6-17-05 Letting, Item 114

76860

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	138BR-2, 138BR-3	BOND	27	1

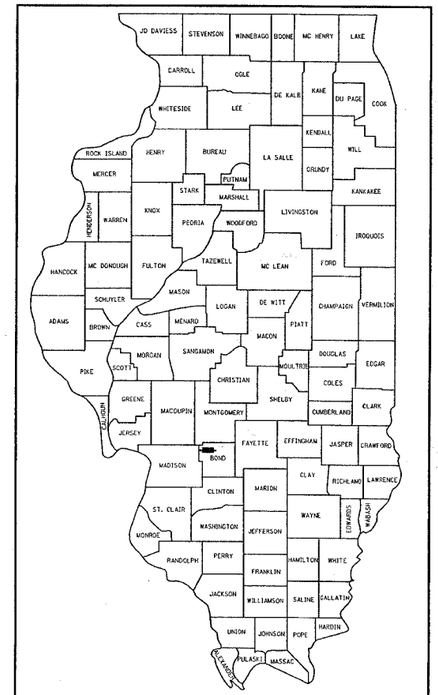
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 785 (IL 140)
SECTION 138BR-2, 138BR-3
PROJECT NO: BHF-0785(024)
SUPERSTRUCTURE REPLACEMENT
BOND COUNTY

C-98-028-05

D-98-010-05



LOCATION OF SECTION INDICATED THUS: –

PROJECT LOCATIONS
IL 140 OVER BIG SHOAL CREEK (S.N. 003-0024)
AT STA. 1769+46.50

IL 140 OVER INDIAN CREEK (S.N. 003-0025)
AT STA. 1807+75.00

OMISSION
STA. 1772+90.10 TO
STA. 1807+07.70

GROSS LENGTH OVER BIG SHOAL CREEK = .069 MI.
OVER INDIAN CREEK = .025 MI.

NET LENGTH OVER BIG SHOAL CREEK = .069 MI.
OVER INDIAN CREEK = .025 MI.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 30 20 05
Mary C Rami
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER
May 13, 20 05
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
May 13, 2005
Victor Modaff
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: PATTI LeBEAU (618) 346-3179
SQUAD CONTACT: ART MUEHLFELD (618) 346-3209

FOR INDEX OF SHEETS, SEE SHEET NO. 2

MICROFILMED _____
NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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

CONTRACT NO. 76860

TRAFFIC DATA
ADT= 1800 (2004)
ADT= 2200 (2024)
SU= 4.7%
MU= 5.0%

LAYOUT
0 MI 1 MI 2 MI 3 MI
1" = 1 MILE

BIG SHOAL	
LATITUDE	Y: 38.88749
LONGITITUDE	X: 89.52240

INDIAN	
LATITUDE	Y: 38.88722
LONGITITUDE	X: 89.50885

PLOT DATE: 3/30/2005

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	2
STA.		TO STA.		
CONTRACT NO.: 76860				

INDEX OF SHEETS

HIGHWAY STANDARDS

000001–04	635006–02
001001	635011–01
001006	701006–02
420401–05	701011–01
515001–02	702001–05
630001–05	780001–01
631032–01	781001–02
	B.L.R. 21–6

GENERAL NOTES:

1. THE STANDARDS AND REVISION NUMBERS SHALL APPLY TO THIS PROJECT.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
3. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING BY CALLING J.U.L.I.E. AND BY NOTIFYING NON-J.U.L.I.E. MEMBERS INDIVIDUALLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
   - ALHAMBRA-GRANTFORK TELEPHONE COMPANY
   - FRONTIER-A CITIZENS COMMUNICATIONS COMPANY
   - ILLINOIS POWER COMPANY
   - SBC
   - SOUTHWESTERN ELECTRIC COOPERATIVE, INC.
   - THREE COUNTY PUBLIC WATER DISTRICT
4. MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY •. NON-MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL WOOD SIGN SUPPORTS IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS; HOWEVER, INSTALLATION BY METHOD 'A' (ARTICLE 730.04(a)) SHALL BE THE ONLY METHOD PERMITTED.
6. SAW CUTTING ON ALL EDGES FOR REMOVAL ITEMS SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEM AS INDICATED AND ACCORDING TO SECTION 440 OF THE STANDARD SPECIFICATIONS.
7. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH THE WORK TO BE PERFORMED ON IL ROUTE 160 OVER SILVER CREEK BY OTHER CONTRACTORS. ALSO, THERE SHOULD BE COOPERATION OF CONSTRUCTION ACTIVITIES BETWEEN CONTRACTORS.
8. THE MINIMUM THICKNESS OF REINFORCED CONCRETE WEARING SURFACE ON THE BRIDGE SHALL BE 5".
9. IF THERE IS ANY TREE DEBRIS AS A RESULT OF THE TREE TRIMMING, THE CONTRACTOR SHALL REMOVE THE DEBRIS WITH NO COST TO THE CONTRACT.
10. THE THICKNESS OF THE BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NORMAL THICKNESS. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
11. AN ESTIMATED QUANTITY OF 200 CU YD OF FURNISHED EXCAVATION HAS BEEN ADDED TO THE CONTRACT FOR ADDITIONAL EARTH BEHIND THE GUARDRAIL.

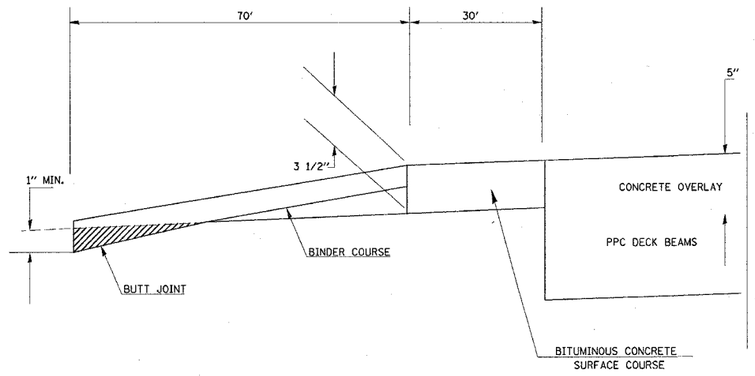
EROSION AND SEDIMENT CONTROL PLAN

1. PLANS INCLUDE ESTIMATED QUANTITIES FOR TEMPORARY EROSION AND SEDIMENT CONTROL. THESE ARE WORST CASE ESTIMATES. DISTURBANCE OF AREAS BEYOND THE LIMITS OF ACTUAL IMPROVEMENT IS TO BE HELD TO A MINIMUM.
2. TEMPORARY SEEDING AND MULCH SHALL BE COMPLETED ON A WEEKLY BASIS ON EXPOSED GROUND AND SHALL BE IN ACCORDANCE WITH SECTION 280 OF THE STANDARD SPECIFICATIONS EXCEPT THAT MULCH AND TEMPORARY SEEDING SHALL BE PAID FOR AS TEMPORARY EROSION CONTROL SEEDING AND NO OTHER PAYMENT WILL BE PERMITTED.
3. ALL AREAS DISTURBED FOR ANY REASON SHALL BE SEEDED WITH CLASS 2 SEEDING AS DIRECTED BY THE ENGINEER. NUTRIENTS SHALL CONFORM TO ARTICLE 250.04 EXCEPT FERTILIZER NUTRIENTS WILL NOT BE PAID FOR SEPARATELY AS INCLUDED IN THE COST OF CLASS 2 SEEDING.
4. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER RECOMMENDED INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.
5. EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
6. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS, AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 'EARTH EXCAVATION' AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. FINAL SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.

COMMITMENTS

THERE WILL BE NO TREE REMOVAL REQUIRED FOR THE STRUCTURES OVER BIG SHOAL AND INDIAN CREEK DUE TO SUFFICIENT ACCESS TO BOTH BRIDGES

MIXTURE USE	SURFACE	BINDER	SHOULDERS
AC/PG	PG 64-22	PG 64-22	PG 58-22
RAP % (MAX)	10%	10%	30%
DESIGN AIR VIODS	4.0% @ Ndes = N70	4.0% @ Ndes = N70	2.0% @ Ndes = 30
MIX COMPOSITION (GRADATION MIXTURE)		IL 19.0	
FRICTION AGG	MIXTURE C	MIXTURE B	BAM



BUTT JOINT DETAIL

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & BUTT JOINT DETAIL

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

PLOT DATE = #DATE#
FILE NAME = #FILE#
PLOT SCALE = #SCALE#
REFERENCE = #REF#

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	3
STA.	TO STA.			
CONTRACT NO.: 76860				

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE S.N. 003-0024 BRIDGE BIG SHOAL CREEK X080-2A	CONSTRUCTION TYPE CODE S.N. 003-0024 RDWY BIG SHOAL CREEK X080-2A	CONSTRUCTION TYPE CODE S.N. 003-0025 BRIDGE INDIAN CREEK X080-2A	CONSTRUCTION TYPE CODE S.N. 003-0025 RDWY INDIAN CREEK X080-2A
	25000210	SEEDING, CLASS 2A	ACRE	1	0.5		0.5	
	X0324952	DETOUR SIGNING	L SUM	1	Q 5		Q 5	
	25100105	MULCH, METHOD 1	ACRE	1	0.5		0.5	
	20400800	FURNISHED EXCAVATION	CU YD	200	100		100	
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	200	100		100	
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1.0		0.5		0.5
	40600300	AGGREGATE (PRIME COAT)	TON	2.0		1.0		1.0
	40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	1223		629		594
	42001165	BRIDGE APPROACH PAVEMENT	SQ YD	440	220		220	
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	88	44		44	
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	14	7		7	
	48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	4		4		
	50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	1		1	
	50104000	BRIDGE RAIL REMOVAL	FOOT	502	367		135	
	50300225	CONCRETE STRUCTURES	CU YD	8.2	4.7		3.5	
	50300260	BRIDGE DECK GROOVING	SQ YD	1697	1246		451	
	50300300	PROTECTIVE COAT	SQ YD	2367	1609		758	
	50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	571	420		151	
	50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	16298	11969		4329	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	22420	16350		6070	
	50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	1003	734		269	
	51500100	NAME PLATES	EACH	2	1		1	
*	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8		4		4
*	63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	6		2		4
*	63301210	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	755		355		400
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	2.5		2.5	
	67100100	MOBILIZATION	L SUM	1	Q 5		Q 5	
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	920		460		460
*	78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	1054	744		310	
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4		2		2
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	7	5		2	
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	32	16		16	
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	5	2		3	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12		6		6
	X0320887	POLYMER CONCRETE	CU FT	7.2	7.2			
	X0322932	SILICONE JOINT SEALER, 1.5"	FOOT	33	33			
	X0322933	SILICONE JOINT SEALER, 2.5"	FOOT	33	33			
	X4066416	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N70	TON	33		16		17
	X4066612	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N30	TON	22		11		11
	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	1721	1264		457	
	XX004814	SILICONE JOINT SEALER, 3"	FOOT	33	33			
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	88	88			
	70101830	TRAFFIC CONTROL AND PROTECTION, BLR-21	L SUM	1	0.5		0.5	

* SPECIALTY ITEMS

Rev.

