SEC. 111B - DR-1  
POPE COUNTY  
STA. 671+76.00

DESIGNED: *Ch. Tran*  
CHECKED: *B. R. Jickel*  
DRAWN: *G.M.P.*  
CHECKED: *J.P.*

EXAMINED: *October 13, 1981*  
*Janice J. Hayward*  
APPROVED: \_\_\_\_\_

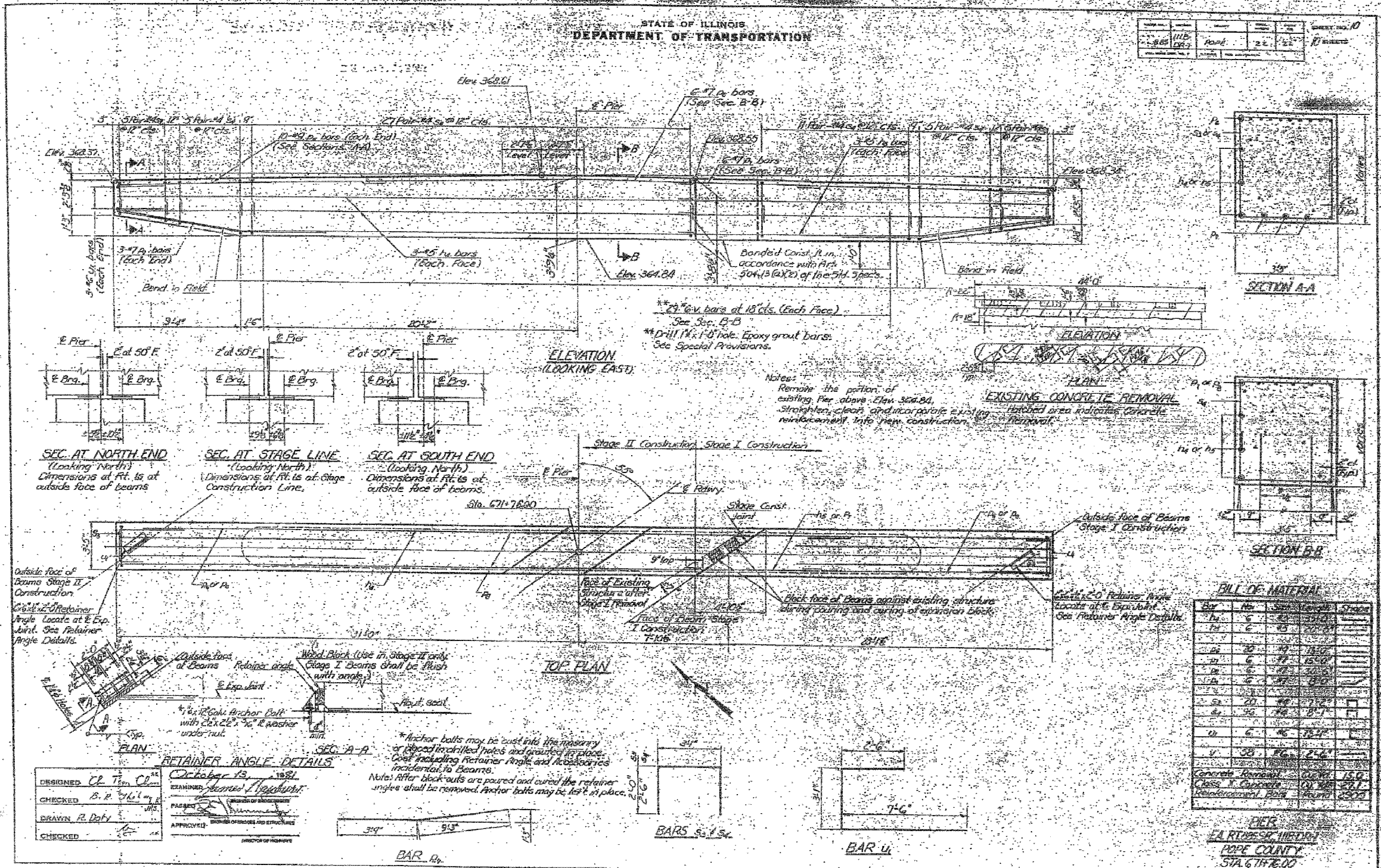


FOR INFORMATION ONLY

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\$FILEL\$	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -			SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 78033		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	
	PLOT DATE = #DATE#	CHECKED - JMH	REVISED -								
		DATE - 03/18/08	REVISED -								

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 10	DATE	2.2.22
885	111BR-1	POPE

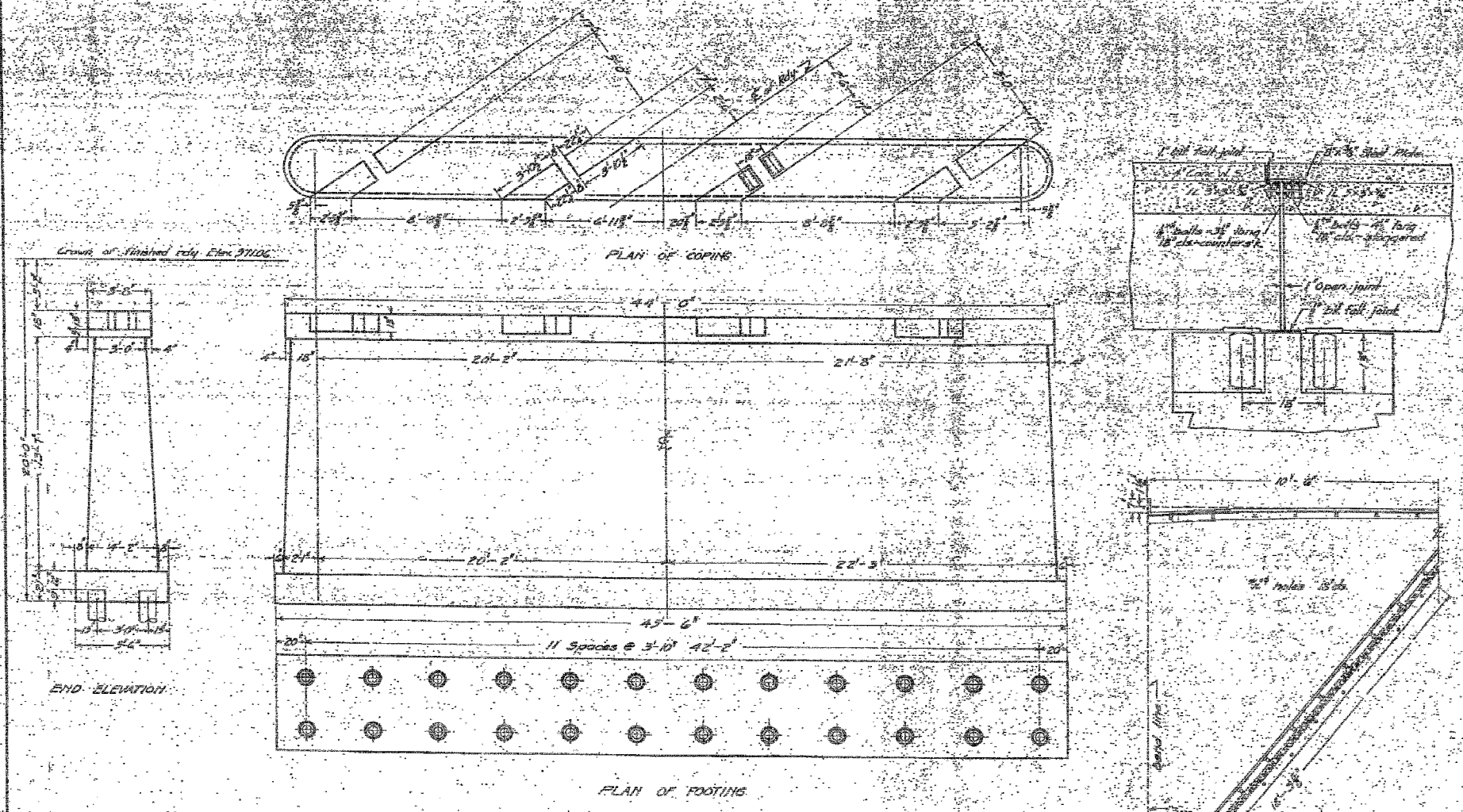


FOR INFORMATION ONLY

FILE NAME =	USER NAME = #USER#	DESIGNED - JHM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - AEC	REVISED -			885	111BR-1	POPE	69	35	
		CHECKED - JMH	REVISED -			CONTRACT NO. 78033					
		DATE - 03/18/08	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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

SHEET NO. 3			
SHEETS			
NO.	DATE	BY	REVISION
1	10/20/76	JJM	AS SHOWN



Use class B concrete throughout  
28 day 101.5  
Proportions 1:3:5  
15 ton unit pile 10 ft 12 butt  
24 Required (cut length 480 ft.)

COMPUTED	J.P. Patton	EXAMINED	Feb 14, 1976
CHECKED	W. J. ...	DESIGNED	J.H.M.
DRAWN	...	CHECKED	J.H.M.
CHECKED	...	APPROVED	...
SPECIAL	...	APPROVED	...

SUGAR CREEK  
S.B.L. ROUTE 145-3ECE 11-B  
POPE COUNTY  
STA. 67+76

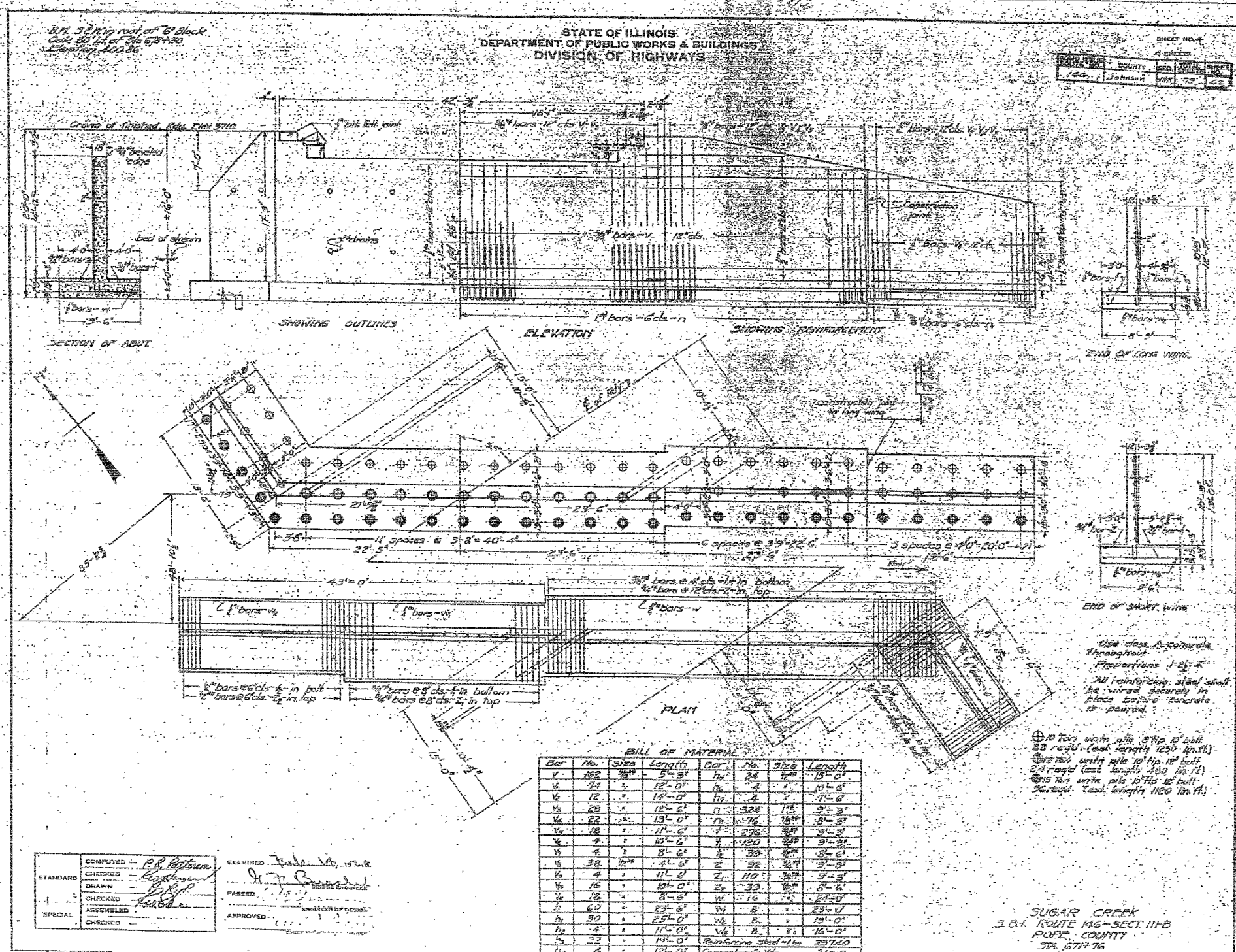


FOR INFORMATION ONLY

FILE NAME =	USER NAME = #USER#	DESIGNED - JHM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS				F.A.P. RTE. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 36
#FILE#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.	CONTRACT NO. 78033				
	PLOT DATE = #DATE#	CHECKED - JHM	REVISED -		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT								
		DATE - 03/18/08	REVISED -										

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

ROUTE NO.	COUNTY	SECTION	SHEET NO.	TOTAL SHEETS
146	JOHNSON	111BR-1	69	37



BILL OF MATERIAL

Bar No.	Size	Length	QTY	Bar No.	Size	Length
V	1/2"	5'-3"	24	14	1/2"	15'-0"
V	1/2"	12'-0"	4	15	1/2"	10'-6"
V	1/2"	18'-0"	4	16	1/2"	7'-0"
V	1/2"	12'-6"	324	17	1/2"	9'-3"
V	1/2"	15'-0"	176	18	1/2"	8'-3"
V	1/2"	11'-6"	276	19	1/2"	9'-3"
V	1/2"	10'-6"	120	20	1/2"	9'-3"
V	1/2"	8'-6"	38	21	1/2"	8'-6"
V	3/8"	4'-6"	32	22	1/2"	9'-3"
V	1/2"	11'-6"	110	23	1/2"	9'-3"
V	1/2"	10'-6"	39	24	1/2"	8'-6"
V	1/2"	8'-6"	16	25	1/2"	24'-0"
H	60	23'-6"	8	26	1/2"	23'-0"
H	30	25'-0"	8	27	1/2"	19'-0"
H	4	11'-0"	8	28	1/2"	16'-0"
H	22	19'-0"	23750	29	1/2"	310.7
H	4	12'-0"	Concrete			

COMPLETED BY: P.B. Peterson  
 CHECKED BY: [Signature]  
 DRAWN BY: [Signature]  
 SPECIAL CHECKED BY: [Signature]

EXAMINED BY: [Signature]  
 PASSED BY: [Signature]  
 APPROVED BY: [Signature]

Use class A concrete throughout.  
 Proportions 1-2-4.  
 All reinforcing steel shall be wired securely in place before concrete is poured.  
 10 bars with 5' tie 12' butt  
 22 rods (each length 1250 lbs.)  
 12 bars with 12' tie 12' butt  
 24 rods (each length 280 lbs.)  
 15 bars with 12' tie 12' butt  
 30 rods (each length 120 lbs.)

SUGAR CREEK  
 I.B.I. ROUTE 146-SECT 111-B  
 POPE COUNTY  
 STA. 671+76



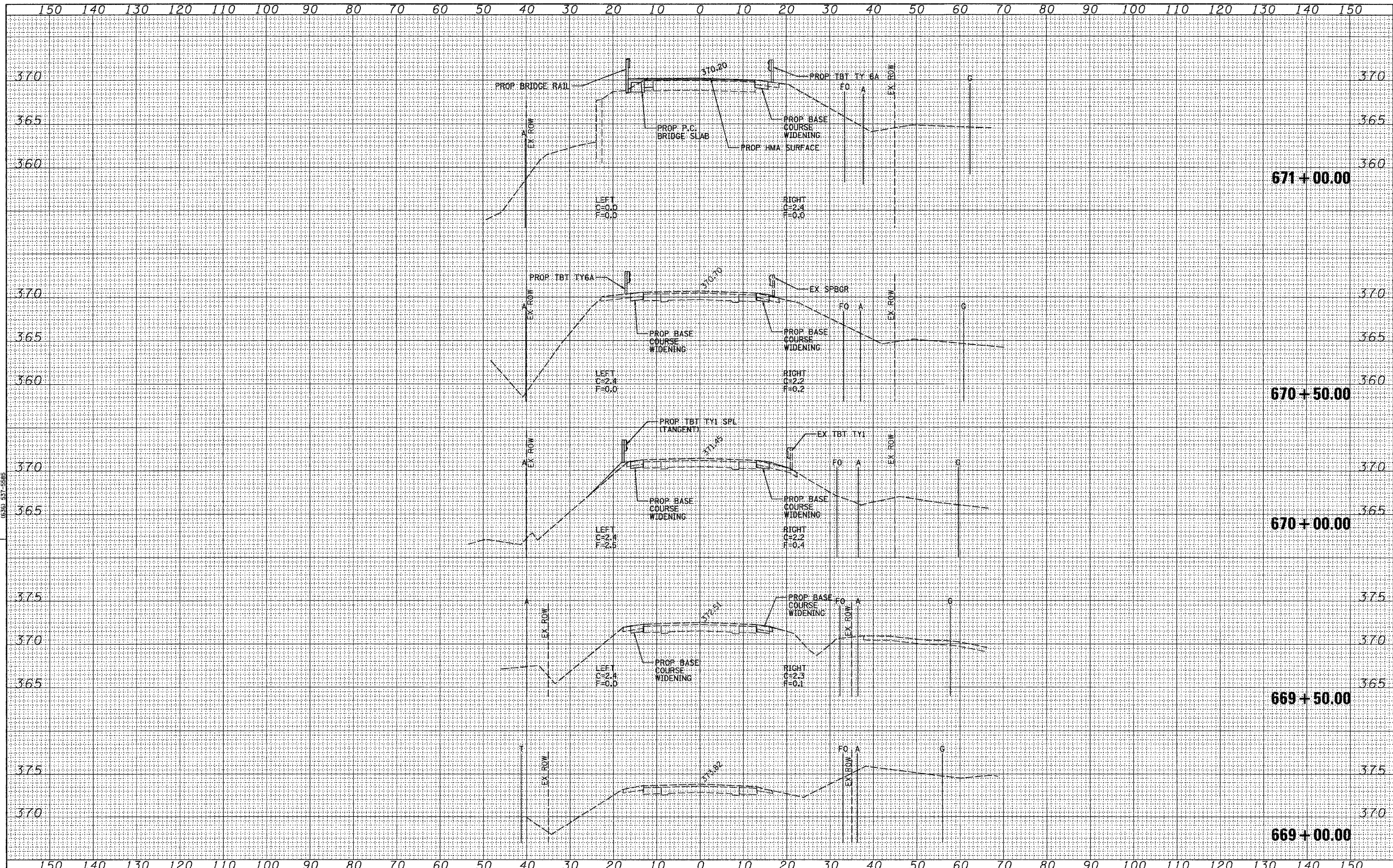
FOR INFORMATION ONLY

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#FILE#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 78033			
	PLOT DATE = #DATE#	CHECKED - JHM	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT						
		DATE - 03/18/08	REVISED -									

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

**EDSI**  
 ENGINEERING DESIGN SOURCE, INC.  
 GREAT BRIDGE, MD. 21051  
 SUITE 300  
 (410) 531-5585

DATE \_\_\_\_\_ BY \_\_\_\_\_  
 ORIGINAL SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

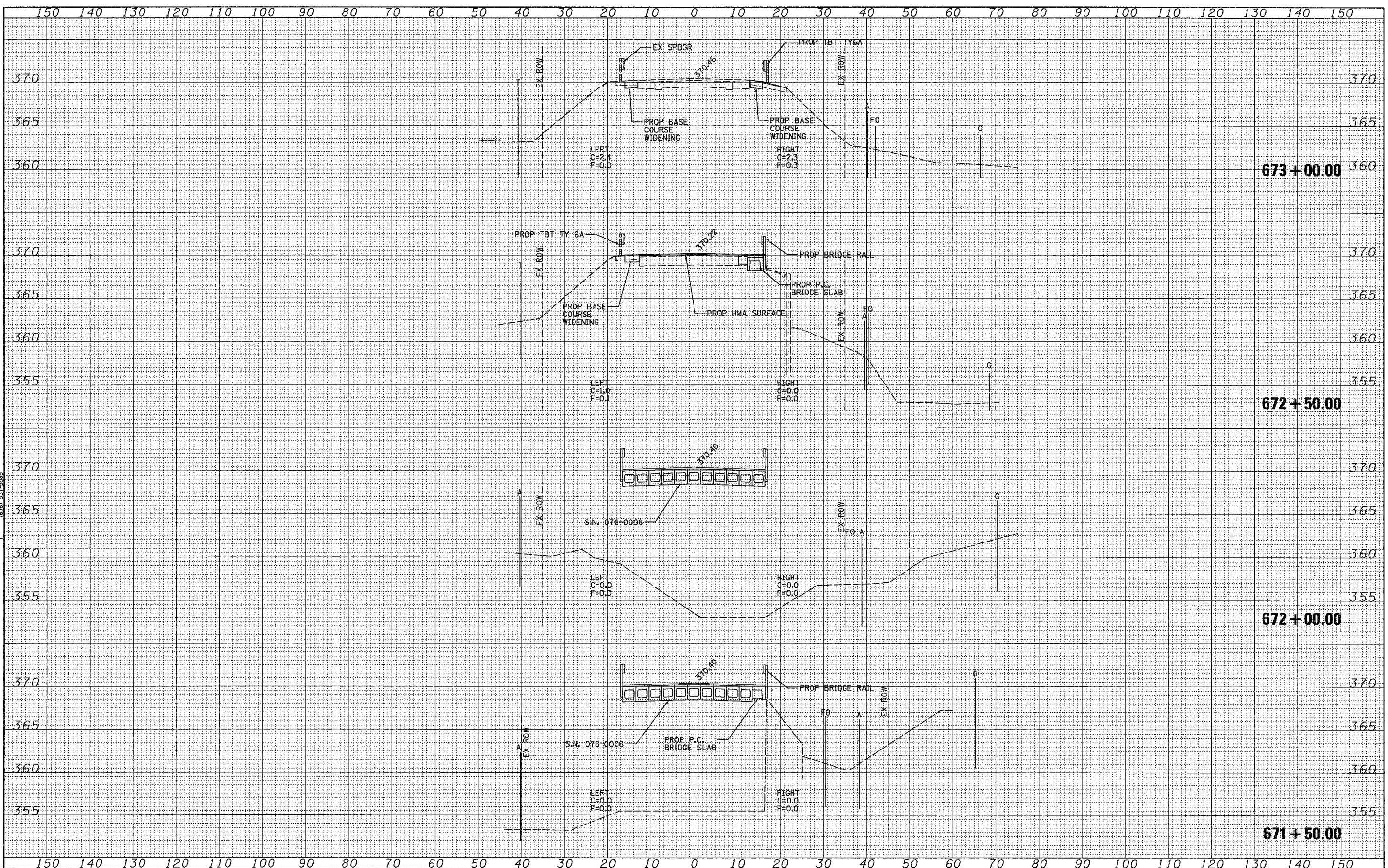


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*FILES*	DRAWN - GDO	REVISED -	885			111BR-1	POPE	69	38	
PLOT SCALE = #SCALE*	CHECKED - JAH	REVISED -	CONTRACT NO. 78033							
PLOT DATE = #DATE*	DATE -	REVISED -	FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT							
SCALE: 1"=10'					SHEET NO. 1 OF 3 SHEETS		STA. 669+00.00 TO STA. 671+00.00			

EDSI  
ENGINEERING DESIGN SOURCE, INC.  
1641 SWINLEY RIDGE RD  
SUITE 100  
CHICAGO, ILL. 60617  
(312) 537-5585

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_ PLOTTED \_\_\_\_\_  
 SURVEY NOTE BOOK \_\_\_\_\_ TEMPLATE \_\_\_\_\_  
 NO. \_\_\_\_\_ AREAS CHECKED \_\_\_\_\_

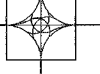
BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_ PLOTTED \_\_\_\_\_  
 SURVEY NOTE BOOK \_\_\_\_\_ TEMPLATE \_\_\_\_\_  
 NO. \_\_\_\_\_ AREAS CHECKED \_\_\_\_\_



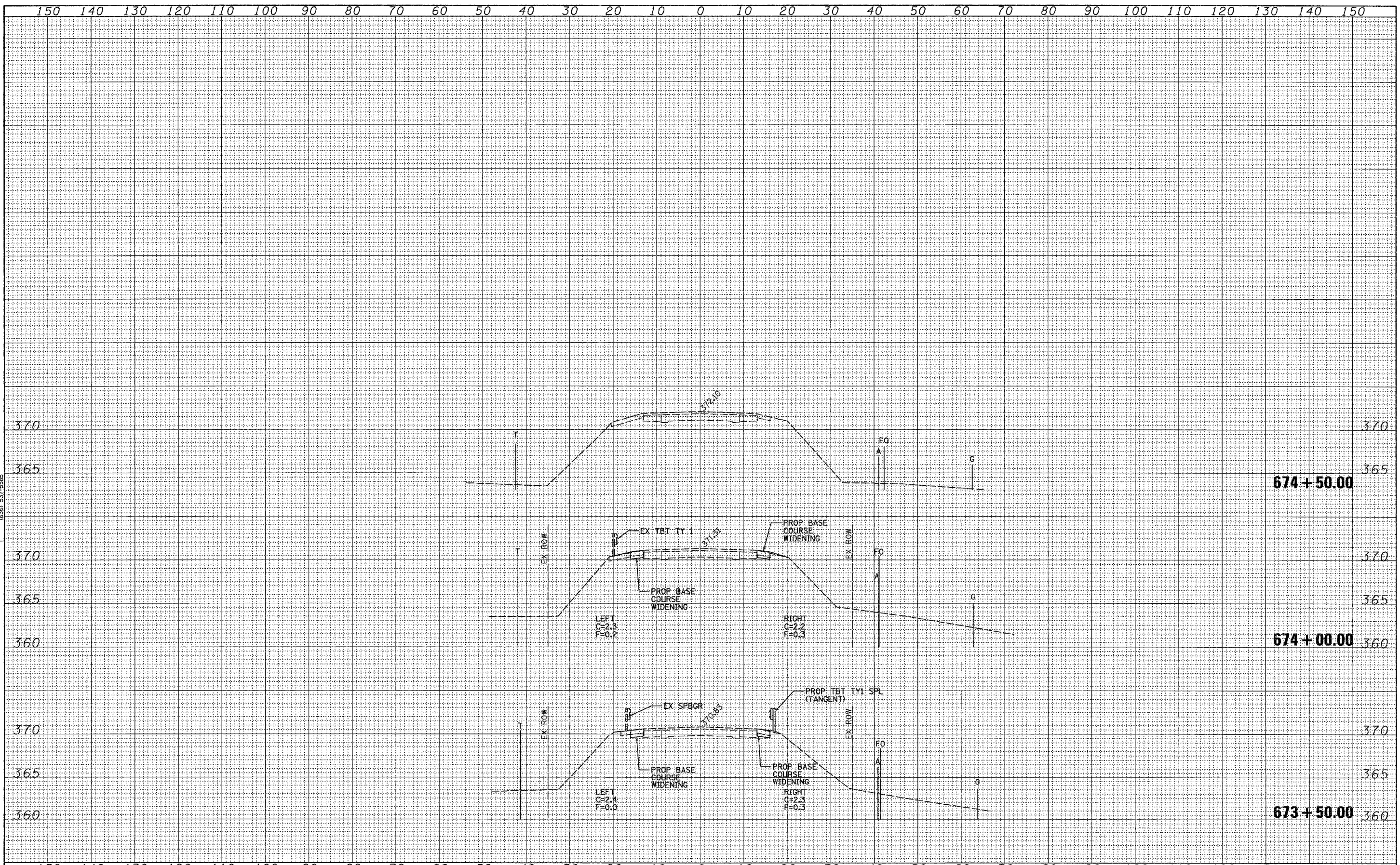
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#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			SCALE: 1"=10'	SHEET NO. 2 OF 3 SHEETS	STA. 671+50.00 TO STA. 673+00.00	CONTRACT NO. 78033			
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT						
		DATE -	REVISED -									

