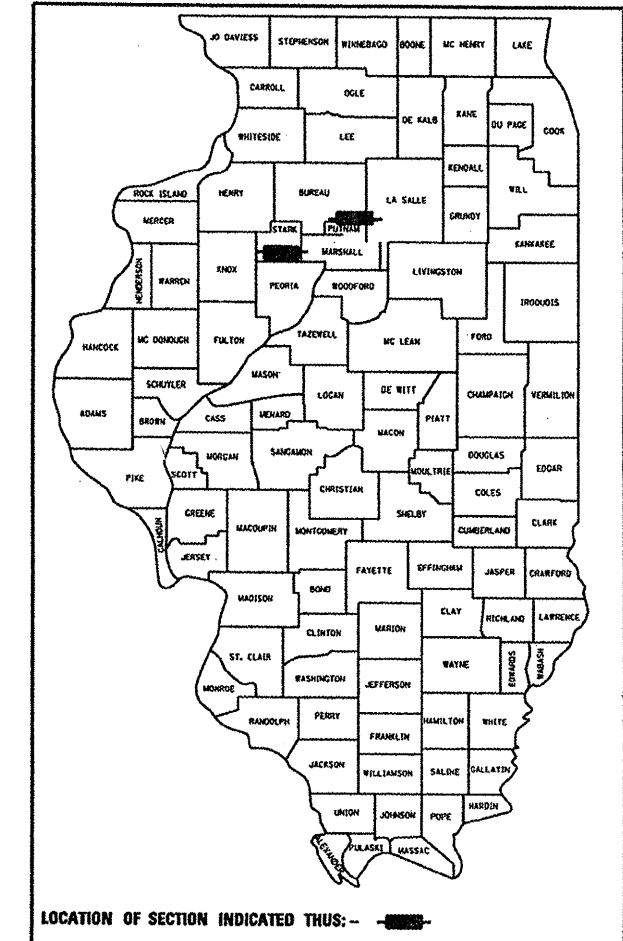


68783

F.A.P.	619	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P.	643				
IL	71	.	..	18	1
IL	17				

• (120-BR) I-1 & (11-B) I
 •• PUTNAM & STARK

D-94-021-08



LOCATION OF SECTION INDICATED THIS: - - - - -

DESCRIPTION:
 EMERGENCY BRIDGE BEAM REPLACEMENT (4 BEAMS)
 ON STRUCTURE (078-0032), CARRYING IL 71 OVER COFFEE CREEK,
 0.6 MILES EAST OF IL 26 IN PUTNAM COUNTY
 ALSO EMERGENCY BRIDGE BEAM REPAIR (BRACING 12 BEAMS)
 ON STRUCTURE (088-0002), CARRYING IL 17 OVER SPOON RIVER,
 0.6 MILES WEST OF WYOMING IN STARK COUNTY.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PROPOSED
 HIGHWAY PLANS**
 FAP ROUTE 619 (IL 71) & FAP ROUTE 643 (IL17)
 SECTION (120-BR) I-1 & (11-B) I
 PUTNAM & STARK COUNTY
 EMERGENCY BRIDGE BEAM REPLACEMENT
 C-94-022-08

INDEX OF SHEETS

- 1 COVER SHEET
- 2 COMMITMENTS & GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 -5 TYPICAL SECTIONS
- 6 SCHEDULE OF QUANTITIES
- 7 TRAFFIC STAGING PLAN
- 8 STAGE REMOVAL & CONSTRUCTION
- 9 PLAN & ELEVATION
- 10-18 REPAIR DETAILS

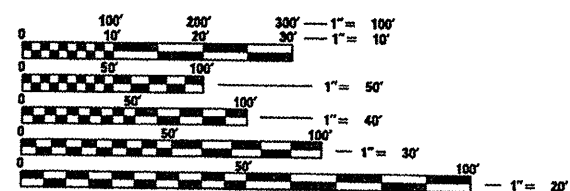
LIST OF STANDARDS

000001 -05 635011 -01 701301 -02 701326 -02
 001001 -01 701006 -02 701321 -09
 280001 -04 701011 -01 701901
 635006 -02 701201 -02 704001 -04

DESIGN DESIGNATION

IL 71
 ADT = 3,350 (2007)
 MU = 300
 SU = 175

IL 17
 ADT = 2,550 (2007)
 MU = 60
 SU = 125

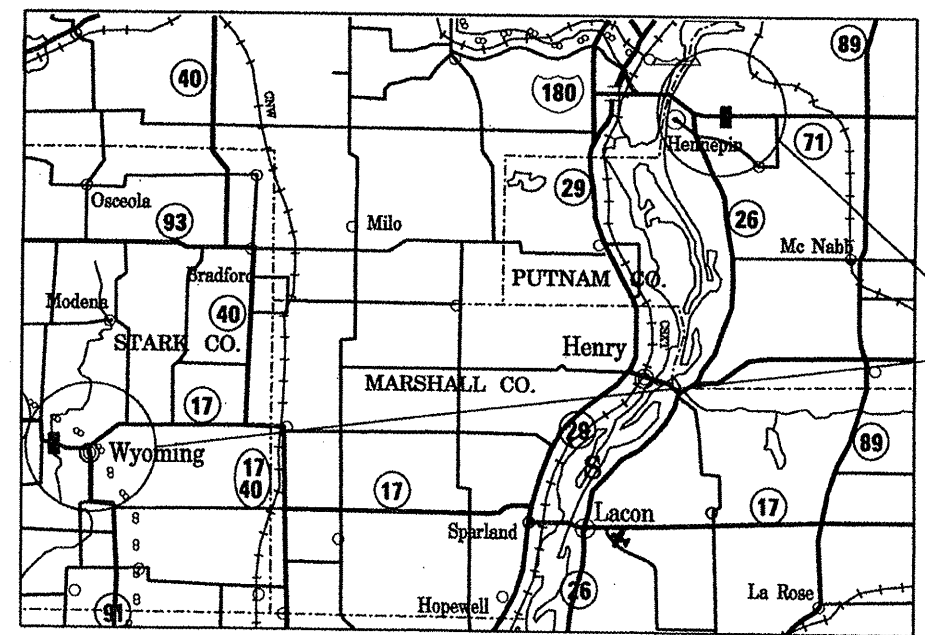


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER : RICHARD DOTSON
 SQUAD LEADER : NICHOLAS JACK
 PROJECT DESIGNER : GEORGE RAMIA

CONTRACT NO. 68783
 CATALOG NO. 033715-00D



GROSS LENGTH OF PROJECT : 1,150 FT (0.218 MILES)
 NET LENGTH OF PROJECT : 1,150 FT (0.218 MILES)

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED *FLO 3 20 08*

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 9, 20 08

Eric E. Haron
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 20 08
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS

COMMITMENTS

COMMITMENT ARE NOT
TO BE ALTERED WITHOUT
THE WRITTEN APPROVAL
OF ALL PARTIES TO WHICH
THE COMMITMENT WAS MADE

NO COMMITMENTS HAVE
BEEN MADE FOR THIS PROJECT

ENGINEERS FIELD OFFICE

Add the following sentence to the end of paragraph 670.02 (f) and 670.04 (e):
All of the telephone lines provided shall have unpublished numbers.

BITUMINOUS CONCRETE MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this Project: Contract 68783
IL 71 Coffee Creek In Putnam County and IL17 over Spoon River in Stark County

Mixture Use(s):	Sand Mix/Leveling Binder	Surface
AC/PG:	SBS or SBR PB 70-22	64-22
RAP % (Max)**:	0%	15%
Design Air Voids:	2.5% @ N=50	4.0% @ N=50
Mixture Composition: (Gradation Mixture)	IL 4.75	IL 9.5 or 12.5
Friction Aggregate:	N/A	Mix D

** If RAP option is selected, the asphalt cement grade may need to be adjusted; this will be determined by the Materials Engineer.

Notes:

Individual lift thickness of each mix typewill be no less than 3 X nominal maximum aggregate size and no more than 6 X nominal maximum aggregate size.

The asphalt sand seal protection layer specified in Section 581 of the Standard Specifications shall be omitted, replaced and paid for as Leveling Binder (Hand Method), N50.

GENERAL NOTES

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

ENVIRONMENTAL REVIEWS

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

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

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

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Environmental Survey Request)
- * A location map showing the size limits and location of the use area
- * Signed property owner agreement form-D4 P10100
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form-D4 P10101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

• (120-BR)I-1 & (11-B)I
• • PUTNAM & STARK

FILE NAME * #FILEL#	USER NAME * #USER#	DESIGNED - - - -	REVISED - - - -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMITMENT & GENERAL NOTES	F.A.P 619	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - - - -	REVISED - - - -			IL 71				
		CHECKED - - - -	REVISED - - - -			F.A.P 643				
		DATE - - - - -	REVISED - - - -			IL 17				
				SCALE: _____	SHEET NO. 2 OF _____ SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. - US 24	CONTRACT NO. 68783		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	STATE SAFETY-2A			
		UNIT	TOTAL	S.N.078-0032 PUTNAM CO.	S.N.088-0008 STARK CO.
20200500	EARTH EXCAVATION (WIDENING)	CU YD	280	280	
25100630	EROSION CONTROL BLANKET	SQ YD	2000	1000	1000
35501320	HOT-MIX ASPHALT BASE COURSE, 9"	SQ YD	1,120	1,120	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	18	18	
40600525	LEVELING BINDER (HAND METHOD), N50	TON	6	6	
40603335	HOT-MIX ASPHALT SURFACE COURSE MIX "D", N 50	TON	14	14	
50300300	PROTECTIVE COAT	SQ YD	64	64	
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	17	17	
50102400	CONCRETE REMOVAL	CU YD	18.7	18.7	
50300255	CONCRETE SUPERSTRUCTURES	CU YD	18.7	18.7	
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	874	874	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	69,470		69,470
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,540	2,540	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	87	87	
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	367	367	
67000400	ENGINEER'S FIELD OFFICE TYPE A	CAL MO	2	2	
67100100	MOBILIZATION	L SUM	1	0.50	0.50
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1		1

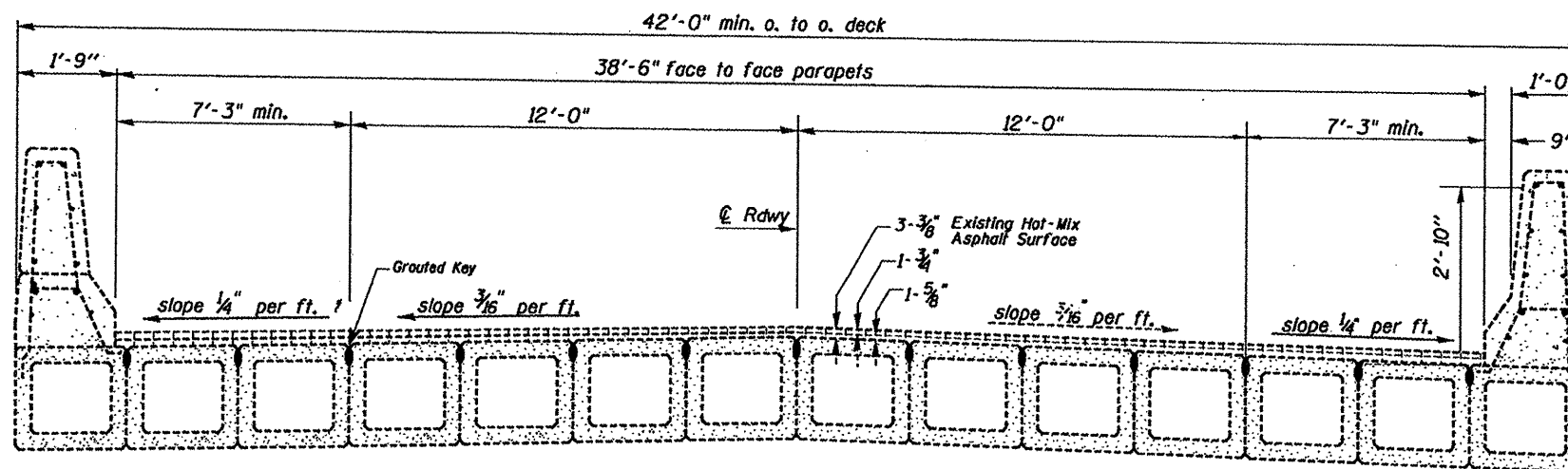
CODE NO.	ITEM	STATE SAFETY-2A			
		UNIT	TOTAL	S.N.078-0032 PUTNAM CO.	S.N.088-0008 STARK CO.
70100550	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	800	800	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	270	270	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	387.5	387.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	387.5	387.5	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,000	1,000	
78200530	BARRIER WALL MARKERS, TYPE C	EACH	4	4	
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	880	880	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	14	14	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	4	4	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

* SPECIALTY ITEM

• (120-BR)I-1 & (11-B)I
•• PUTNAM & STARK

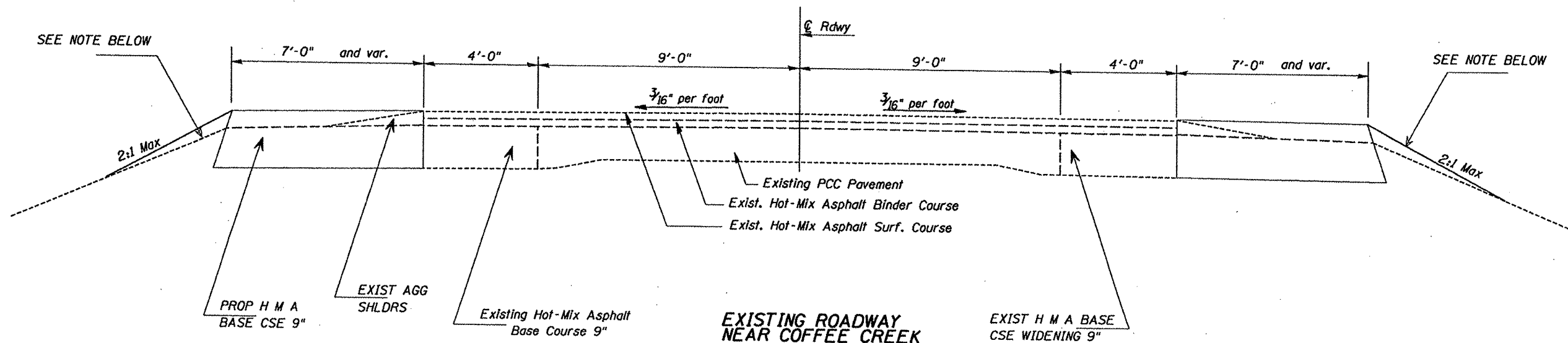
FILE NAME *	USER NAME * #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P 619 IL 71	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN -	REVISED -			F.A.P 643 IL 17			18	3
		CHECKED -	REVISED -						CONTRACT NO. 68783	
		DATE -	REVISED -			SCALE: _____ SHEET NO. 3 OF _____ SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ US 24 FED. AID PROJECT		