PLOT DATE: 3/31/2005

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	138BR-2,138BR-3	BOND	26	4
STA.	TO STA.			
CONTRACT NO.: 76860				

PLAN
NOTE BOOK
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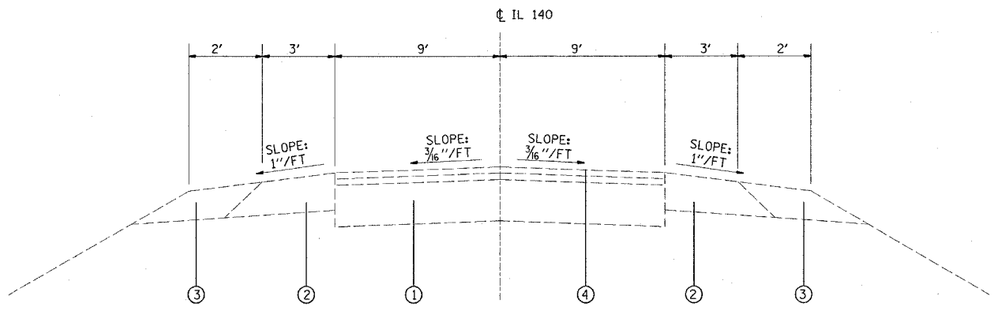
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME

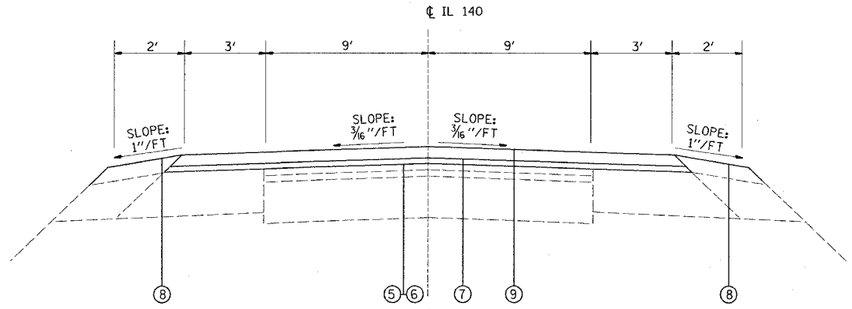
BY

DATE



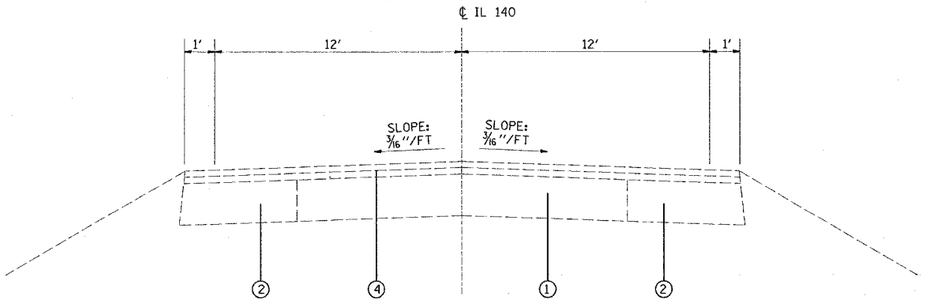
EXISTING TYPICAL SECTION RDWY

STA. 1767+63.10 TO STA. 1768+33.10
STA. 1772+59.89 TO STA. 1773+29.89



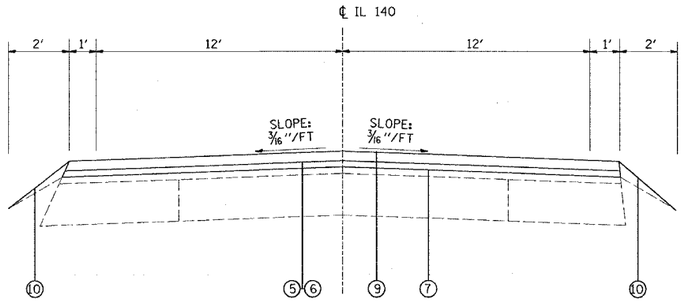
PROPOSED TYPICAL SECTION RDWY

STA. 1767+63.10 TO STA. 1768+33.10
STA. 1772+59.89 TO STA. 1773+29.89



EXISTING TYPICAL SECTION APP PVMT.

STA. 1768+33.10 TO STA. 1768+63.10
STA. 1772+29.89 TO STA. 1772+59.89



PROPOSED TYPICAL SECTION APP. PVMT.

STA. 1768+33.10 TO STA. 1768+63.10
STA. 1772+29.89 TO STA. 1772+59.89

LEGEND

1. EXISTING PCC PAVEMENT
2. EXISTING BITUMINOUS CONCRETE BASE COURSE WIDENING - 9″
3. EXISTING BITUMINOUS SHOULDER
4. EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 1″
5. PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
6. PROPOSED AGGREGATE (PRIME COAT)
7. PROPOSED BITUMINOUS BINDER COURSE 2″
8. PROPOSED BITUMINOUS SHOULDER SUPERPAVE 2″
9. PROPOSED BITUMINOUS SURFACE COURSE SUPERPAVE 1 1/2 ″
10. PROPOSED AGGREGATE SHOULDER, TYPE B 2″

DRAWING NOT TO SCALE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
BIG SHOAL CREEK
S.N. 003-0024

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

DRAWN BY:

PLOT DATE: *DATE-TIME*

$$DATE$$
DATE-TIME
DGN-SPEC
*REF-
*REF-
*REF-

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	5
STA.	TO STA.			
CONTRACT NO.: 76860				

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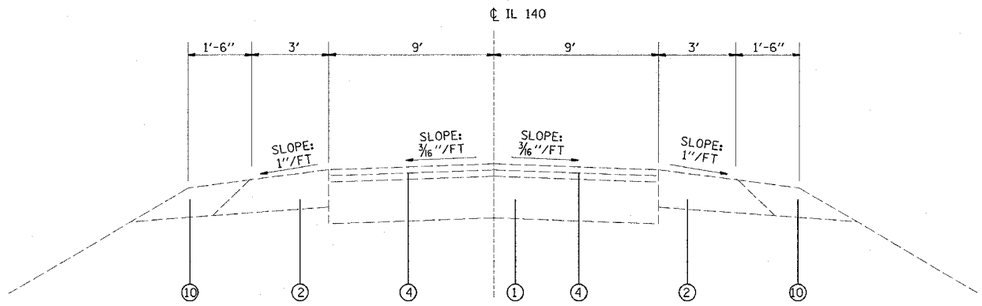
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



EXISTING TYPICAL SECTION RDWY

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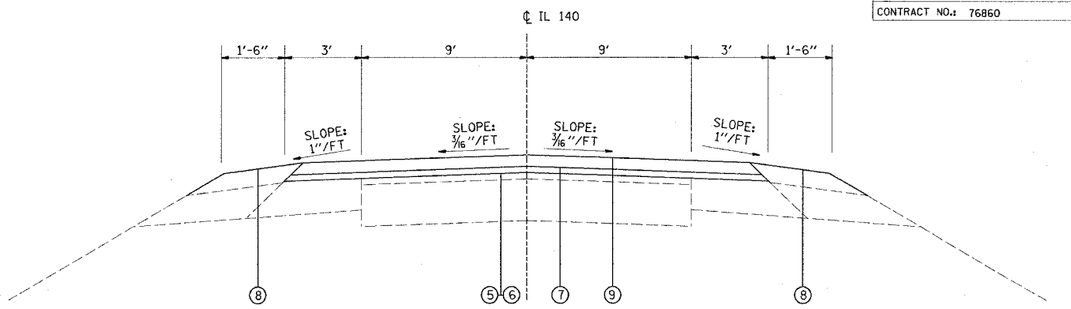
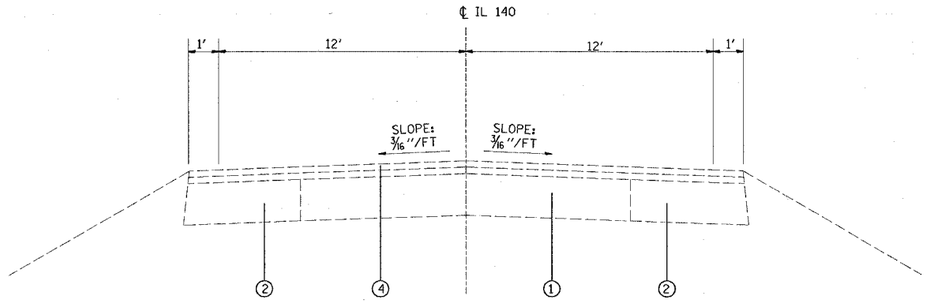
STA. 1809+72.35 TO STA. 1810+42.35



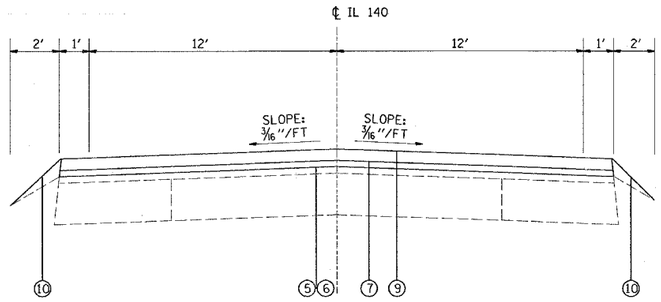
PROPOSED TYPICAL SECTION RDWY

STA. 1807+07.70 TO STA. 1807+77.70
STA. 1809+72.35 TO STA. 1810+42.35



EXISTING TYPICAL SECTION APP. PVMT.

STA. 1807.77.70 TO STA. 1808+07.70
STA. 1809+42.35 TO STA. 1809+72.35



PROPOSED TYPICAL SECTION APP. PVMT.