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

**EDSI**  
**ENGINEERING DESIGN SOURCE, INC.**  
 1641 SWINGLEY RIDGE RD  
 CHESTERFIELD, MO. 63017  
 (636) 537-5585

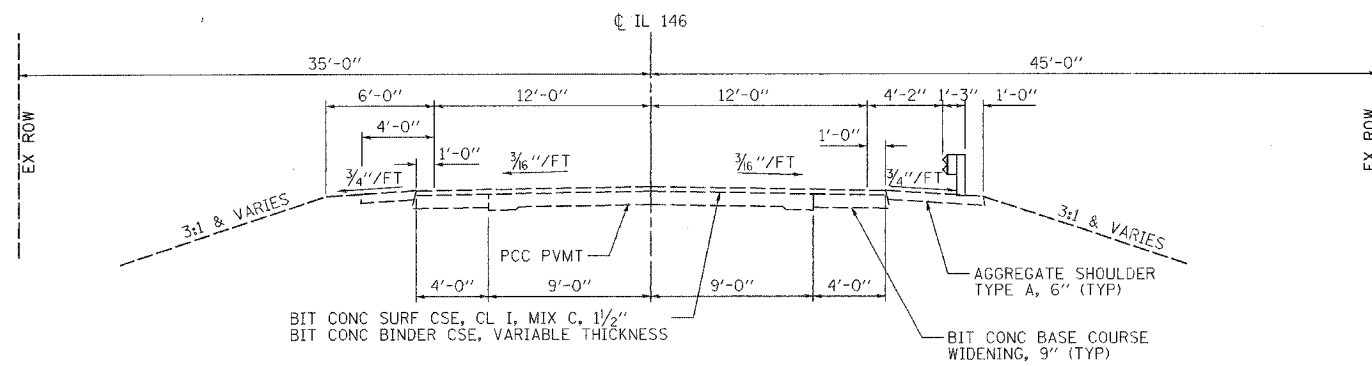


DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME =	USER NAME = *USER*	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) CROSS SECTIONS</b>			F.A.P. RTE. 885	SECTION 111BR-1	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 40
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	PLOT DATE = *DATE*	CHECKED - JAH	REVISED -		CONTRACT NO. 78033							
		DATE -	REVISED -									



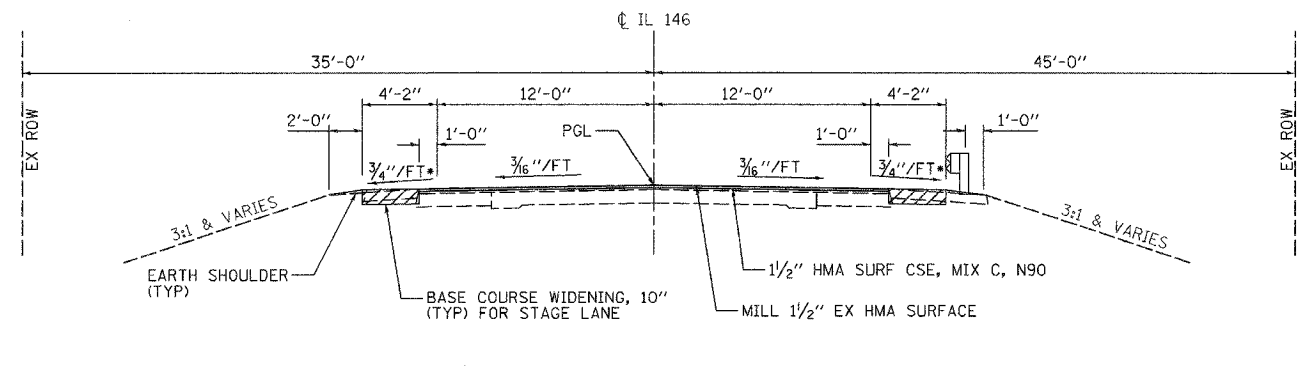


WITHOUT GUARDRAIL

WITH GUARDRAIL

**EXISTING TYPICAL ROADWAY SECTION**

STA 816+05 TO STA 817+62  
STA 818+45 TO STA 819+90



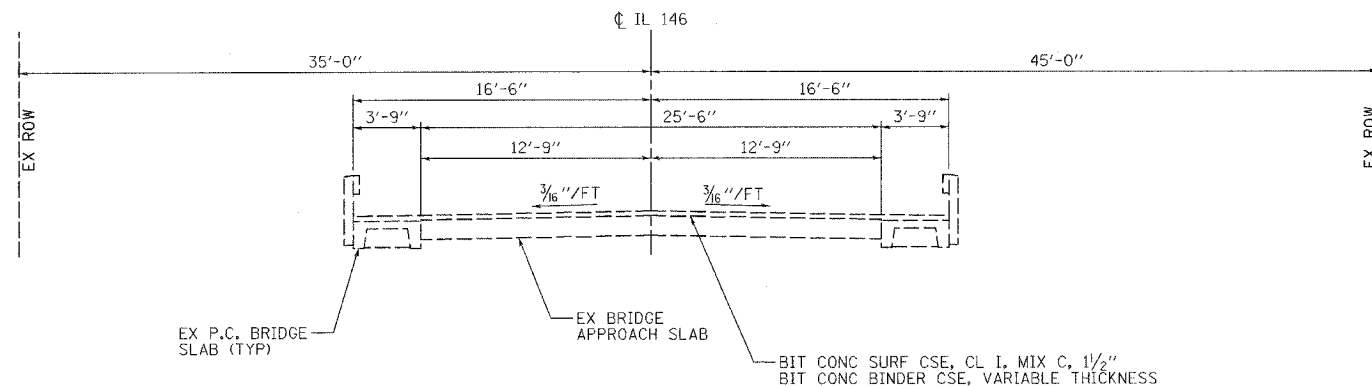
WITHOUT GUARDRAIL

WITH GUARDRAIL

**PROPOSED TYPICAL ROADWAY SECTION**

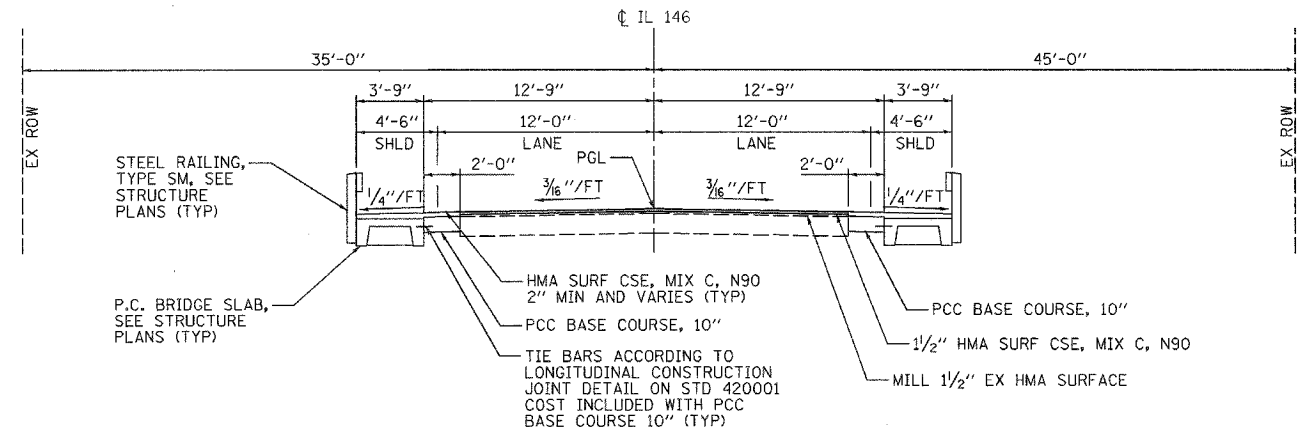
STA 816+05 TO STA 817+62  
STA 818+45 TO STA 819+90

\*TRANSITION TO 1/4"/FT  
NEAR P.C. BRIDGE SLABS



**EXISTING BRIDGE APPROACH SECTION**

STA 817+62 TO BRIDGE  
BRIDGE TO STA 818+45



**PROPOSED BRIDGE APPROACH SECTION**

STA 817+62 TO BRIDGE  
BRIDGE TO STA 818+45

**HMA MIXTURE REQUIREMENTS**

LOCATION(S):	BASE COURSE WIDENING	HOT MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT MIX ASPHALT BINDER COURSE, N90, IL-19.0	HOT MIX ASPHALT SURFACE COURSE, MIX C, N90
AC/PG:	PG64-22	PG64-22
RAP % (MAX):	10	10
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0 mm	IL-9.5 mm OR IL-12.5 mm
FRICTION AGGREGATE:	NONE	C SURFACE



FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) TYPICAL SECTIONS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILES#		DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	41	
	PLOT SCALE = #SCALE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
	PLOT DATE = #DATE#	DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
				SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.			

PAVEMENT MARKING SCHEDULE				
LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING	PAINT PAVEMENT MARKING - LINE	TEMP PAVEMENT MARKING - LINE
			4"	4"
		FOOT	FOOT	FOOT
STA 816+22 TO STA 819+73 LT	SOLID WHITE EDGE LINE			351
STA 814+63.5 TO STA 820+87.5 RT	SOLID WHITE EDGE LINE			624
STA 816+22 TO STA 819+73 RT	SOLID WHITE EDGE LINE			351
STA 815+00.5 TO STA 821+38.5 LT	SOLID WHITE EDGE LINE			638
STA 814+40.5 TO STA 821+48.5	SKIP DASH YELLOW CENTERLINE	71		
STA 814+40.5 TO STA 821+48.5	SKIP DASH YELLOW CENTERLINE			177
STA 816+50 TO STA 821+48.5	SOLID YELLOW CENTERLINE			499
STA 816+22 TO STA 819+73 LT	SOLID WHITE EDGE LINE		351	
STA 816+22 TO STA 819+73 RT	SOLID WHITE EDGE LINE		351	
STA 814+40.5 TO STA 821+48.5	SKIP DASH YELLOW CENTERLINE		177	
STA 816+50 TO STA 821+48.5	SOLID YELLOW CENTERLINE		499	
TOTALS		71	1378	2640

GUARDRAIL SCHEDULE						
LOCATION	TRAFFIC BARRIER TERMINAL TYPE 6A	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	STEEL RAILING, TYPE SM	
	EACH	EACH	EACH	EACH	FOOT	
NE QUADRANT	1		1			
NW QUADRANT	1	1	1			
SE QUADRANT	1	1	1			
SW QUADRANT	1		1			
BRIDGE				4	167	
TOTALS		4	2	4	4	167

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	FOOT
NE QUADRANT	45*
NW QUADRANT	45*
SE QUADRANT	45*
SW QUADRANT	45*
TOTALS	180*

BASE COURSE SCHEDULE			
LOCATION	PCC BASE COURSE, 10"	BASE COURSE WIDENING, 10"	
	SQ YD	SQ YD	SQ YD
NE QUADRANT	5	51	
NW QUADRANT	5	55	
SE QUADRANT	5	51	
SW QUADRANT	5	55	
TOTALS	20	212	

PAVEMENT MARKER SCHEDULE	
LOCATION	RRPM REMOVAL
	EACH
STA 817+80	1
STA 818+60	1
TOTALS	2

EROSION CONTROL SCHEDULE		
LOCATION	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)
	FOOT	POUND
NE QUADRANT	185	4
NW QUADRANT	195	4
SE QUADRANT	185	4
SW QUADRANT	195	4
TOTALS	760	16

\* QUANTITY MAY VARY DEPENDING ON LAYOUT PROPOSED BY THE CONTRACTOR. SEE MISCELLANEOUS DETAILS SHEET FOR DETAILS.

WORK ZONE AND PAVEMENT MARKING REMOVAL SCHEDULE			
LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
STA 814+40.5 TO STA 816+05	CENTER LINE		14
STA 819+90 TO STA 821+48.5	CENTER LINE		13
STA 816+22 TO STA 819+73 LT	EDGE LINE		117
PHASE 1 EDGE LINES	TEMPORARY	325	
STA 816+22 TO STA 817+47 RT	EDGE LINE		41
STA 818+60 TO STA 819+73 RT	EDGE LINE		38
PHASE 2 EDGE LINES	TEMPORARY	330	
CENTER LINE	SHORT-TERM	24	
CENTER LINE	TEMPORARY	225	
TOTALS		904	223

SEEDING SCHEDULE							
LOCATION	SEEDING CLASS 2A	SEEDING CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIME STONE	MULCH METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NE QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
NW QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
SE QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
SW QUADRANT	0.02	0.02	1.8	1.8	1.8	0.04	0.04
TOTALS	0.08	0.08	7.2	7.2	7.2	0.16	0.16

HMA SURF REMOVAL SCHEDULE		
LOCATION	BUTT JOINT	2"
	SQ YD	SQ YD
STA 817+74	86	
STA 818+60	87	
WEST ABUTMENT		5
EAST ABUTMENT		5
TOTALS	173	10

NOTE: HMA SURFACE REMOVAL (2") IS INCLUDED IN THE COST OF REMOVAL OF EXISTING SUPERSTRUCTURE.

REMOVAL SCHEDULE	
LOCATION	PAVEMENT REMOVAL SQ YD
NE QUADRANT	5
NW QUADRANT	5
SE QUADRANT	5
SW QUADRANT	5
TOTALS	20

EARTHWORK SCHEDULE				
LOCATION	SUITABLE EARTH EXCAVATION (WIDENING)	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
NE QUADRANT	12	9	1	+8
NW QUADRANT	14	11	1	+10
SE QUADRANT	13	10	1	+9
SW QUADRANT	13	10	2	+8
TOTALS	52	40	5	+35

NOTE:  
1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE INCIDENTAL EXCAVATION) x 0.75

PAVING SCHEDULE			
LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	HMA SURFACE COURSE, MIX C, N90
	GALLON	TON	TON
WEST APPROACH	45	0.3	9.8
EAST APPROACH	43	0.3	9.8
TOTALS	88	0.6	19.6

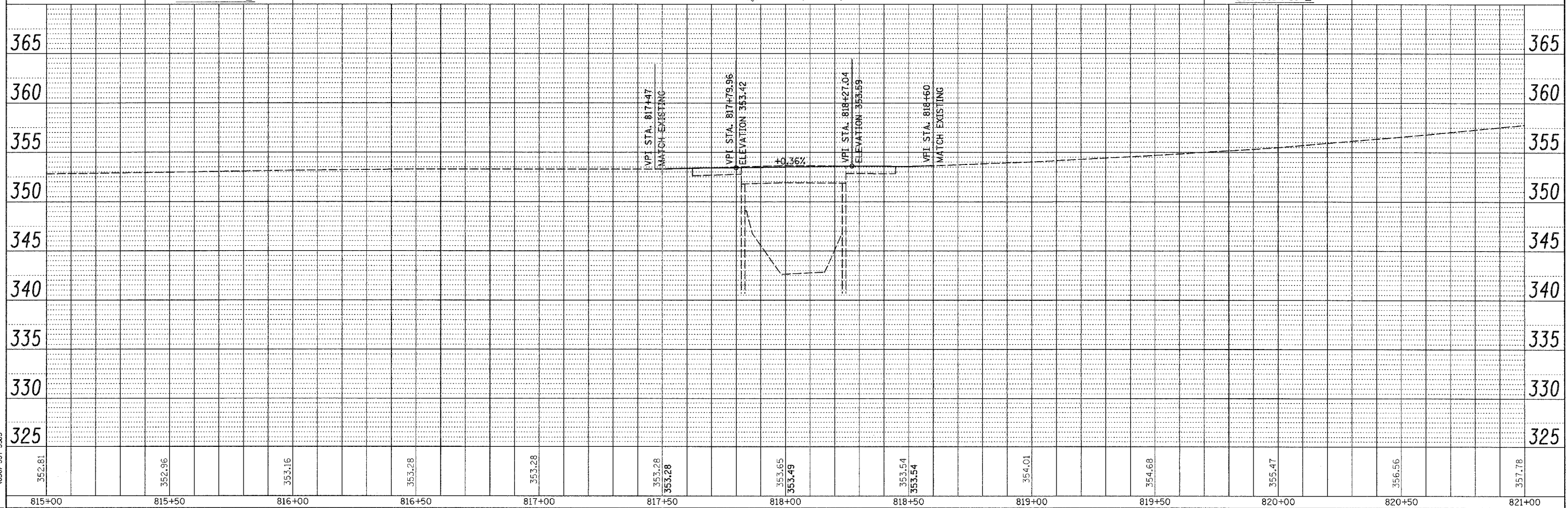
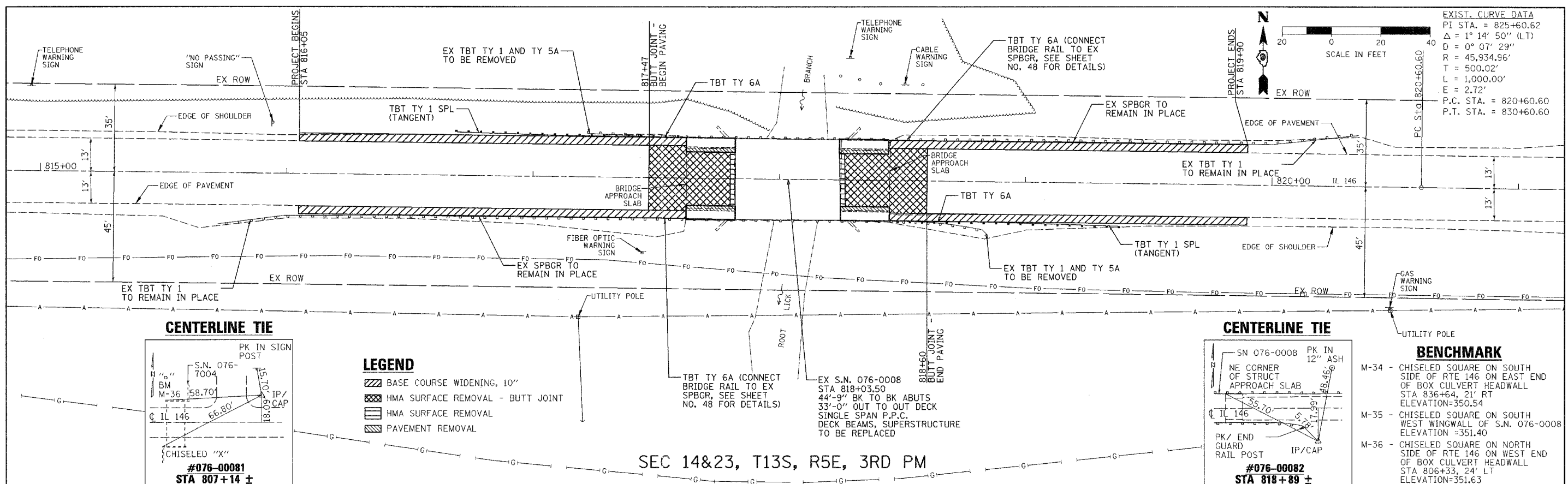


FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) SCHEDULE OF QUANTITIES</b>	F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 42		
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 78033		
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT						
		DATE -	REVISED -									

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO. OF MAY CHECKED	
ADD FILE NAME	
NO.	

DATE	
BY	
PROFILE	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO. OF MAY CHECKED	
STRUCTURE NOTATIONS CHG	
NO.	

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FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) PLAN AND PROFILE</b>	F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 43		
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	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			FED. ROAD DIST. NO. 7 (ILLINOIS) FED. AID PROJECT						
		DATE -	REVISED -									

**SCHEDULE OF QUANTITIES**

TEMPORARY CONCRETE BARRIER		
STATION TO	STATION	FEET
816+10	819+85	375

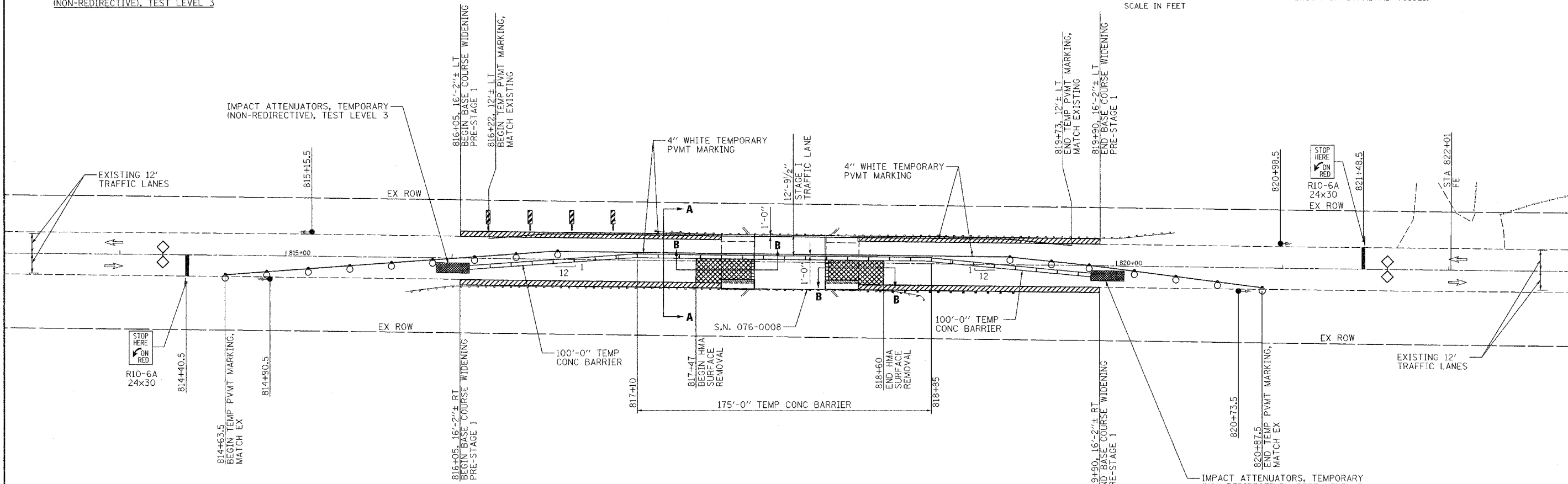
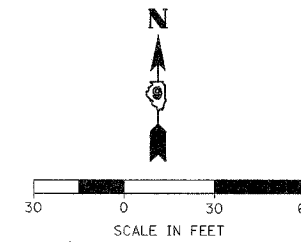
TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH

TEMPORARY RUMBLE STRIPS - 6 EACH

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

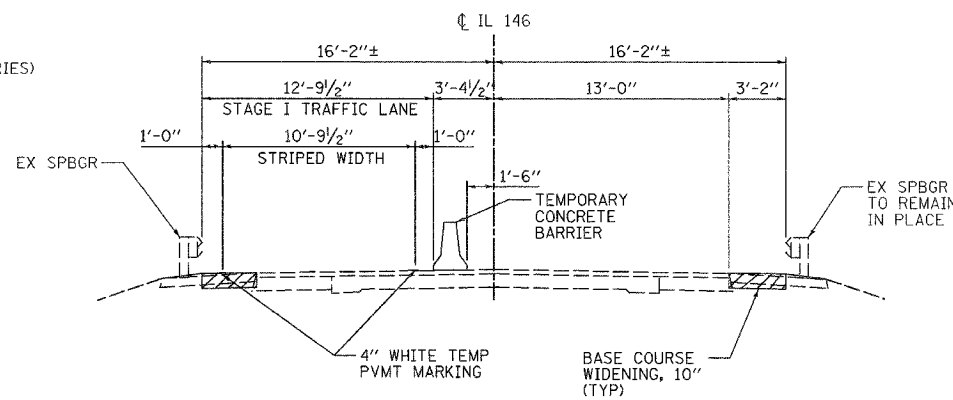
**NOTES:**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.

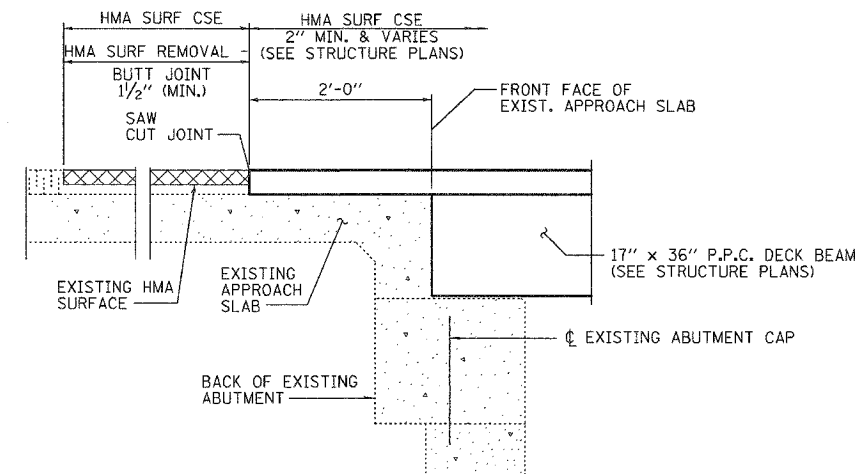


**LEGEND**

- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ▨ BASE COURSE WIDENING, 10"
- ▩ HMA SURFACE REMOVAL - BUTT JOINT
- ▧ HMA SURFACE REMOVAL (2" MIN & VARIES)
- ▦ PAVEMENT REMOVAL



**SECTION A-A**



**SECTION B-B**

NOTE: HORIZONTAL DIMENSION SHOWN IS AT RIGHT ANGLES TO BEAM ENDS.