TYPICAL SECTIONS



EXISTING BRIDGE DECK
FROM STA 217+41 TO STA 218+13

S N 076-0032 OVER
COFFEE CREEK



EXISTING ROADWAY
NEAR COFFEE CREEK

FROM STA 213+41 TO STA 222+13

NOTE:
THE COST OF THE SMALL QUANTITIES OF EARTH WORK NEEDED FOR GRADING & SHIPING
THE SIDE SLOPE SHALL BE INCLUDED IN THE PRICE OF HOT MIX ASPHALT BASE COURSE 9"

• (120-BR)I-1 & (11-B)I
•• PUTNAM & STARK

FILE NAME *	USER NAME = #USER*	DESIGNED -	REVISED -
*FILE#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE*	CHECKED -	REVISED -
	PLOT DATE = #DATE*	DATE -	REVISED -

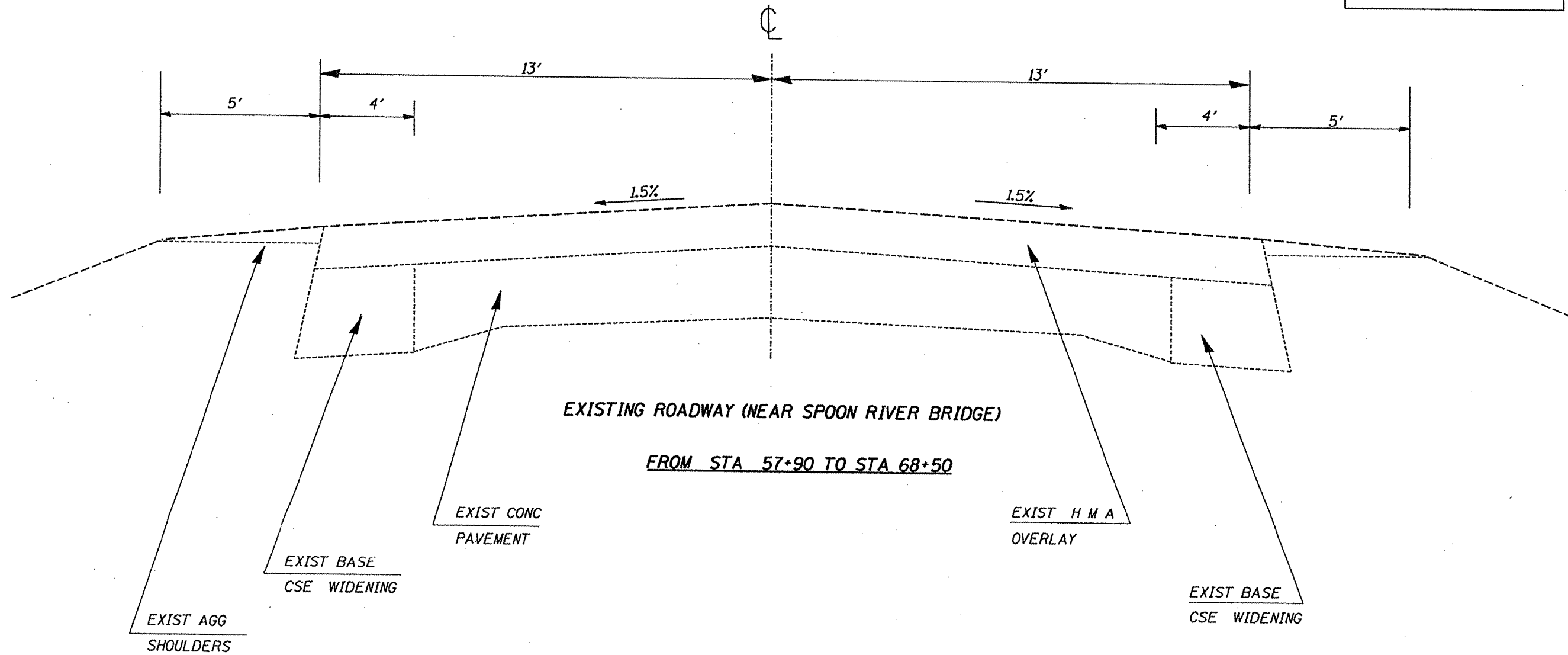
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES	
SCALE: _____	SHEET NO. 4 OF _____ SHEETS
STA. _____ TO STA. _____	

F.A.P 619	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 71			18	4
F.A.P 643				
IL 17				
FED. ROAD DIST. NO. _____	US 24	FED. AID PROJECT	CONTRACT NO. 68783	

TYPICAL SECTIONS

IL 17 @ SPOON RIVER



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION

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

• (120-BR)-1 & (11-B)I
• PUTNAM & STARK

F.A.P IL 619 71	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P IL 643 17			18	5
CONTRACT NO. 68783			FED. ROAD DIST. NO. - US 24 FED. AID PROJECT	

IL 71 OVER
COFFEE CREEK
PUTNAM COUNTY
S.N 078-0032

SCHEDULE OF QUANTITIES

LOCATIONS STA. TO STA.	EARTH EXCAV WIDENING	HOT MIX ASPHALT BASE COURSE 9"	TRAFFIC CONTROL & PROTECTION STANDARD 701326	TRAFFIC CONTROL SURVEILLANCE
	CU YD	SQ YD	L. SUM	CAL DA
213+41 - 222+13	280	1120	1	5
TOTAL	280	1120	1	5

LOCATIONS STA. TO STA.	SHORT - TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING LINE 4"
	FOOT	SQ FT	FOOT
217+41 - 218+13	800	270	1,000
TOTAL	800	270	1,000

LOCATIONS STA. TO STA.	BIT MAT (PRIME COAT)	LEVELING BINDER (HAND METHOD), N50	HMA SURF CSE MIX "D" N50	HMA SURF REM
	GALLON	TON	TON	SQ YD
217+41 - 218+13	18	6	14	17
TOTAL	18	6	14	17

LOCATIONS STA. TO STA.	ENGINEER FIELD OFFICE TYPE A	MOBILIZATION	T C & PROT STANDARD 701321	TEMPORARY BRIDGE TRAFFIC SIGNAL
	CAL. MO.	L SUM	EACH	EACH
217+41 - 218+13	2	0.50	1	1
TOTAL	2	0.50	1	1

LOCATIONS STA. TO STA.	P P CONC DECK BEAM (33' DEPTH)	REM OF EXIST P P CONC DECK BEAMS	* EROSION CONTROL BLANKET
	SQ FT	SQ FT	SQ YD
217+41 - 218+13	874	880	1,000
TOTAL	874	880	1,000

LOCATIONS STA. TO STA.	TEMPORARY CONCRETE BARRIER	RELOCATE TEMP CONC BARRIER	BARRIER WALL REFLECTOR, TYPE C
	FOOT	FOOT	EACH
215+89 - 219+65	387.5	387.5	4
TOTAL	387.5	387.5	4

LOCATIONS STA. TO STA.	WATERPROOFING MEMBRANE SYSTEM	P C MORTAR FAIRING COURSE	PROTECTIVE COAT
	SQ YD	FOOT	SQ YD
217+41 - 218+13	87	367	64
TOTAL	87	367	64

LOCATIONS STA. TO STA.	CONCRETE REMOVAL	CONCRETE SUPERSTRUCTURE	REINFORCEMENT BAR, EPOXY COATED	ASBESTOS PADS BEARING REMOVAL
	CU YD	CU YD	POUND	EACH
217+41 - 218+13	18.7	18.7	2,990	4
TOTAL	18.7	18.7	2,990	4

LOCATIONS STA. TO STA.	IMPACT ATT TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATT RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	CHANGEABLE MESSAGE SIGN
	EACH	EACH	CAL DAY
215+89 - 219+65	2	2	14
TOTAL	2	2	14

IL 17 OVER
SPOON RIVER
STARK COUNTY
S.N 088-0002

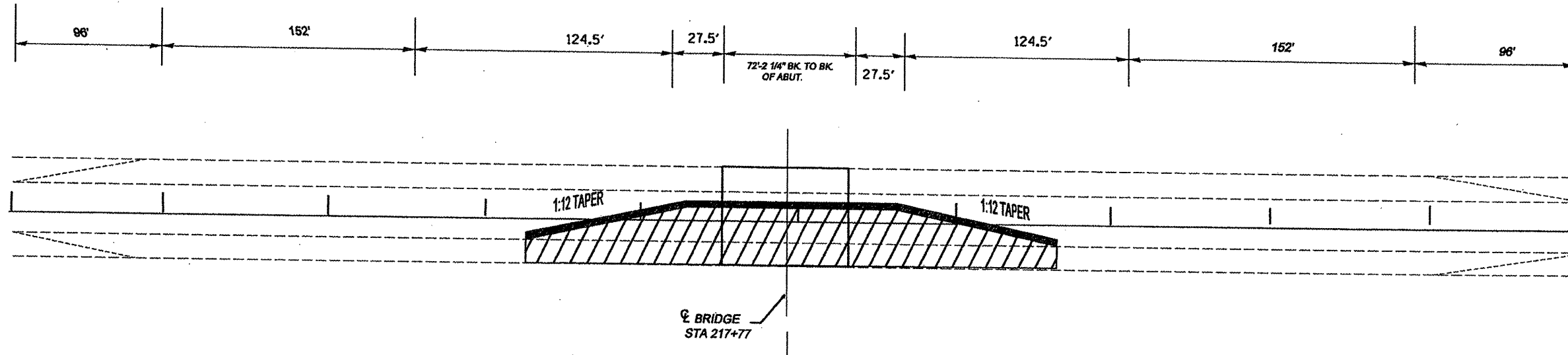
LOCATIONS STA. TO STA.	TRAFFIC CONTROL AND PROTECTION STANDARD 701201	* EROSION CONTROL BLANKET	FURNISHING AND ERECTING STRUCTURAL STEEL	MOBILIZATION
	L. SUM	SQ YD	POUND	L. SUM
61+91.56 - 64+51.56	1	1,000	205,510	0.50
TOTAL	1	1,000	205,510	0.50

* SEEDING OF MINOR AREAS SHALL BE INCLUDED IN THE COST OF EROSION CONTROL BLANKET

• (120-BR)-1 & (11-B)I
•• PUTNAM & STARK



FILE NAME *	USER NAME * #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES	F.A.P 619	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN -	REVISED -			IL 71			18	6
		CHECKED -	REVISED -			F.A.P 643				
		DATE -	REVISED -			IL 17				CONTRACT NO. 68783
						SCALE: _____	SHEET NO. 5 OF _____ SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. - US 24	FED. AID PROJECT

STAGING PLANS



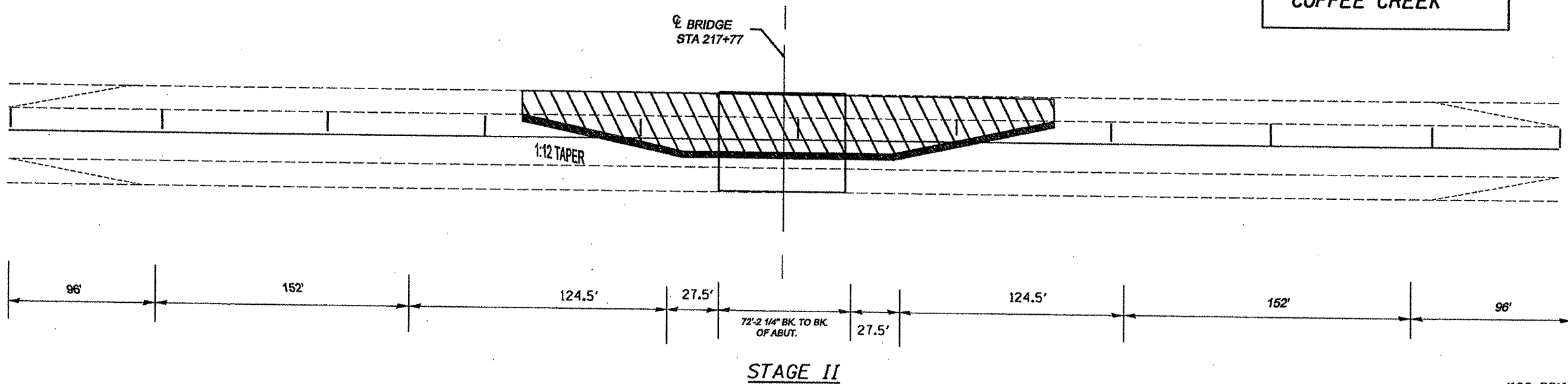
NOTE:
 A total of Five (5) W12-1103 signs, as described in the Special Provisions, will be required for this project. Three (3) signs shall be placed at the intersection of IL 71 and IL 89, one (1) sign shall be placed at the intersection of IL 71 and I-180 and one (1) sign shall be placed at the intersection of IL 71 and IL 26. These signs shall be located at the direction of the Engineer. The costs shall be included with the cost of the TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