STA. 1807.77.70 TO STA. 1808+07.70
STA. 1809+42.35 TO STA. 1809+72.35

LEGEND

(1) EXISTING PCC PAVEMENT
(2) EXISTING BITUMINOUS CONCRETE BASE COURSE WIDENING - 9"
(3) EXISTING BITUMINOUS SHOULDER
(4) EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 1"
(5) PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
(6) PROPOSED AGGREGATE (PRIME COAT)
(7) PROPOSED BITUMINOUS BINDER COURSE 2"
(8) PROPOSED BITUMINOUS SHOULDER SUPERPAVE 2"
(9) PROPOSED BITUMINOUS SURFACE COURSE SUPERPAVE 1 1/2 "
(10) PROPOSED AGGREGATE SHOULDER, TYPE B 2"

DRAWING NOT TO SCALE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
INDIAN CREEK
S.N. 003-0025

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

DRAWN BY:

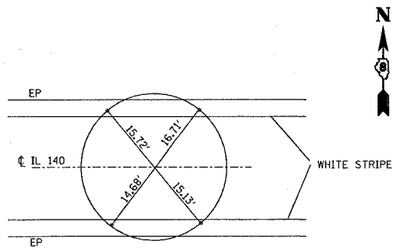
PLOT DATE: *DATE-TIME*

$$DATE*$
DATE-TIME
DWG-SPEC
*REF-
*REF-

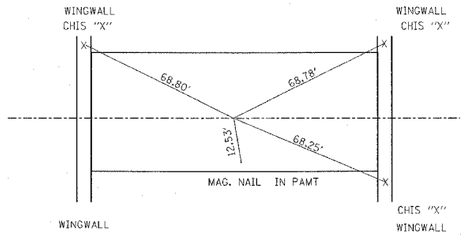
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	6
STA.	TO STA.			
CONTRACT NO.: 76860				

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNMENT CHECKED	
NOTE BOOK	AS-BUILT MARKED	
NO.	CADD FILE NAME	

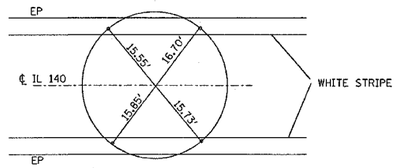
TIE POINTS



STATION 1819+00.00



STA. 1808+96.40
CENTER BRIDGE OVER INDIAN CREEK



STATION 1799+00.00

RESURFACING SCHEDULE

	LOCATION	BIT. CONC. SURFACE COARSE, SUPERPAVE MIX "C", N70	BIT. MATLS. (PRIME COAT)	AGG. MATLS. (PRIME COAT)	BIT. CONCRETE BINDER COARSE SUPERPAVE N30 IL-19.0	BIT. SHLD. SUPERPAVE
		TON	TON	TON	TON	TON
BIG SHOAL CREEK	STA. 1767+63.10 TO STA. 1768+33.10	8	.12	.56	6	
	STA. 1767+63.10 TO STA. 1768+63.10					4
	STA. 1772+59.89 TO STA. 1773+29.89	8			5	
INDIAN CREEK	STA. 1807+29.63 TO STA. 1807+99.63	9	.12	.56	6	
	STA. 1809+93.17 TO STA. 1810+63.17	8			5	
	TOTALS	33	.24	1.12	22	4

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE AND TIE POINTS

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

DRAWN BY:

PLOT DATE: 3/31/2005

$$DATE$$
3/31/2005
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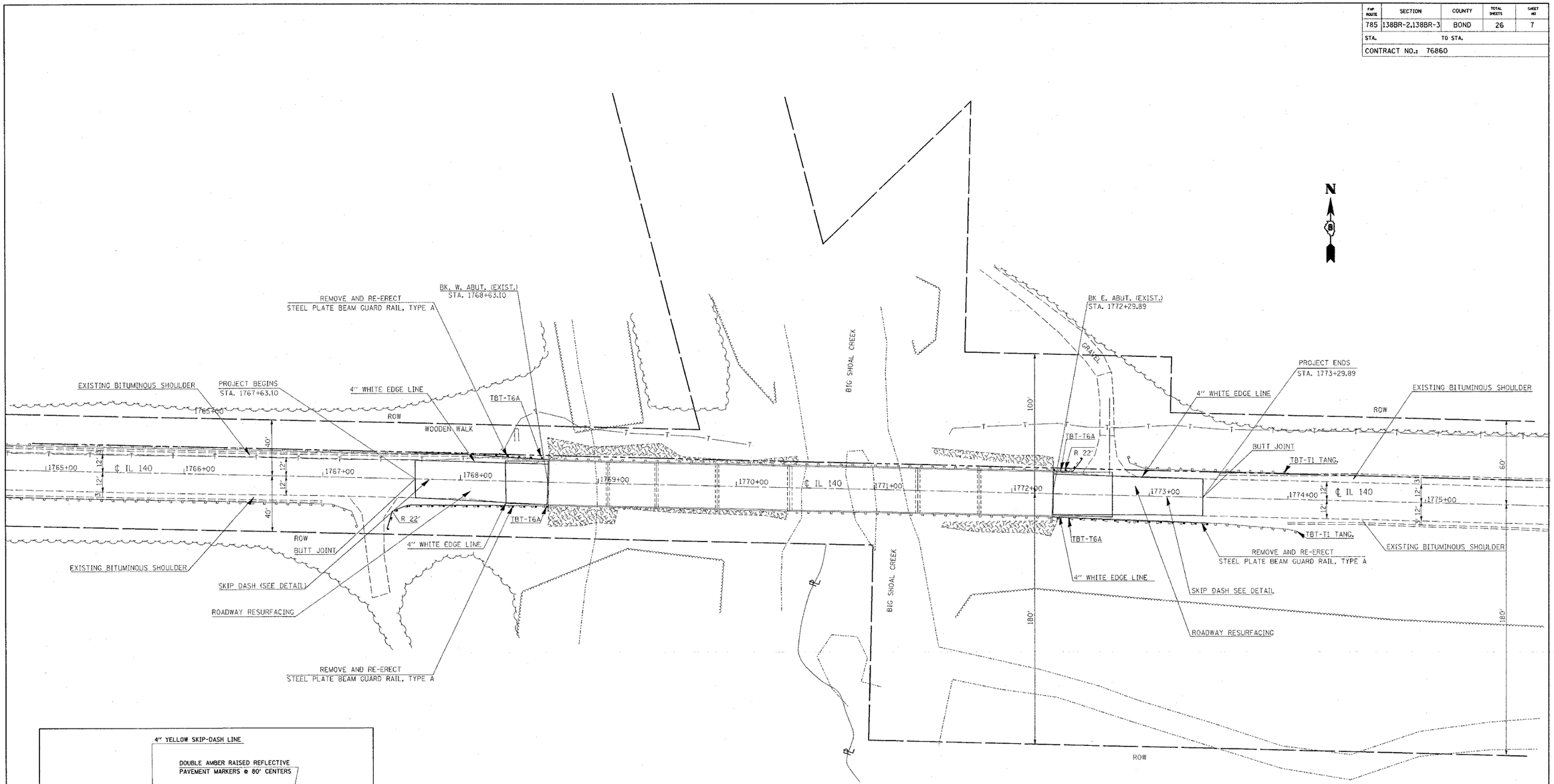
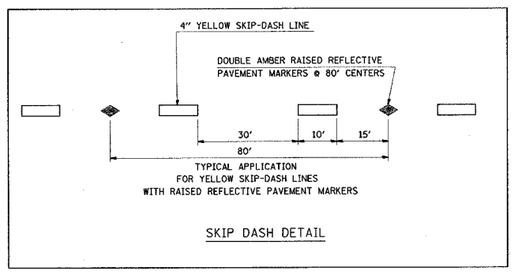
•REF:
•REF:

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	7
STA.	TO STA.			
CONTRACT NO.: 76860				





SKIP DASH DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

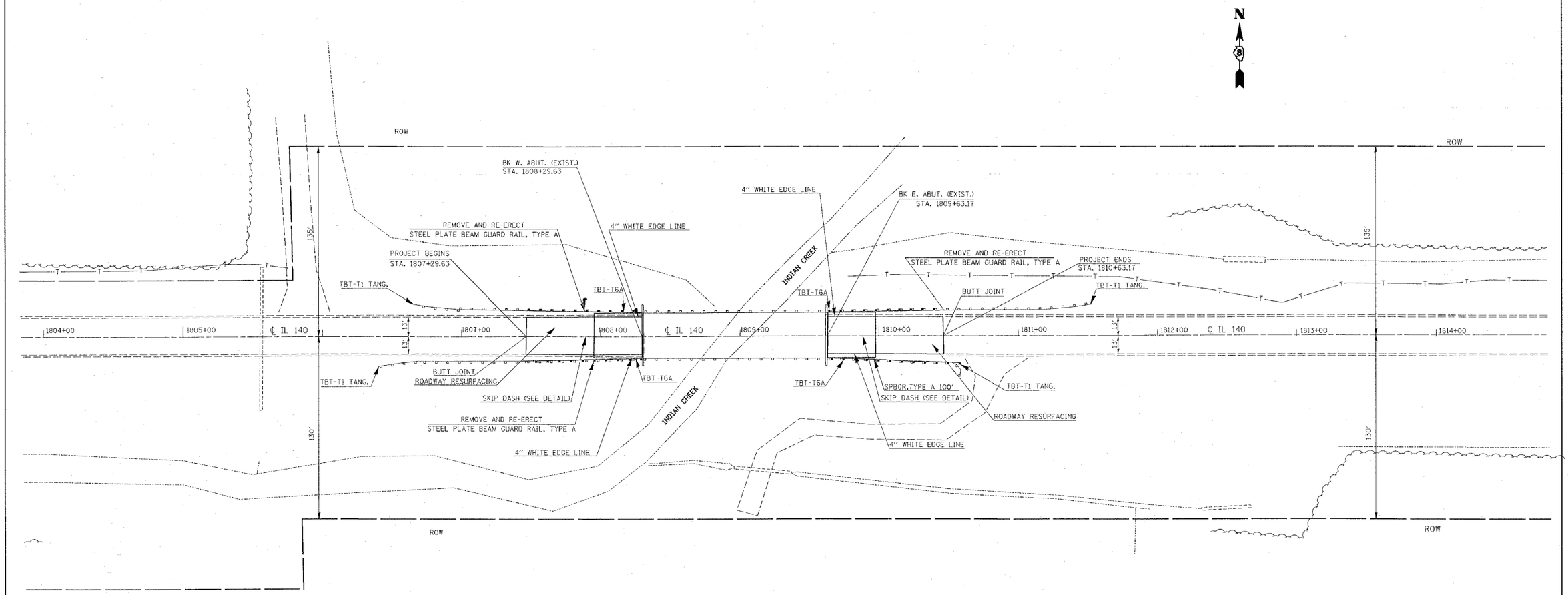
PLAN VIEW BIG SHOAL CREEK

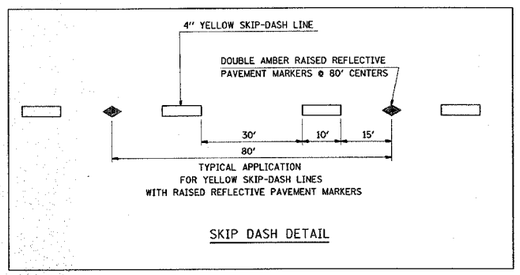
FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