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FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) STAGE I CONSTRUCTION</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	44	
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT					

SCALE: 1"=30' SHEET NO. 1 OF 2 SHEETS STA. 813+30 TO STA. 822+75

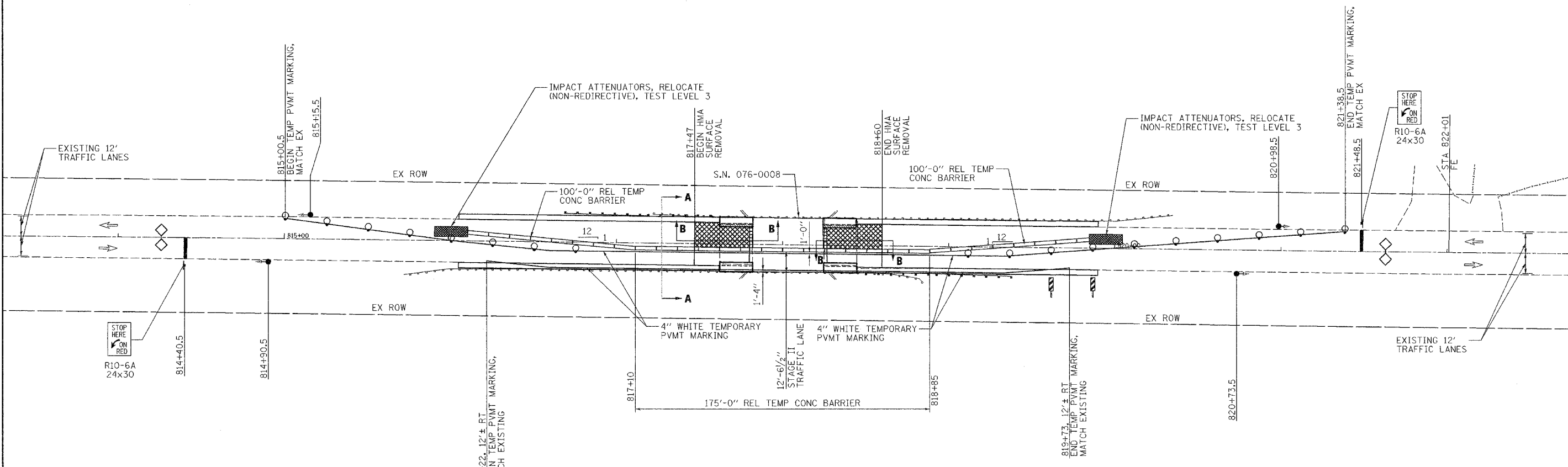
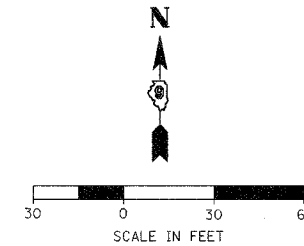
**SCHEDULE OF QUANTITIES**

RELOCATE TEMPORARY CONCRETE BARRIER  
 STATION TO STATION FEET  
 816+10 819+85 375

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

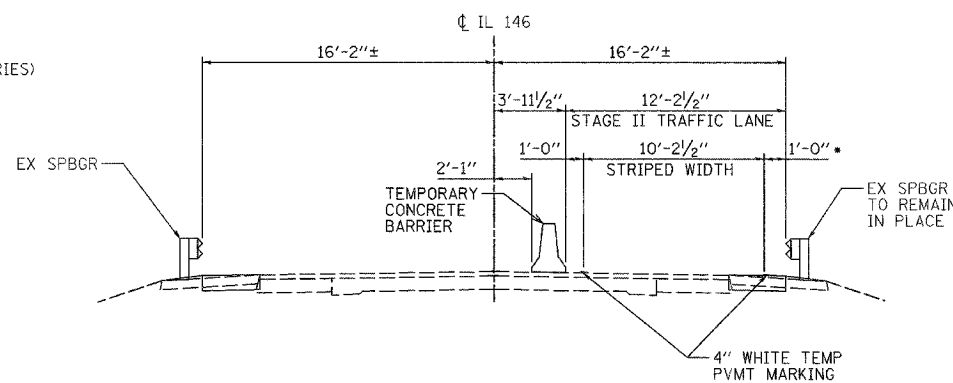
**NOTES:**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. MAINTAIN TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.

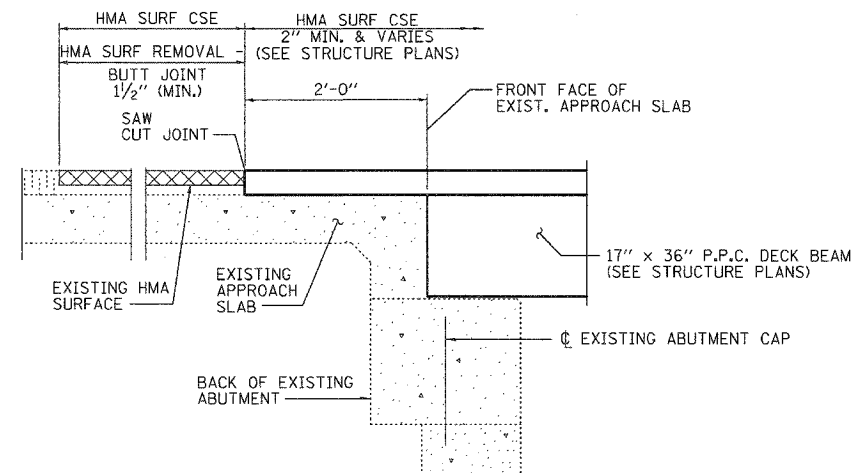


**LEGEND**

- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ▨ BASE COURSE WIDENING, 10"
- ▩ HMA SURFACE REMOVAL - BUTT JOINT
- ▧ HMA SURFACE REMOVAL (2" MIN & VARIES)
- ▦ PAVEMENT REMOVAL



**SECTION A-A**  
 • 1'-4" ON STRUCTURE



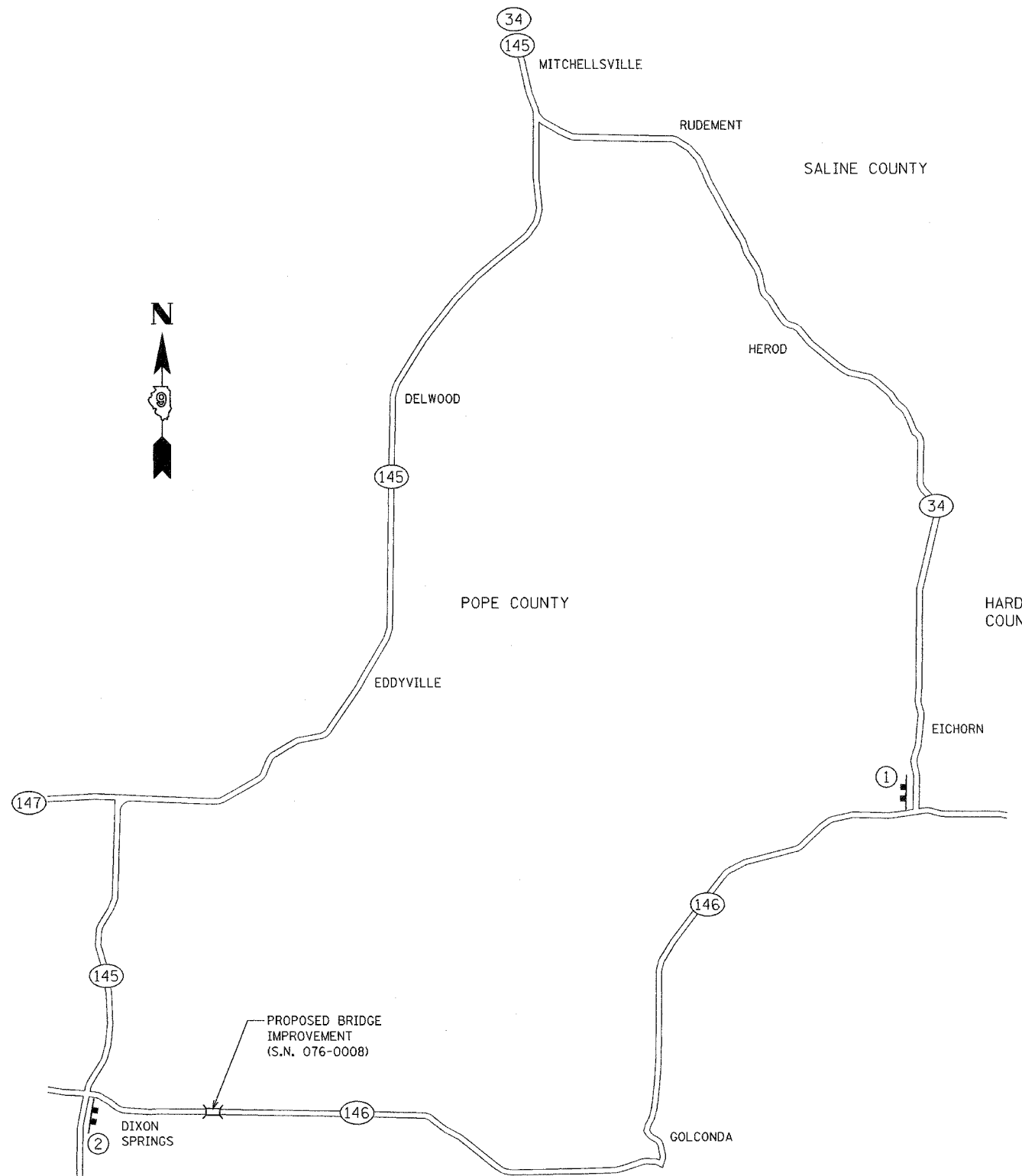
**SECTION B-B**

NOTE:  
 HORIZONTAL DIMENSION SHOWN IS AT RIGHT ANGLES TO BEAM ENDS.

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FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) STAGE II CONSTRUCTION</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	45	
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
		DATE -	REVISED -			FED. ROAD DIST. NO. 7   ILLINOIS FED. AID PROJECT					

SCALE: 1"=30' SHEET NO. 2 OF 2 SHEETS STA. 813+30 TO STA. 822+75



**DETOUR SIGNING PLAN**

**SIGN LEGEND  
STAGE I**

**MAX WIDTH  
11'-0"  
18 MILES  
AHEAD**

**MAX WIDTH  
11'-0"  
2 1/2 MILES  
AHEAD**

①  
48"x48"

②  
48"x48"

**SIGN LEGEND  
STAGE II**

**MAX WIDTH  
10'-6"  
18 MILES  
AHEAD**

**MAX WIDTH  
10'-6"  
2 1/2 MILES  
AHEAD**

①  
48"x48"

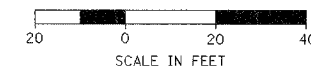
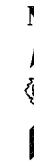
②  
48"x48"

**DETOUR NOTES**

1. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE POSTS AND SIGNS AT THE LOCATIONS SHOWN AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE CONTRACTOR SHALL GIVE I.D.O.T. BUREAU OF OPERATIONS, PERMITS SECTION, TWO WEEKS NOTICE BEFORE IMPLEMENTING ANY LANE WIDTH RESTRICTIONS.
3. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.

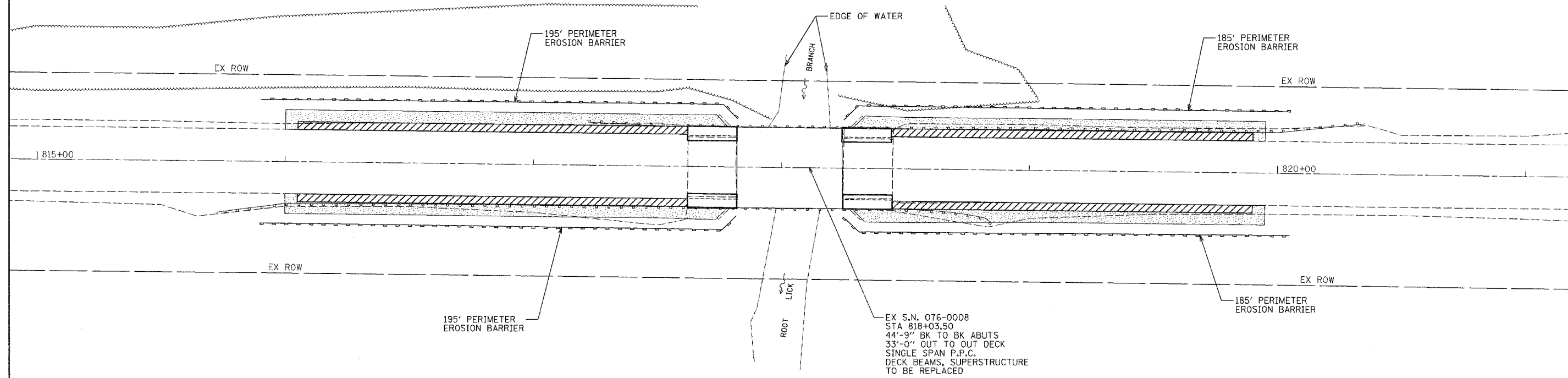
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FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) WIDE LOAD DETOUR</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	46	
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
					SCALE: NO SCALE	SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.		



**LEGEND**

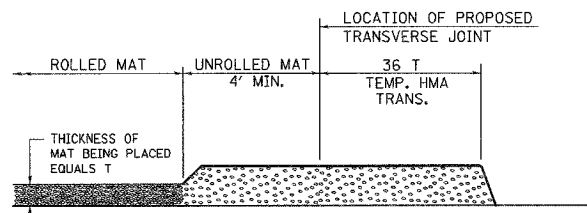
- PERIMETER EROSION BARRIER
- ▨ BASE COURSE WIDENING
- ▤ APPROXIMATE SEEDING AND MULCH AREAS



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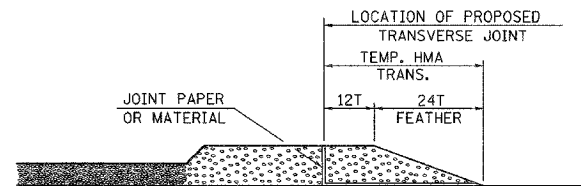
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#FILES#		DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	47	
	PLOT SCALE = #SCALE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
	PLOT DATE = #DATE#	DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
					SCALE: 1"=20'	SHEET NO. 1 OF 1 SHEETS	STA. 815+00 TO STA. 821+00				

## TEMPORARY HOT-MIX ASPHALT TRANSITIONS



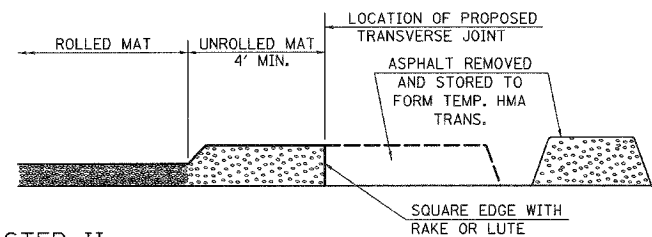
### STEP I

1. PLACE HOT-MIX ASPHALT MAT, LENGTH 36 TIMES THE THICKNESS OF THE MAT BEING PLACED PAST THE PROPOSED TRANSVERSE JOINT LOCATION USING NORMAL OPERATING PROCEDURES.
2. EXTREME CARE SHOULD BE TAKEN TO MAINTAIN ENOUGH MATERIAL IN FRONT OF THE SCREED TO MAINTAIN REQUIRED PAVING DEPTH.



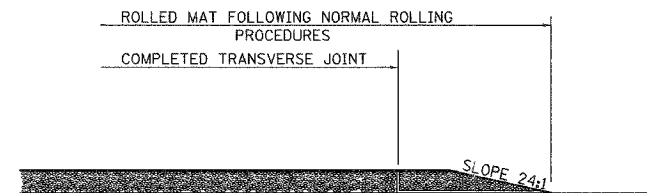
### STEP III

1. JOINT PAPER OR OTHER PRESELECTED JOINT MATERIAL IS THEN PLACED IN THE CLEARED AREA AND THE EXCESS ASPHALT USED TO HAND FORM A TRANSITION TO THE DIMENSIONS SHOWN ABOVE.
2. NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



### STEP II

1. MOVE THE PAVER OUT OF THE WAY AND REMOVE THE ASPHALT FROM THE AREA OF THE PROPOSED TEMPORARY HOT-MIX ASPHALT TRANSITION.
2. SQUARE UP THE END OF THE MAT WITH A RAKE OR LUTE.
3. NOTE THAT THE MAT WITHIN 4' OF THE END OF JOINT IS NOT TO BE ROLLED AT THIS TIME.



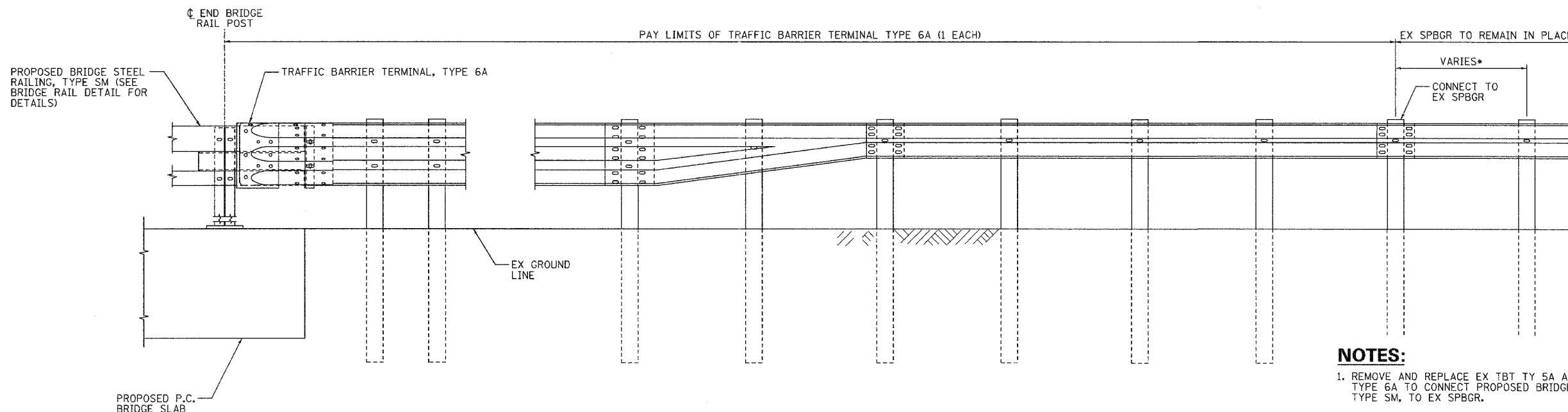
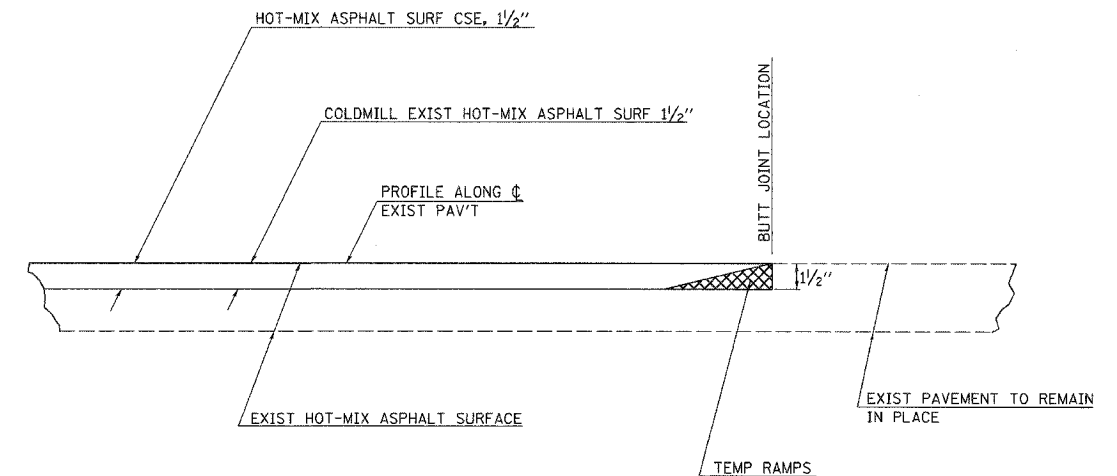
### STEP IV

1. COMPLETE TEMPORARY TRANSITION BY ROLLING.
2. TO RESUME PAVING, AT THE JOINT, REMOVE TEMPORARY TRANSITION AND DISPOSE OF THE MATERIAL ACCORDING TO ART. 202.03 OF THE STD. SPECS. (COST INCLUDED IN THE CONTRACT).
3. CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 406.14 OF THE STANDARD SPECIFICATIONS.

REVISIONS
REDRAWN 2-15-88
REVISED 8-16-94
REVISED 01-09-07
REVISED

STD. 9-26

## BUTT JOINT DETAIL



### GUARDRAIL CONNECTION DETAIL

\* POST SPACING AS REQUIRED TO MATCH TBT TYPE 6A TO EX SPBGR (6'-3" MAX)

### NOTES:

1. REMOVE AND REPLACE EX TBT TY 5A AND SPBGR WITH TBT TYPE 6A TO CONNECT PROPOSED BRIDGE STEEL RAILING, TYPE SM, TO EX SPBGR.
2. CONTRACTOR MAY USE EXISTING STEEL POSTS OR INSTALL NEW/ADDITIONAL POSTS AS REQUIRED. THE ENGINEER SHALL APPROVE TBT TYPE 6A LAYOUT PRIOR TO INSTALLATION.
3. GUARDRAIL HEIGHT SHALL BE SET TO THAT REQUIRED BY THE FINAL PROFILE.
4. UNLESS OTHERWISE NOTED, DETAILS SHALL BE AS SHOWN ON "TRAFFIC BARRIER TERMINAL, TYPE 6A, STANDARD 631032".
5. COST OF WORK SHOWN TO BE INCLUDED IN TRAFFIC BARRIER TERMINAL, TYPE 6A.

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#FILES#	PLOT SCALE = #SCALE#	DRAWN - GDO	REVISED -			885	111BR-2	POPE	69	48	
	PLOT DATE = #DATE#	CHECKED - JAH	REVISED -			CONTRACT NO. 78033					
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
				SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.		TO STA.	



Bench Mark 35: Chiseled square in southwest wingwall of SN 076-0008. Elevation 351.404.

Existing Structure: The original single span structure was built in 1928 with a reinforced concrete deck girder superstructure on reinforced concrete closed abutments with a length of 43'-3" back-to-back of abutments. The structure was rehabilitated in 1981. The superstructure was replaced with P.P.C. deck beam with a total width of 33'-0" out-to-out of superstructure and substructure was modified accordingly.

Proposed Improvements: The existing superstructure is to be replaced with P.P.C. deck beams and a HMA surface course and waterproofing. Minor substructure repairs are required. Traffic to be maintained at all times utilizing stage construction.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 11 SHEETS
F.A.P. 885	111BR-2	POPE	69	49	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

Contract #78033

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specifications, 4th Edition

**LOADING HL-93**

No allowance for Future Wearing Surface.

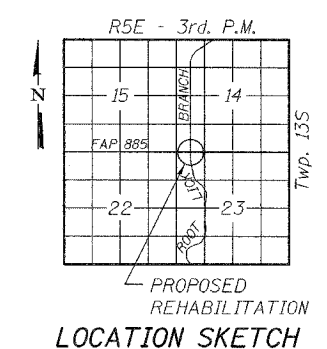
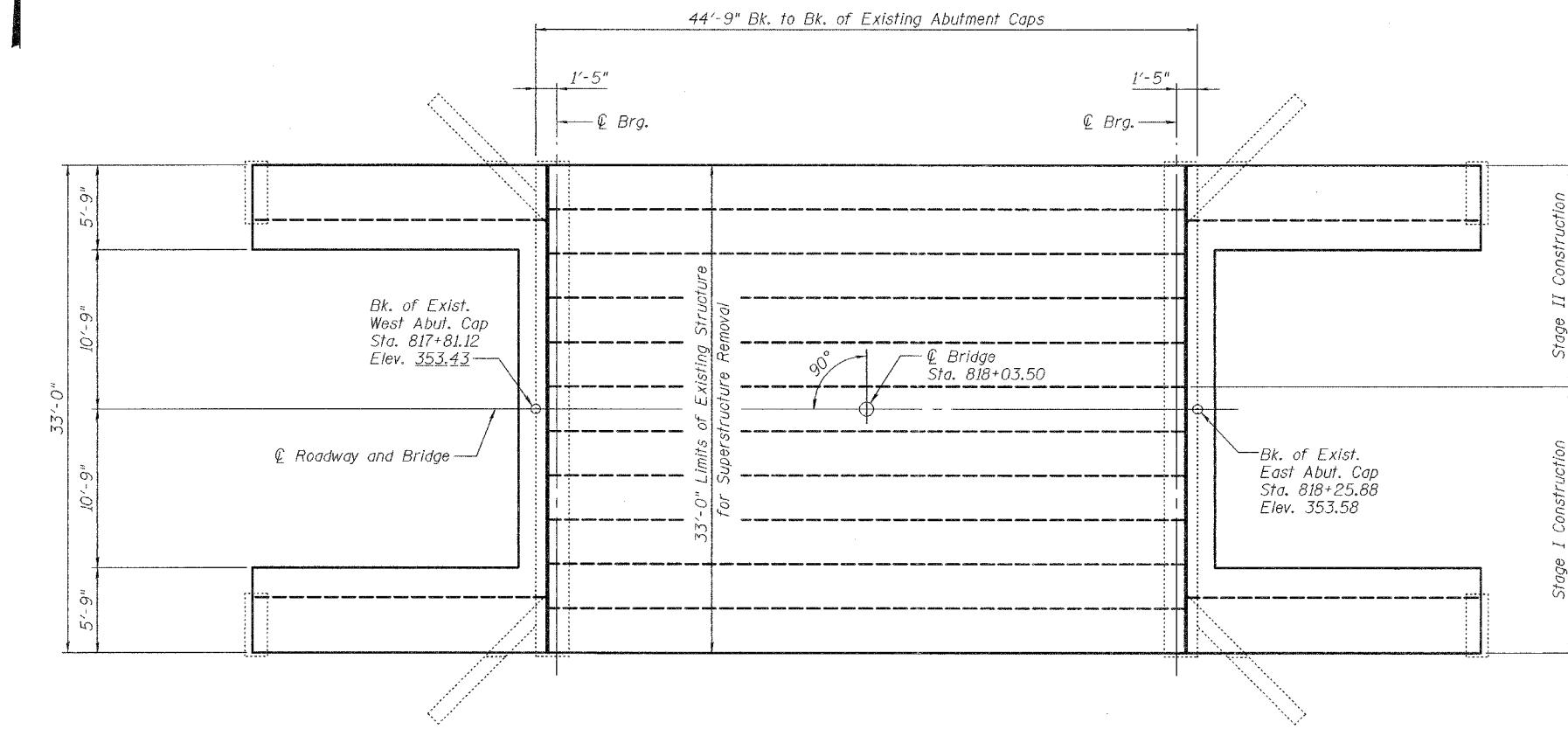
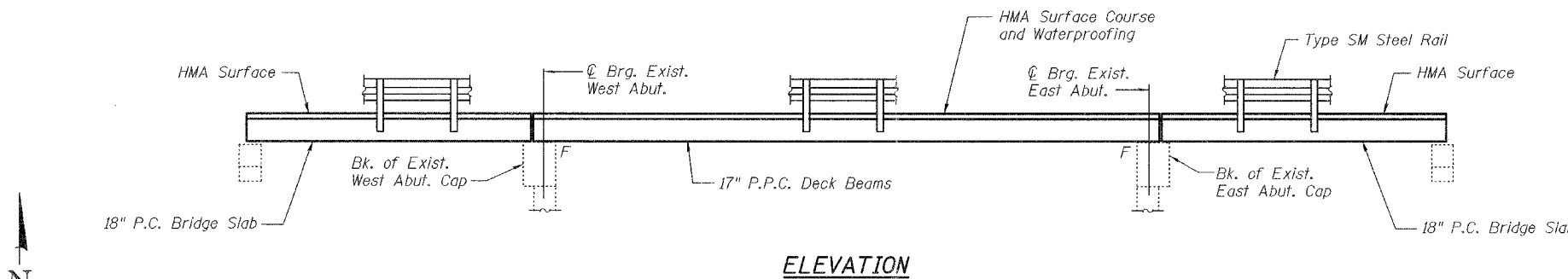
**DESIGN STRESSES**

**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f_{pbt} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)

**PRECAST UNITS**

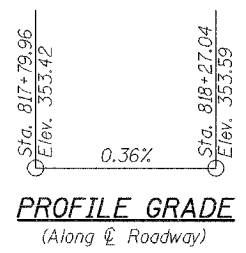
$f'_c = 4,500$  psi  
 $f_y = 60,000$  psi (reinforcement)



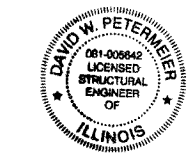
STATION 818+03.50  
REBUILT 200\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 885 SEC. 111BR-2  
LOADING HL93  
STR. NO. 076-0008

**NAME PLATE**  
See Std. 515001

Notes:  
Existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates.  
Locate name plates at outside face of top steel railing tube at southwest corner of bridge.