STAGE I

- LEGEND**
-  Work Area
 -  Temporary Concrete Barrier

NOT TO SCALE

S N 076-0032 OVER
 COFFEE CREEK



STAGE II

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

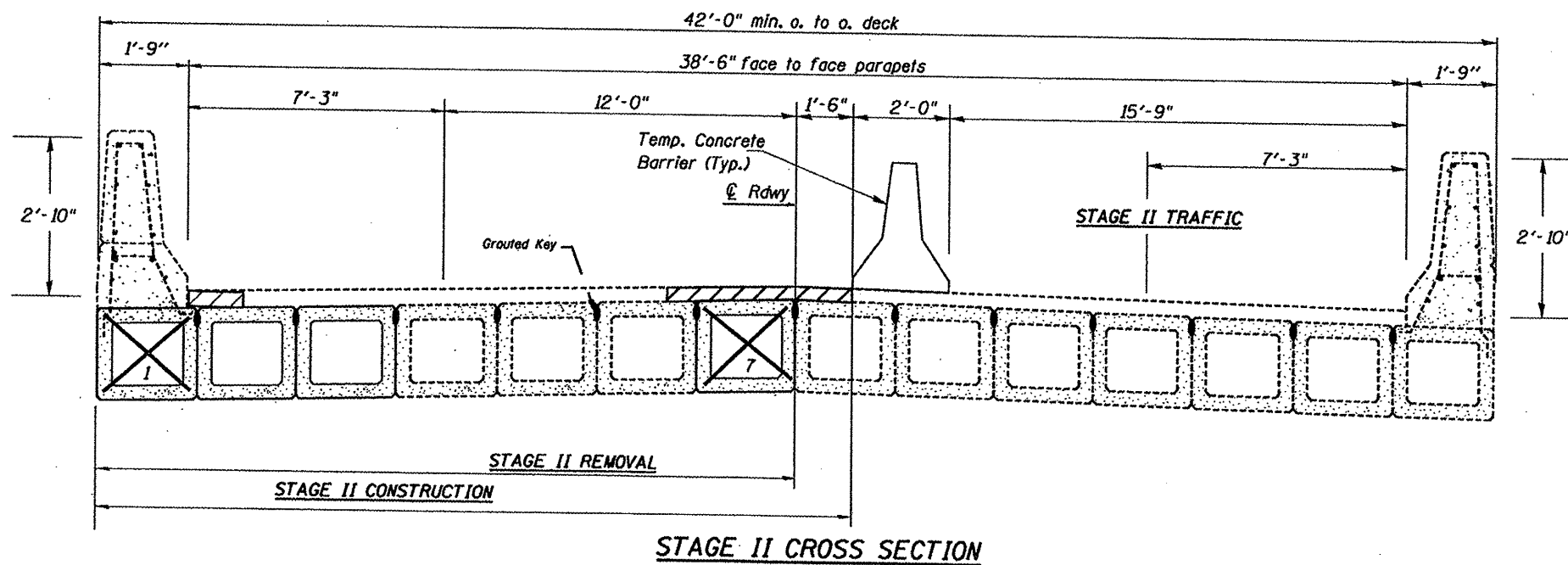
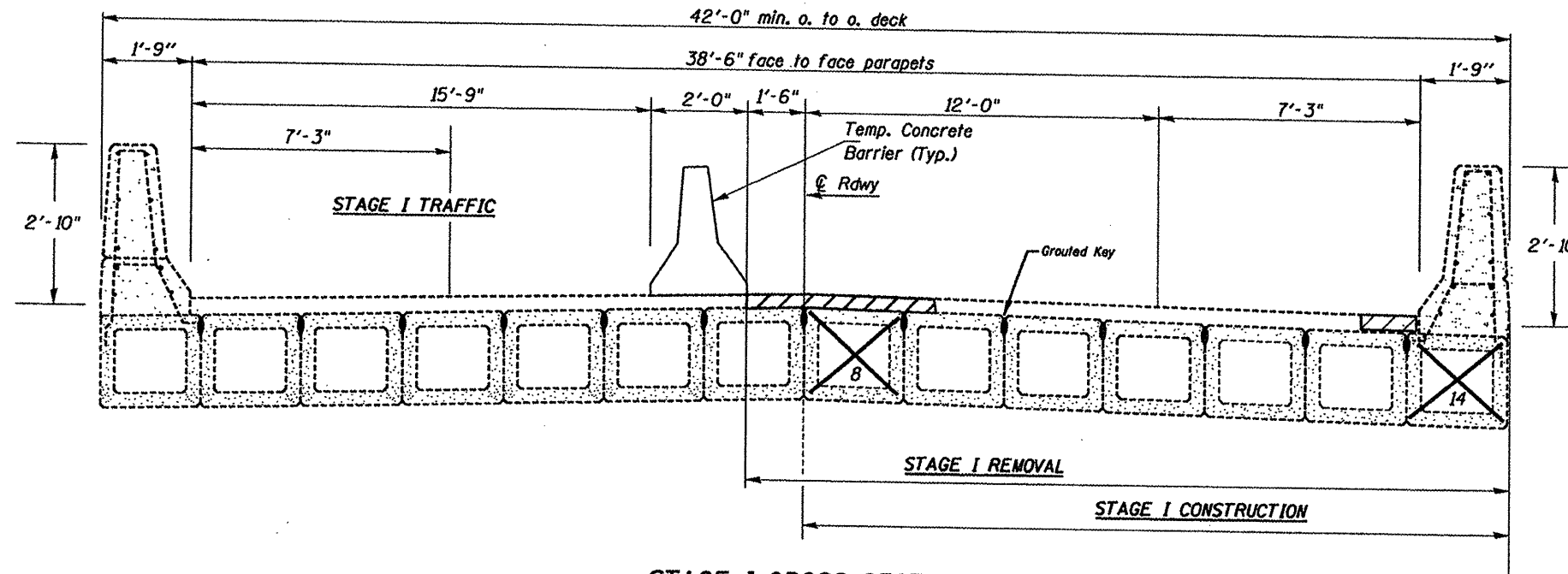
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STAGING PLANS
 SCALE: SHEET NO. 6 OF SHEETS STA. TO STA.

F.A.P. 619	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 71			13	7
F.A.P. 643				
IL 17				
CONTRACT NO. 68783			FED. ROAD DIST. NO. - US 24 FED. AID PROJECT	

(120-BR)I-1 & (11-B)I
 PUTNAM & STARK

STAGE REMOVAL AND CONSTRUCTION



S N 076-0032 OVER
COFFEE CREEK

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILEL#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE REMOVAL & CONSTRUCTION
SCALE: SHEET NO. 7 OF SHEETS STA. TO STA.

F.A.P 619 IL 71	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P 643 IL 17			18	8
CONTRACT NO. 68783			FED. ROAD DIST. NO. US 24 FED. AID PROJECT	

• (120-BR)I-1 & (11-B)I
• PUTNAM & STARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
FAP 619	*	PUTNAM	18	9	6 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract Number: 68783
* (120-BR)I-1 & (11-B)I

GENERAL NOTES

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

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new or existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

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.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

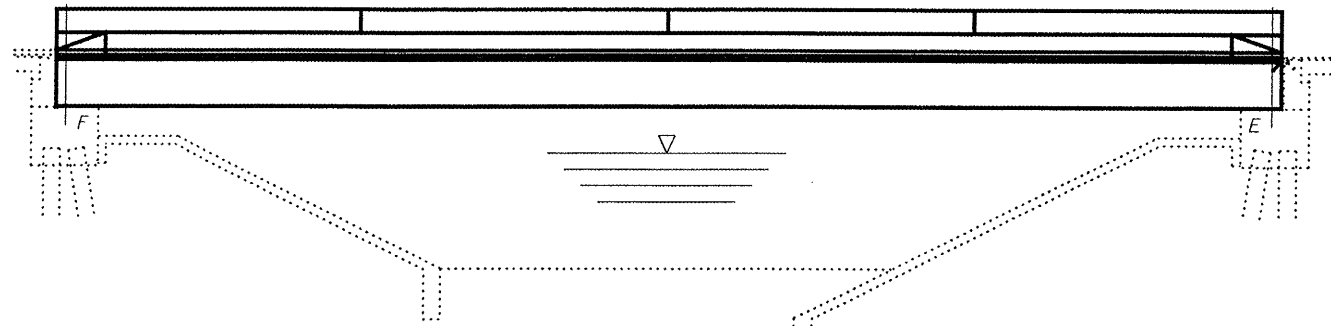
Temporary concrete barrier shall only be anchored into the overlay and not into the PPC deck beams.

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

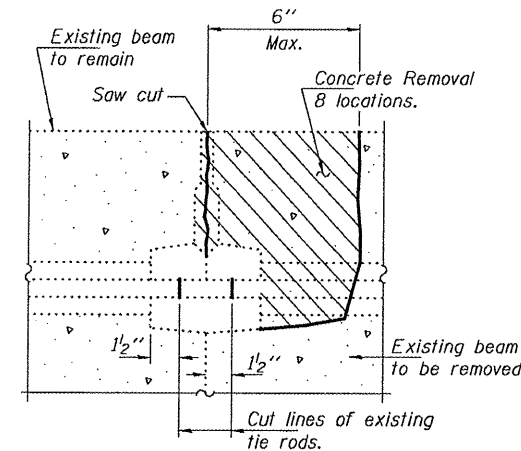
Any damage done to the bridge during beam removal shall be repaired by the contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Precast Prestressed Concrete Deck Beams (33" Depth)

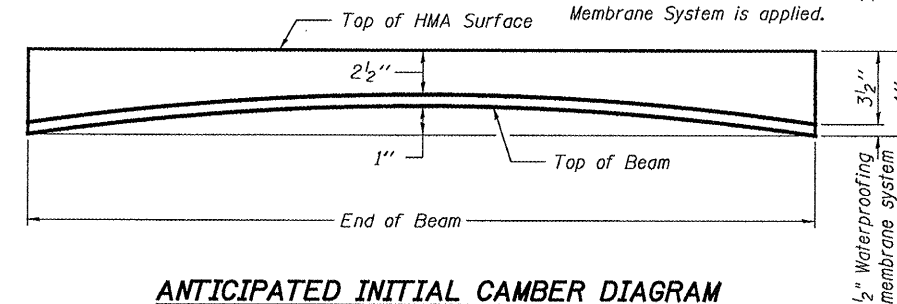
Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.



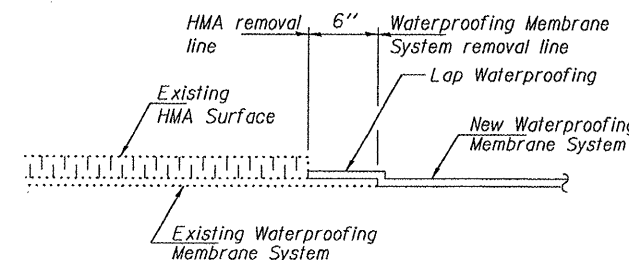
ELEVATION



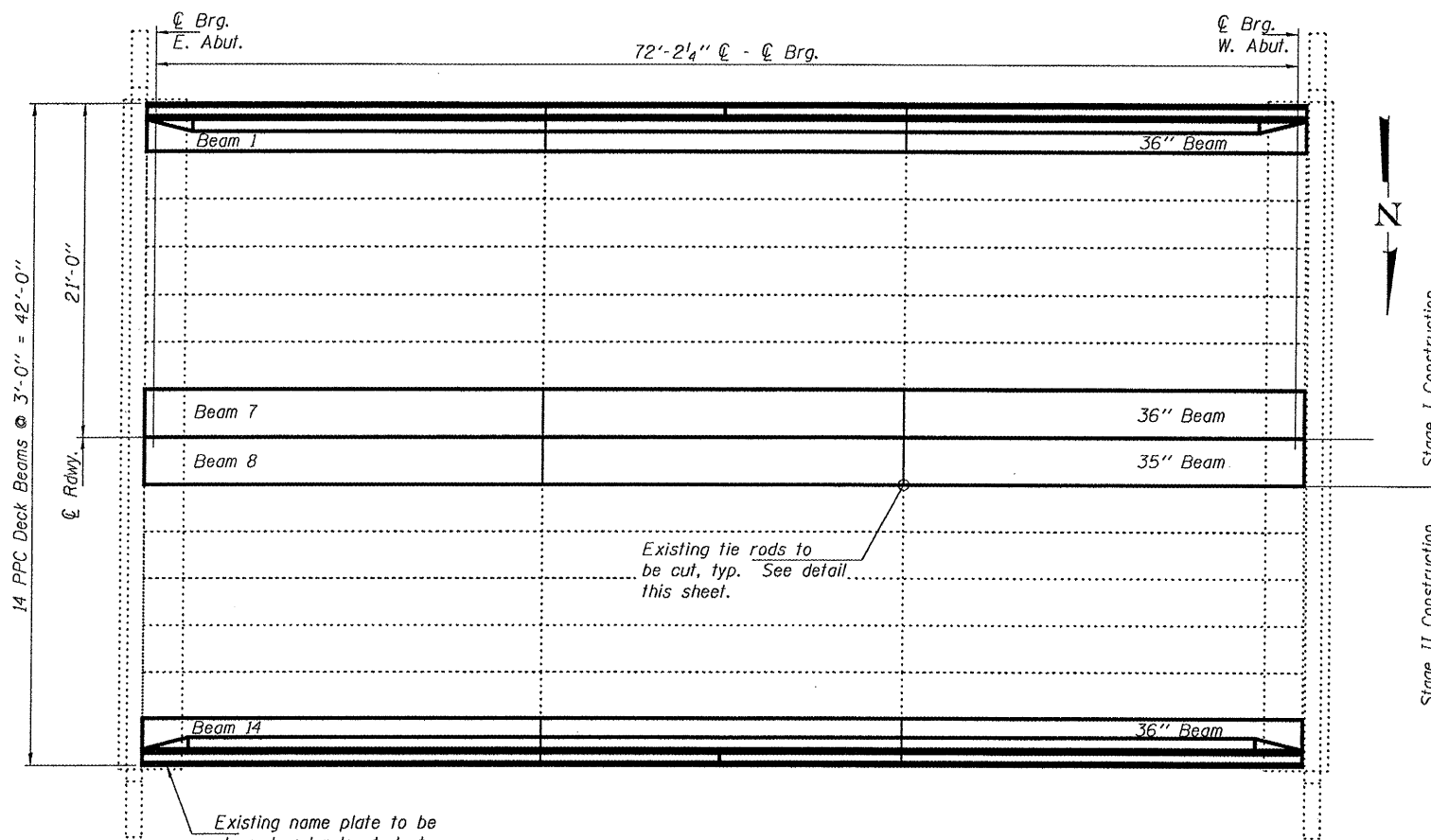
BEAM REMOVAL DETAIL AT TRANSVERSE TIES



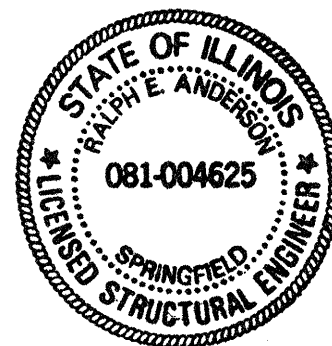
ANTICIPATED INITIAL CAMBER DIAGRAM



WATERPROOFING TREATMENT



PLAN



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
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)
 $f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	880
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	874
HMA Surface Removal	Sq. Yd.	17.2
HMA Surface Course Mix "D" N50	Tons	16.9
PC Mortar Fairing Course	Foot	367
Asbestos Bearing Pad Removal	Each	4
Waterproofing Membrane System	Sq. Yd.	86.8
Concrete Removal	Cu. Yd.	18.7
Concrete Superstructure	Cu. Yd.	18.7
Reinforcement Bars, Epoxy Coated	Pound	2540
Protective Coat	Sq. Yd.	63.8

PLAN AND ELEVATION
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

DESIGNED	Adrian T. Hall
CHECKED	[Signature]
DRAWN	Steffen
CHECKED	AH ASD

EXAMINED	May 12, 2008
PASSED	[Signature]

Expires: November 30, 2008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	*	PUTNAM	18	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2

6 SHEETS

Contract Number: 68783
*(120-BR)I-1 & (11-B)I

BAR LIST
ONE 35" BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	66	#4	2'-6"	—
B(E)	12	#5	25'-10"	—
B ₁ (E)	9	#4	25'-6"	—
B ₂ (E)	4	#5	14'-9"	—
S(E)	102	#4	7'-4"	U
S ₁ (E)	12	#4	6'-2"	U
S ₂ (E)	90	#4	6'-5"	U
U(E)	8	#6	5'-0"	C
U ₁ (E)	6	#4	5'-0"	C

Bars indicated thus 4 x 3-#5 etc. indicates 4 line of bars with 3 lengths per line.