DRAWN BY

PLOT DATE = #DATE#
FILE NAME = #FILE#
PLOT SCALE = #SCALE#
REFERENCE = #REF#

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	8
STA.		TO STA.		
CONTRACT NO.: 76860				





SKIP DASH DETAIL

0 50' 100'
SCALE 1" = 50'

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN VIEW INDIAN CREEK

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY

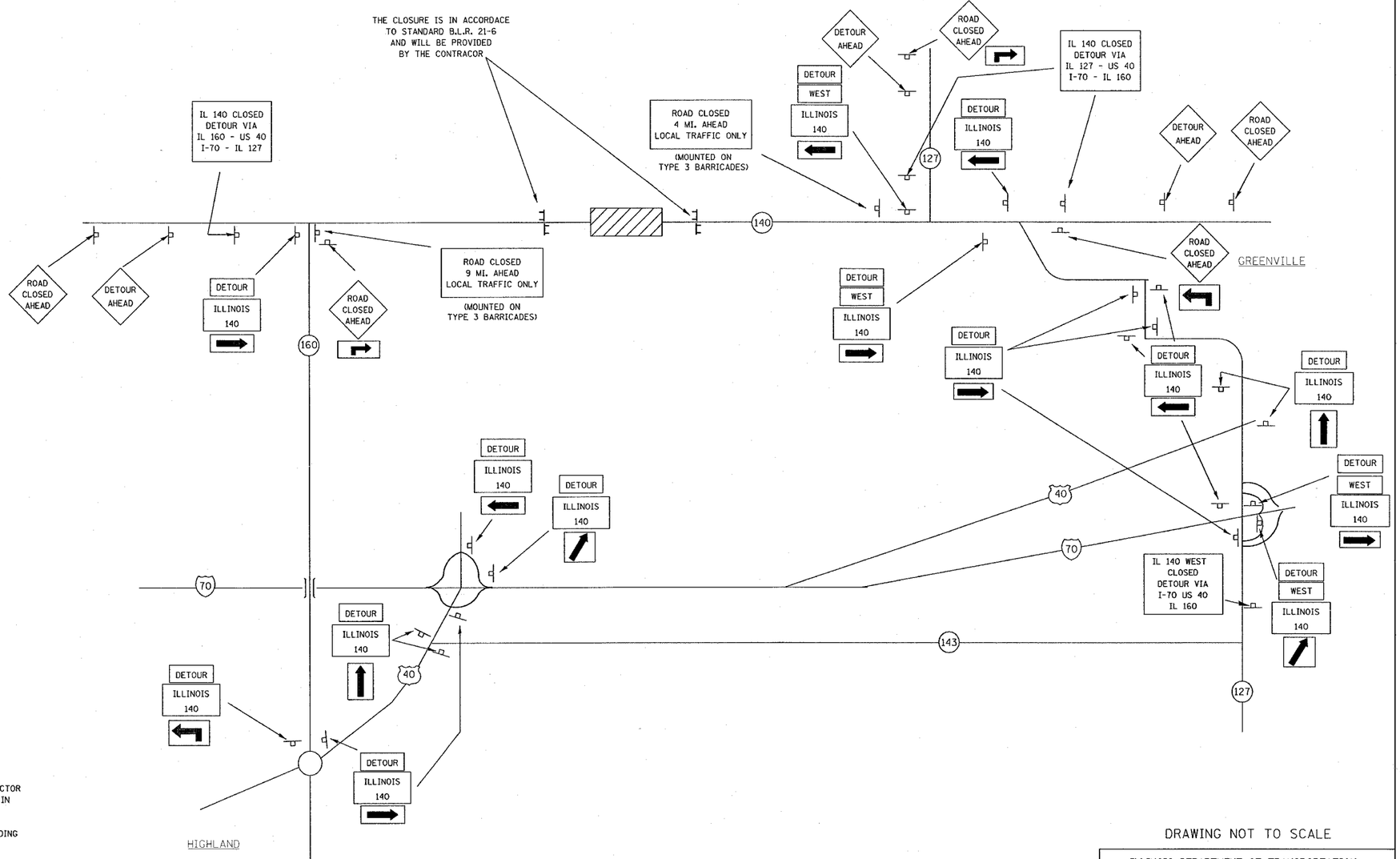
DRAWN BY

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
REFERENCE = REF

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
785	138BR-2,138BR-3	BOND	26	9
STA.	TO STA.			
CONTRACT NO.: 76860				

SIGNS REQUIRED

ILLINOIS 140	(21)	IL 140 CLOSED DETOUR VIA IL 160 - US 40 I-70 - IL 127	(1)
DETOUR	(21)	IL 140 CLOSED DETOUR VIA IL 127 - US 40 I-70 - IL 160	(2)
	(4)	IL 140 WEST CLOSED DETOUR VIA I-70 US 40 IL 160	(1)
	(2)	ROAD CLOSED AHEAD	(5)
	(2)	DETOUR AHEAD	(3)
	(2)	ROAD CLOSED 9 MI. AHEAD LOCAL TRAFFIC ONLY	(1)
	(6)	ROAD CLOSED 4 MI. AHEAD LOCAL TRAFFIC ONLY	(1)
	(8)		
WEST	(4)		



NOTES

1. ALL SIGNS REQUIRED SHALL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE R.E./R.T. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR THE SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE TM BUILDING AT 9601 ST. CLAIR AVE. IN FAIRVIEW HEIGHTS.
3. THE CONTRACTOR SHALL REMOVE AND RETURN THE SIGNS TO THE TM BUILDING IN FAIRVIEW HEIGHTS AFTER THE CONTRACT HAS BEEN COMPLETED.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR DETOUR SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.

PLAN — SURVEYED — BY — DATE
PLOTTED — CHECKED
ALL DATA CHECKED
NOTE BOOK
CADD FILE NAME
NO.

DRAWING NOT TO SCALE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING

FAP ROUTE 785
SECTION 138BR-2, 138BR-3
BOND COUNTY
SN 003-0024
SN 003-0025

DRAWN BY:

PLOT DATE: *DATE-TIME*

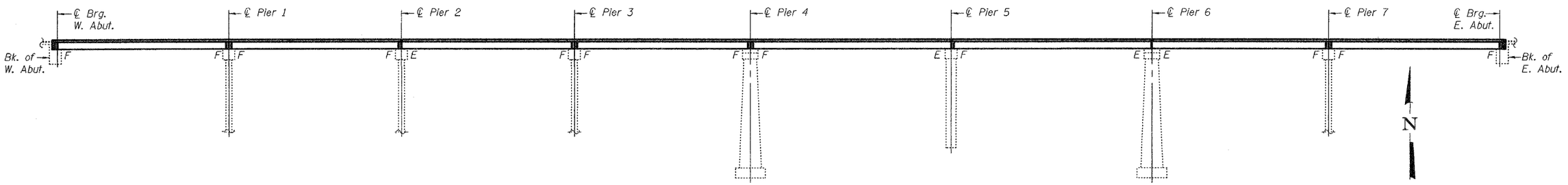
*$$DATE$$
DATE-TIME
DGN-SPEC
*REF-
*REF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

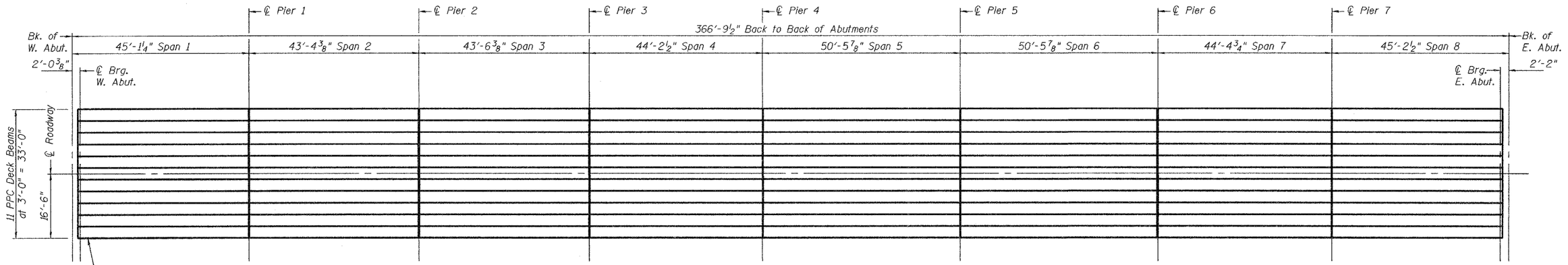
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
12 SHEETS

Contract Number: 76860



ELEVATION



PLAN

LOADING HS20-44

No allowance for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½" ϕ low lax strands)
f'si = 201,960 psi (½" ϕ low lax strands)

STATION 1770+46.50
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 785 SEC. 138BR-2
LOADING HS20
STR. NO. 003-0024

NAME PLATE

(See Std. 515001)

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.

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

Reinforcement bars shall conform to AASHTO M31 or M322, Grade 60.

Concrete sealer shall be applied to the exterior vertical face of each fascia beam. Cost included with PPC Deck Beams (21").

All construction joints shall be bonded.

No instream work will be allowed on this project.