**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Ralph E. Anderson (TSD)*  
ENGINEER OF BRIDGES AND STRUCTURES



*David W. Petermeier 4/23/08*  
DAVID W. PETERMEIER  
EDWARDSVILLE, ILLINOIS  
ILLINOIS LICENSED STRUCTURAL  
ENGINEER NO. 081-005642  
EXPIRES NOV. 30, 2008

**GENERAL PLAN AND ELEVATION**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

03/17/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 50	SHEET NO. 2 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

Contract #78033

**SCOPE OF WORK**

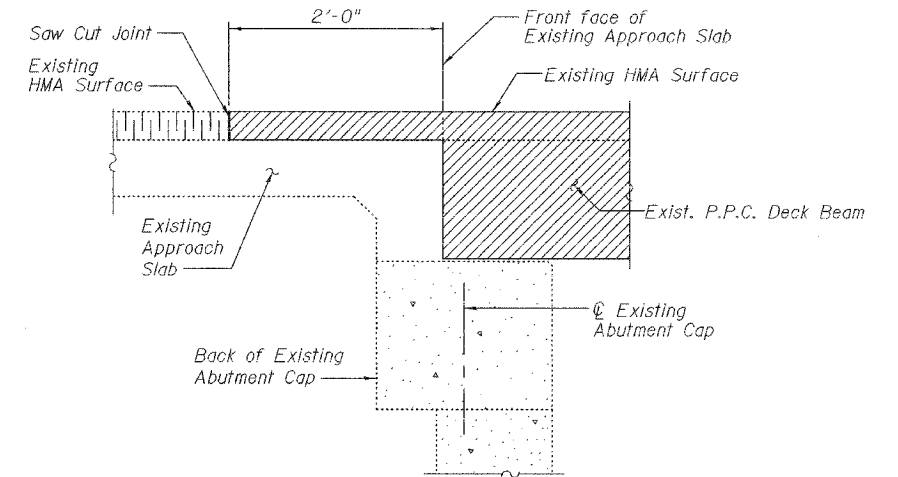
1. Remove existing surface, steel railing, deck beams, approach shoulder channel beams, and bearing pads.
2. Repair bearing seats and perform other repairs at abutments as required.
3. Reconstruct a single span P.P.C. deck beam superstructure with bituminous wearing surface and steel railing, Type SM. Reconstruct approach shoulders with P.C. bridge slabs with bituminous wearing surface and steel railing, Type SM.

**GENERAL NOTES**

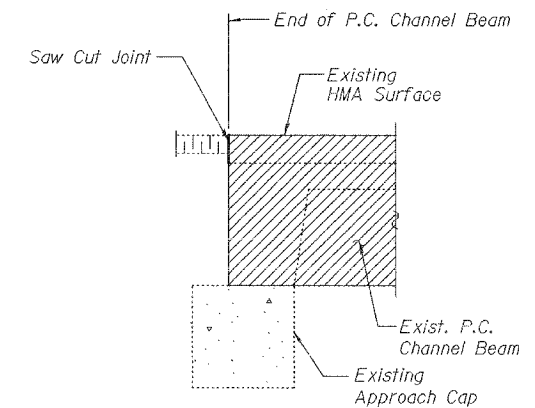
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
4. Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
5. No in-stream work will be allowed on this project.
6. 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.
7. If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (17" Depth).
8. The minimum thickness of the HMA surface course shall be 1 1/2" and varies as required to adjust for the existing profile grade and beam camber.
9. Repair of the substructure shall be completed prior to placement of the new deck beams.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Surface Course, Mix "C", N90	Ton	18	-	18
Removal of Existing Superstructures	Each	1	-	1
Precast Concrete Bridge Slab	Sq. Ft.	299	-	299
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,422	-	1,422
Steel Railing, Type SM	Foot	167	-	167
Name Plates	Each	1	-	1
Waterproofing Membrane System	Sq. Yd.	173	-	173
Epoxy Crack Injection	Foot	-	6	6
Removal of Existing Precast Concrete Units	Sq. Ft.	299	-	299



**SECTION AT CENTERLINE ROADWAY**



**SECTION AT APPROACH SHOULDER**

**LIMITS OF EXISTING STRUCTURE FOR SUPERSTRUCTURE REMOVAL**

Notes:  
HMA removal over approach slab included in the cost of Removal of Existing Superstructures.  
HMA removal over approach shoulder channel beam and removal of P.C. channel beams included in the cost of the Removal of Existing Precast Concrete Units.



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

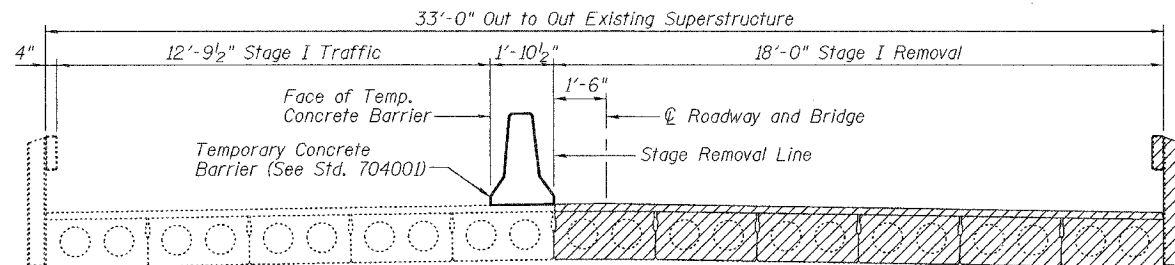
03/17/08

**GENERAL STRUCTURE DATA**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**

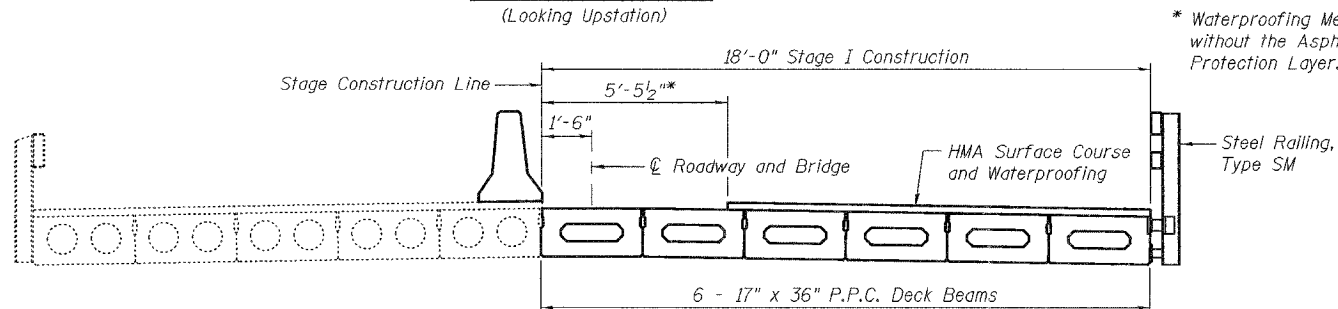
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 51	SHEET NO. 3 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	

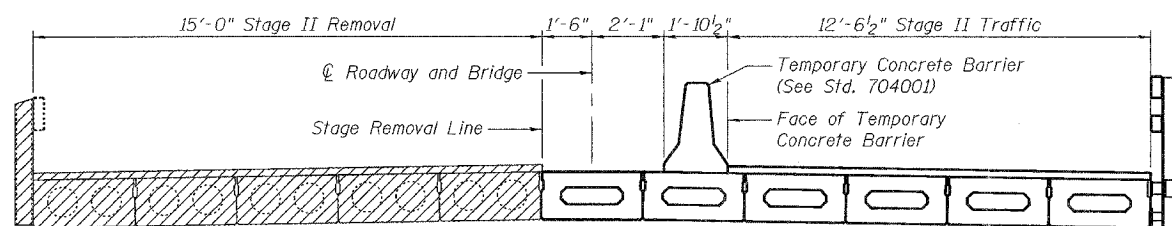
Contract #78033



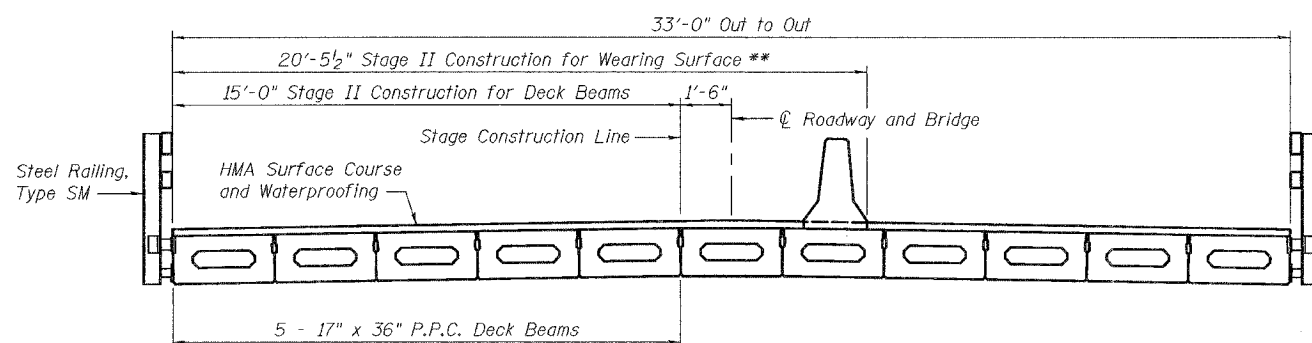
**STAGE I REMOVAL**  
(Looking Upstation)



**STAGE I CONSTRUCTION**  
(Looking Upstation)



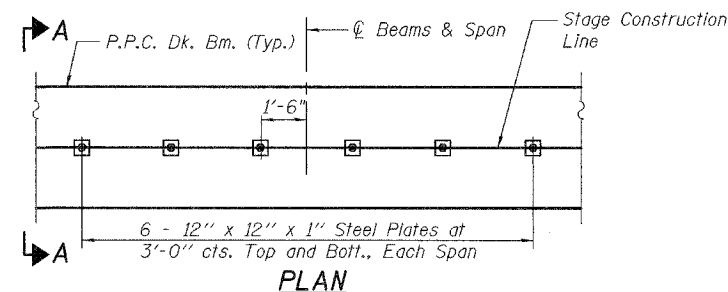
**STAGE II REMOVAL**  
(Looking Upstation)



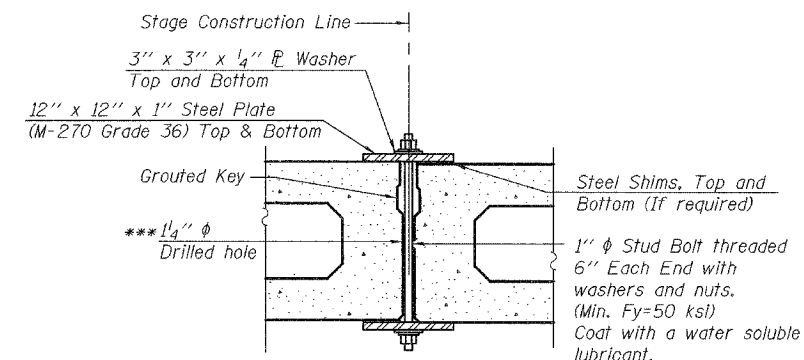
**STAGE II CONSTRUCTION**  
(Looking Upstation)

See Roadway Plans for quantity of Temporary Concrete Barrier.

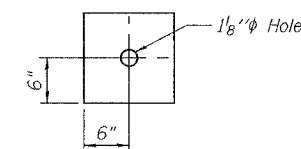
\*\*\* The Temporary Concrete Barrier for Stage II Traffic shall be removed after the Stage II Construction shear keys are grouted and cured and immediately prior to placement of the HMA wearing surface. Once the Temporary Concrete Barrier has been removed, the penetrating primer, coal tar emulsion membrane, fiber-glass fabric and coal tar emulsion slurry layers of the Waterproofing Membrane shall be lapped 6". The asphalt sand seal protection layer shall then be applied according to Section 581 of the Standard Specifications.



**PLAN**



**SECTION A-A**



**CLAMPING PLATE**

**SHEAR KEY CLAMPING DETAILS**

See Article 504.06 of the Standard Specifications for Stage Construction of Precast Prestressed Concrete Deck Beams.  
Cost included with Precast Prestressed Concrete Deck Beams (17" Depth).

\*\*\* As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

**STAGE CONSTRUCTION DETAILS**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

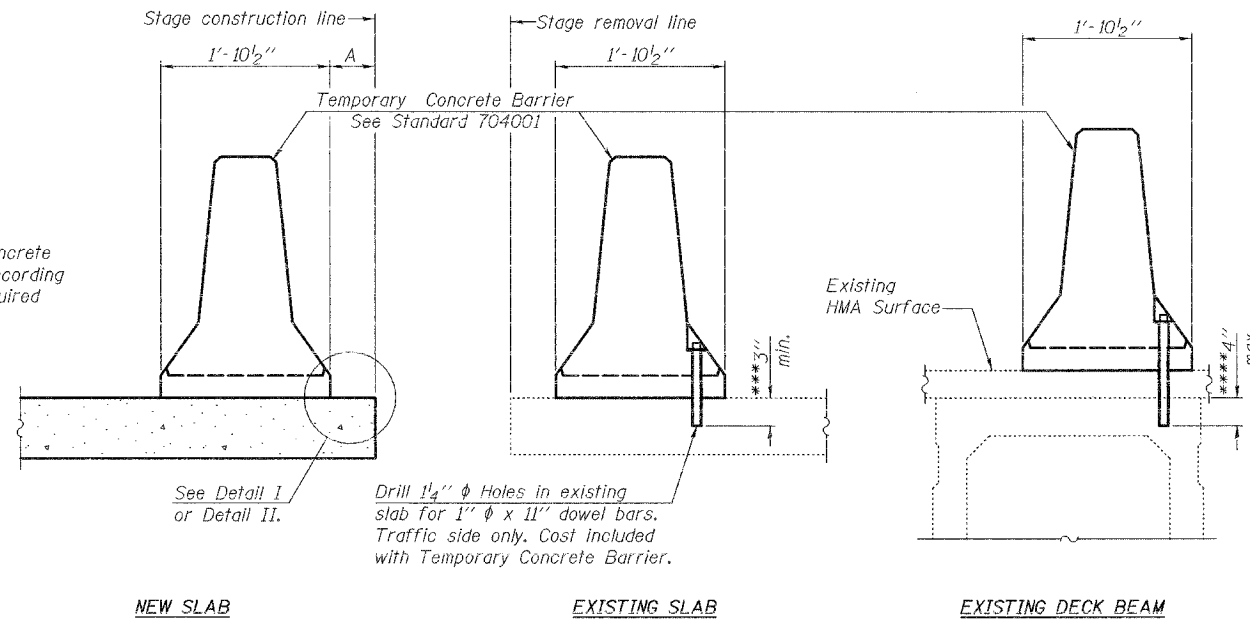
04/22/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 11 SHEETS
F.A.P. 885	111BR-2	POPE	69	52	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78033

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



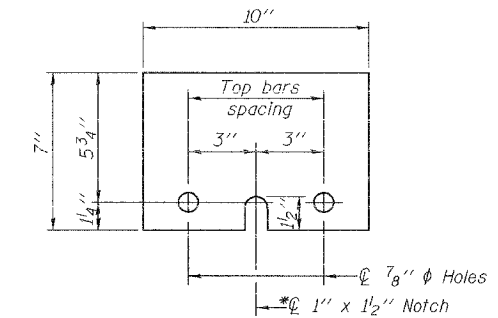
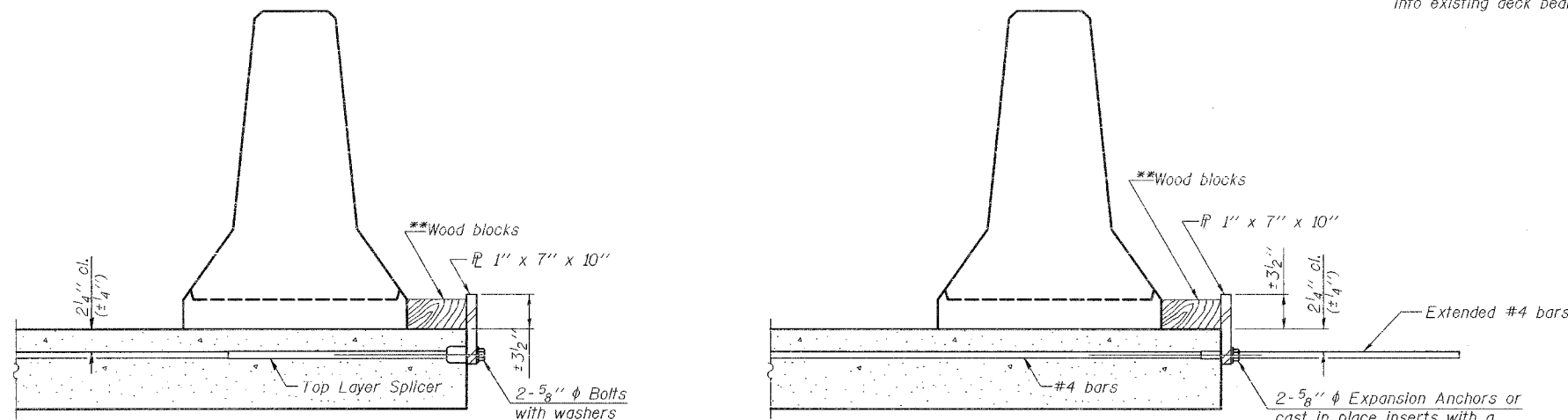
Drill 1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

**NOTES**

- Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.
- Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.  
See Roadway Plans for quantity of Temporary Concrete Barrier.

**SECTIONS THRU SLAB OR DECK BEAM**

- \*\*\*Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- \*\*\*\*If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**STEEL RETAINER 1" x 7" x 10"**

\* Required only with Detail II

**DETAIL I**

**DETAIL II**

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



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

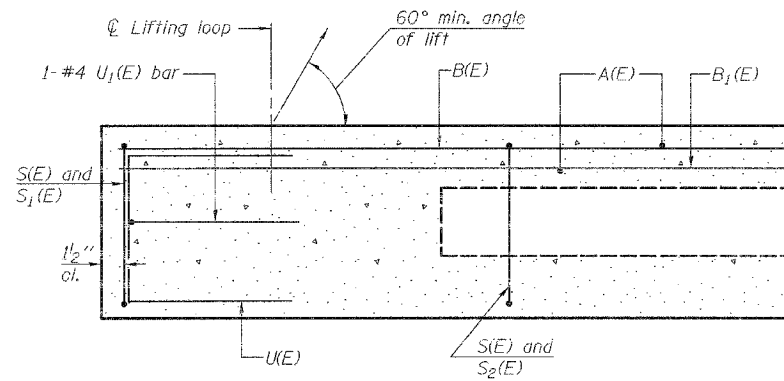
03/17/08

**TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
ILL. ROUTE 146 OVER ROOT LICK BRANCH  
F.A.P. ROUTE 885 - SECTION 111BR-2  
POPE COUNTY  
STATION 818+03.50  
STRUCTURE NO. 076-0008**

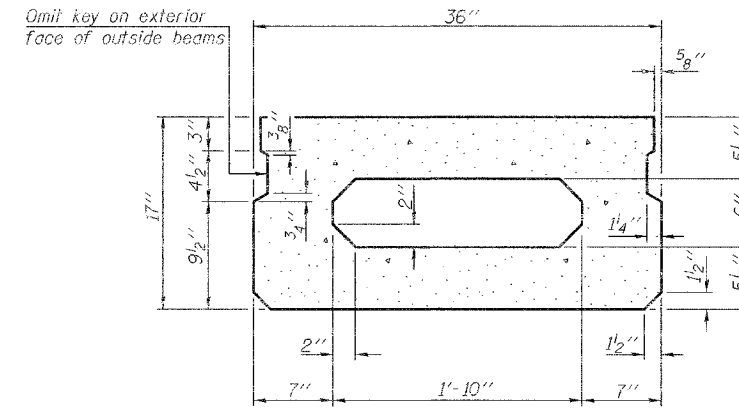
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F.A.P. 885	111BR-2	POPE	69	53	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

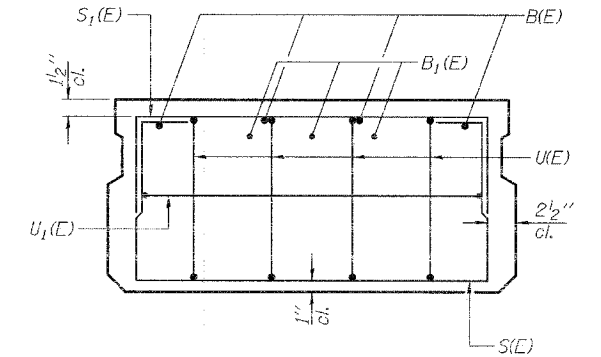
Contract #78033



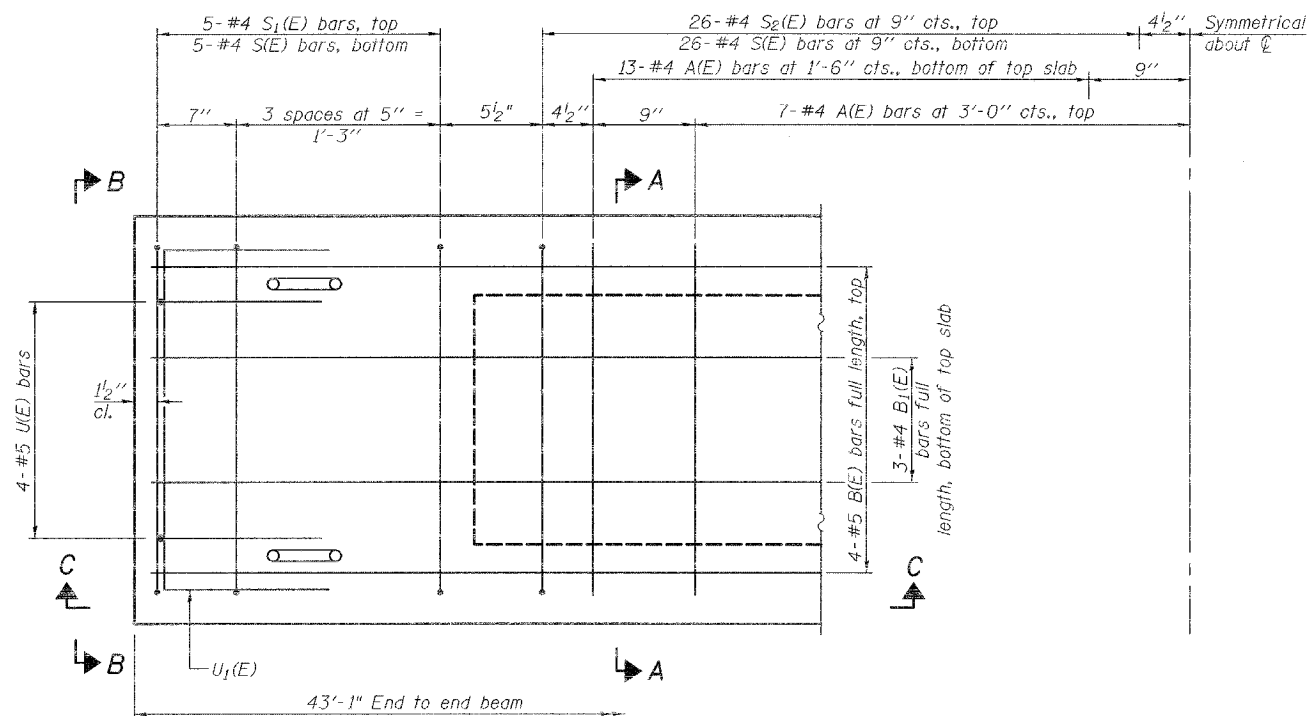
SECTION C-C



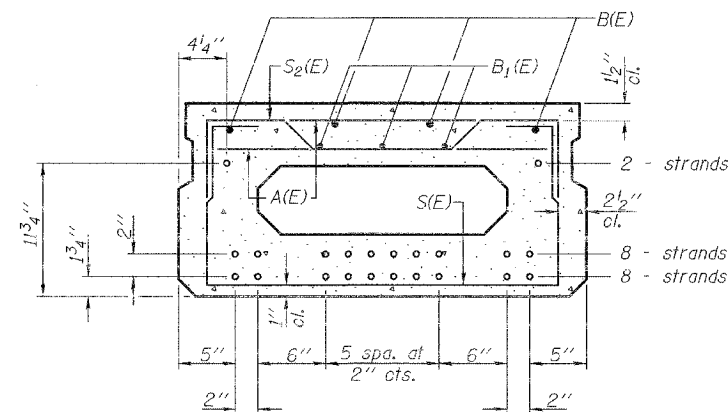
SECTION A-A  
(Showing dimensions)