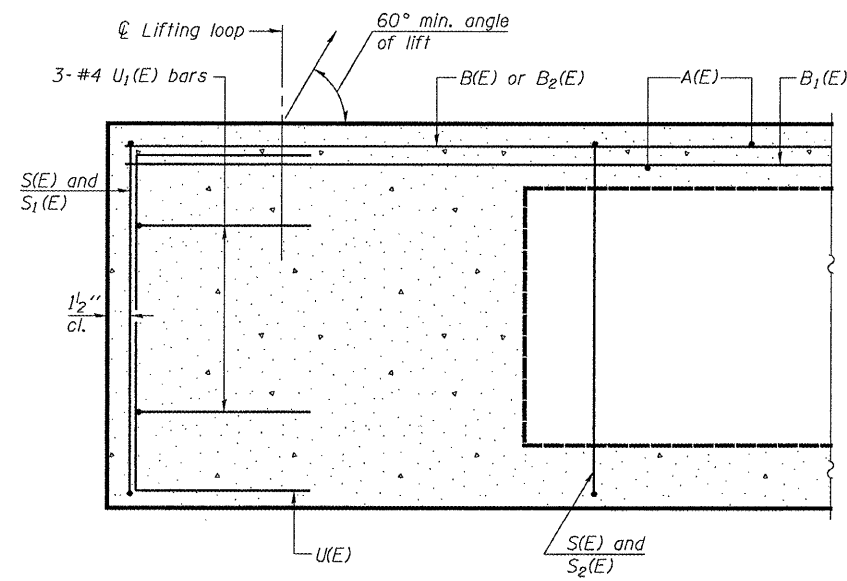
Note: See sheet 3 of 6 for additional details and Bill of Material.

BAR LIST
ONE 36" BEAM ONLY
(For information only)

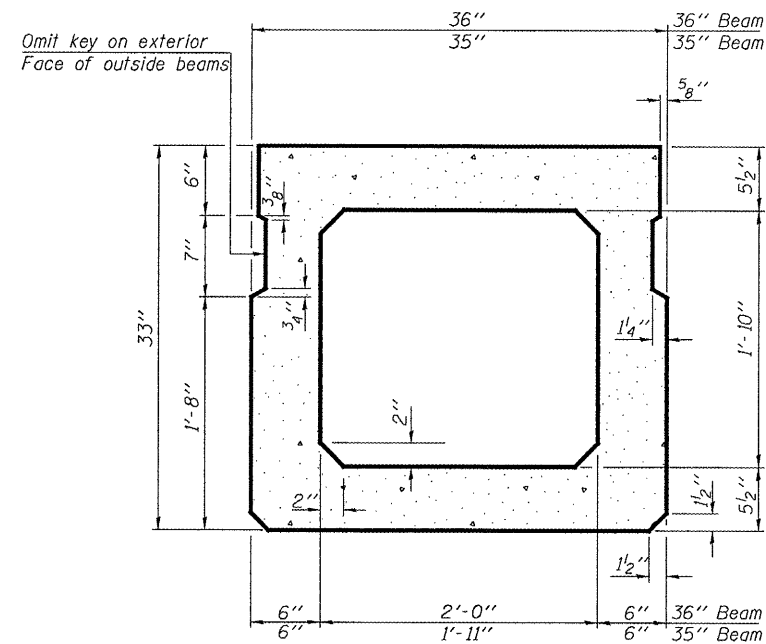
Bar	No.	Size	Length	Shape
A(E)	66	#4	2'-7"	—
B(E)	12	#5	25'-10"	—
B ₁ (E)	9	#4	25'-6"	—
B ₂ (E)	4	#5	14'-9"	—
*D(E)	68	#5	3'-1"	U
*D ₁ (E)	74	#5	4'-0"	U
*D ₂ (E)	6	#5	2'-10"	U
S(E)	102	#4	7'-5"	U
S ₁ (E)	12	#4	6'-3"	U
S ₂ (E)	90	#4	6'-6"	U
U(E)	8	#6	5'-0"	C
U ₁ (E)	6	#4	5'-0"	C

Bars indicated thus 4 x 3-#5 etc. indicates 4 line of bars with 3 lengths per line.

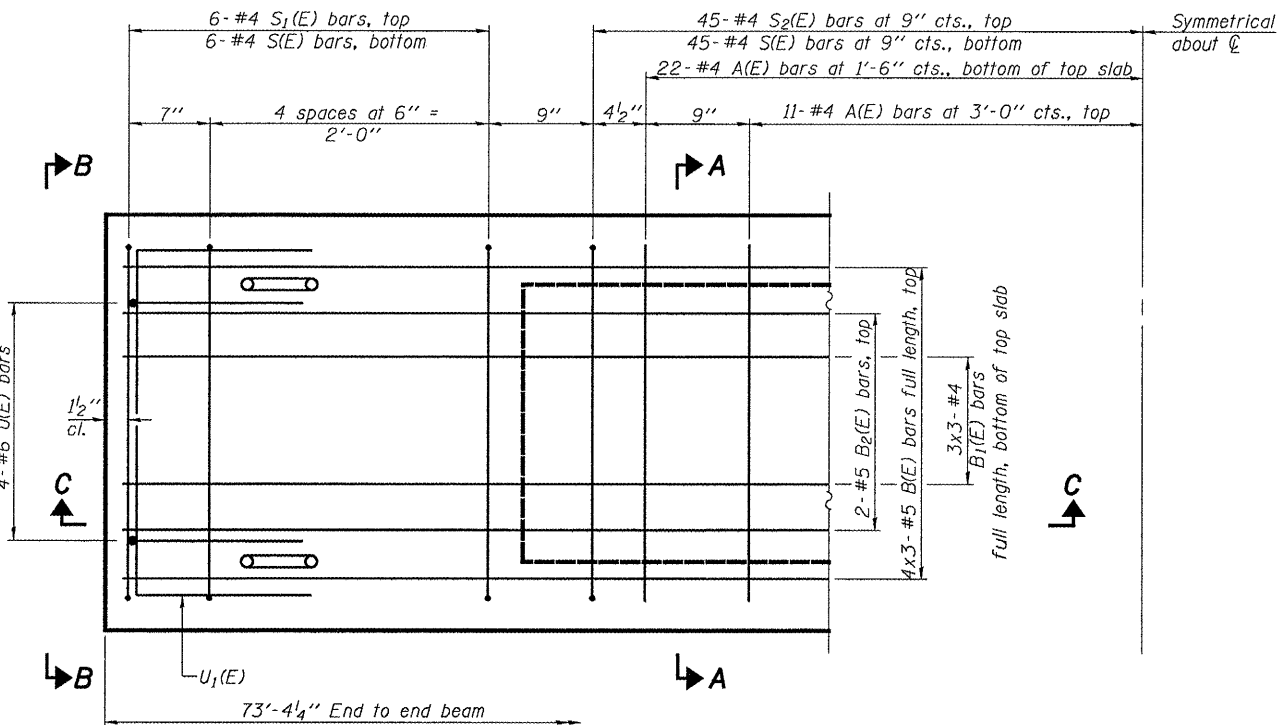
Note: See sheet 3 of 6 for additional details and Bill of Material.



SECTION C-C



SECTION A-A
(Showing dimensions)



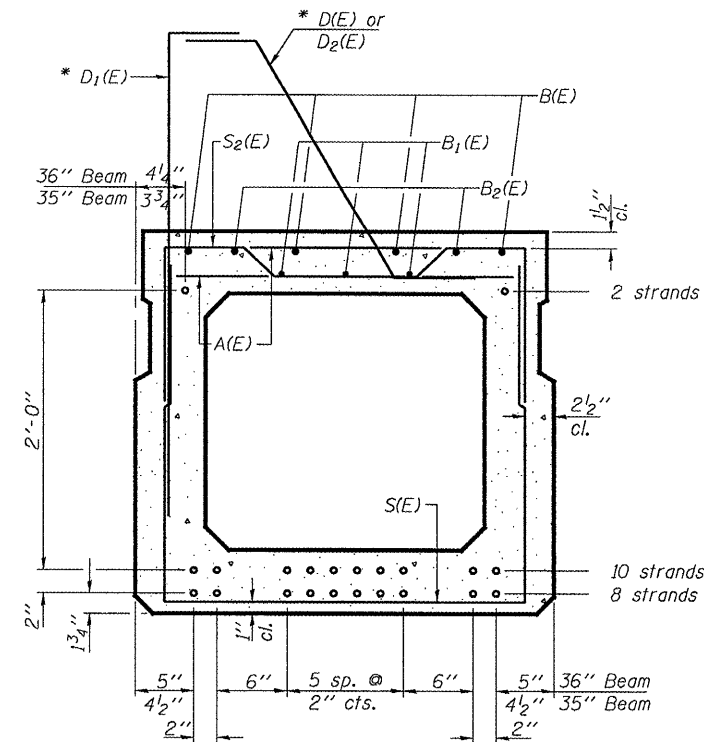
PLAN VIEW

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	ATH
CHECKED	AJB
DRAWN	Steffen
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED *Carl Proyer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

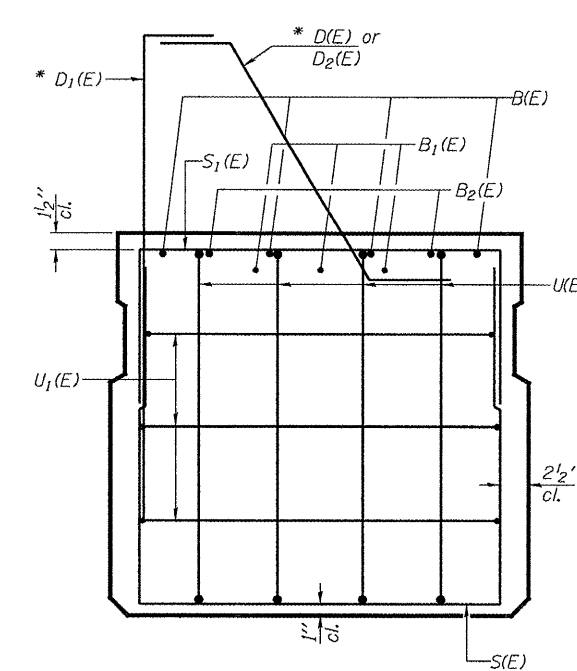
* Outside Face of Exterior Beams only.
See sheet 6 of 6 for spacing and additional details.



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.



VIEW B-B

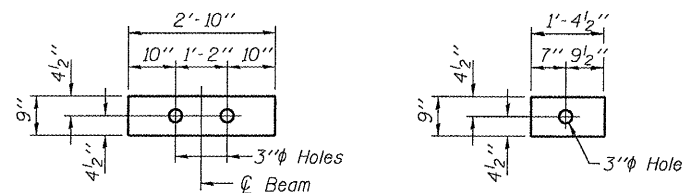
REPAIR DETAILS
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	*	PUTNAM	18	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
6 SHEETS

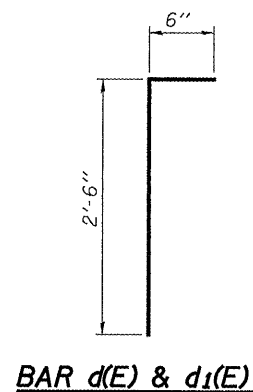
Contract Number: 68783
* (120-BR)1-1 & (11-B)1



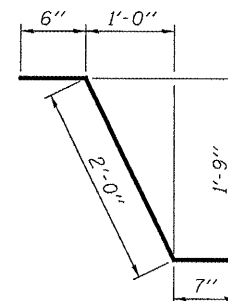
FABRIC BEARING PAD FABRIC ADJUSTING SHIM

FIXED

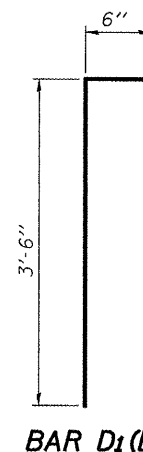
Note: Omit holes when using expansion bearings.



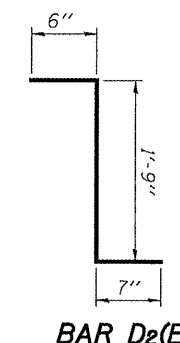
BAR d(E) & d1(E)



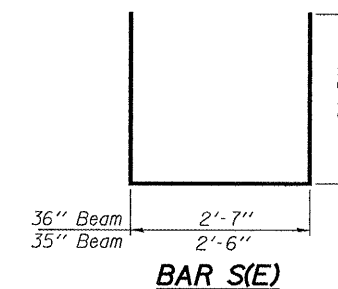
BAR D(E)



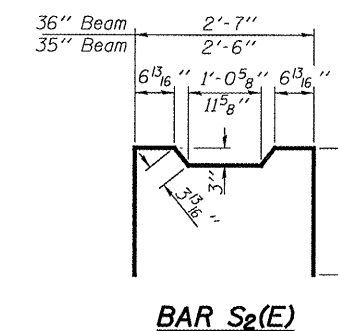
BAR D1(E)



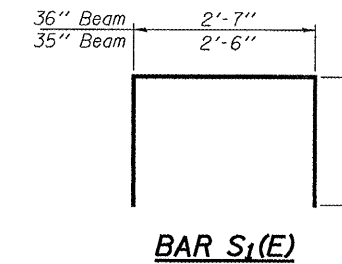
BAR D2(E)



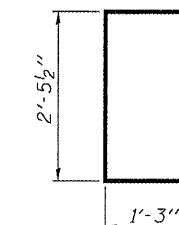
BAR S(E)



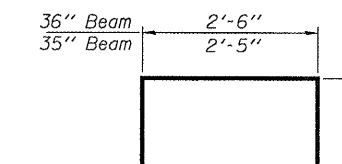
BAR S2(E)