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

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

If the contractors procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If cranes or other heavy equipment will be placed on new beams prior to placement of the concrete wearing surface, it shall be done after the dowel rods are grouted and cured for 24 hours minimum and prior to grouting the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
PPC Deck Beams (21" Depth)	Sq. Ft.	11,969
Concrete Structures	Cu. Yd.	4.7
Asbestos Bearing Pad Removal	Each	88
Reinforcement Bars, Epoxy Coated	Pound	16,350
Steel Bridge Rail, Type SM	Foot	734
Polymer Concrete	Cu. Ft.	7.2
Silicone Joint Sealer, 1½"	Foot	33
Silicone Joint Sealer, 2½"	Foot	33
Silicone Joint Sealer, 3"	Foot	33
Concrete Wearing Surface, 5"	Sq. Yd.	1,264
Bridge Deck Grooving	Sq. Yd.	1,246
Formed Concrete Repair (≤5")	Sq. Ft.	420
Name Plates	Each	1

DESIGNED Ronald A. Johnson
CHECKED VICTOR H. VELEZ
DRAWN
CHECKED PSJ VHV

May 10, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2006

PLAN AND ELEVATION
IL 140 / BIG SHOAL CR.
F.A.P. RT. 785
SEC. 138BR-2
BOND COUNTY
STA. 1770+46.50
SN 003-0024

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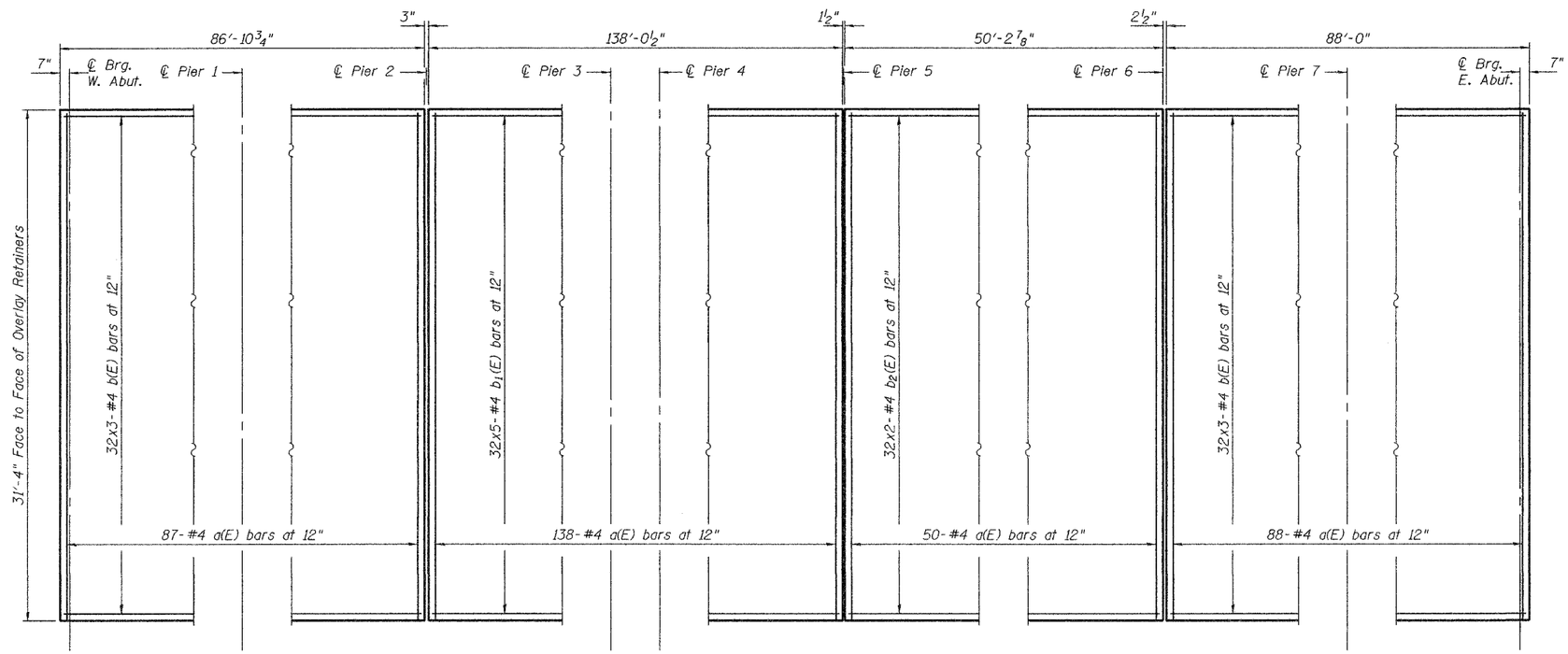
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

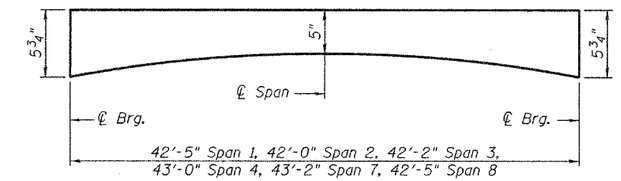
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
12 SHEETS

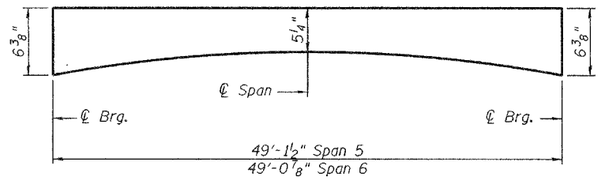
Contract Number: 76860



CONCRETE OVERLAY PARTIAL PLAN

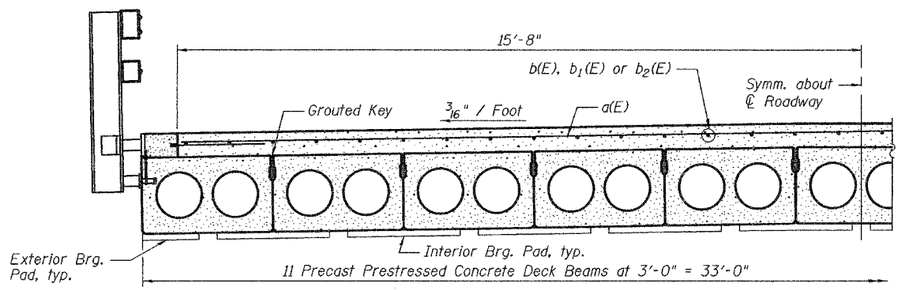


CONCRETE WEARING SURFACE PROFILE
SPANS 1 THRU 4, 7 AND 8



CONCRETE WEARING SURFACE PROFILE
SPANS 5 AND 6

Note:
Thicknesses shown are for Beams 1 thru 5 and 7 thru 11. Thickness for Beam 6 will vary from those shown at beam edges to ¼" additional at ℄ Roadway.



HALF CROSS SECTION

MIN. BAR LAP
#4 = 1'-4"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	363	#4	31'-0"	———
				———
b(E)	192	#4	30'-2"	———
b1(E)	160	#4	28'-8"	———
b2(E)	64	#4	25'-8"	———
Reinforcement Bars, Epoxy Coated			Pound	15,550

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

OVERLAY DETAILS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

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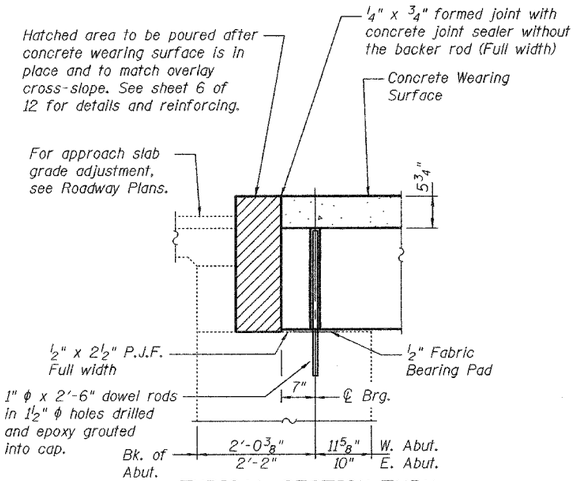
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

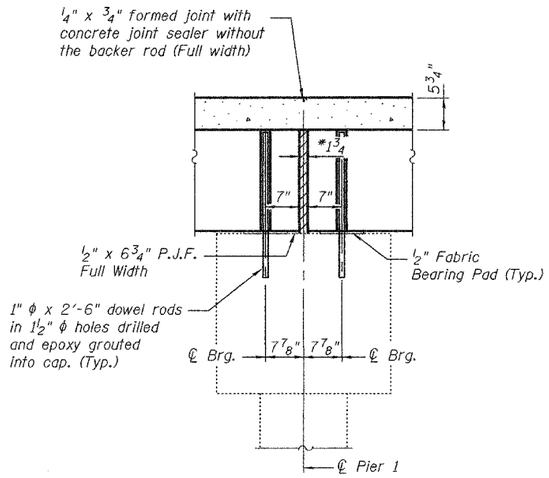
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	12	12.
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
12 SHEETS

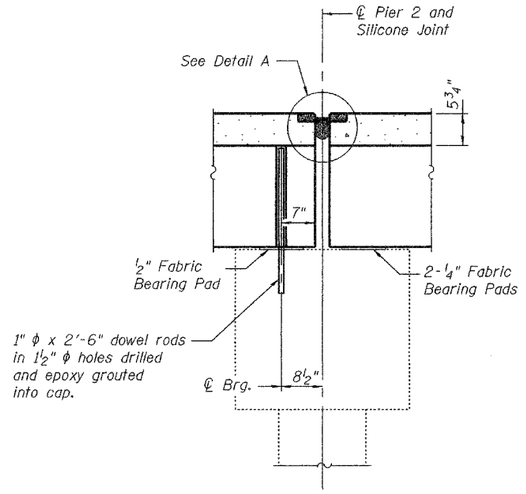
Contract Number: 76860



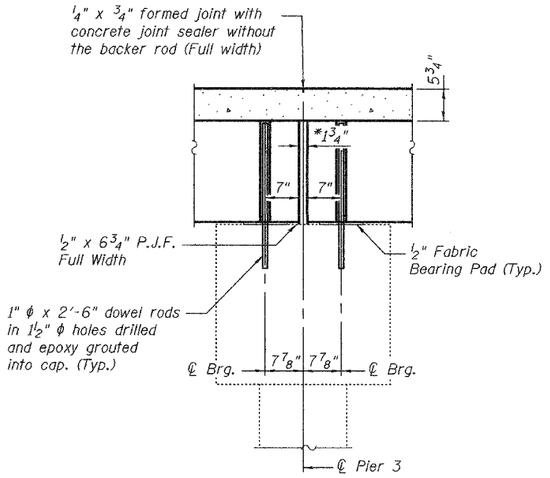
TYPICAL SECTION THRU FIXED ABUTMENTS



PIER 1 SECTION FIXED



PIER 2 SECTION FIXED / EXPANSION



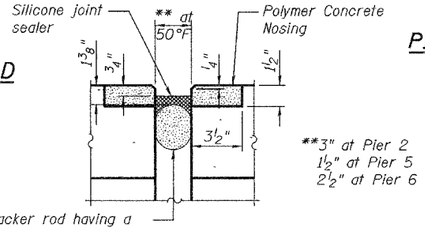
PIER 3 SECTION FIXED

PIER 4 SECTION FIXED

PIER 5 SECTION EXPANSION / FIXED

PIER 6 SECTION EXPANSION

PIER 7 SECTION FIXED



**3" at Pier 2
1 1/2" at Pier 5
2 1/2" at Pier 6

DETAIL A

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

*Joint shall be filled with non-shrink grout. This dimension may vary plus or minus to accomodate tolerance in beam lengths.

Notes:
All Pier sections are looking North.
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed 1'-3" Minimum into existing caps. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min 24 hours prior to grouting the shear keys.