VIEW B-B



PLAN VIEW



SECTION A-A

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST  
ONE BEAM ONLY  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	39	#4	2'-7"	—
B(E)	4	#5	42'-10"	—
B1(E)	3	#4	42'-10"	—
S(E)	62	#4	5'-9"	□
S1(E)	10	#4	4'-11"	□
S2(E)	52	#4	5'-2"	□
U(E)	8	#5	3'-8"	□
U1(E)	2	#4	5'-0"	□

Note: See sheet 6 of 11 for additional details and Bill of Material.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

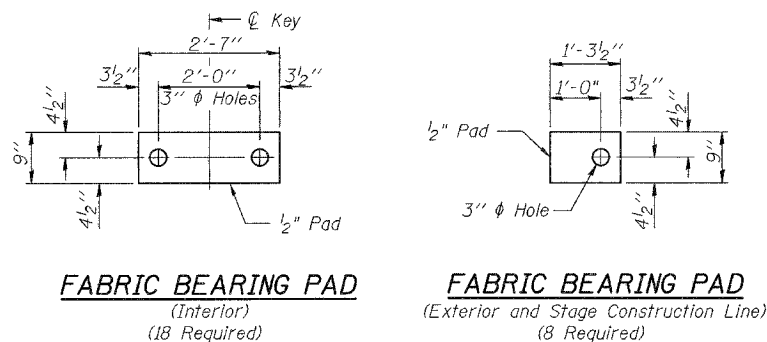
03/17/08

17" X 36" DECK BEAM  
ILL. ROUTE 146 OVER ROOT LICK BRANCH  
F.A.P. ROUTE 885 - SECTION 111BR-2  
POPE COUNTY  
STATION 818+03.50  
STRUCTURE NO. 076-0008

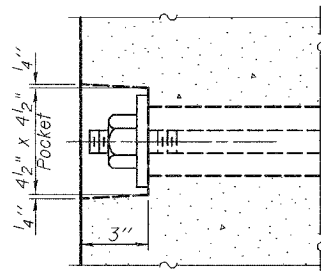
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 54	SHEET NO. 6 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

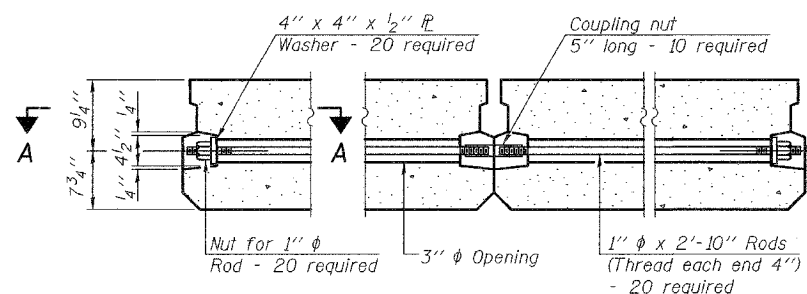
Contract #78033



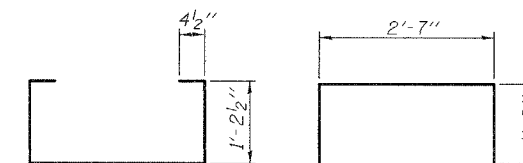
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**SECTION A-A**

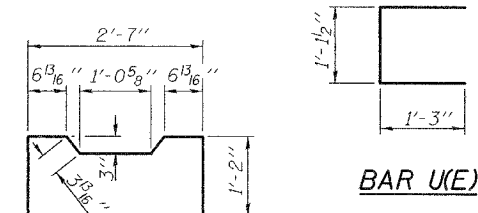


**TYPICAL TRANSVERSE TIE ASSEMBLY**



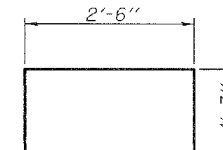
**BAR S<sub>1</sub>(E)**

**BAR S(E)**

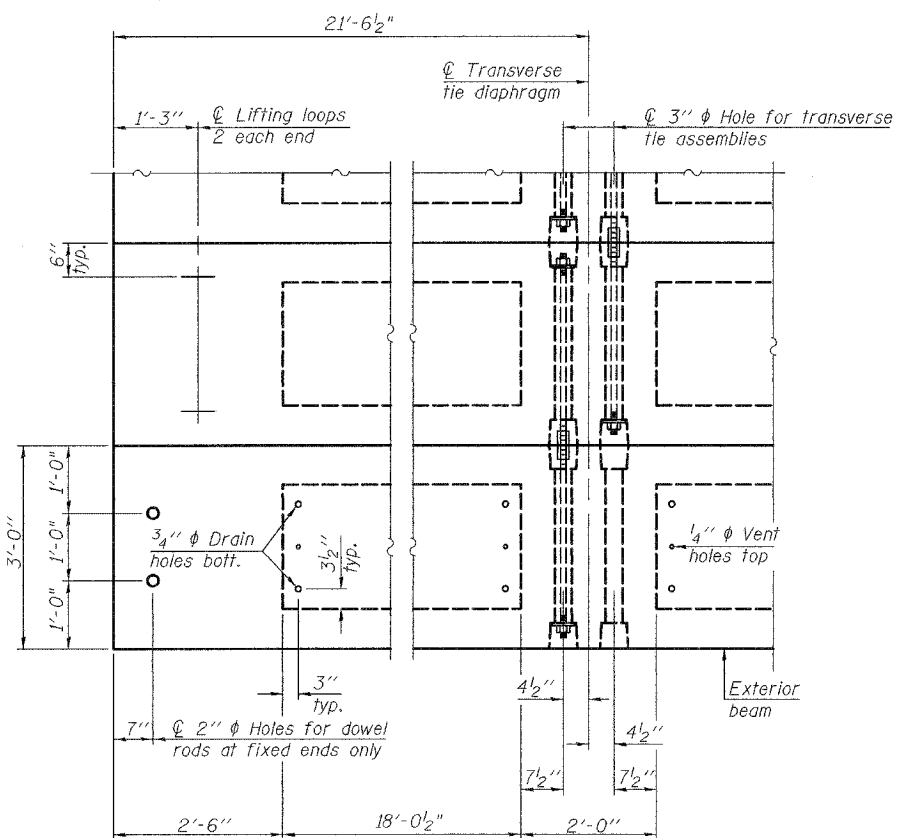


**BAR U(E)**

**BAR S<sub>2</sub>(E)**



**BAR U<sub>1</sub>(E)**



**PLAN VIEW**

Note: Connect beams in pairs with the transverse tie configuration shown.

**NOTES**

- See Sheets 9 and 10 of 11 for fascia beam modifications for rail post anchorage.
- 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.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Lifting loops shall be burned off after beams have been erected.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (17" Depth)	Sq. Ft.	1,422
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**17" X 36" DECK BEAM DETAILS**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**



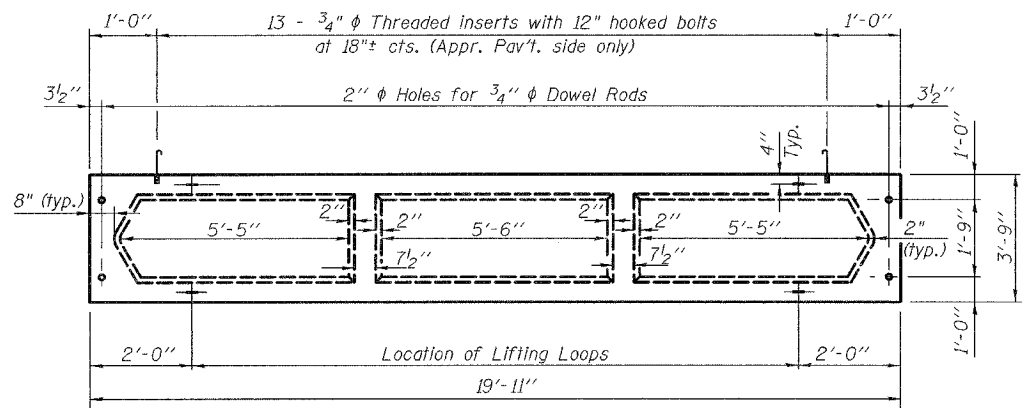
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DRAWN	PRC
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03/17/08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

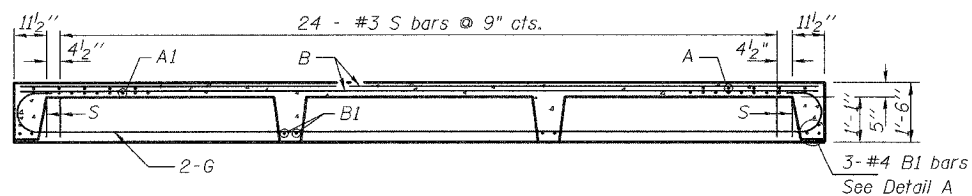
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F.A.P. 885	111BR-2	POPE	69	55	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #78033

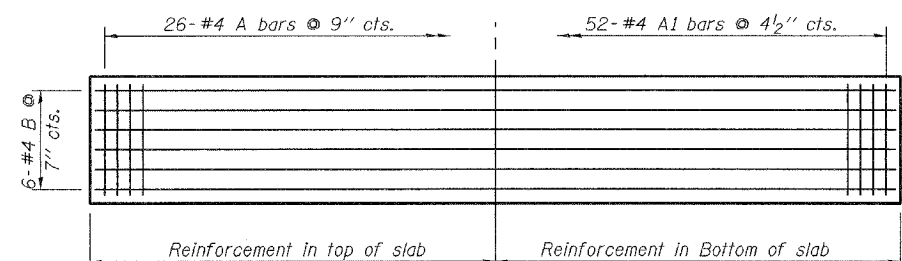


**TYPICAL PLAN OF BRIDGE SLAB**

(4 Required: 2 Right Hand Units and 2 Left Hand Units)

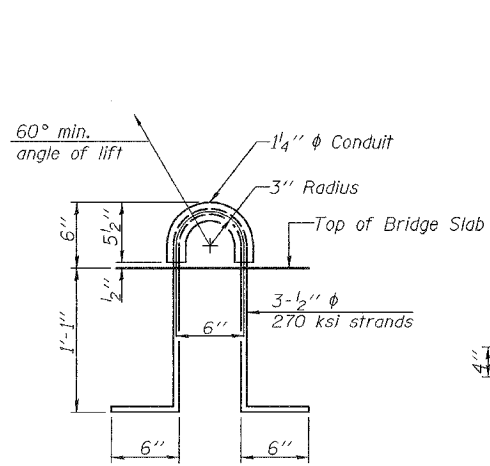


**LONGITUDINAL SECTION**

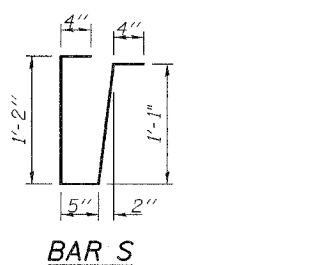


**PLAN**

Showing Slab Reinforcement

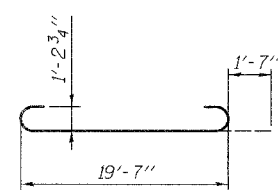


**LIFTING LOOP DETAIL**



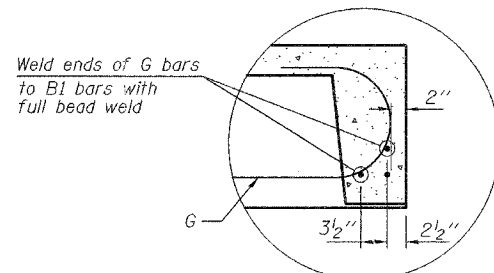
**BAR S**

**BAR A**



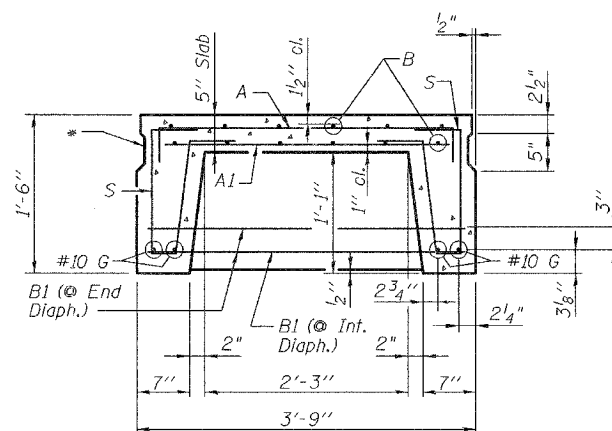
**BAR G**

Note: Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer.



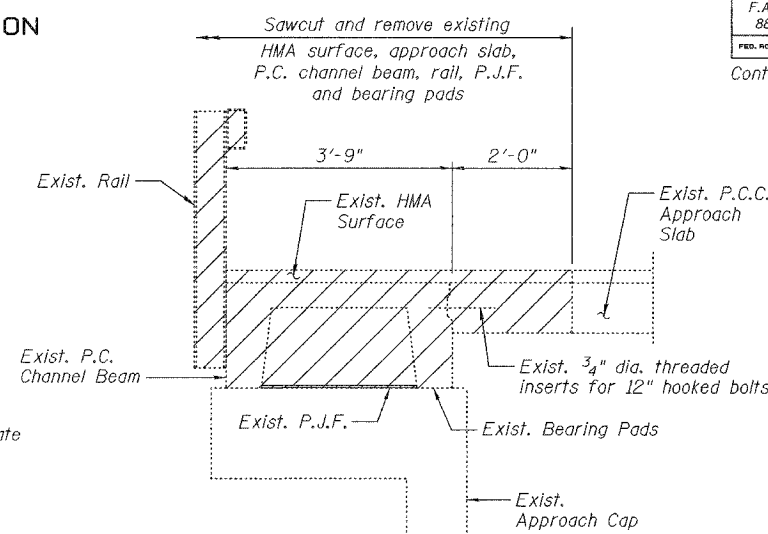
**DETAIL A**

Note: The surface of the member shall not deviate more than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface.

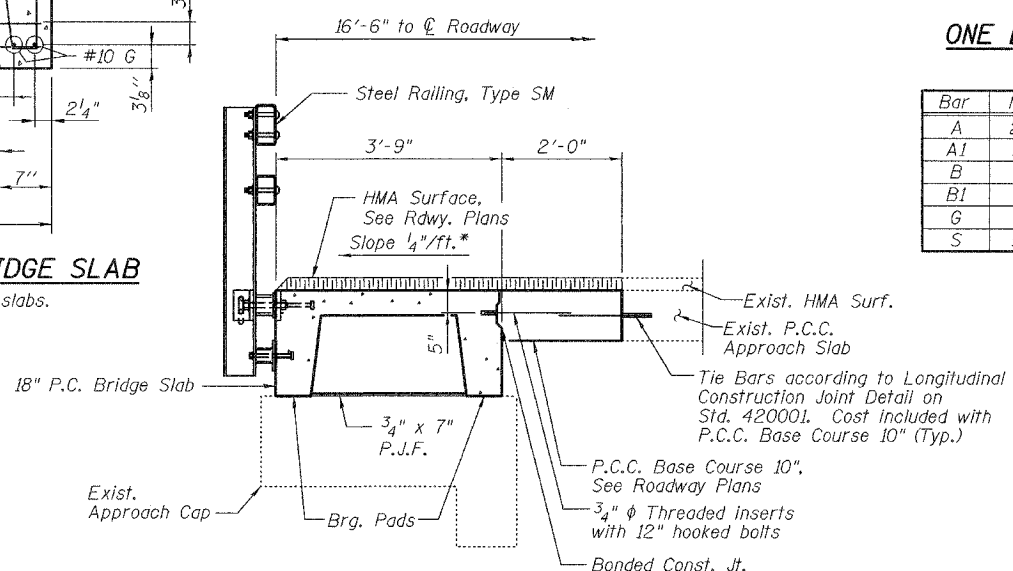


**TYPICAL SECTION THRU BRIDGE SLAB**

\* Omit key on exterior face of slabs.



**LIMITS OF REMOVAL AT APPROACH SHOULDERS**



**PROPOSED CROSS SECTION**

\* Cross slope shown applies to HMA Surface

**NOTES**

Lifting loops shall be burned off after bridge slabs have been erected. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8 inch fabric adjusting shims of the dimensions of the 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 bridge slabs. Cleaning shall be done by sandblasting the keyway areas between the top of the bridge slabs and the bottom edge of the keys. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs. See Sheets 9 and 10 of 11 for required modifications for rail anchorage. The precast concrete bridge slab shall be erected and aligned with the exterior face of the fascia deck beam after deck beams are in final position. Cost of removing exist. P.C. channel beam, HMA Surface, and rail included with Removal of Exist. Precast Concrete Units. See Roadway Plans for measurements and payment for Approach Slab Removal and Replacement.

**BAR LIST**  
**ONE BRIDGE SLAB ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A	26	#4	4'-0"	U
A1	52	#4	3'-3"	—
B	12	#4	19'-7"	—
B1	10	#4	3'-6"	—
G	4	#10	22'-9"	—
S	52	#3	3'-4"	U

**BILL OF MATERIAL**

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299

**PRECAST CONCRETE BRIDGE SLAB**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**



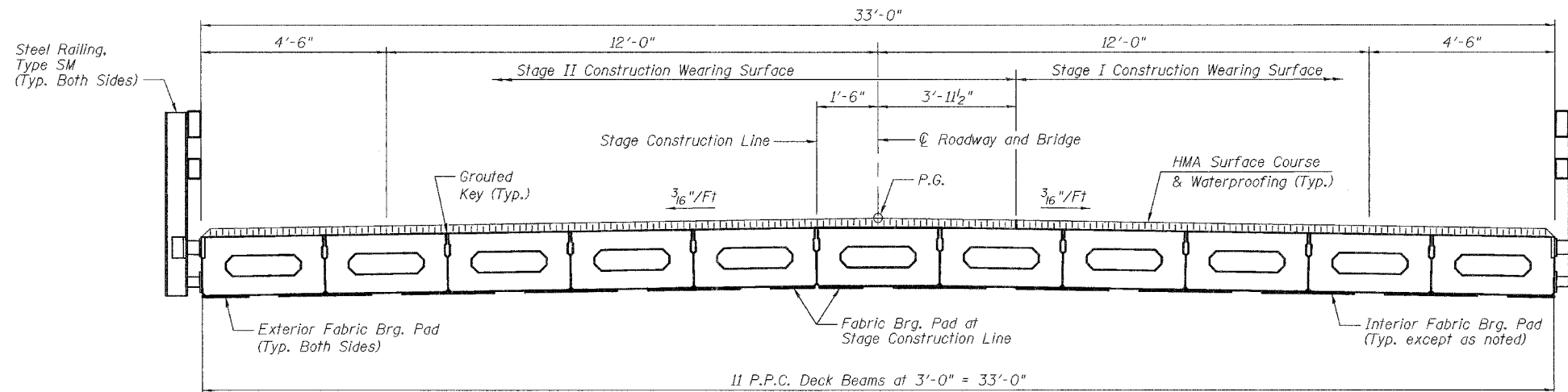
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DRAWN	PRC
CHECKED	RLM

04/22/08

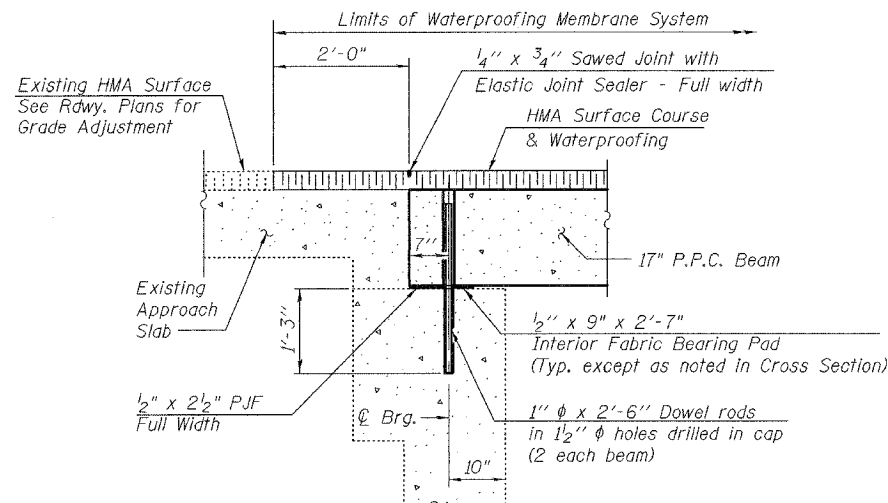
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
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FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

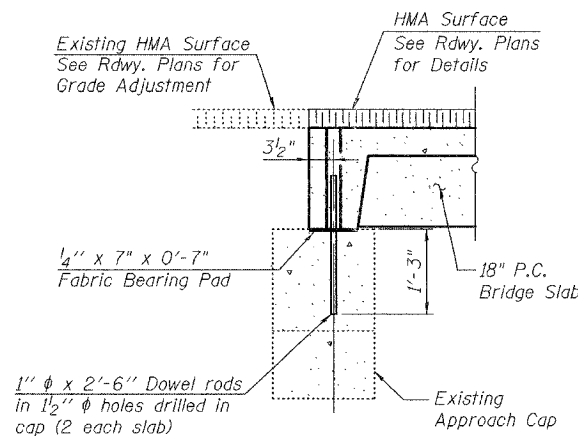
Contract #78033



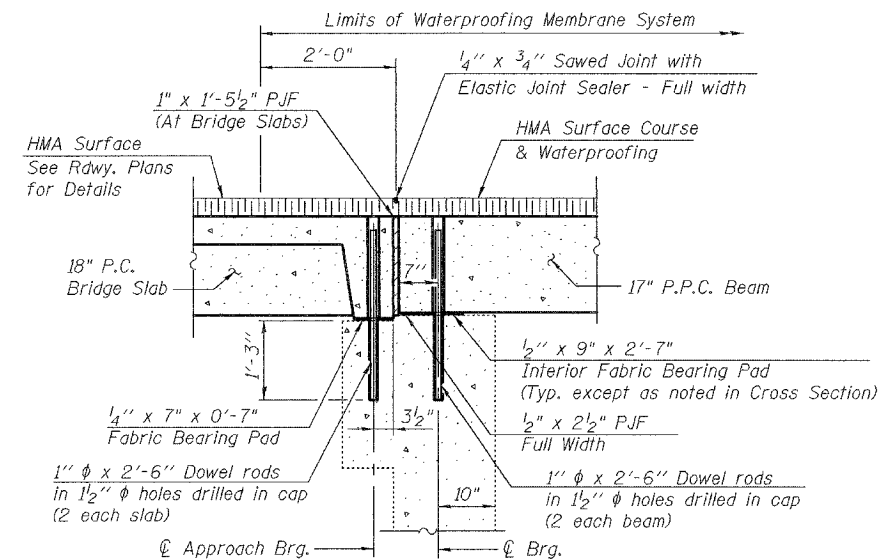
**CROSS SECTION**  
(Looking Upstation)



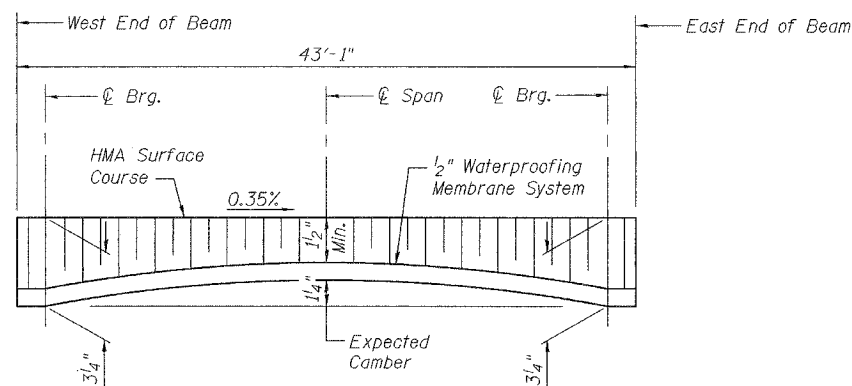
**SECTION THRU ABUTMENT AT APPROACH SLAB**



**SECTION THRU APPROACH CAP**



**SECTION THRU ABUTMENT AT SHOULDER**



**HMA WEARING SURFACE PROFILE**

Note:  
Thickness on center beam will vary from those shown above at beam sides to 3/16" more at the profile grade.

**BILL OF MATERIAL**

Hot-Mix Asphalt Surface Course, Mix "C", N90	Ton	18
Waterproofing Membrane System	Sq. Yd.	173

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. See Sheets 6 and 7 of 11 for bearing pad details. See Section 581 of the Standard Specifications for Waterproofing Membrane System. See Roadway Plans for HMA surface course, Mix "C", N90 mixture requirements. The HMA surface course shall be placed according to Section 582 of the Standard Specifications.