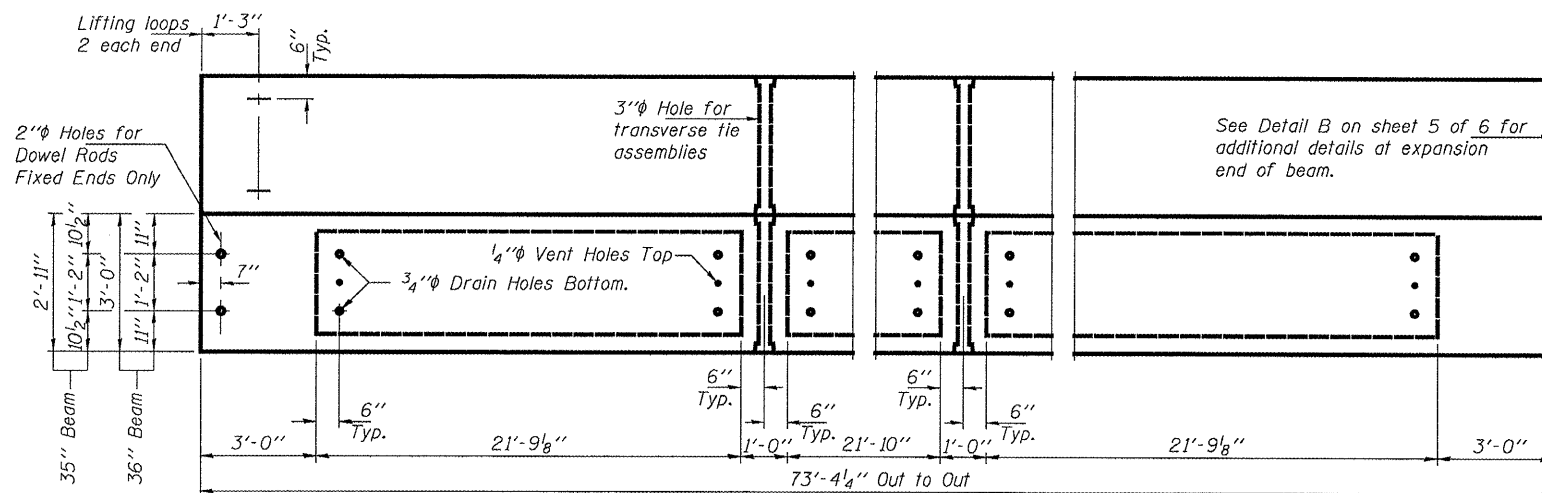
BAR S1(E)



BAR U(E)

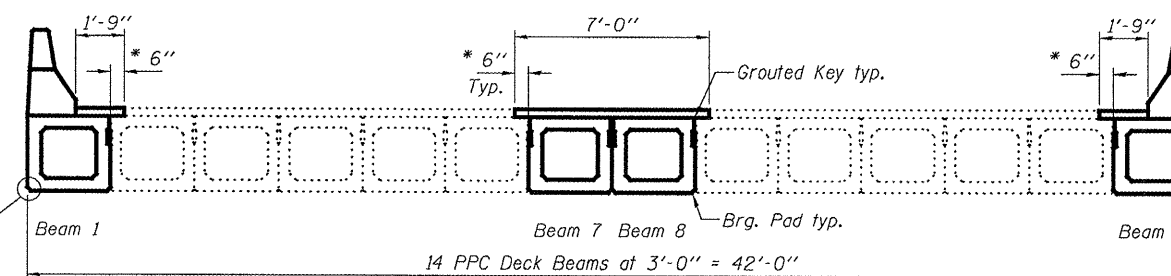


BAR U1(E)



PLAN

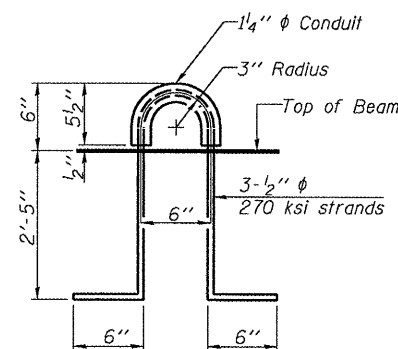
See sheet 6 of 6 for additional reinforcement bars cast in beams.



CROSS SECTION
(Looking West)

Install Side Retainer at Expansion End. (Typ.)
See Detail sheet 5 of 6.

* Limits of HMA Surface Removal.
Existing waterproofing to remain.
Lap new waterproofing 6" over existing.



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. 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. Reinforcement bars shall conform to ASTM A 706 (IL MOD), Grade 60. (See Special Provisions) 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" lifting pin shall be used to engage the lifting loops during handling. 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.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Conc. Deck Bms.	Sq. Ft.	874

REPAIR DETAILS
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

DESIGNED	ATH
CHECKED	AJB
DRAWN	Steffen
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED *A. Carl Perry*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

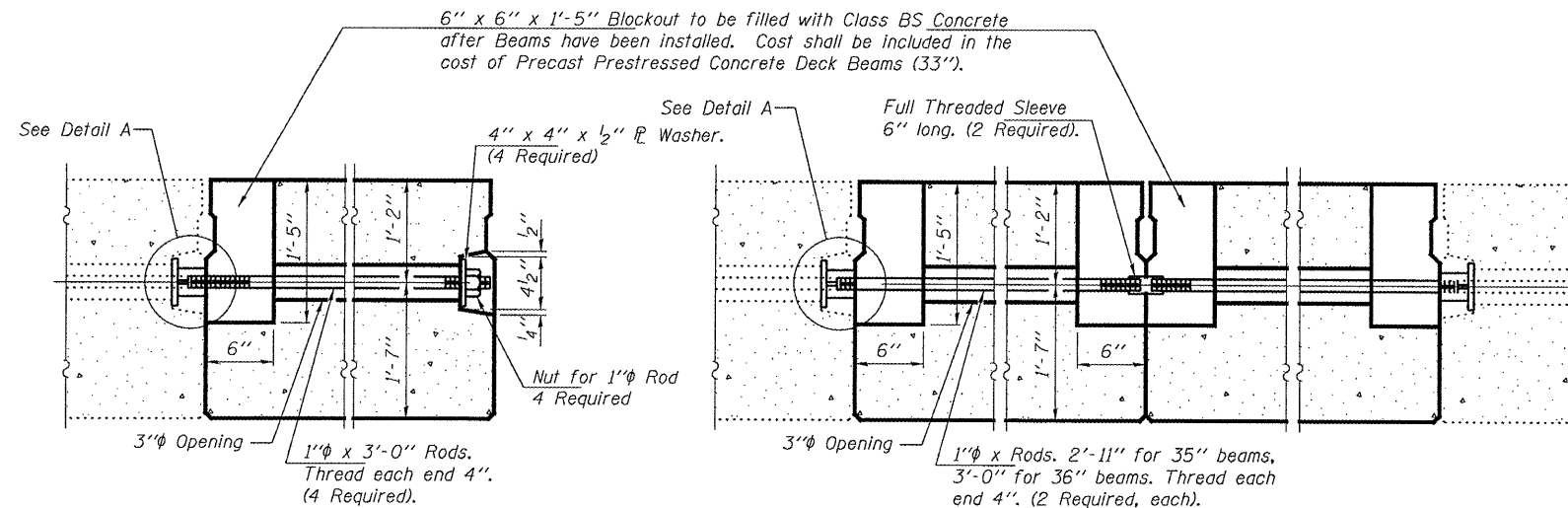
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	*	PUTNAM	18	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4

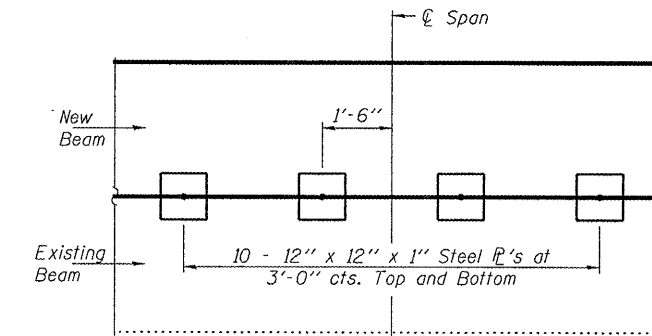
6 SHEETS

Contract Number: 68783
* (120-BR)I-1 & (11-B)I

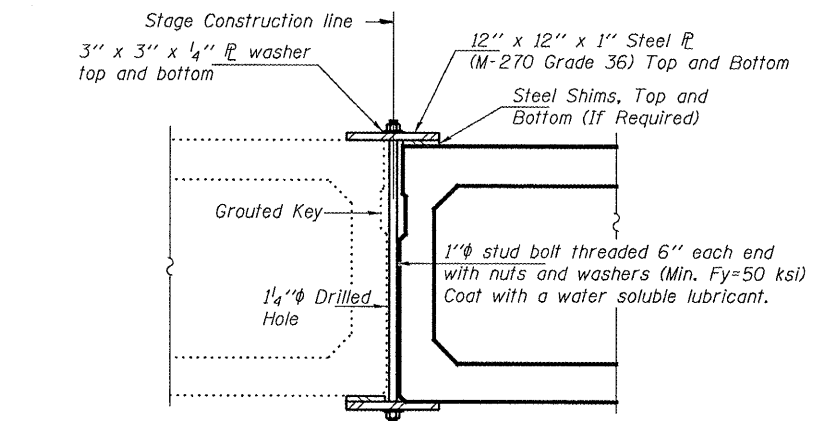


TRANSVERSE TIE ASSEMBLY
(Typ. beams 1 & 14)

TRANSVERSE TIE ASSEMBLY
(Typ. beams 7 & 8)

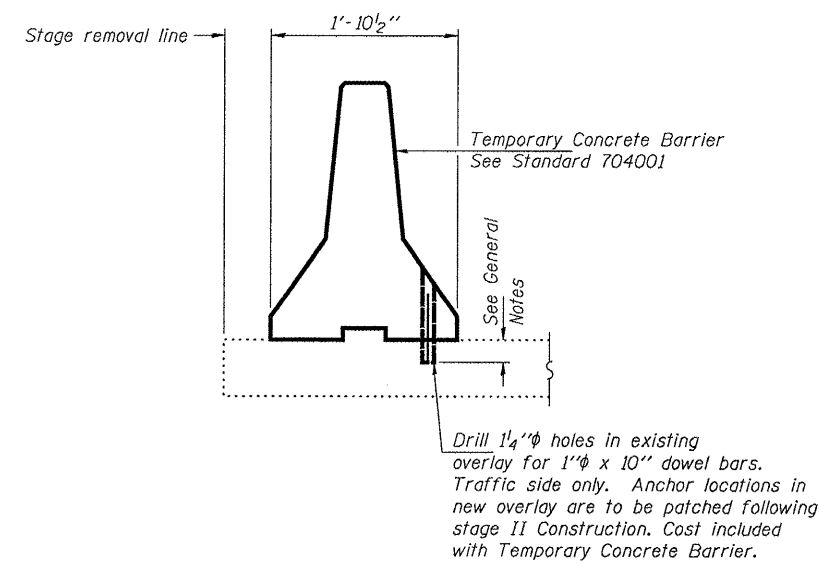


PLAN

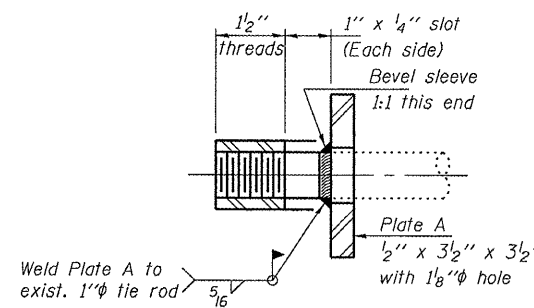


SHEAR KEY CLAMPING DEVICE

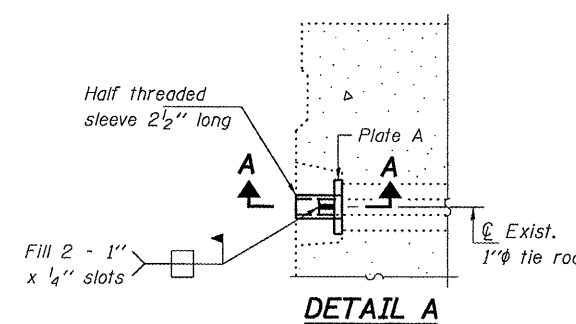
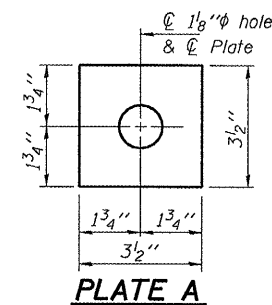
Notes:
See Special Provisions for Stage Construction Precast Prestressed Concrete Deck Beams.
See sheet 1 of 6 for Stage Construction.
Cost is included with Precast Prestressed Concrete Deck Beams.



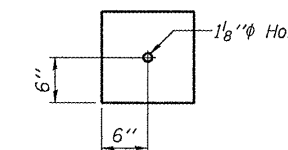
TEMPORARY CONCRETE BARRIER
See Roadway Plans for Quantity



SECTION A-A
(8 Required)



DETAIL A



CLAMPING PLATE

DESIGNED	ATH
CHECKED	AJB
DRAWN	Steffen
CHECKED	ATH AJB

MAY 12, 2008

EXAMINED *Carl Hoyer*
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

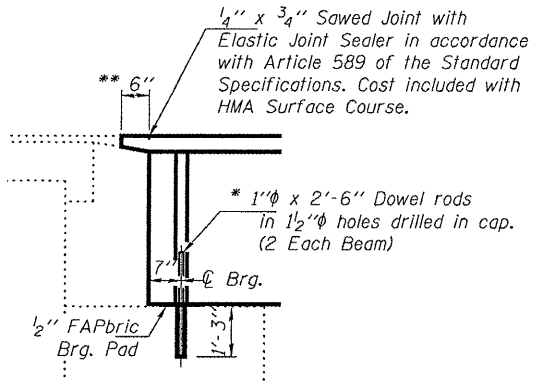
REPAIR DETAILS
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	*	PUTNAM	18	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