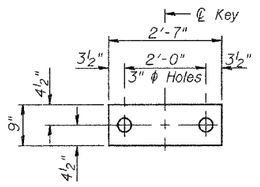
ABUTMENT AND PIER JOINT DETAILS
F.A.P. RT.785
BOND COUNTY
SN 003-0024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

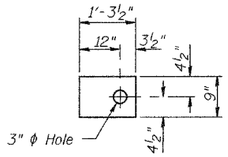
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	13
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
12 SHEETS

Contract Number: 76860

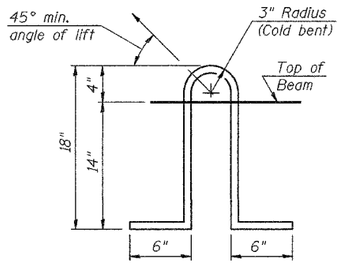


FABRIC BEARING PAD
(Interior)

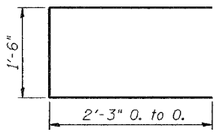


FABRIC BEARING PAD
(Exterior)

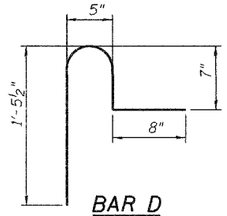
FIXED



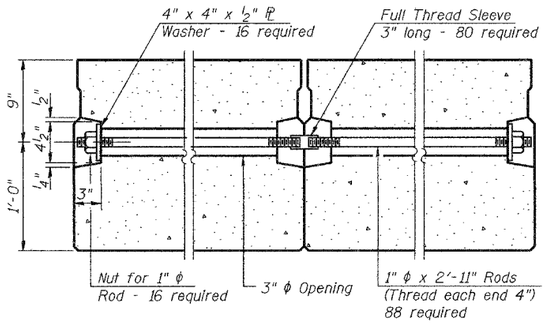
LIFTING LOOP DETAIL



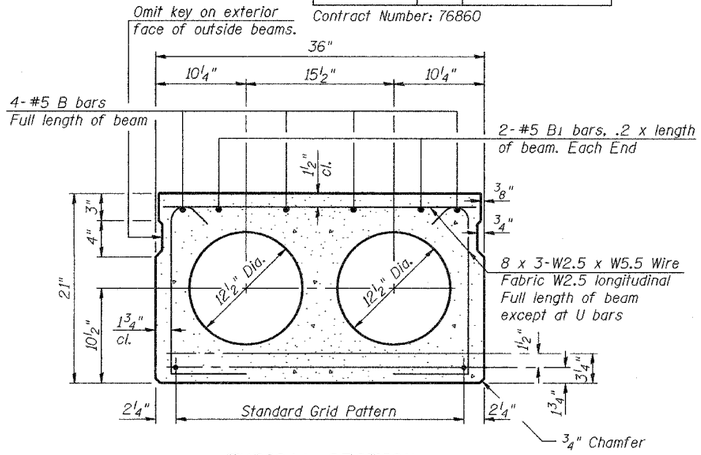
BAR U



BAR D



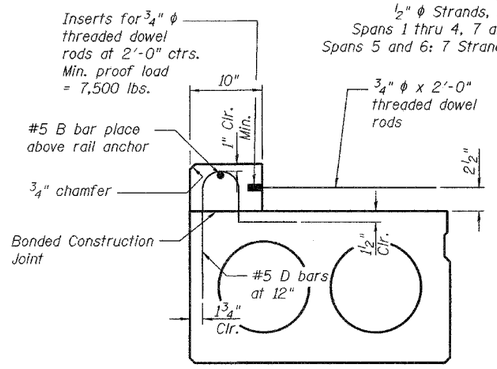
TYPICAL TRANSVERSE TIE ASSEMBLY



TYPICAL SECTION

½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
Spans 1 thru 4, 7 and 8: 5 Strands 1¾" Up, 6 Strands 3¼" Up
Spans 5 and 6: 7 Strands 1¾" Up, 6 Strands 3¼" Up, 2 Strands 9" Up

Note:
Place strands symmetrically about ℄ of beam.

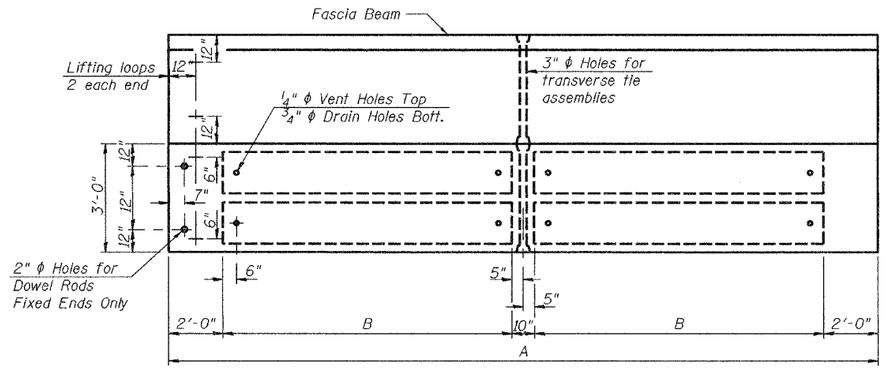


TYPICAL SECTION AT FASCIA BEAM

See section thru Interior Beams for strand pattern, dimensions and bar call outs.

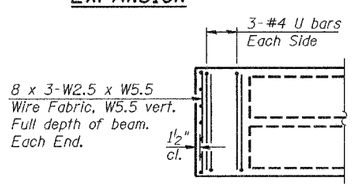
Bridge rail inserts shall be cast in precast beams and curbs. Curbs shall be cast by the precast prestressed concrete supplier after strands have been released and prior to shipping the beam. The concrete in the curb shall be the same as specified for the deck beams.

The curb inserts and threaded dowel rods may be either epoxy coated or galvanized and the cost shall be included with PPC Deck Beams (21").



PLAN

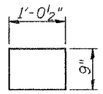
Span	A	B
1	43'-7"	19'-4½"
2	43'-2"	19'-2"
3	43'-4"	19'-3"
4	44'-2"	19'-8"
5	50'-3½"	22'-8¾"
6	50'-2⅞"	22'-8⁷⁄₁₆"
7	44'-4"	19'-9"
8	43'-7"	19'-4½"



END PLAN

EXPANSION

FABRIC BEARING PAD
(Interior)



FABRIC BEARING PAD
(Exterior)

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-½" ϕ-270 ksi strands, as shown.

The 1" ϕ 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.

Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

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

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

Required Release Strength, f'ci, shall be 4000 p.s.i.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Conc. Deck Bms. (21")			Sq. Ft.	11,969

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
F.A.P. RT.785
BOND COUNTY
SN 003-0024

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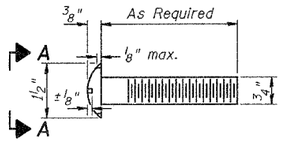
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

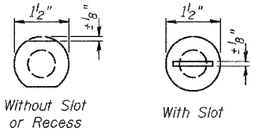
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	14
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
12 SHEETS

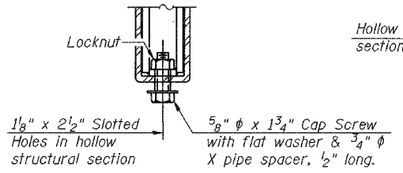
Contract Number: 76860



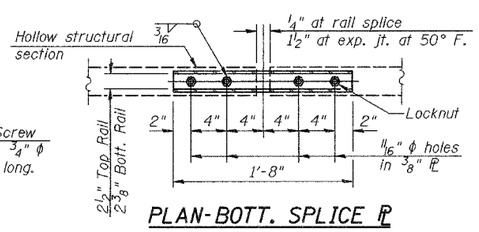
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



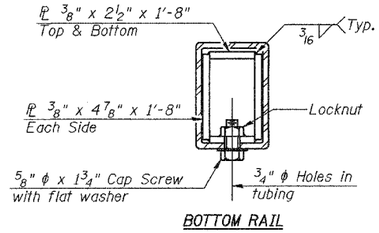
VIEW A-A



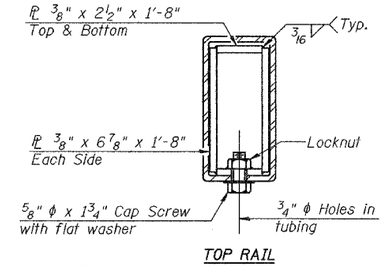
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL TYPICAL