**SUPERSTRUCTURE DETAILS  
SECTIONS AND JOINT DETAILS  
ILL. ROUTE 146 OVER ROOT LICK BRANCH  
F.A.P. ROUTE 885 - SECTION 111BR-2  
POPE COUNTY  
STATION 818+03.50  
STRUCTURE NO. 076-0008**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

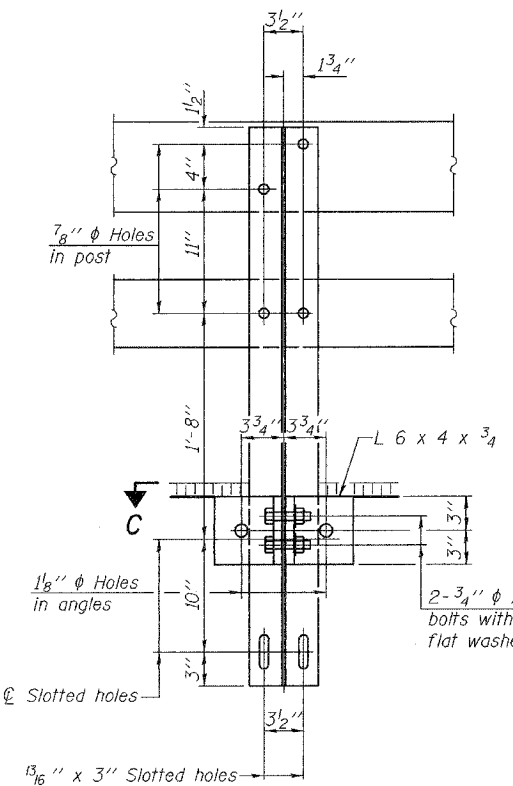
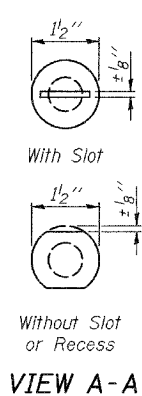
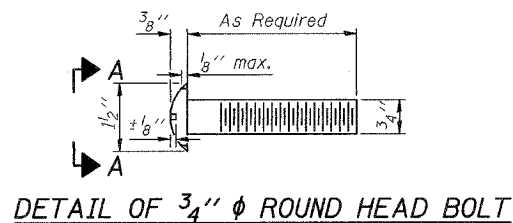
03/17/08



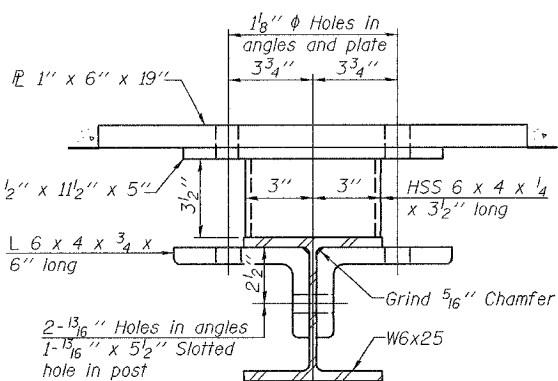
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 11 SHEETS
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FED. ROAD DIST. NO. 7	ILLINOIS	FED. ROAD PROJECT			

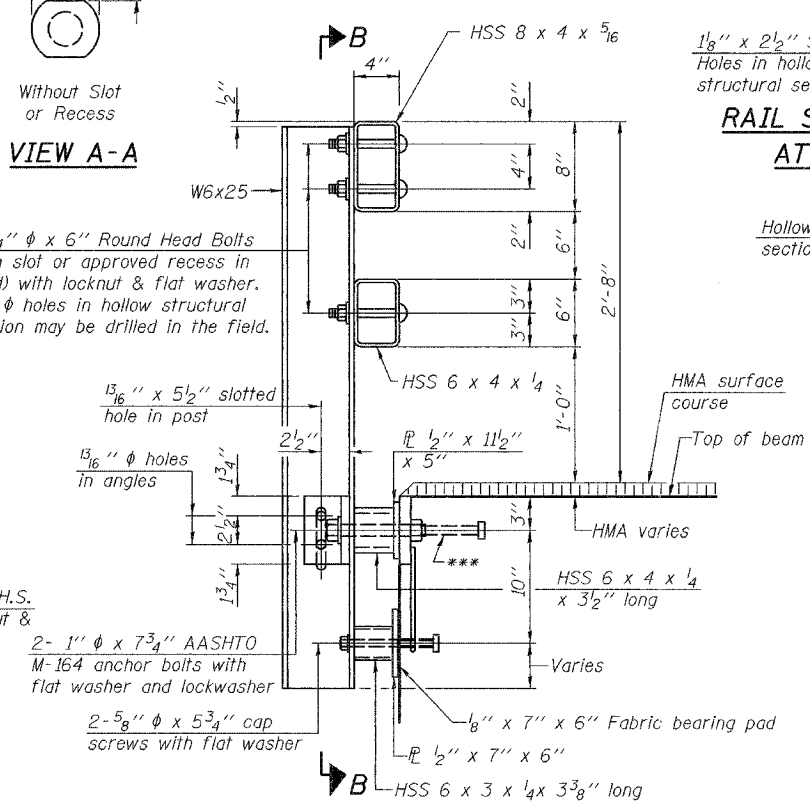
Contract #78033



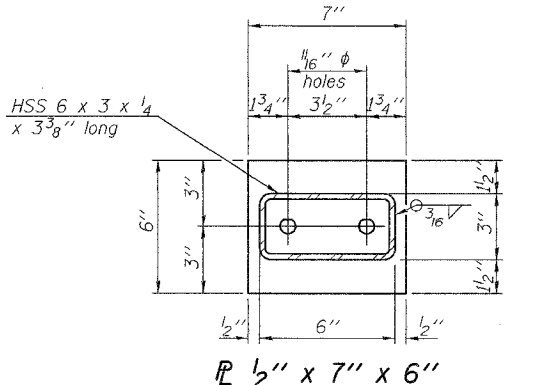
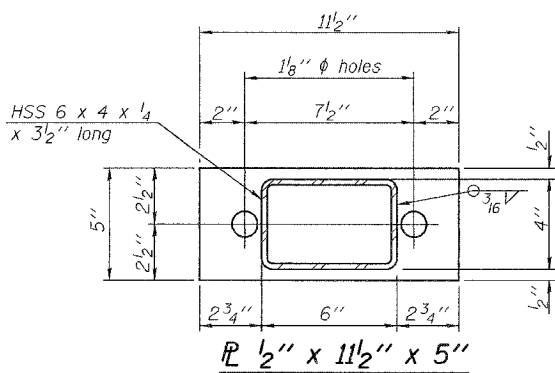
SECTION B-B



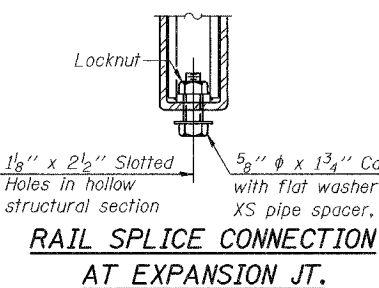
SECTION C-C



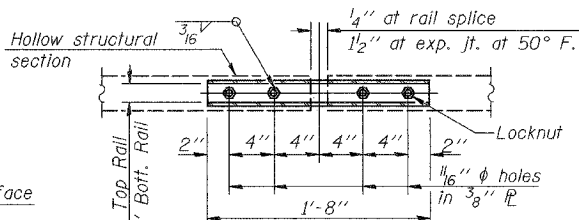
SECTION AT RAIL POST



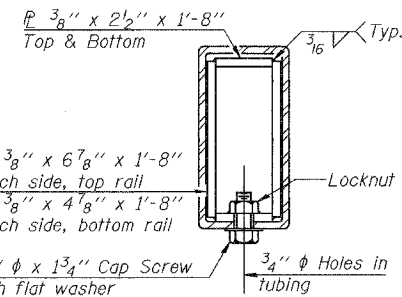
ANCHOR DEVICE



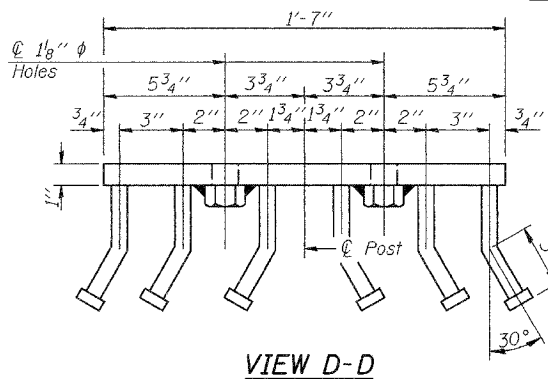
RAIL SPLICE CONNECTION  
AT EXPANSION JT.



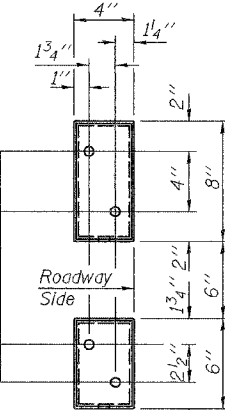
PLAN-BOTT. SPLICE AT  
TYPICAL



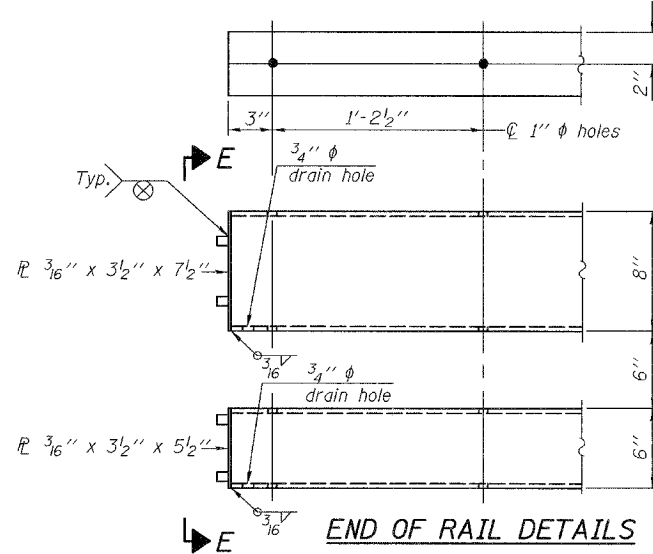
SECTION AT  
RAIL SPLICE



VIEW D-D



VIEW E-E



END OF RAIL DETAILS

Notes:  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.  
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.  
\*\*\*The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.  
See Sheet 10 of 11 for rail post locations.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	167

STEEL RAILING, TYPE SM  
ILL. ROUTE 146 OVER ROOT LICK BRANCH  
F.A.P. ROUTE 885 - SECTION 111BR-2  
POPE COUNTY  
STATION 818+03.50  
STRUCTURE NO. 076-0008



DESIGNED YSS  
CHECKED RLM  
DRAWN PRC  
CHECKED RLM

R-34HMAWS

9-3-07

(6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum HMA thickness)

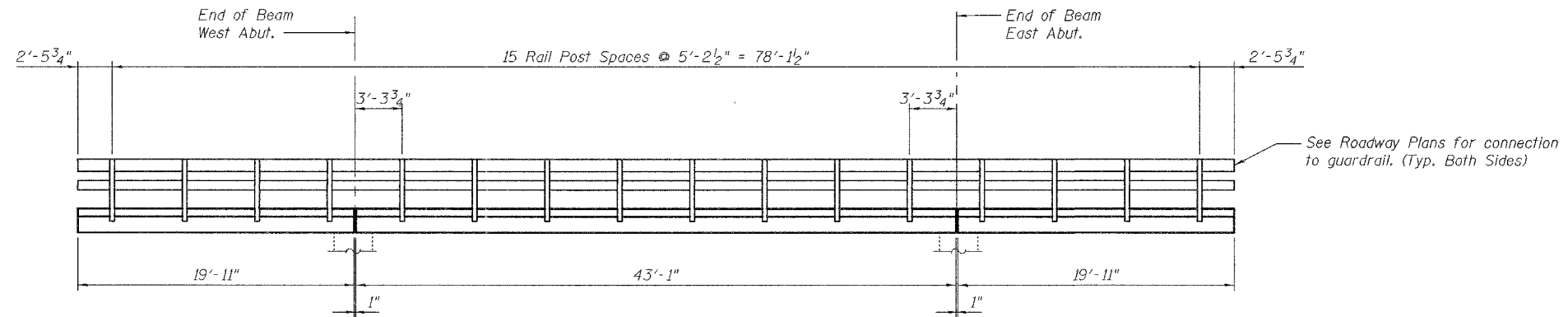
\*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

\*\*Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
F.A.P. 885	111BR-2	POPE	69	58	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT-		

Contract #78033



RAIL POST SPACING DETAIL

South Elevation shown, North Elevation opposite hand



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

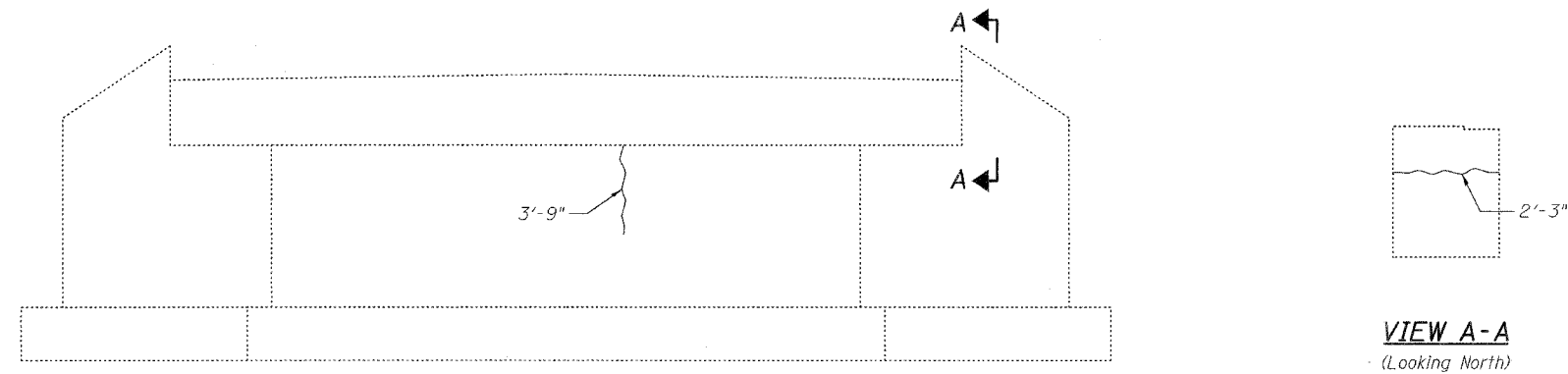
03/17/08

RAIL POST SPACING  
ILL. ROUTE 146 OVER ROOT LICK BRANCH  
F.A.P. ROUTE 885 - SECTION 111BR-2  
POPE COUNTY  
STATION 818+03.50  
STRUCTURE NO. 076-0008

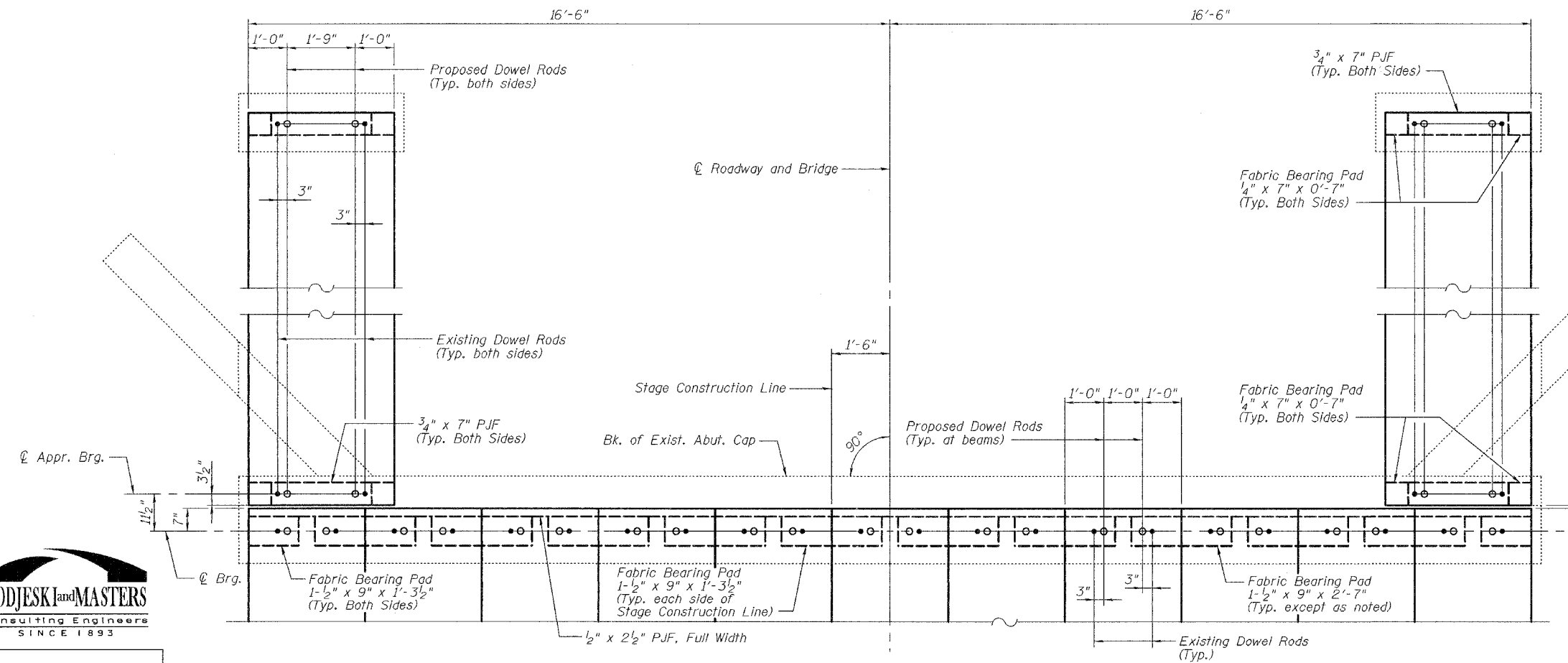
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 885	111BR-2	POPE	69	59
FED. ROAD DIST. NO. 7		ALIGNMENT	FED. AID PROJECT	

Contract #78033



**ELEVATION - EAST ABUTMENT**  
(Looking East)



**PLAN - EAST ABUTMENT BEARING SEAT**  
(East Abutment shown, West Abutment similar)

Bituminous wearing surface and existing approach pavement not shown for clarity.

**BILL OF MATERIAL**

Item	Unit	Total
Epoxy Crack Injection	Foot	6

- LEGEND**
- Crack Length — Epoxy Crack Injection
  - Existing Dowel Rod
  - Proposed Dowel Rod

**Notes:**  
Existing dowel rods shall be burned off flush with the existing concrete face, ground smooth, and sealed with epoxy. Cost to remove existing P.C. channel beam dowel rods is included with Removal of Existing Precast Concrete Units. Cost to remove existing P.P.C. deck beam dowel rods is included with Removal of Existing Superstructures.

**ABUTMENT REPAIRS**  
**ILL. ROUTE 146 OVER ROOT LICK BRANCH**  
**F.A.P. ROUTE 885 - SECTION 111BR-2**  
**POPE COUNTY**  
**STATION 818+03.50**  
**STRUCTURE NO. 076-0008**



DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

03/17/08

B.M. R.R. Spike In A.P. 55 RT. STA. 817+00  
 Elev. 352.41  
 Existing Structure: 1 Span R.C.D.G. (14'0" Clear)  
 12'0" R/W. R.C. Closed Abut. Year built 1928  
 as Section 11B S.B.I. For 116 Pope County  
 Superstructure to be removed, and  
 replaced a portion at a time by  
 Contractor utilizing stage construction  
 as shown. (Exist Sta. No. 016-0088)

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

Scale	1" = 10'	Sheet No.	8
Project	FA RT 885	Section	111BR-2
Contract	78033	County	POPE

GENERAL NOTES:

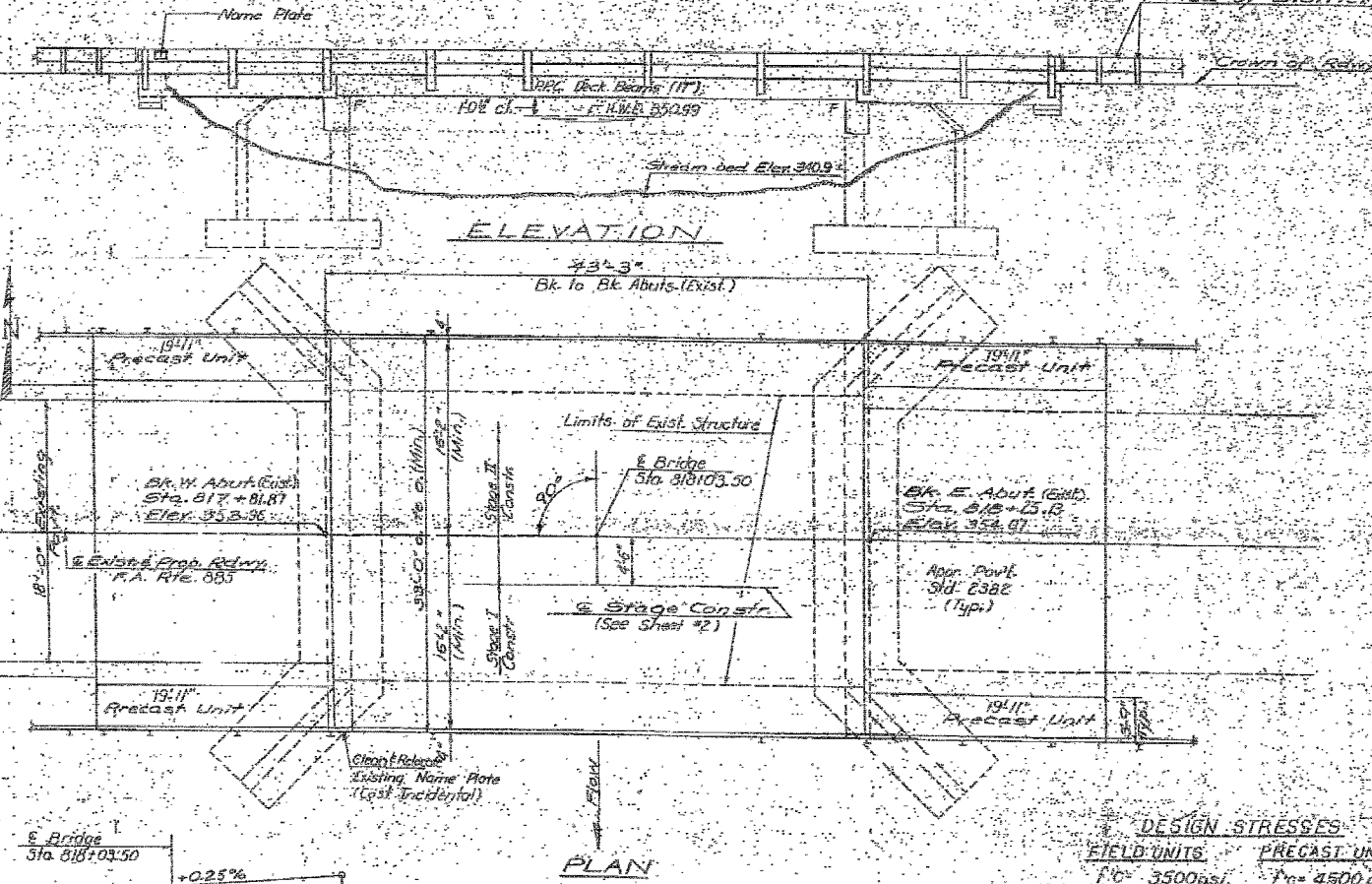
Plan dimensions and details relating to existing structure have been taken from existing plans and are subject to normal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The top surface of the beams shall be finished in accordance with Article 500.06 of the Standard Specifications, except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/2".

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

Limits of Waterproofing: Membrane system and Class I shall be treated beyond each end of deck beams and out to out of deck beams. Shoulder transition to wingwall shall be sloped with broken concrete. Cost incidental.

A Calcium Nitrate Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.



STATION 818+03.50  
 REBUILT 198 BY  
 STATE OF ILLINOIS  
 FA RT 885 SEC. 111B-DR-2  
 PROJECT ON PAGES 15)  
 LOADING H520  
 \*GTR NO.

\*Structure Number to be supplied by District.

NAME PLATE  
 (See Std. 2113)

TOTAL BILL OF MATERIAL

Item	Unit	Sup	Sub	Total
Bituminous Concrete Surface Course, Class 1	Sq. Yds.	19		19
Removal of Existing Superstructures	2000	1		1
Concrete Removal	Cu. Yds.	11		11
Temporary Bridge Rail	Lm. Ft.	83		83
Class I Concrete	Cu. Yds.	16.0		17.5
Precast Concrete Bridge Sill	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (17' Depth)	Sq. Ft.	1402		1402
Steel Reinforcing Bars S12	Lm. Ft.	166		166
Reinforcing Bars S12	Lm. Ft.	2090		2090
Waterproofing Membrane System	Sq. Yds.	117		117
Portland Cement Mortar Finishing Course	Lm. Ft.	431		431
Nitrate Plates	Each			1

DESIGN STRESSES  
 FIELD UNITS PRECAST UNITS  
 Fc = 3500 psi Fc = 4500 psi  
 Fy = 60,000 psi (Rein) Fy = 1200 psi  
 Fc = 20,000 psi

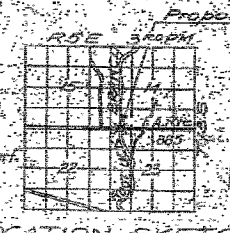
PRECAST PRESTRESSED UNITS  
 Fc = 5000 psi  
 Fc = 4900 psi  
 Fy = 270,000 psi (6 strands)  
 Fy = 189,000 psi (6 strands)  
 Design Specifications 1977 AASHTO  
 1978 thru 1982 Interim Specifications  
 as applicable  
 Allow 23.1 sq. ft. for future bearing surf.  
 LOADING H520-44 (New Const.)