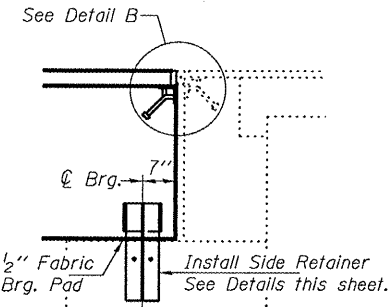
SHEET NO. 5
6 SHEETS

Contract Number: 68783
* (120-BR)I-1 & (11-B)I

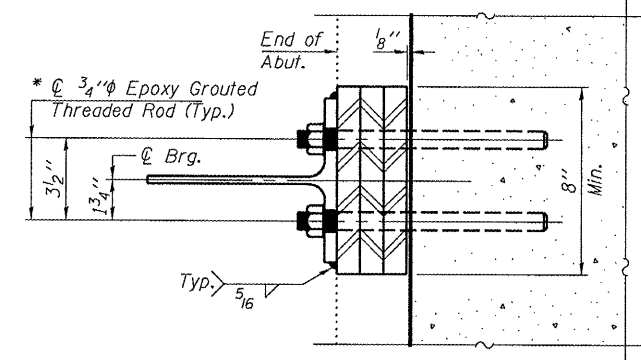


TYPICAL SECTION AT E. ABUTMENT

* Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

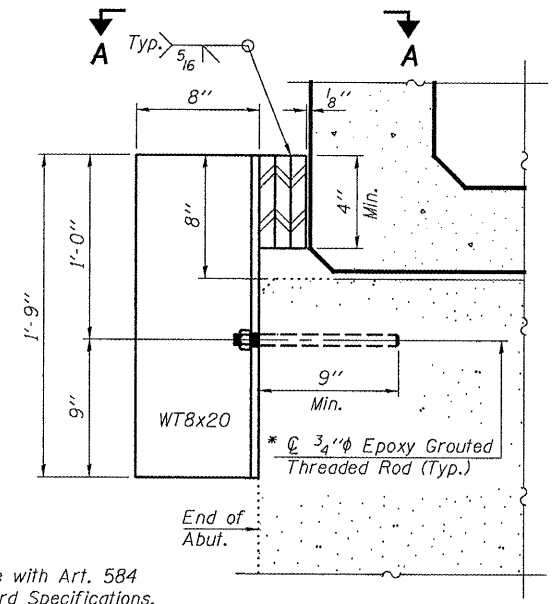


TYPICAL SECTION AT W. ABUTMENT



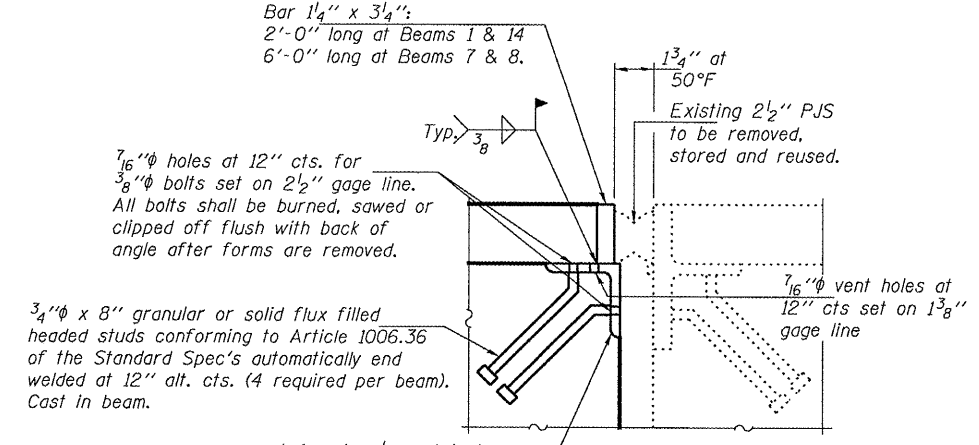
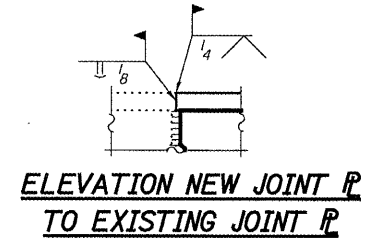
SECTION A-A

* In accordance with Art. 584 of the Standard Specifications.



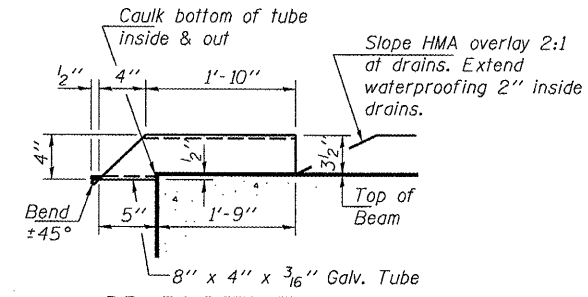
EXPANSION JOINT RETAINER DETAILS

(Cost included with PPC Deck Beams)



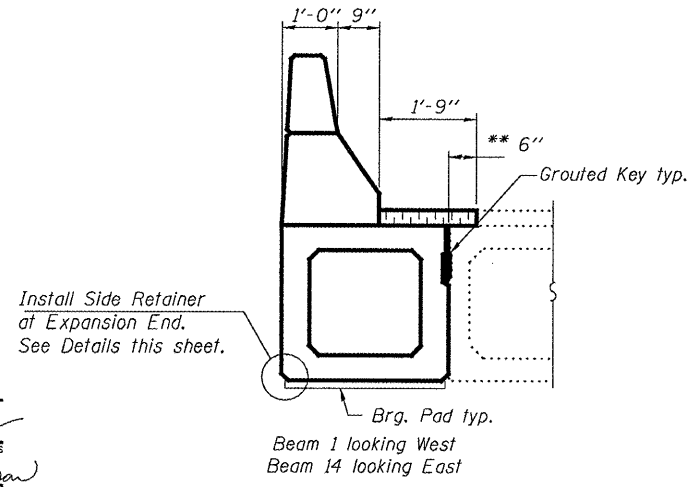
DETAIL B

(Cost included with PPC Deck Beams)

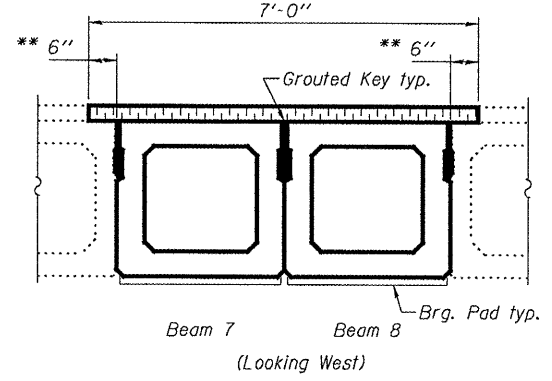


DRAIN DETAIL

Cost included with Concrete Superstructure



PARTIAL CROSS SECTION



PARTIAL CROSS SECTION

** Limits of HMA Surface Removal. Existing waterproofing to remain. Lap new waterproofing 6" over existing.

REPAIR DETAILS
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

DESIGNED	ATH
CHECKED	AJB
DRAWN	Steffen
CHECKED	ATH AJB

MAY 12, 2008

EXAMINED *Carl Perry*
ENGINEER OF STRUCTURAL SERVICES

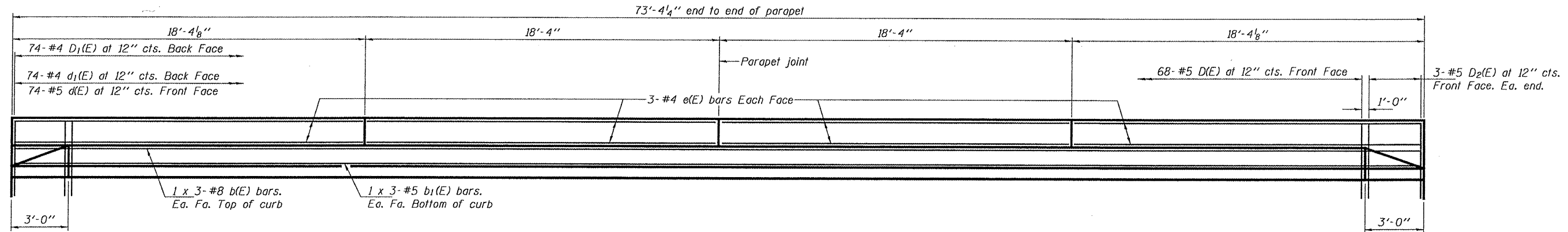
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	JOB NO.	SHEET NO.
FAP 619	*	PUTNAM	18 14	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 6
6 SHEETS

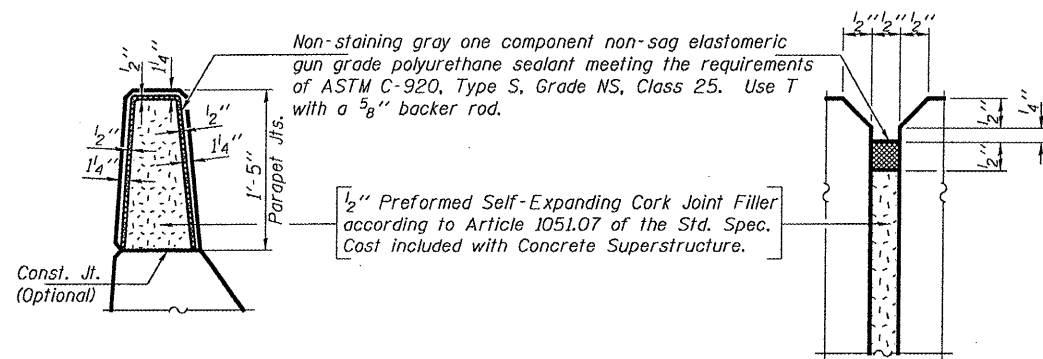
Contract Number: 68783
* (120-BR)I-1 & (11-B)I



PARAPET ELEVATION

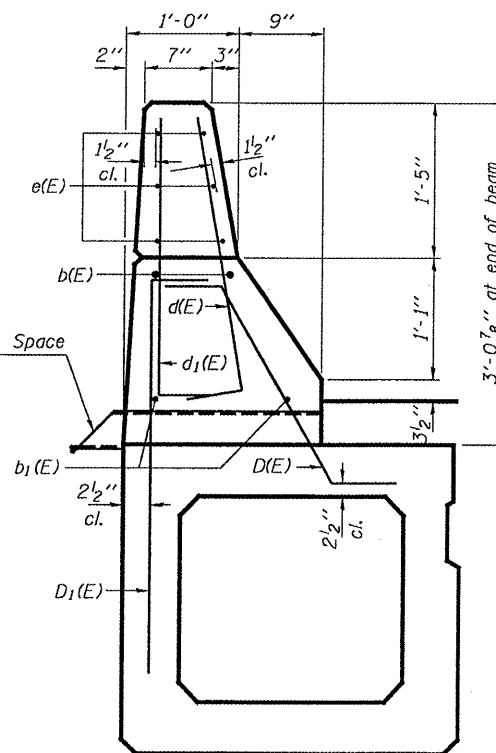
MINIMUM BAR LAPS

#5 bar = 2'-2"
#8 bar = 4'-6"

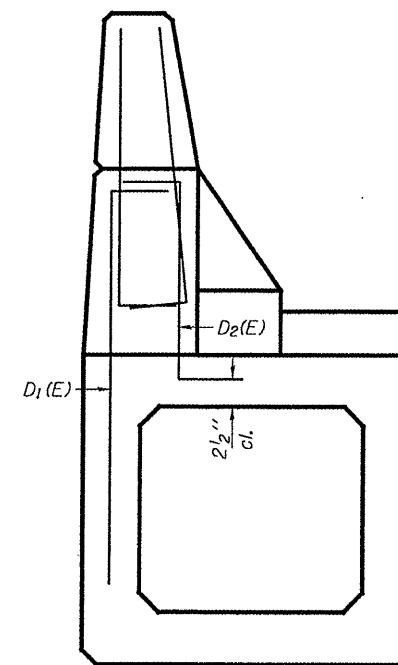


PARAPET JOINT DETAILS

Drain tubes at 12'-0" cts. Space to miss D(E) & D₁(E) bars See Detail on sheet 5 of 6.



SECTION THRU CURB



END VIEW OF CURB

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b(E)	12	#8	27'-6"	—
b ₁ (E)	12	#5	26'-0"	—
d(E)	148	#5	3'-0"	┌
d ₁ (E)	148	#4	3'-0"	┌
e(E)	48	#4	18'-0"	—
Reinforcement Bars, Epoxy Coated		Pound	2540	
Concrete Removal		Cu. Yd.	18.7	
Concrete Superstructure		Cu. Yd.	18.7	

DESIGNED	ATH
CHECKED	AJB
DRAWN	Steffen
CHECKED	ATH AJB

MAY 12, 2008

EXAMINED *Carl Henry*
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP 619 OVER COFFEE CREEK
PUTNAM COUNTY
SN 078-0032

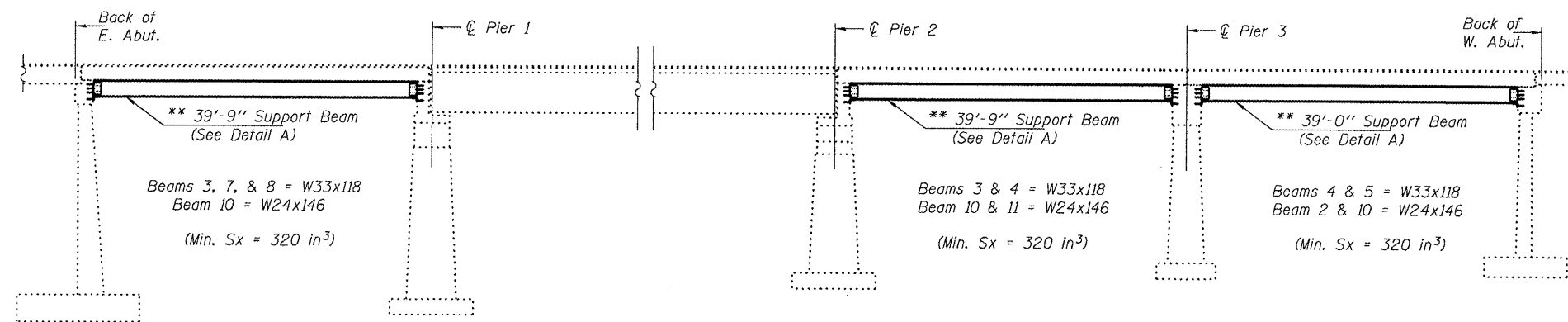
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 1
FAP 643		STARK	18	15	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

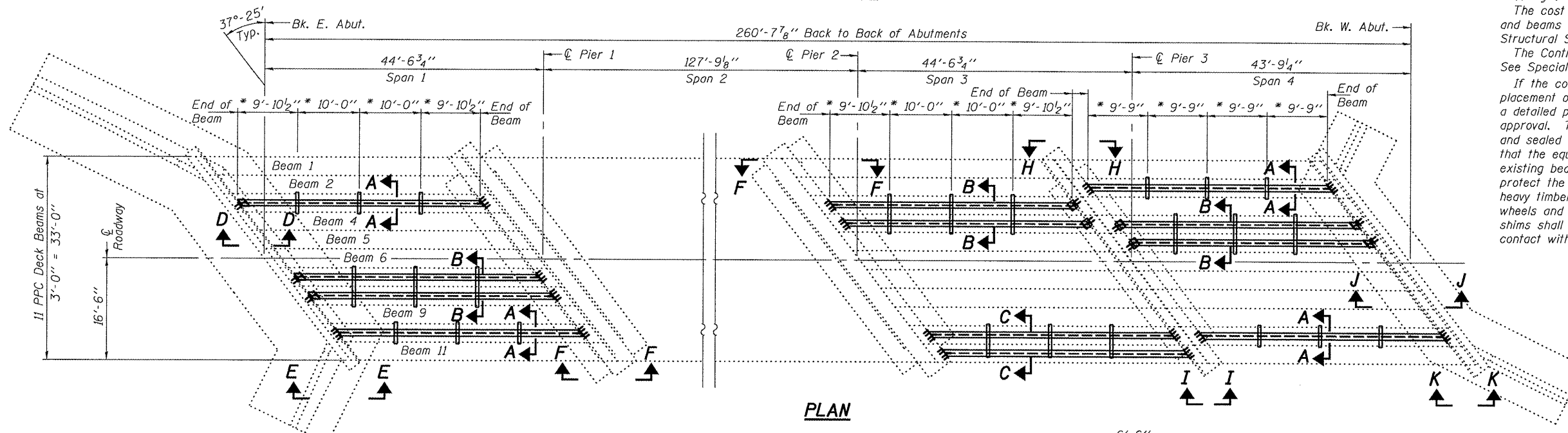
Contract Number: 68783

** Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 36". No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans

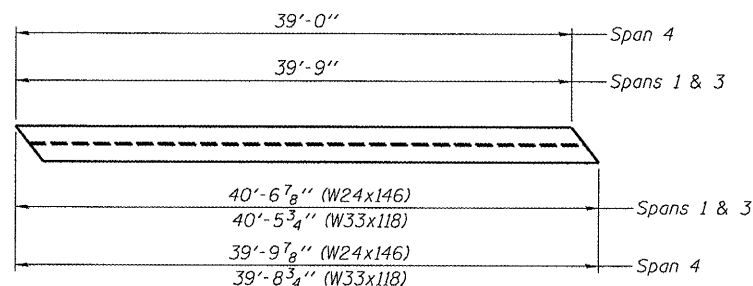
* \varnothing Transverse tie \bar{P} 's (3 per span). Place additional shims at midpoints between tie \bar{P} 's. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.