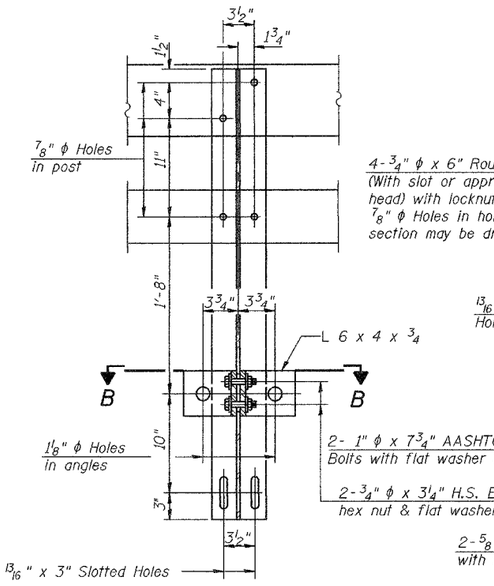


BOTTOM RAIL

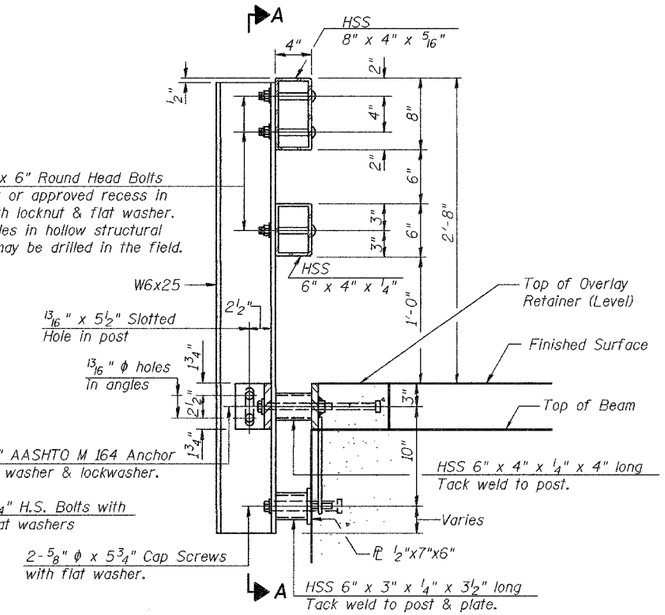


TOP RAIL

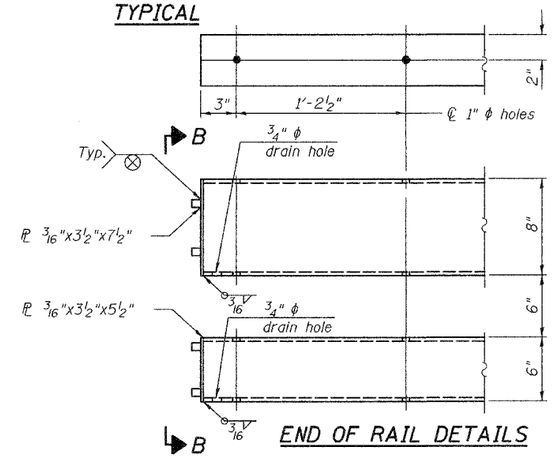
SECTIONS AT RAIL SPLICE



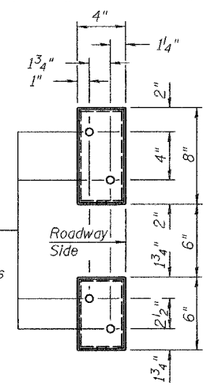
SECTION A-A



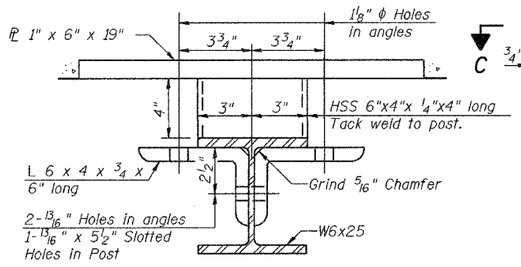
SECTION AT RAIL POST



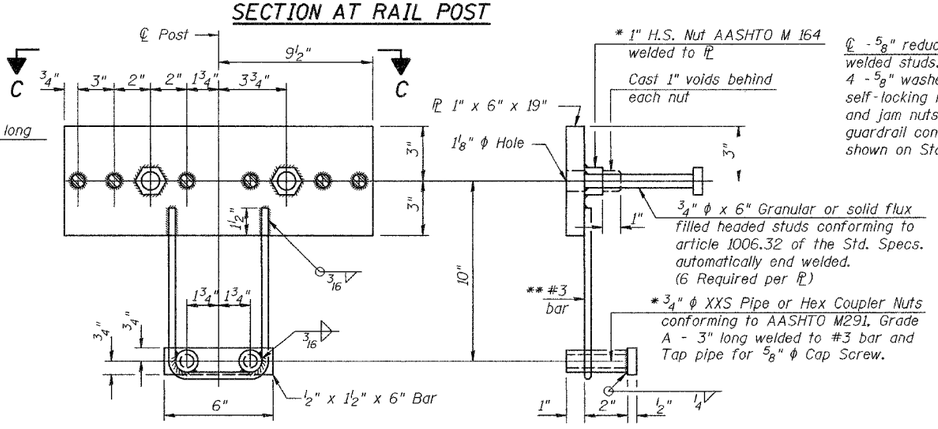
END OF RAIL DETAILS



VIEW B-B



SECTION B-B



ANCHOR DEVICE

VIEW C-C

NOTES

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

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

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

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

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

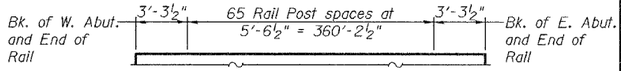
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

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

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.



RAIL POST SPACING

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	734

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

(6'-3" Max Post Spacing)

* 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".

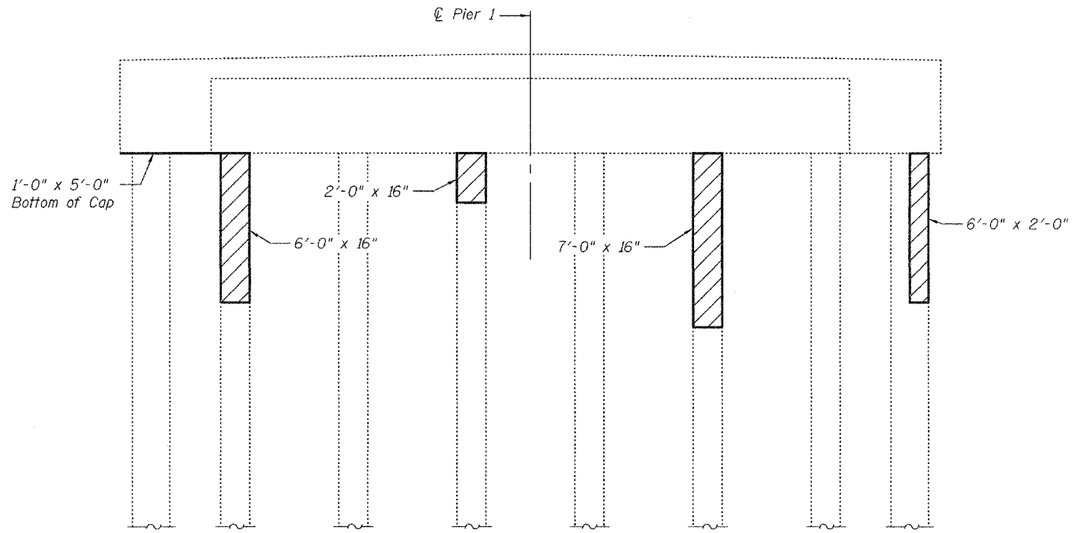
SIDE MOUNT BRIDGE RAIL DETAILS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

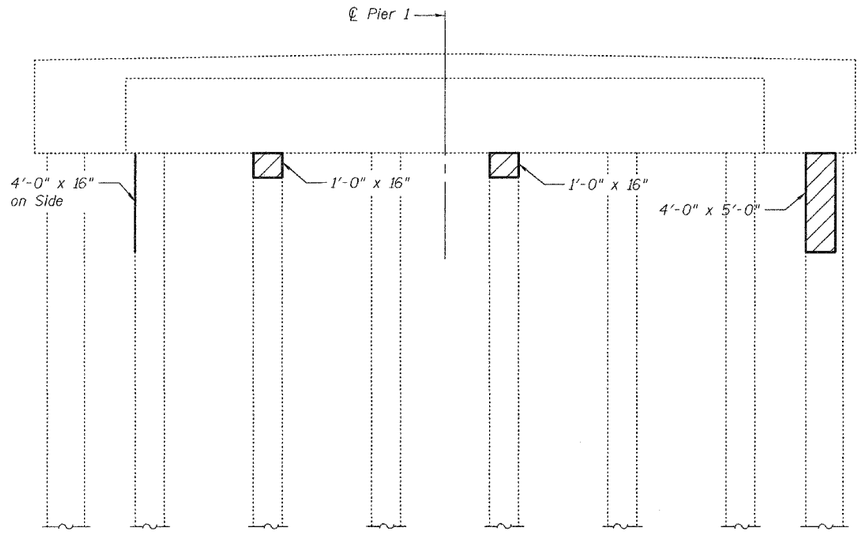
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
12 SHEETS

Contract Number: 76860

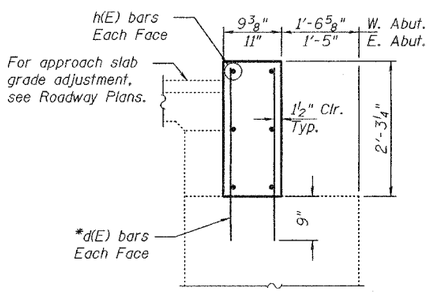


WEST SIDE PIER 1
(Looking East)

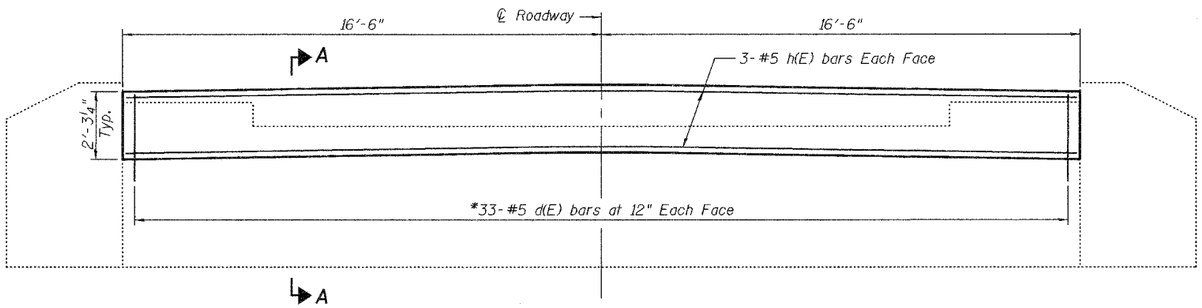


EAST SIDE PIER 1
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.



SECTION A-A



TYPICAL ABUTMENT ELEVATION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	132	#5	2'-10"	
h(E)	12	#5	32'-9"	
Formed Concrete Repair (≤5")			Sq. Ft.	65
Reinforcement Bars, Epoxy Coated			Pound	800
Concrete Structures			Cu. Yd.	4.7

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

*Drill and epoxy grout in accordance with Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

PIER 1 FORMED CONCRETE REPAIRS AND ABUTMENT DETAILS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

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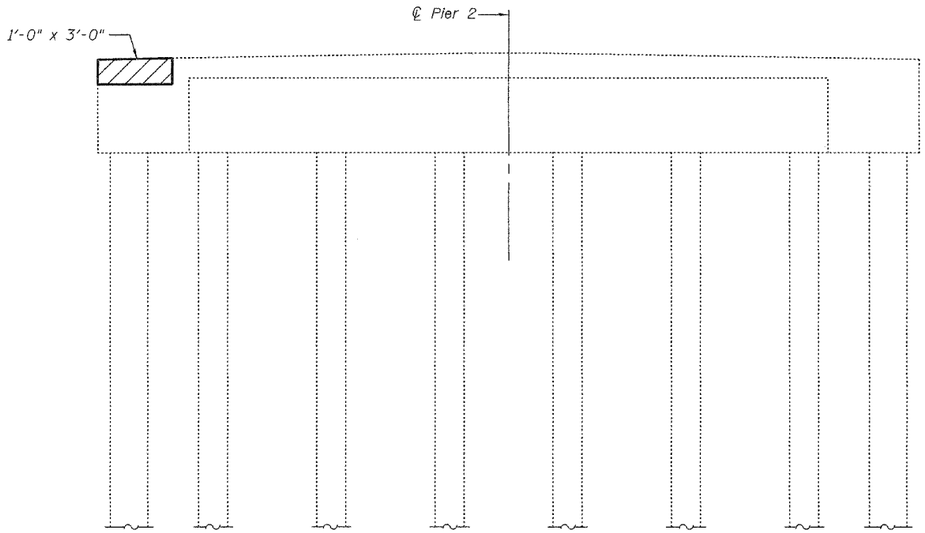
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