WATERWAY INFORMATION

Drainage Area	338 Sq. Mi.	Low Grade Elev.	352.90 @ Sta. 818+00
Flood	100 Yrs.	Q	3253
		Opening	320
		Net	336
		Head	350.99
		Height	2.94
		Water	2.78
		Depth	353.33
		Prop.	353.74
Base	100	C.F.S.	3773
		Exist.	320
		Prop.	348
		H.W.E.	351.30
		Exist.	2.49
		Prop.	2.85
		Depth	353.79
		Prop.	354.15
Overlapping	20		2354
			316
			317
			350.50
			2.00
			2.65
			352.50
			353.16
Max Calc.	500		

PROPOSED GRADE F.A. RTE. 885

DESIGNED	J.P. Doty	DATE	August 25, 1981
CHECKED	R. Doty		
DRAWN	R. Doty		
CHECKED	Alte		



PROPOSED IMPROVEMENT  
 R.O.E. SKETCH  
 GENERAL PLAN & ELEVATION  
 PROJECT  
 F.A. RT. 885 OVER ROOT LICK BRANCH  
 F.A. RT. 885 (S.B.I. RTE. 116) SEC. 111B-DR-2  
 POPE COUNTY  
 STA. 818+03.50

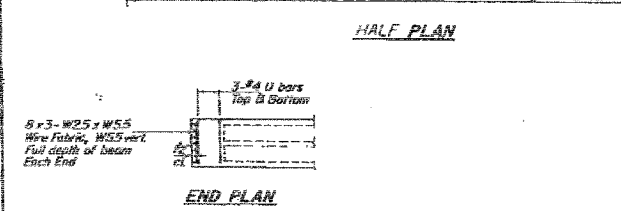
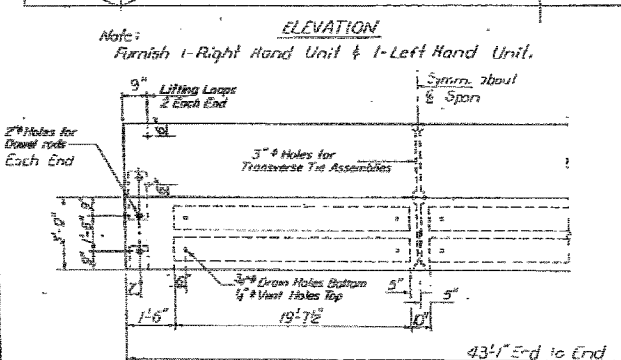
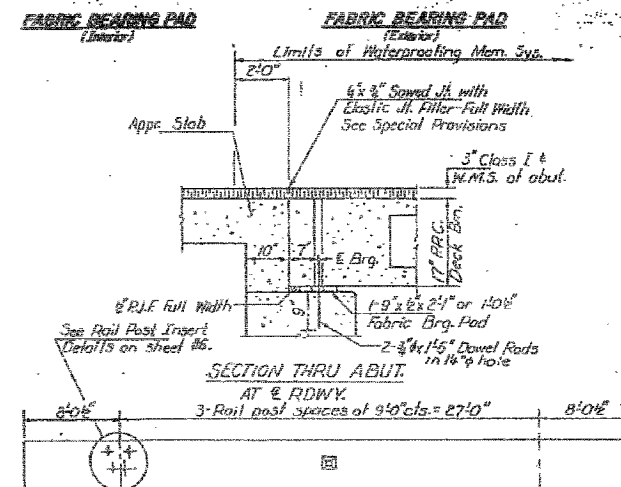
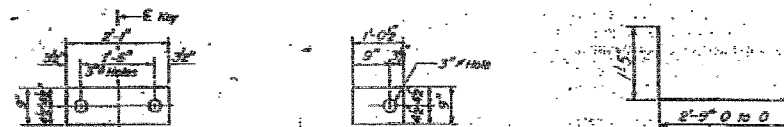


FOR INFORMATION ONLY

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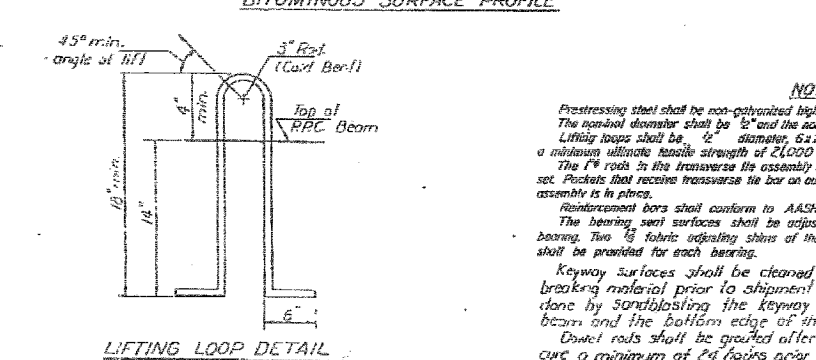
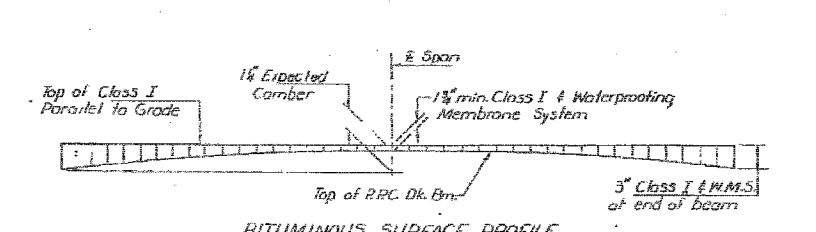
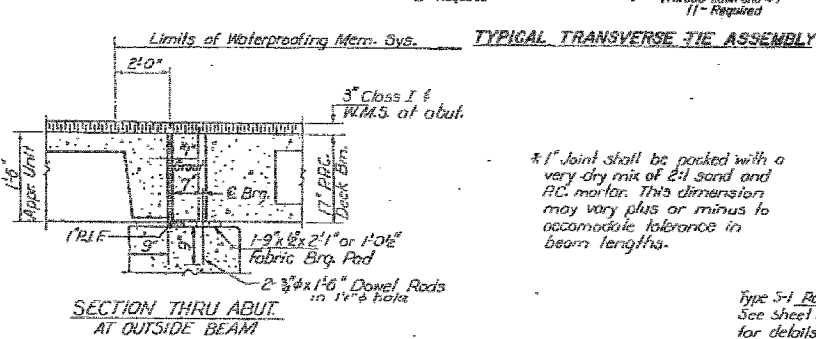
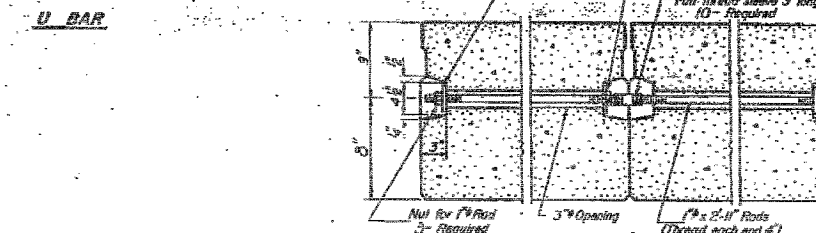
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
885	111B-2	17	61

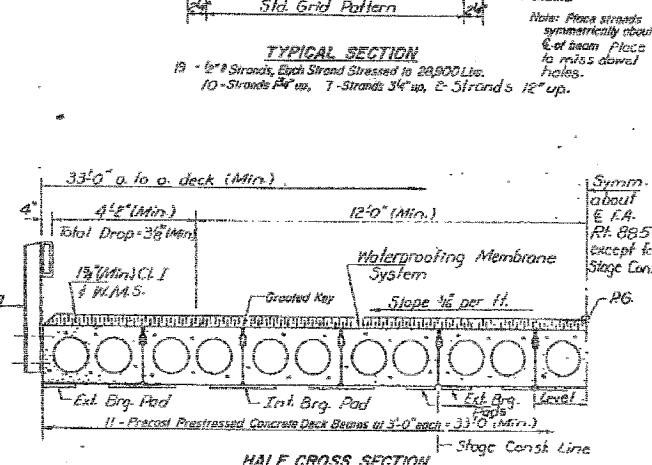
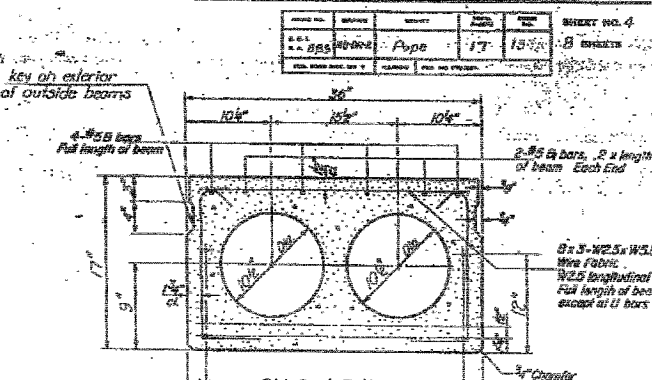


DESIGNED MKC RD. A.K.  
CHECKED C.F.C. R.P.  
DRAWN R. Lohy  
CHECKED ALZ H. SALAS P.S.

APPROVED [Signature]  
DATE 03/18/08



\*1" Joint shall be packed with a very dry mix of 2:1 sand and PC mortar. This dimension may vary plus or minus to accommodate tolerance in beam lengths.



Notes:  
Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60.  
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two (2) fabric bedding shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.  
Keyway surfaces shall be cleaned to remove form oil or other hard breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of one beam and the bottom edge of the key.  
Dowel rods shall be grouted after beams are in place and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

Notes:

Pressing steel shall be non-polarized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 1/2" diameter, 6x25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 24,000 lbs. or 2-2 #270 bar strands. The 1/2" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two (2) fabric bedding shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other hard breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of one beam and the bottom edge of the key. Dowel rods shall be grouted after beams are in place and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

BILL OF MATERIAL		
Item	Unit	Total
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq Ft	1422

SUPERSTRUCTURE  
FA RT 885 SEC 111B-DR-2  
POPE COUNTY  
STA 616+03.50

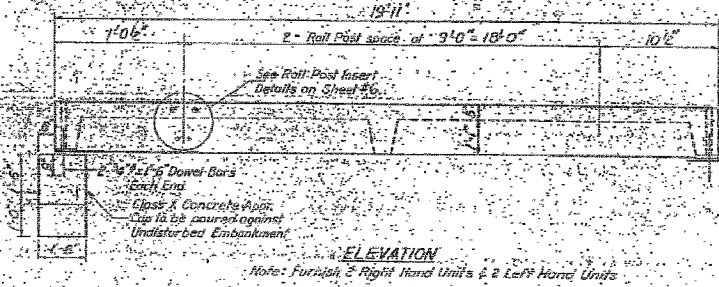


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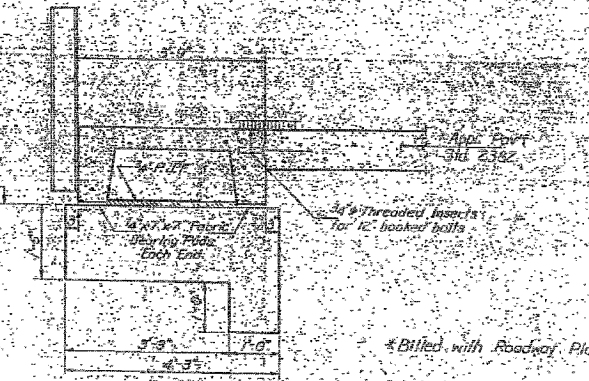
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

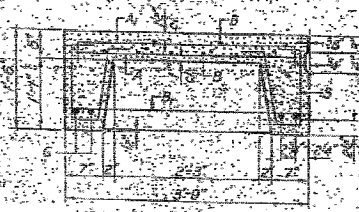
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Contract No.	78033	Scale	AS SHOWN



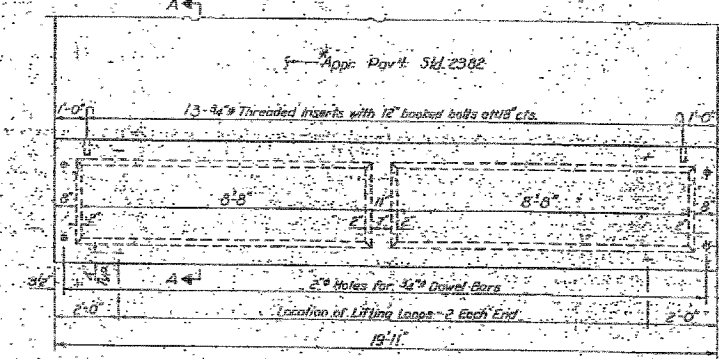
ELEVATION  
Note: Furnish 2 Right Hand Units & 2 Left Hand Units



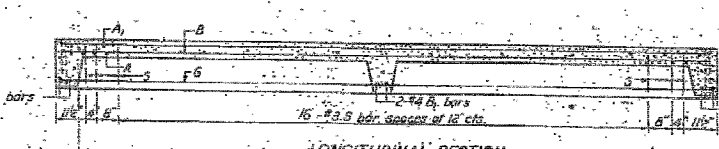
SECTION A-A



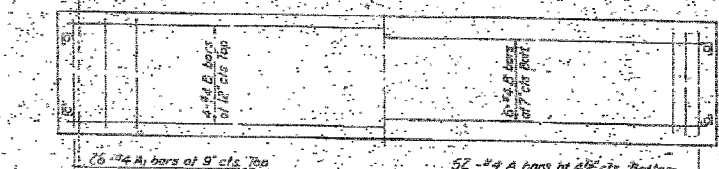
SECTION THRU PRECAST UNIT



PARTIAL PLAN OF APPROACH



LONGITUDINAL SECTION



SLAB REINFORCEMENT

BAR LIST - ONE UNIT  
Reinforcement to be cast into slab

Bar No.	Size	Length	Shape
A	#4	8'-3"	
B	#4	4'-0"	
C	#4	19'-11"	
D	#4	3'-6"	
E	#4	3'-6"	

NOTES  
Unless otherwise approved by the Engineer, lifting loops shall be 2-#4 Class wire rope with fiber core and shall have a minimum ultimate strength of 2100 lbs. or 2-#4 ERW Rod Strands as shown on sheet #4. Holes shall be drilled and grouted in place.  
Cost of reinforcement and accessories confine the slab unit, bearing posts, finishing, drilling for, placing and grouting anchor bolts and #4 hooked bolts is included in Unit-bid price for "Precast Concrete Bridge Slab".  
The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam, after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	289
Class X Concrete	Cu. Yd.	16

DESIGNED: M.K.C. R.D. AK  
CHECKED: G.T.C. RB  
DRAWN: R. Daly  
CHECKED: A. Kashani  
APPROVED: James A. Kashani  
DATE: August 25, 2001

APPROACH DETAILS  
RA-RT-885 SEC. 111B-DP-2  
POPE COUNTY  
STA. 016+03.50

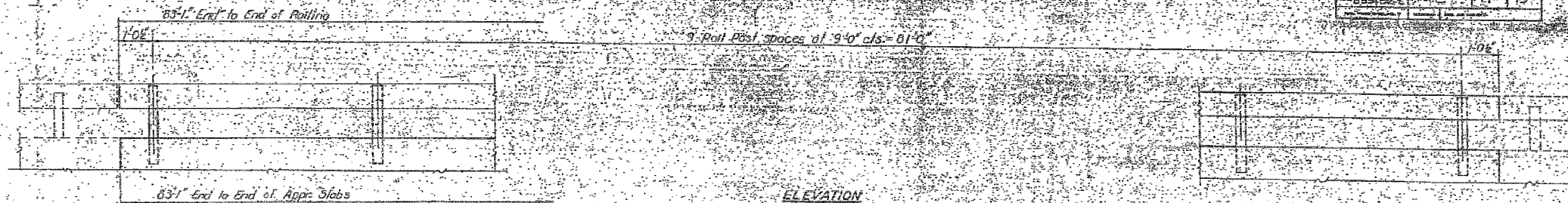


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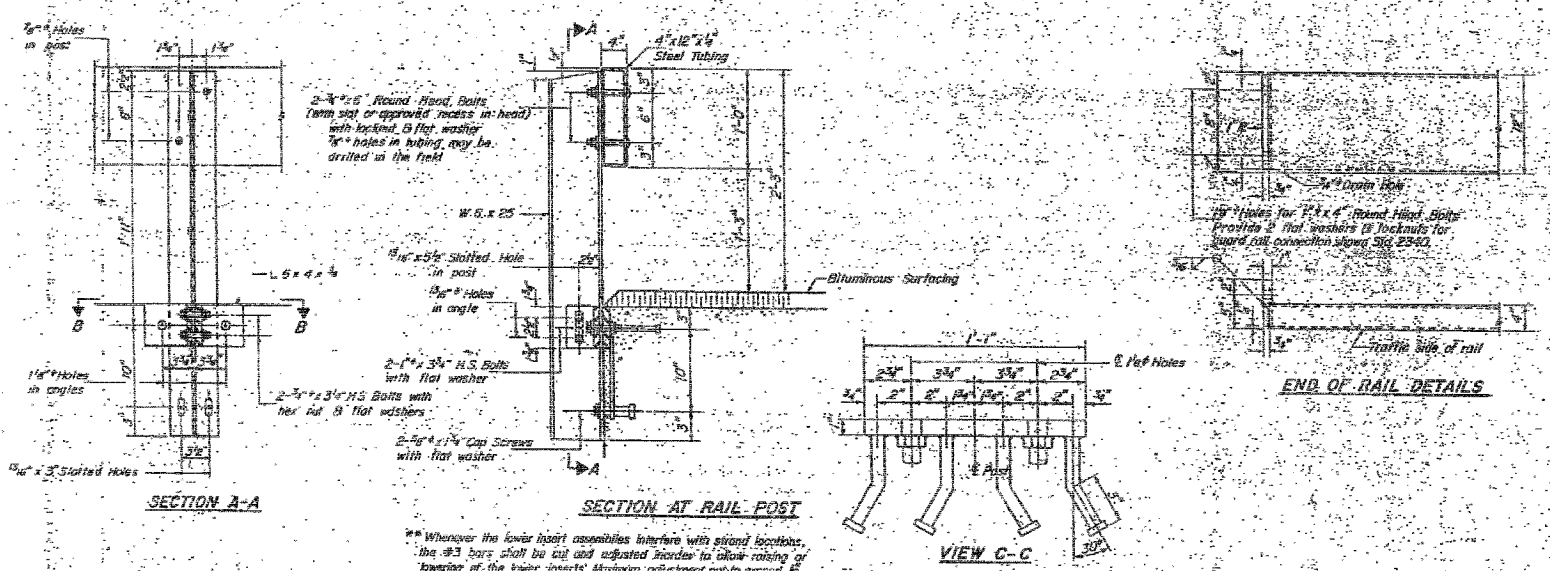
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		DATE - 03/18/08	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Project No.	Sheet No.
885-111BR-2	15
Section	111BR-2
County	POPE
Stationing	Sta. 818+05.50



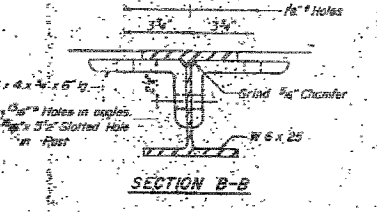
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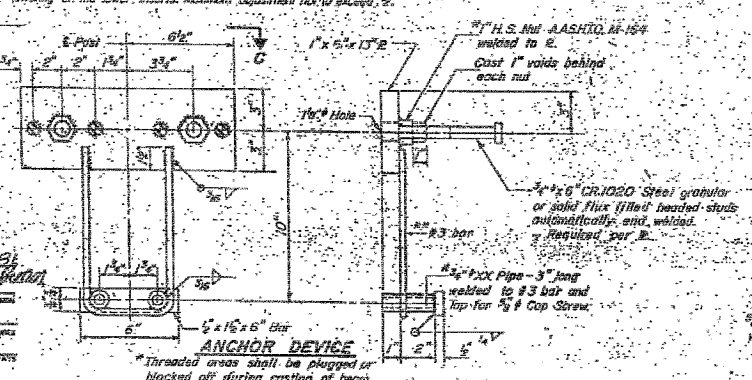
SECTION A-A

SECTION AT RAIL POST

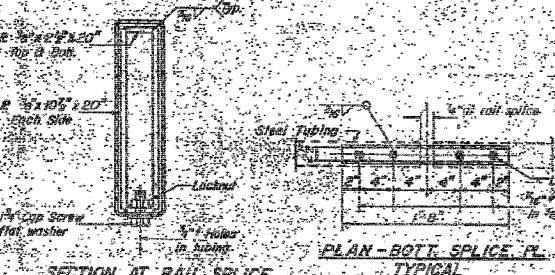
VIEW C-C



SECTION B-B



ANCHOR DEVICE



SECTION AT RAIL SPLICE

PLAN - BOTT. SPLICE PL. TYPICAL

NOTES

- Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing.
- All other steel shapes and plates shall conform to the requirements of AASHTO M-223, 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 which shall conform to AASHTO M-223.
- All bolts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-223.
- All posts, railings, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-365. Galvanizing will not be required.
- Welding shall be in accordance with Section 508 of the Standard Specifications, except as noted, but shall be done for the contract unit price per pound for STEEL RAILING, TYPE S-1.
- All fast slotted holes shall be coated with an approved zinc rich paint before erection.
- The lower portion of the post flange in contact with concrete shall receive two coats of epoxy paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.
- The 1/2" high strength bolts used to connect the 6" x 4" x 1/2" angles to the post shall be tightened in accordance with Article 602.04(1)(3) of the Standard Specifications. The 1/2" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 3/8" cap screws in bottom of posts shall be tightened to snug fit only.

BILL OF MATERIAL

Item	UNIT	Quantity
Steel Railing, Type S-1	Lin. Ft.	165

TYPE S-1  
STEEL RAILING  
I.A. R1-025 SEC. 111B-DR-2  
POPE COUNTY  
STA. 818+05.50

DESIGNED M.K.C. RD. 7X  
CHECKED C.T.G. P.B.  
DRAWN R. Doty  
CHECKED Alie Kushnir, P.E.  
August 25, 1991  
DIRECTOR OF HIGHWAYS

R-236, 2, 35-2C, (10'-5" Maximum Post Spacing)

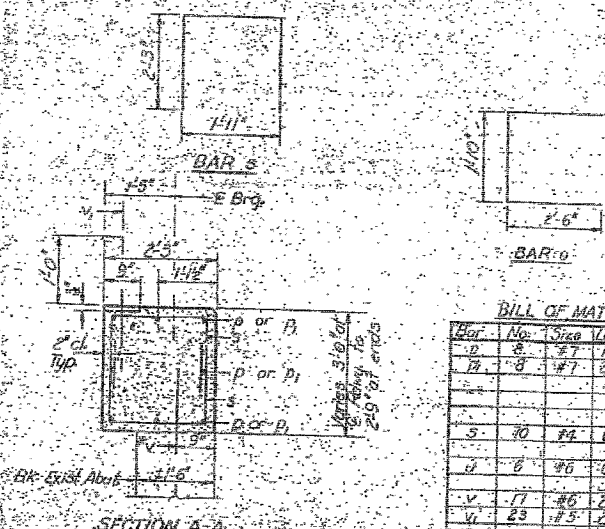
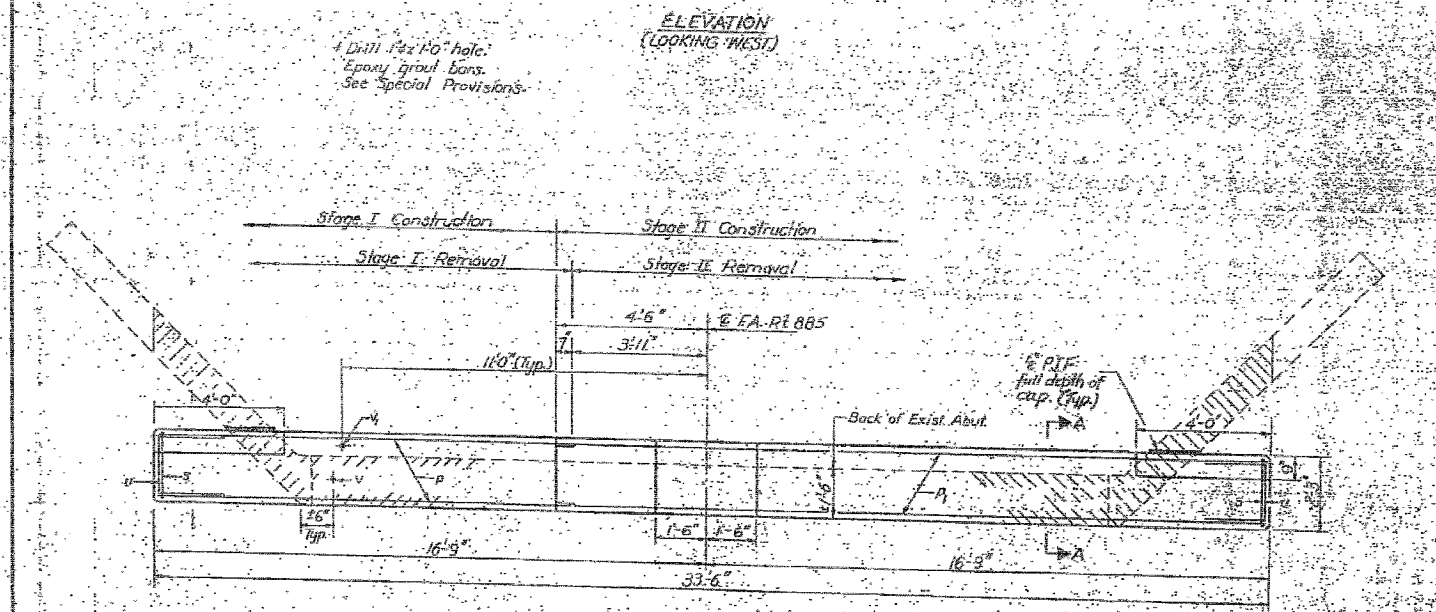
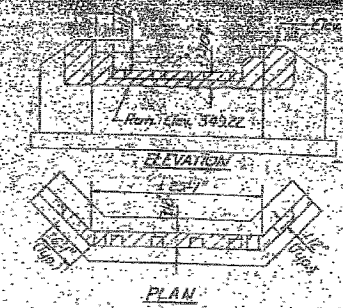
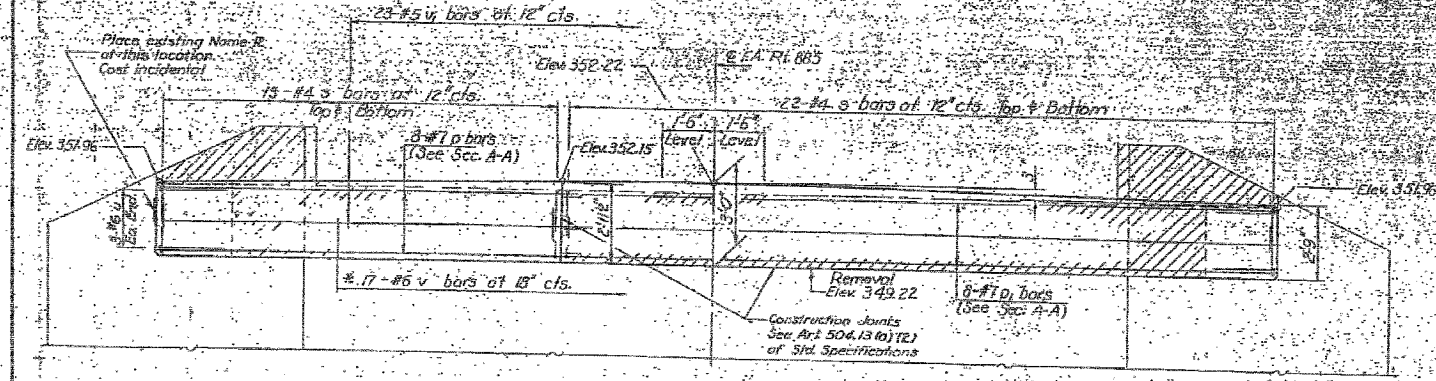


FOR INFORMATION ONLY

FILE NAME =	USER NAME = #USER#	DESIGNED - JHM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS			F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 63
#FILE#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 78033				
	PLOT DATE = #DATE#	CHECKED - JMH	REVISED -		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT							
		DATE - 03/18/08	REVISED -									

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DESIGNED	BY	DATE	PROJECT NO.
CHECKED	BY	DATE	8-88888
DRAWN	BY	DATE	
CHECKED	BY	DATE	



**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
5	#5	125'	
6	#6	210'	
7	#7	61.5'	U
8	#8	640'	U
10	#10	21.5'	
11	#11	21.5'	
13	#13	21.5'	

Class II Concrete Cu. Yds. 810  
Reinforcement Bars Lbs. 1040  
Concrete Removal Cu. Yds. 6