ELEVATION



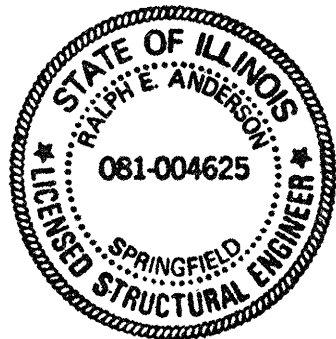
PLAN



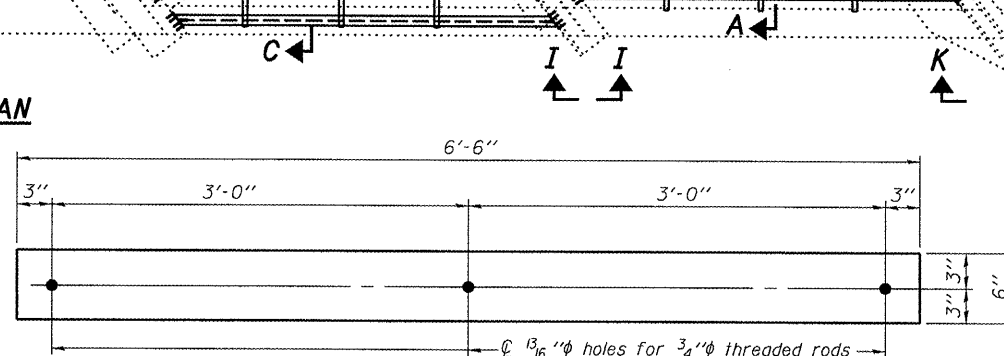
DETAIL A

DESIGNED: *Alvan J. Hallaway*
CHECKED: *Victor H. Velis*
DRAWN: *Steffen*
CHECKED: *VHV ATH*

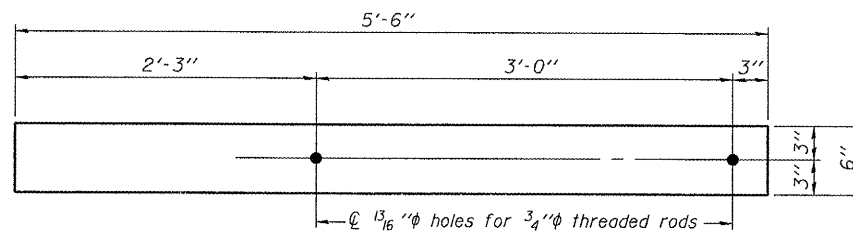
MAY 7, 2008
EXAMINED: *Dr. Carl Dreyer*
PASSED: *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



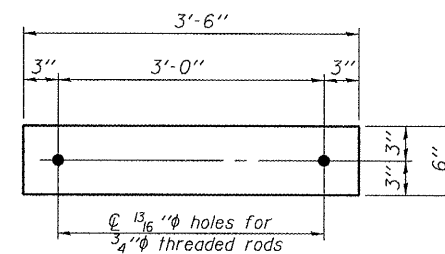
EXPIRES 11-30-2008



TRANSVERSE TIE P C
 \bar{P} 1/2" x 6" x 6"
(9 Required)



TRANSVERSE TIE P B
 \bar{P} 1/2" x 6" x 6"
(3 Required)



TRANSVERSE TIE P A
 \bar{P} 1/2" x 6" x 3'-6"
(12 Required)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	69,470

PLAN & ELEVATION
FAP 643 OVER
SPOON RIVER
STARK COUNTY
SN 088-0002

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

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

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

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

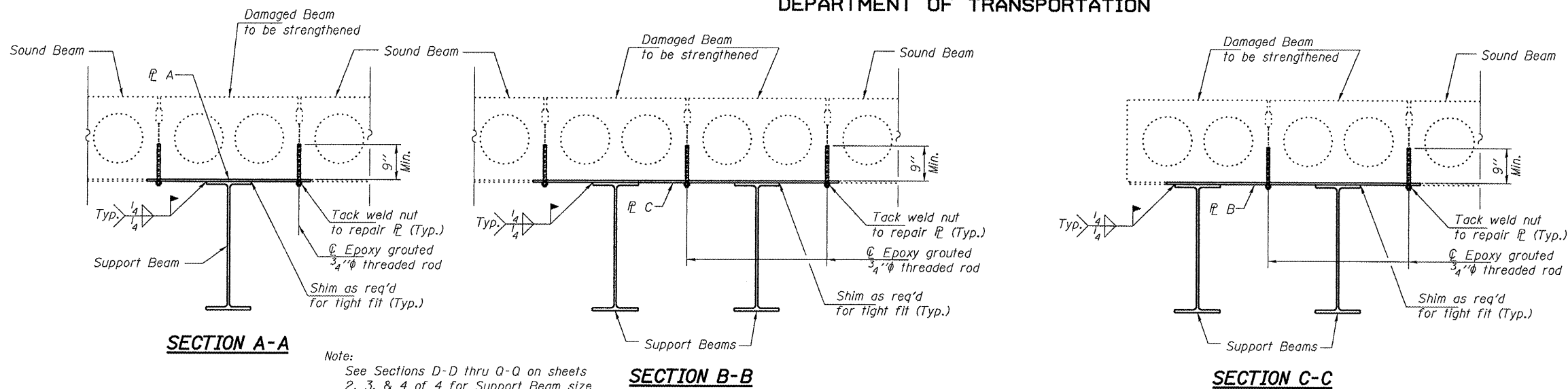
The Contractor has the option of using used steel. See Special Provisions.

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

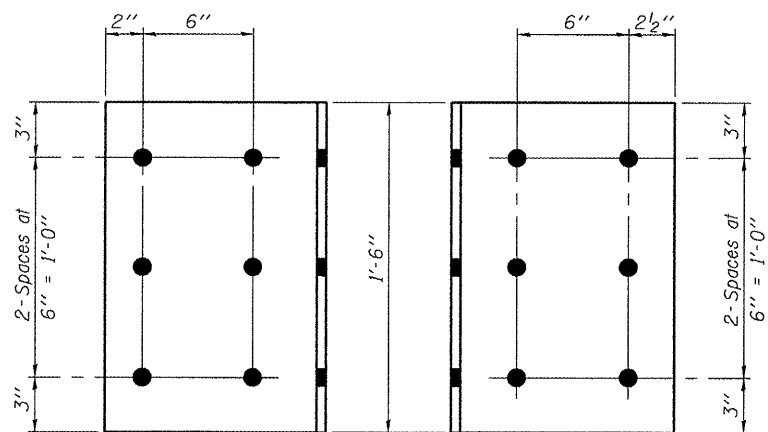
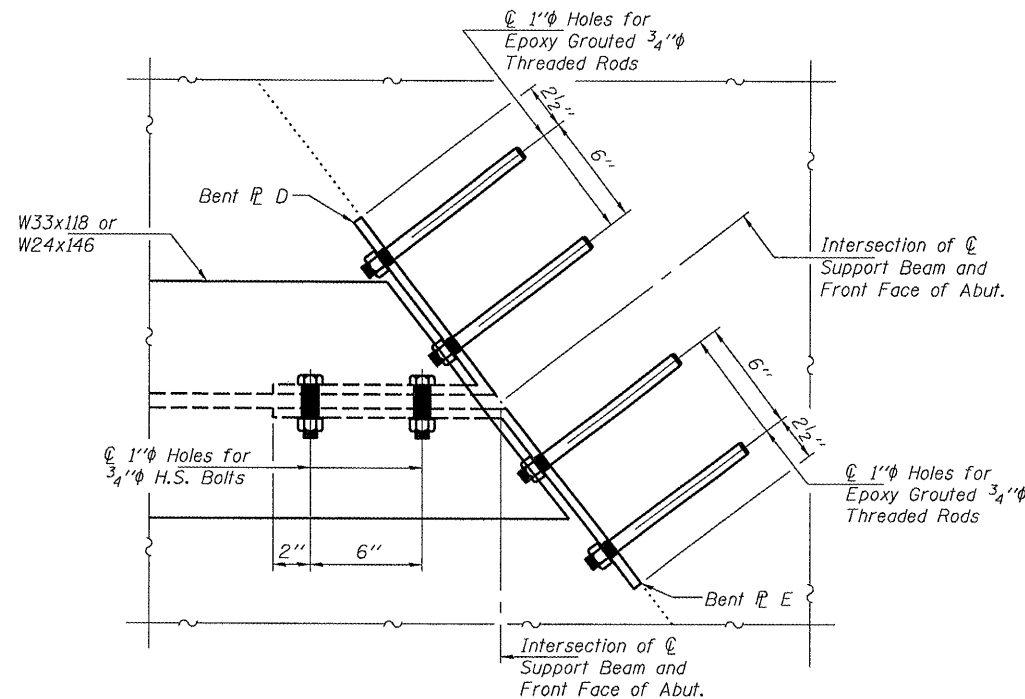
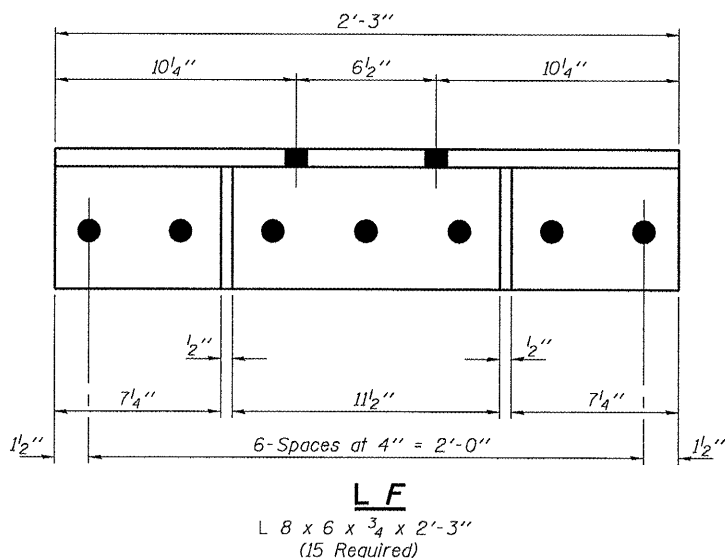
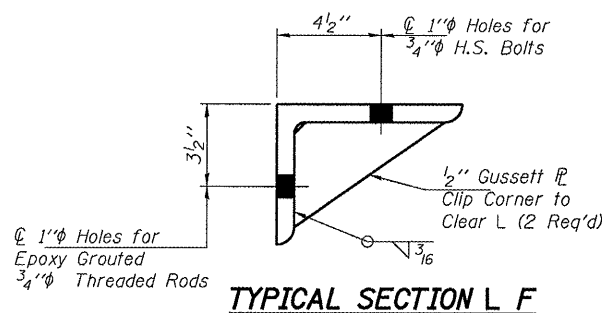
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 2
FAP 643		STARK	18 16	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

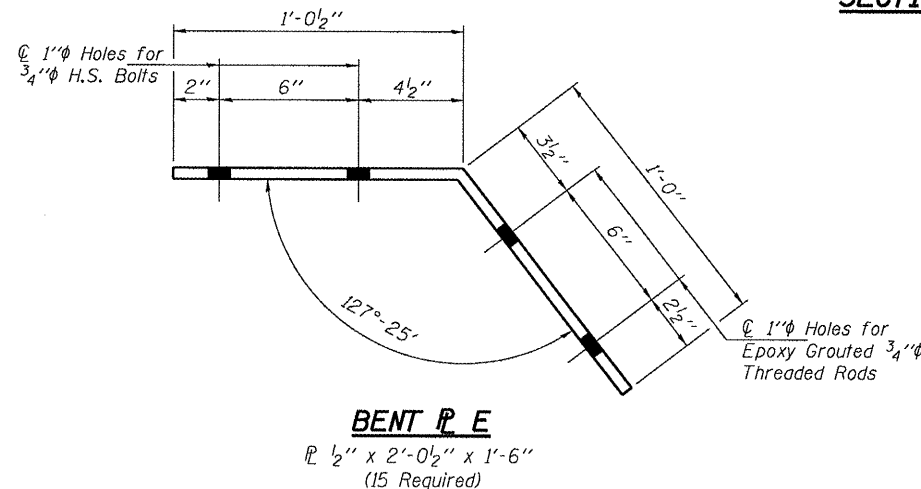
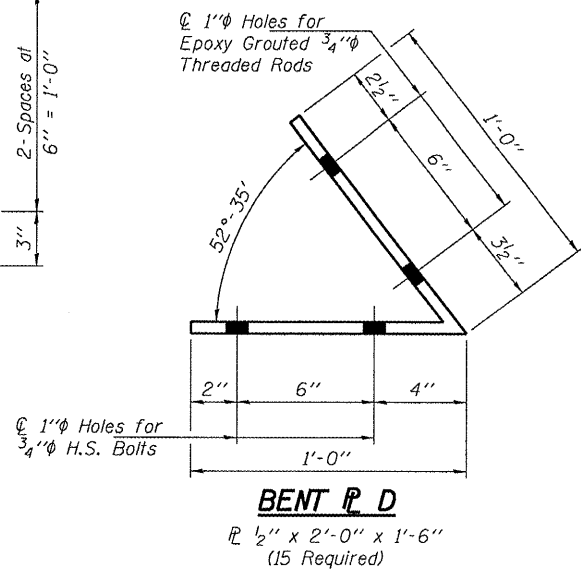
Contract Number: 68783



Note:
See Sections D-D thru Q-Q on sheets
2, 3, & 4 of 4 for Support Beam size
and attachment method.



TYPICAL BENT PL ELEVATION



SECTION Q-Q

DESIGNED	ATH
CHECKED	VHV
DRAWN	Steffen
CHECKED	ATH VHV

MAY 7, 2008
EXAMINED *Carl Hoyer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

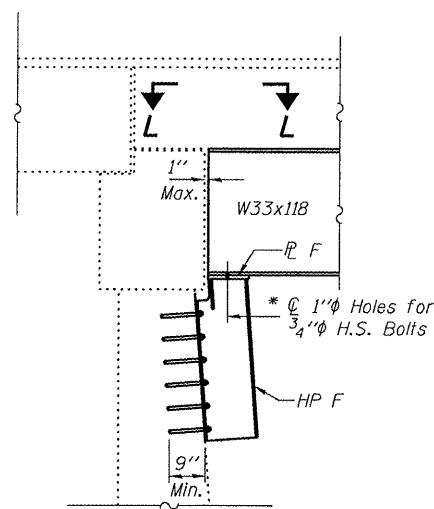
REPAIR DETAILS
FAP 643 OVER
SPOON RIVER
STARK COUNTY
SN 088-0002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

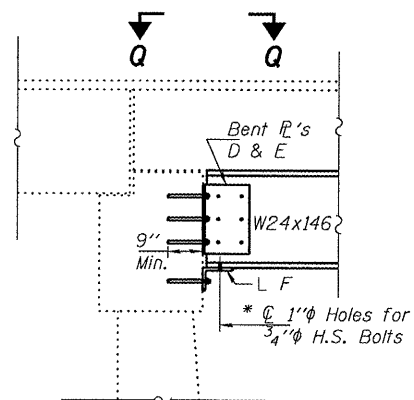
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FAP 643		STARK	18	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
4 SHEETS

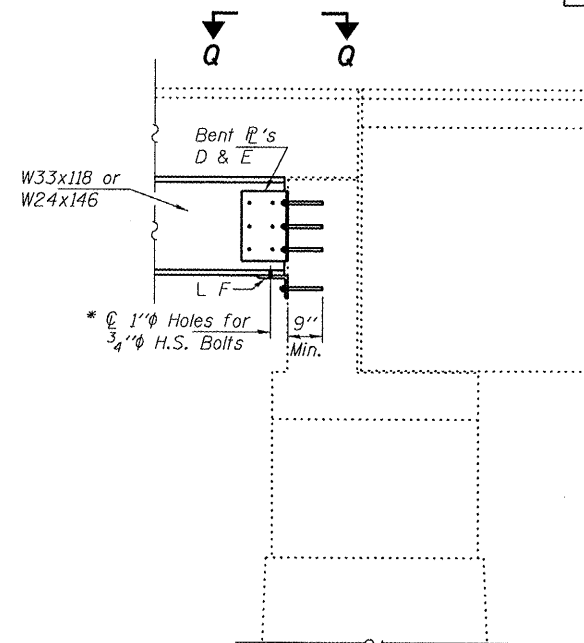
Contract Number: 68783



SECTION D-D
Typical Span 1 Beams 3, 7, & 8
at East Abutment



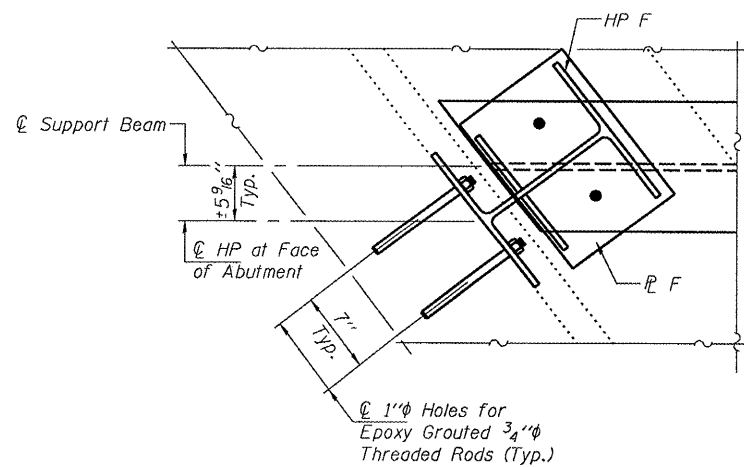
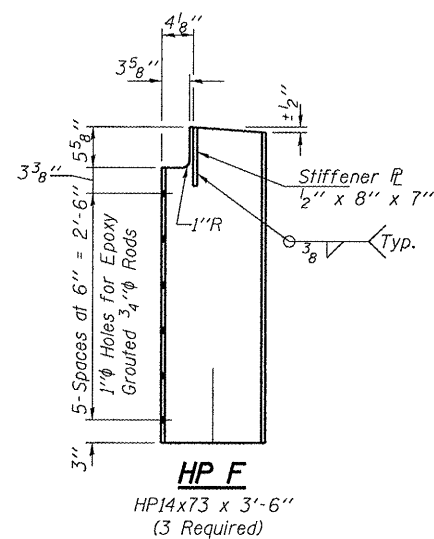
SECTION E-E
Typical Span 1 Beam 10
at East Abutment



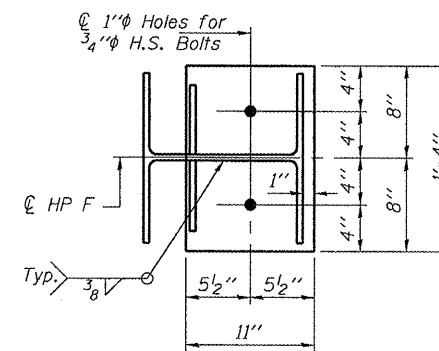
SECTION F-F
Typical Span 1 Beams 3, 7, 8 & 10 at Pier 1
and Span 3 Beams 3, 4, 10 & 11 at Pier 2

Note:
See sheet 2 of 4 for Bent Plate details.

* Use holes in brackets to
field drill holes in beams.



SECTION L-L



P F
1" x 1'-4" x 11"
(3 Required)

DESIGNED	ATH
CHECKED	VHV
DRAWN	Steffen
CHECKED	ATH VHV

MAY 7, 2008
EXAMINED *Carl Thayer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

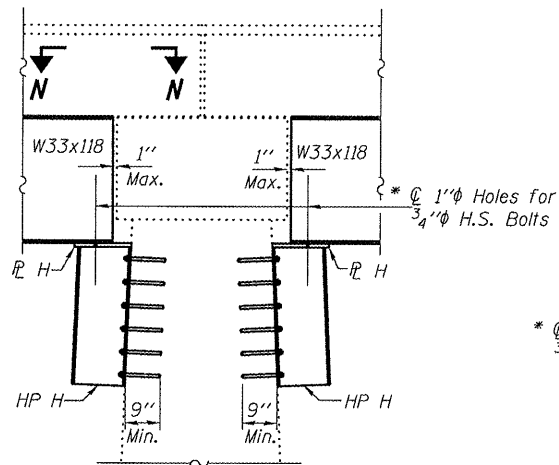
REPAIR DETAILS
FAP 643 OVER
SPOON RIVER
STARK COUNTY
SN 088-0002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 643		STARK	18.18	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

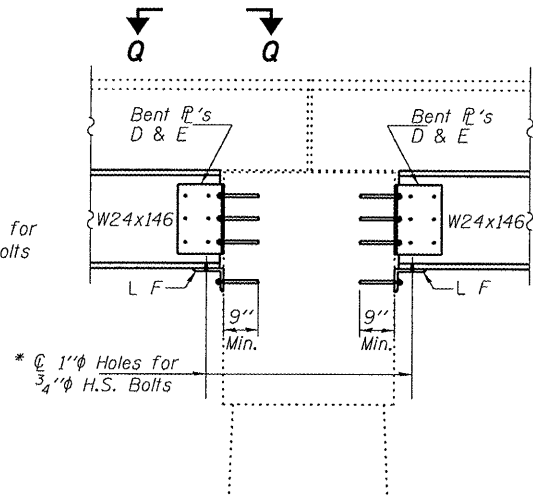
SHEET NO. 4
4 SHEETS

Contract Number: 68783



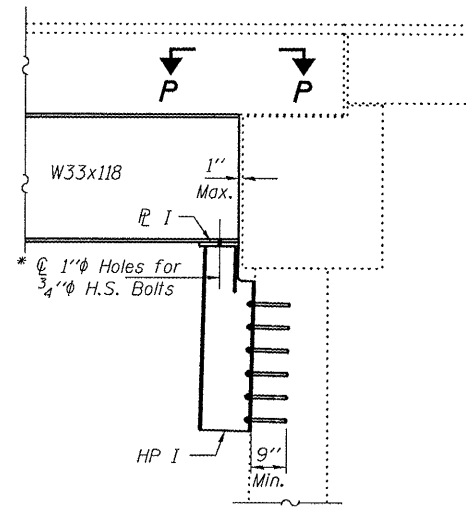
SECTION H-H

Typical Span 3 Beams 3 & 4
and Span 4 Beams 4 & 5 at Pier 3



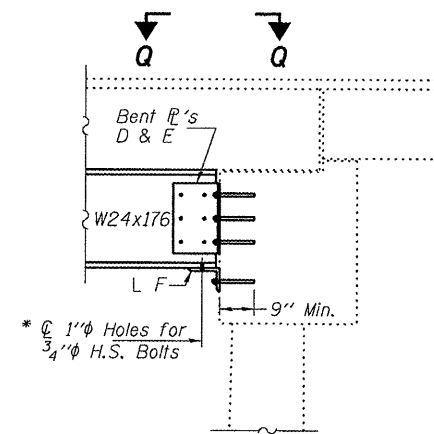
SECTION I-I

Typical Span 3 Beam 10 & 11 and
Span 4 Beams 2 & 10 at Pier 3



SECTION J-J

Typical Span 4 Beams 4 & 5
at West Abutment

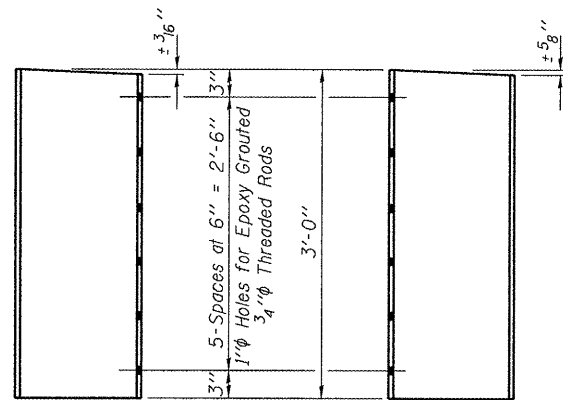


SECTION K-K

Typical Span 4 Beams 2 & 10
at West Abutment

Note:
See sheet 2 of 4 for Bent Plate details.

* Use holes in brackets to
field drill holes in beams.

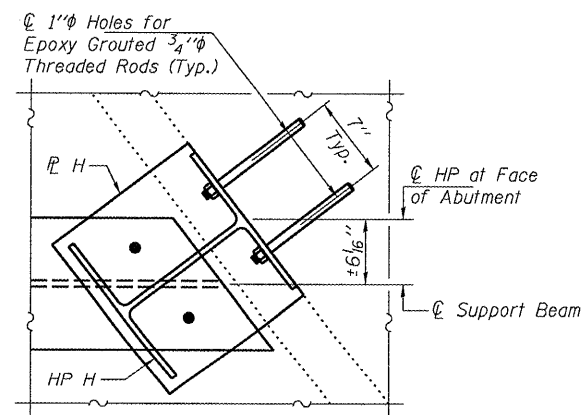


SPAN 3

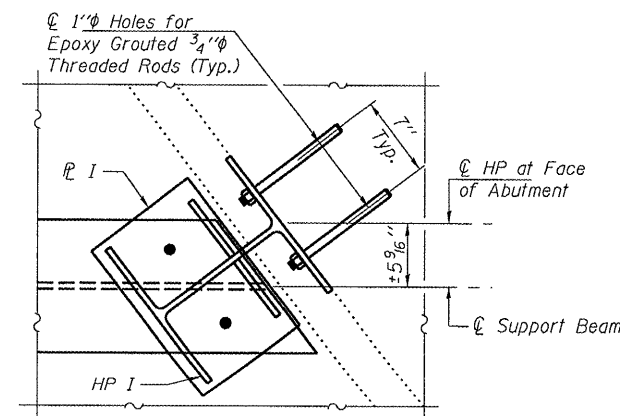
SPAN 4

HP H

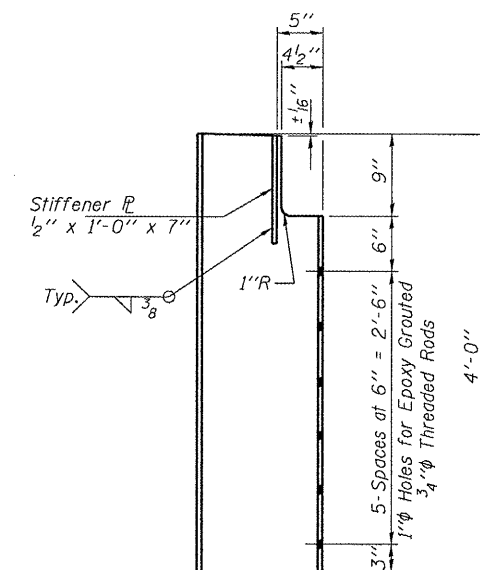
HP14x73 x 3'-0"
(4 Required)
2-Span 3 & 2-Span 4



SECTION N-N

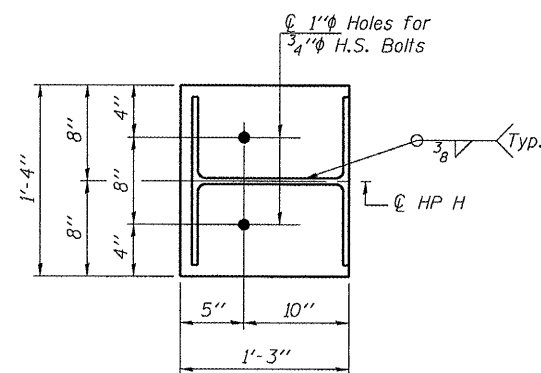


SECTION P-P



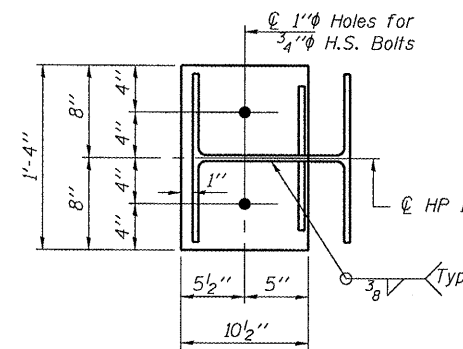
HP I

HP14x73 x 4'-0"
(2 Required)



RH

1" x 1'-4" x 1'-3"
(4 Required)



RI

1" x 1'-4" x 10 1/2"
(2 Required)

DESIGNED	ATH
CHECKED	VHV
DRAWN	Steffen
CHECKED	ATH VHV

MAY 7, 2008
EXAMINED *Carl Hoyer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP 643 OVER
SPOON RIVER
STARK COUNTY
SN 088-0002