DESIGNED *M.C. R.D. A.R.*  
CHECKED *C.T.C. R.B.*  
DRAWN *R. Dakl*  
CHECKED *Alm K. J. R. R.B.*

EXAMINED *August 25 1981*  
PASSED *[Signature]*  
APPROVED *[Signature]*

**NOTE**  
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.  
Space chamfers 1/4\"/>

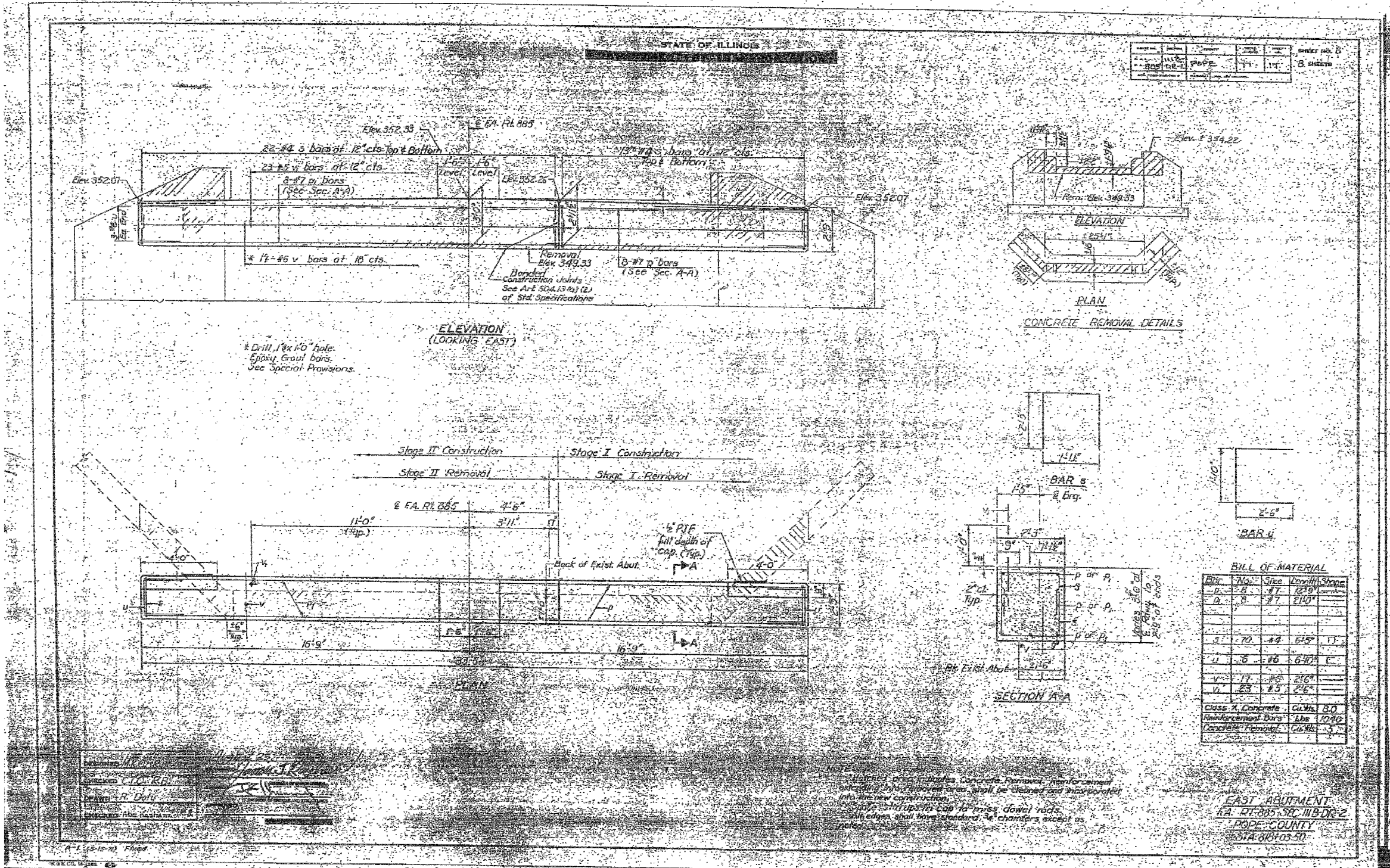
**WEST ABUTMENT**  
P.A. RT. 885 SEC. 111B-DP-2  
POPE COUNTY  
STA. 01803.50



FOR INFORMATION ONLY

FILE NAME =	USER NAME = #USER#	DESIGNED - JHM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS	F.A.P. RTE. 885	SECTION 111B-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 64		
#FILEL#	DRAWN - AEC	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 78033				
PLOT SCALE = #SCALE#	CHECKED - JMH	REVISED -	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT									
PLOT DATE = #DATE#	DATE - 03/18/08	REVISED -										





NO.	DATE	BY	CHKD.	APP'D.
1	11/14/08	JHM	JHM	JHM
2	03/18/08	JHM	JHM	JHM

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
B	8	#7	1219"	
B	8	#7	2140"	
S	70	#4	655"	1"
U	8	#8	6-10"	C
V	17	#6	2168"	
U	23	#5	216"	
Class A Concrete		Cu.Wt.	3.0	
Reinforcement Bars		Lbs	1090	
Concrete Removal		Cu.Wt.	3.7	

**EAST ABUTMENT**  
 EA RT 885 SEC 111B-DI-2  
 POPE COUNTY  
 STA 814+03.50



FOR INFORMATION ONLY

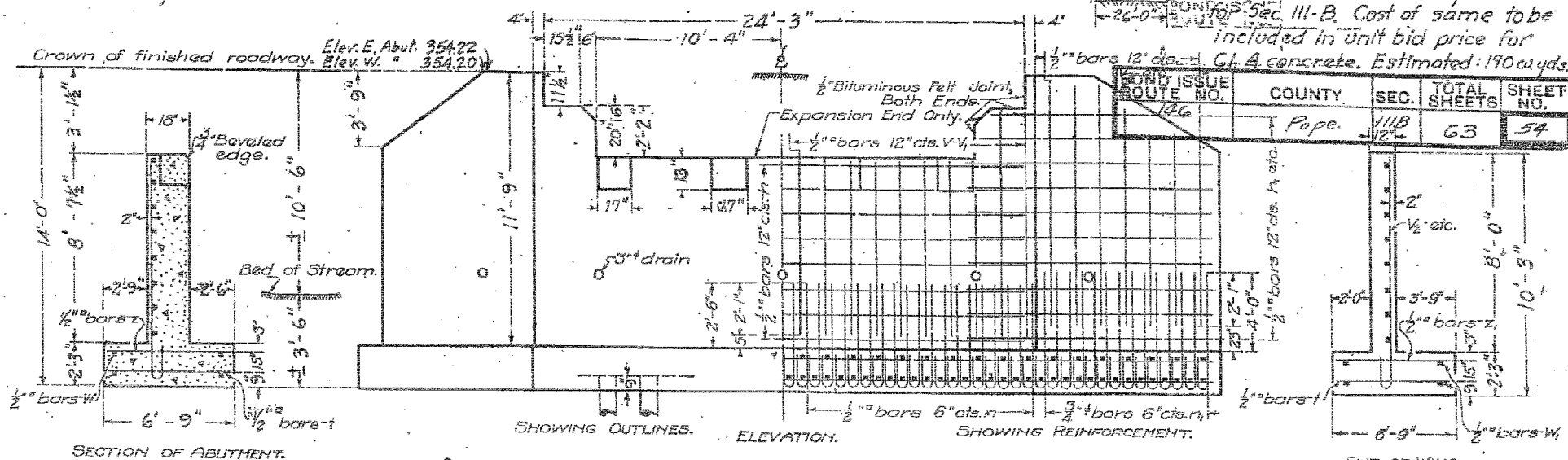
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#FILEL#	PLDT SCALE = #SCALE#	DRAWN - AEC	REVISED -			885	111BR-2	POPE	69	65	
PLDT DATE = #DATE#	DATE - 03/18/08	CHECKED - JMH	REVISED -			CONTRACT NO. 78033					
						FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

B.M. 2 spikes in 18" willow 60 ft.  
 ft. of & sta. 817+75.  
 Elevation 349.42.  
 No Existing Structure

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
 DIVISION OF HIGHWAYS  
 R. C. ABUTMENTS FOR DECK GIRDER BRIDGE  
 HEIGHT OVER ALL 14 FEET

Sheet No. 3  
 3 Sheets:

Note: Channel excavation within  
 ROW limits to be done by contractor  
 top Sec. III-B. Cost of same to be  
 included in unit bid price for  
 Cl. A concrete. Estimated: 190 cu. yds.



BOND ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.
146	Pope	111B	63	54

Class A concrete shall  
 be used throughout.  
 Proportions: 1:2:4.  
 All reinforcing steel  
 shall be securely wired in  
 place before concrete is  
 poured.

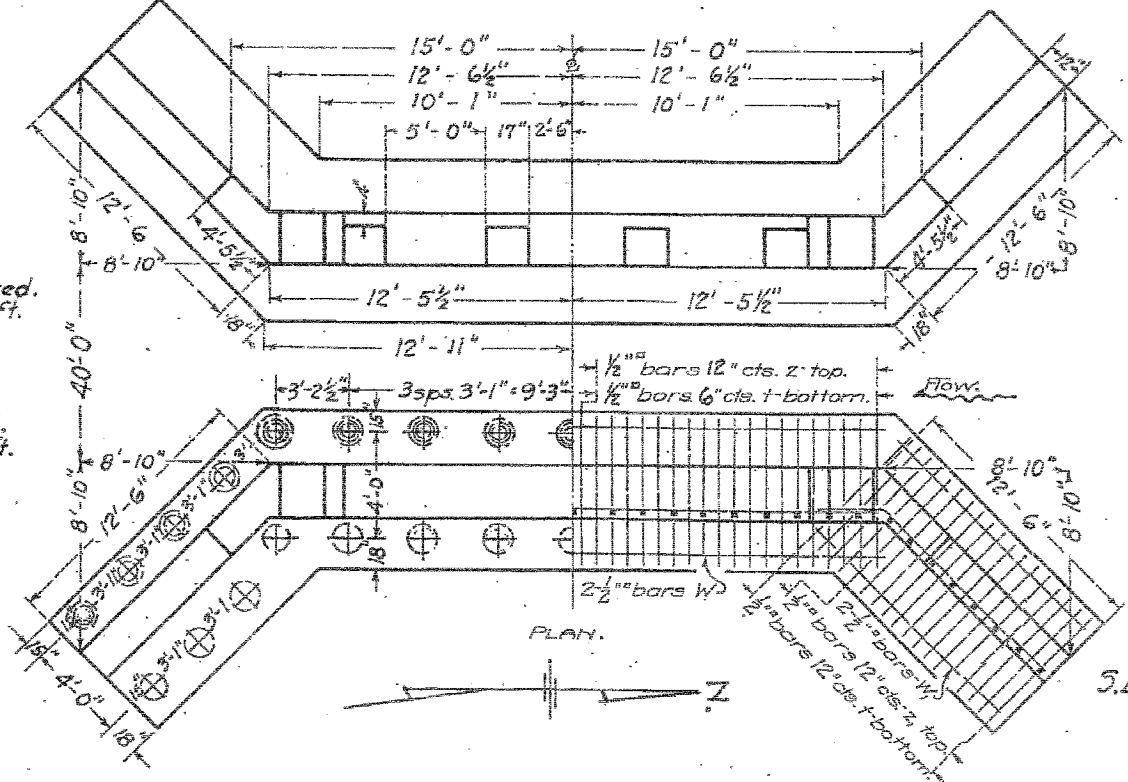
⊕ 10 Ton untr. pile. 10 inch  
 butt 8 inch tip 30 required.  
 Estimated length 450 lin. ft.

⊕ 12 Ton untr. pile. 12 inch  
 butt 10 inch tip. 16 required.  
 Estimate length 320 lin. ft.

⊕ 15 Ton untr. pile. 12 inch  
 butt 10 inch tip. 18 required.  
 Estimated length 360 lin. ft.

COMPUTED	- C. C. Wood
CHECKED	- <i>[Signature]</i>
DRAWN	- <i>[Signature]</i>
CHECKED	- C. C. W.
SPECIAL	ASSEMBLED - P. Michener
CHECKED	- E. L. Styles

EXAMINED Feb. 14 1928  
*[Signature]*  
 PASSED *[Signature]*  
 APPROVED *[Signature]*



BILL OF MATERIAL.

Bars	No.	Size	Length
V	42	1/2"	8'-0"
V1	8	"	9'-6"
V2	24	"	9'-6"
V3	12	"	8'-6"
V4	12	"	6'-6"
h	18	1/2"	25'-0"
h1	36	"	14'-6"
h2	8	"	10'-0"
n	100	1/2"	4'-6"
n1	96	3/4"	7'-0"
r	104	"	6'-6"
r1	56	1/2"	6'-6"
r2	50	1/2"	6'-6"
r3	44	1/2"	6'-6"
w	8	1/2"	25'-6"
w1	16	"	13'-6"

10 Ton Untr. Pile Untr. 450  
 12 Ton Untr. Pile Lin. ft. 320  
 Reinforcing Steel - Lbs. 4140  
 Concrete - Cu. Yds. 97.5  
 15 Ton Untr. Pile Lin. ft. 360

ROOT LICK BRANCH  
 3.B.I. ROUTE 146-SEC. III-B  
 POPE COUNTY  
 STA. 817+98.

1149



FOR INFORMATION ONLY

FILE NAME =	USER NAME = #USER#	DESIGNED - JHM	REVISED -	STATE OF ILLINOIS	EXISTING STRUCTURE PLANS	F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 66
#FILE#	PLOT SCALE = #SCALE#	DRAWN - AEC	REVISED -	DEPARTMENT OF TRANSPORTATION	SCALE: SHEET NO. OF SHEETS STA. TO STA.	885	111BR-2	POPE	69	66
	PLOT DATE = #DATE#	CHECKED - JHM	REVISED -						CONTRACT NO. 78033	
		DATE - 03/18/08	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

DATE	BY
DATE	BY

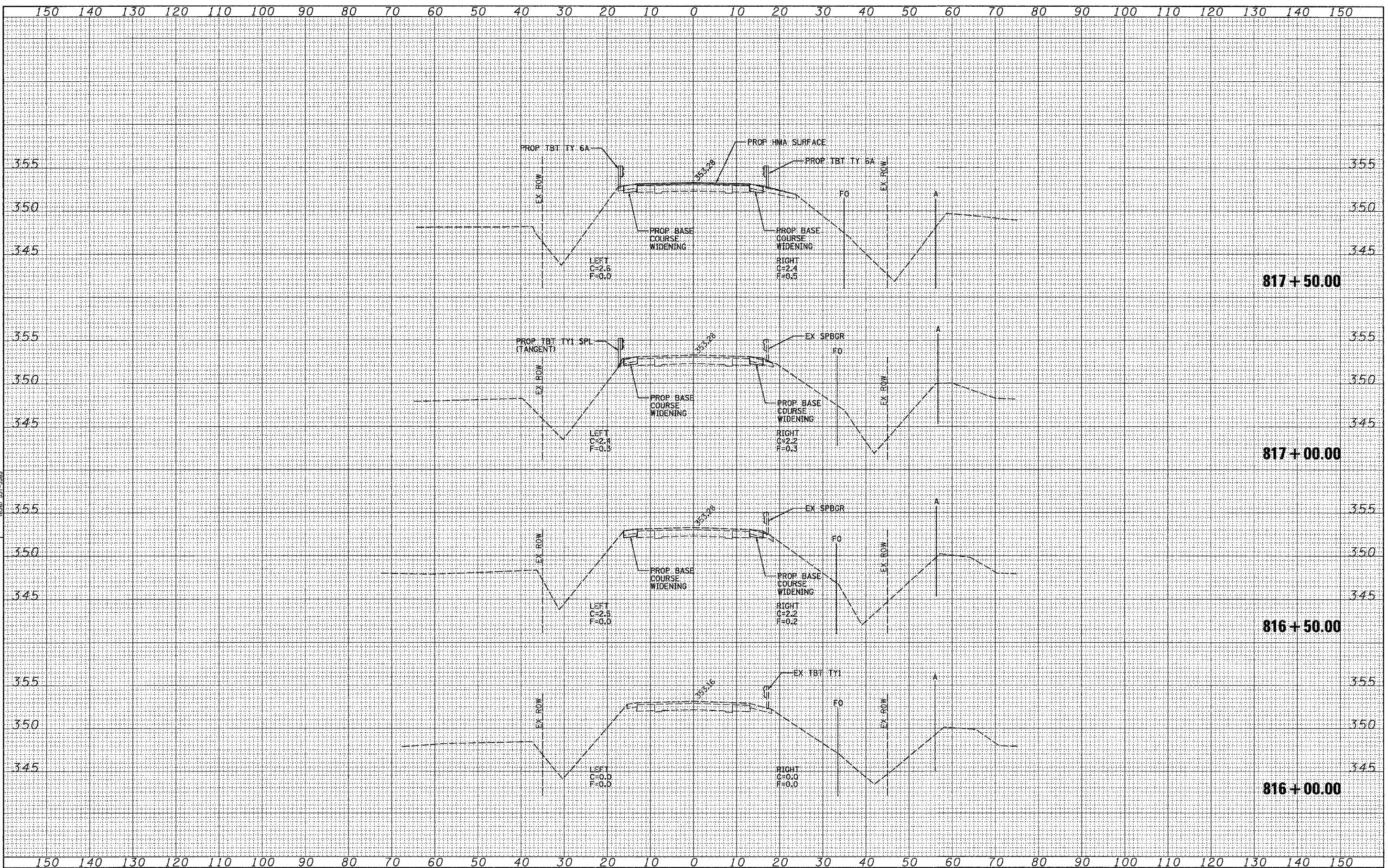
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

EDSI  
ENGINEERING DESIGN SOURCE, INC.  
16141 SHINGLEY RIDGE RD  
SUITE 300  
GARDEN GROVE, IL 60137  
(630) 537-5585

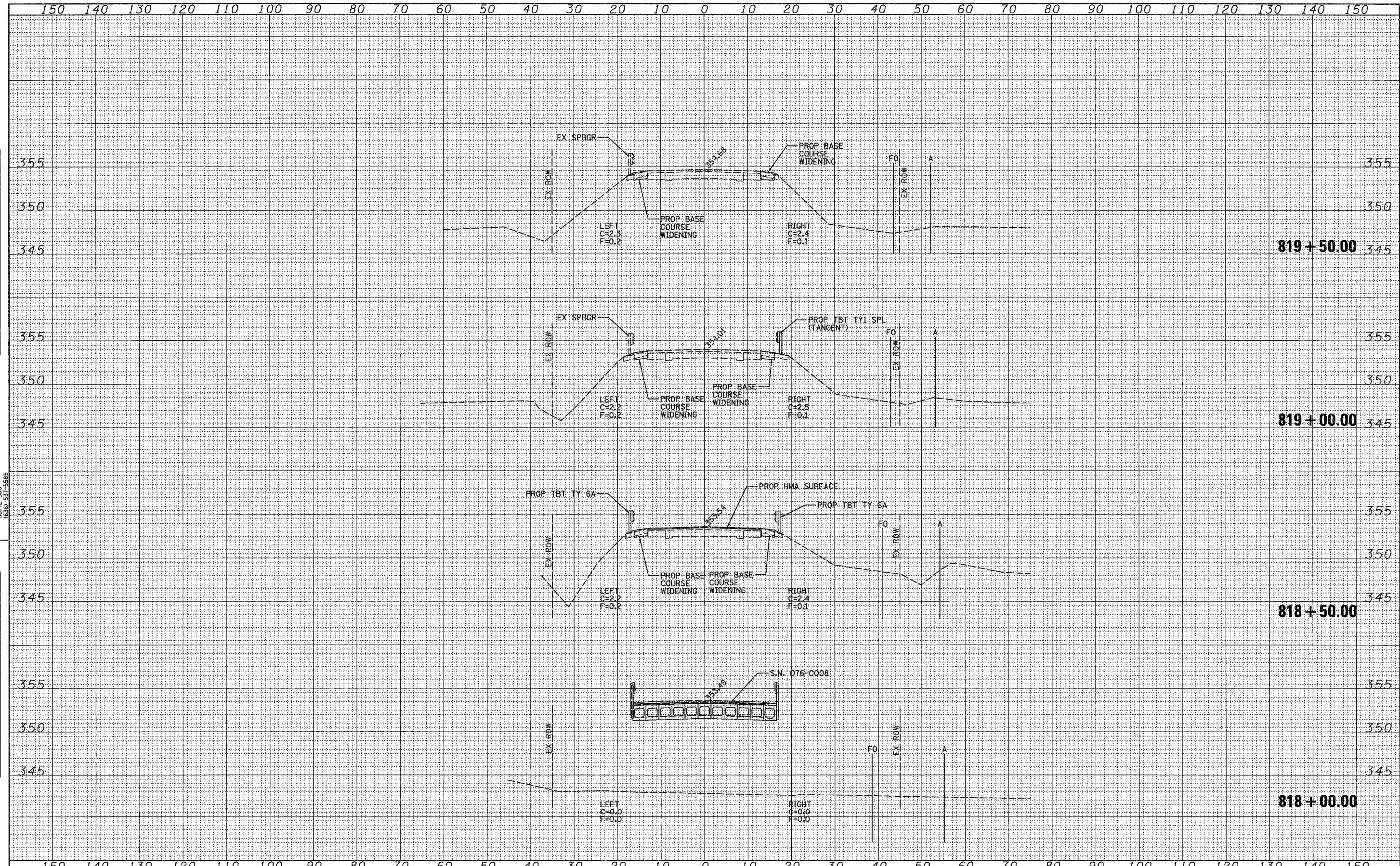


FILE NAME =	USER NAME = #USER#	DESIGNED - JAH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAP ROUTE 885 (IL 146) CROSS SECTIONS	F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 67		
#FILES*	PLOT SCALE = #SCALE*	DRAWN - GDO	REVISED -			SCALE: 1"=10'	SHEET NO. 1 OF 3 SHEETS	STA. 816+00.00 TO STA. 817+50.00	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			
	PLOT DATE = #DATE*	CHECKED - JAH	REVISED -			CONTRACT NO. 78033						
		DATE -	REVISED -									

DATE	BY

EDSI  
 ENGINEERING DESIGN SOURCE, INC.  
 1641 SWINLEY RIDGE RD  
 CHESTER, MD 21531  
 (410) 337-5885

DATE	BY

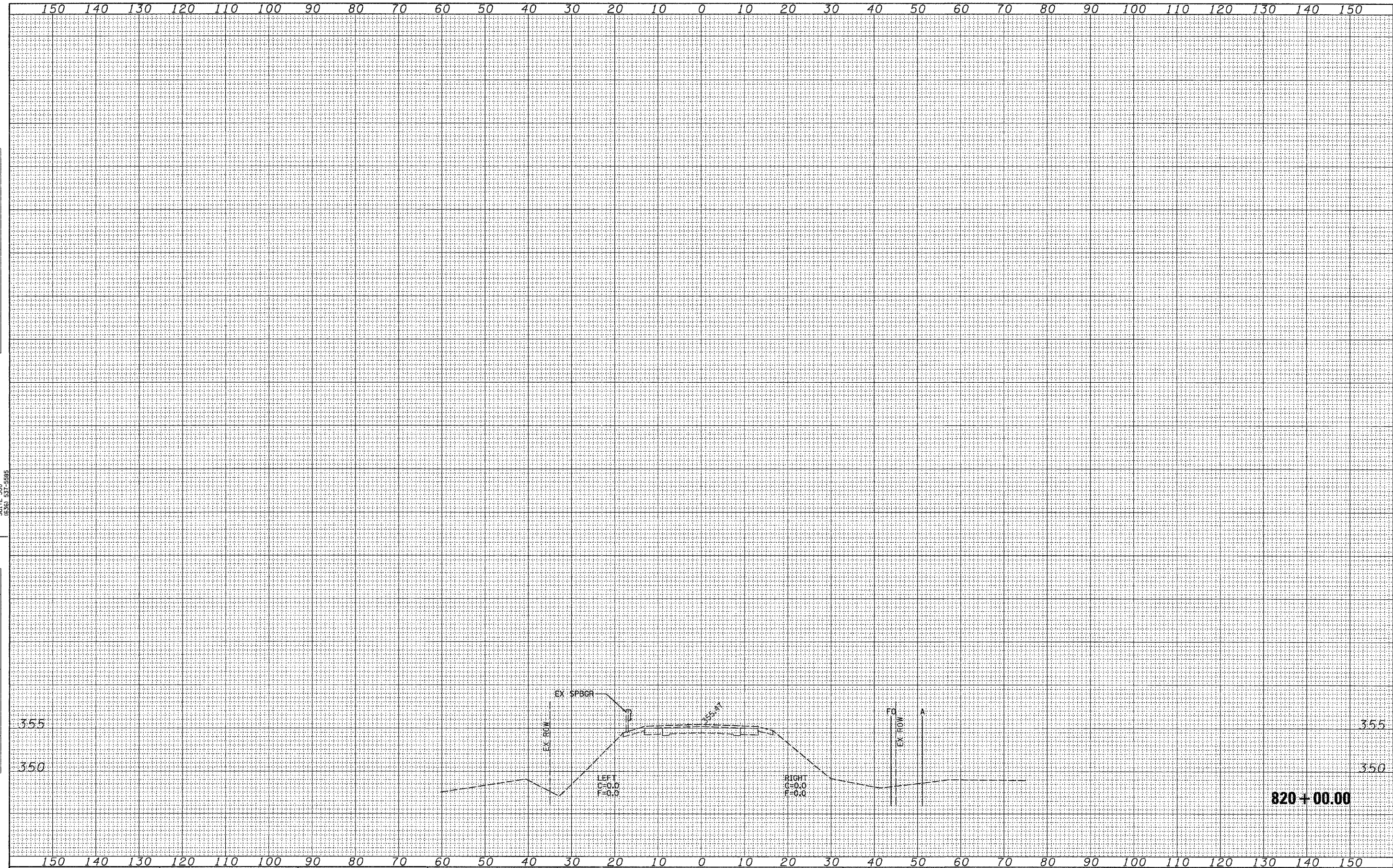


FILE NAME =	USER NAME = #USER*	DESIGNED - JAH	REVISED -	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>FAP ROUTE 885 (IL 146) CROSS SECTIONS</b>	F.A.P. RTE. 885	SECTION 111BR-2	COUNTY POPE	TOTAL SHEETS 69	SHEET NO. 68	
#FILES*	PLOT SCALE = #SCALE*	DRAWN - GDO	REVISED -			SCALE: 1"=10'	SHEET NO. 2 OF 3 SHEETS	STA. 818+00.00 TO STA. 819+50.00	CONTRACT NO. 78033		
	PLOT DATE = #DATE*	CHECKED - JAH	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					
		DATE -	REVISED -								

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

**EDSI**  
**ENGINEERING DESIGN SOURCE, INC.**  
 1614 SWINGLEY RIDGE RD  
 CHESTERFIELD, MO. 63017  
 (636) 537-5685

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME =  
 #FILES\*

USER NAME = #USER\*  
 PLLOT SCALE = #SCALE\*  
 PLLOT DATE = #DATE\*

DESIGNED - JAH  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 885 (IL 146) CROSS SECTIONS**

SCALE: 1"=10'  
 SHEET NO. 3 OF 3 SHEETS  
 STA. 820+00.00 TO STA. 820+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	111BR-2	POPE	69	69
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			CONTRACT NO. 78033	