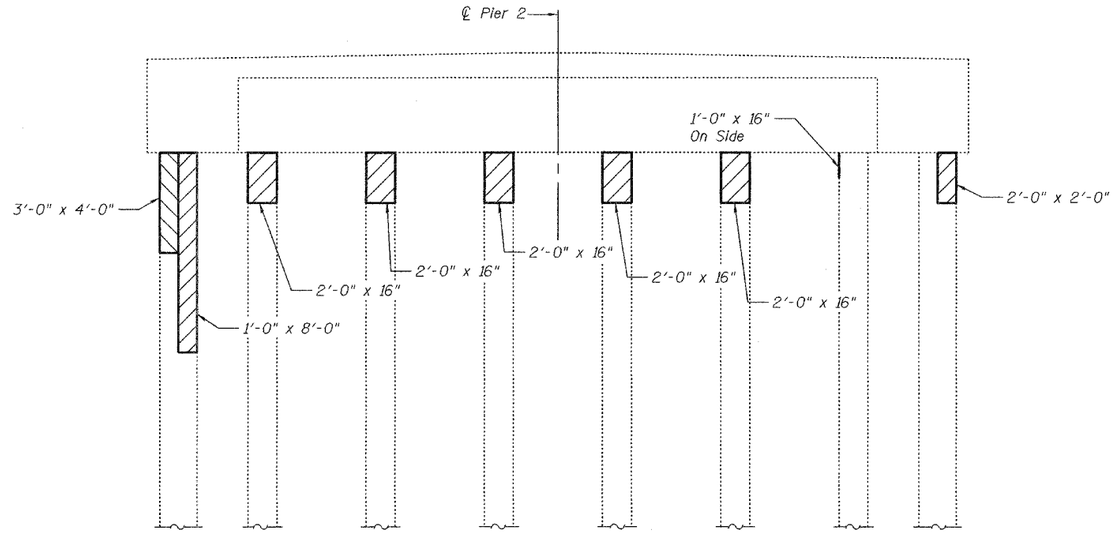
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	16
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 2
(Looking East)



EAST SIDE PIER 2
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	42

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 2 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

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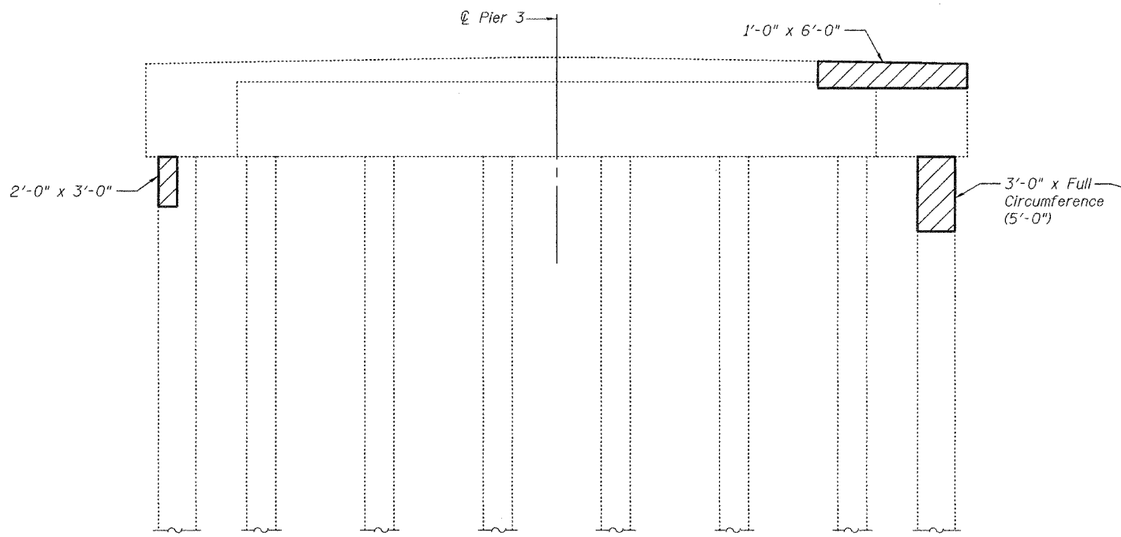
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

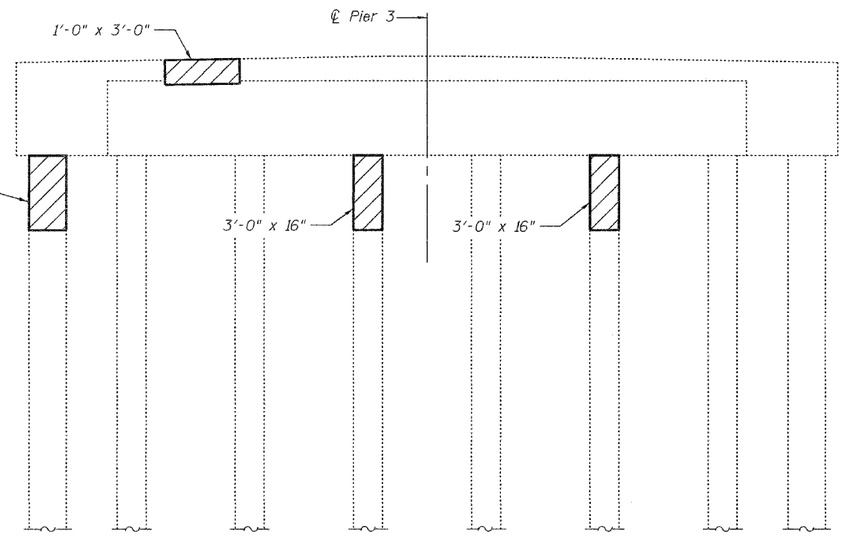
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 3
(Looking East)



EAST SIDE PIER 3
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	38

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 3 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

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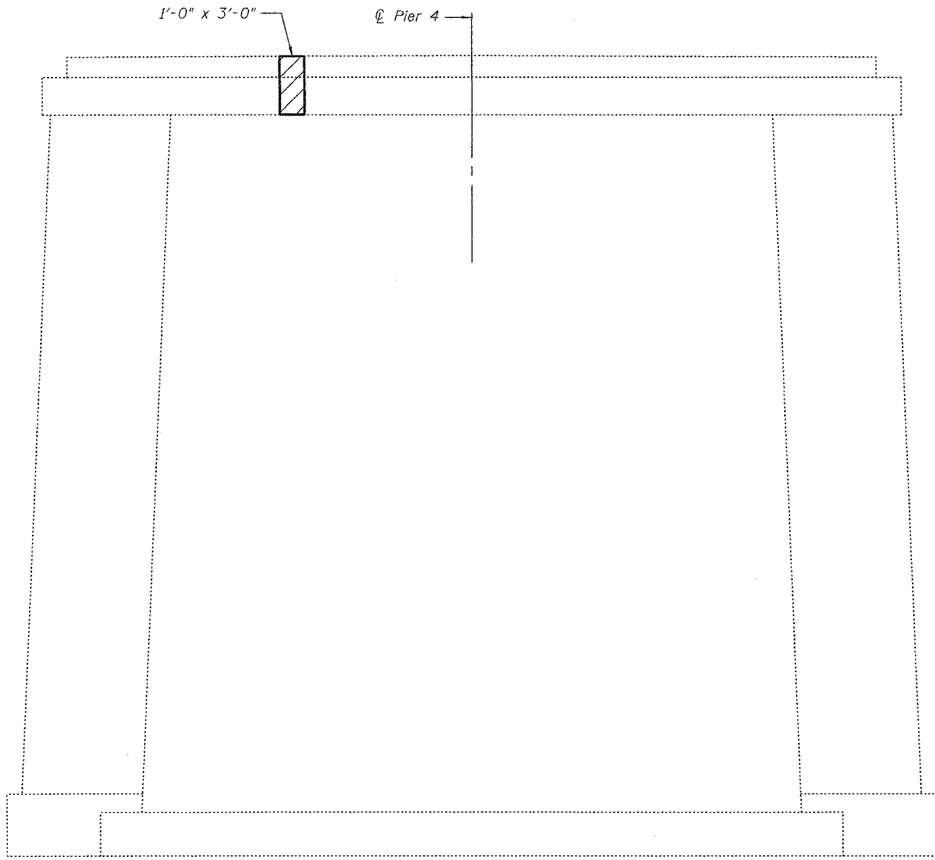
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

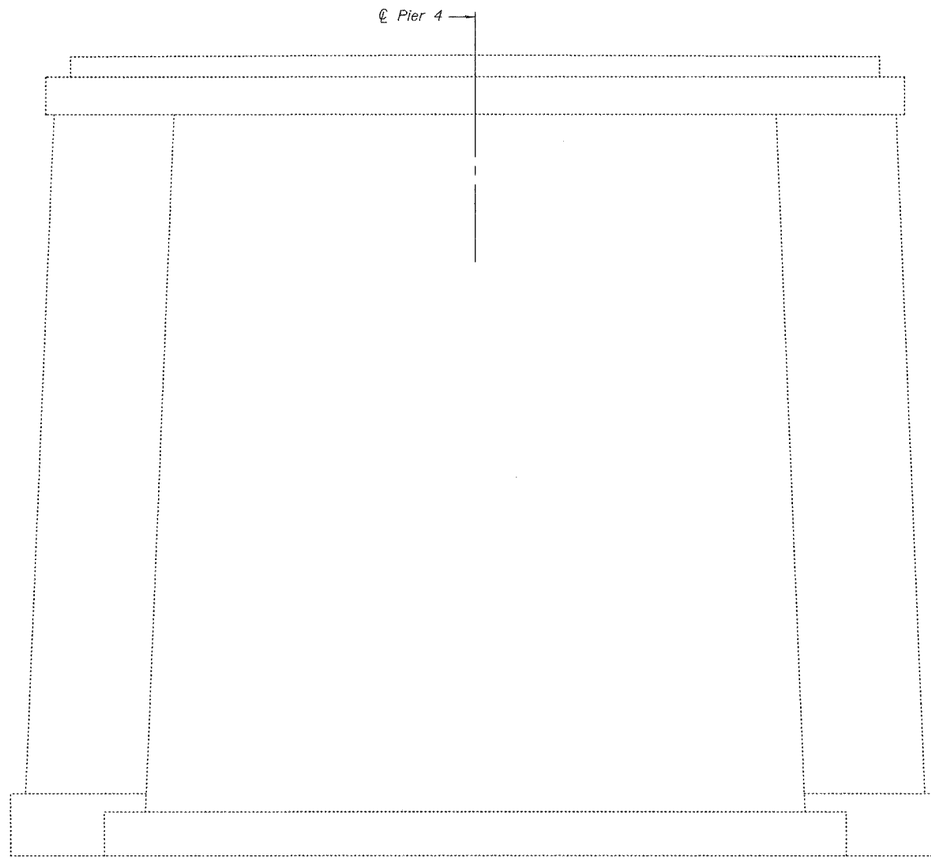
SHEET NO. 9
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 4
(Looking East)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.



EAST SIDE PIER 4
(Looking West)

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	3

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

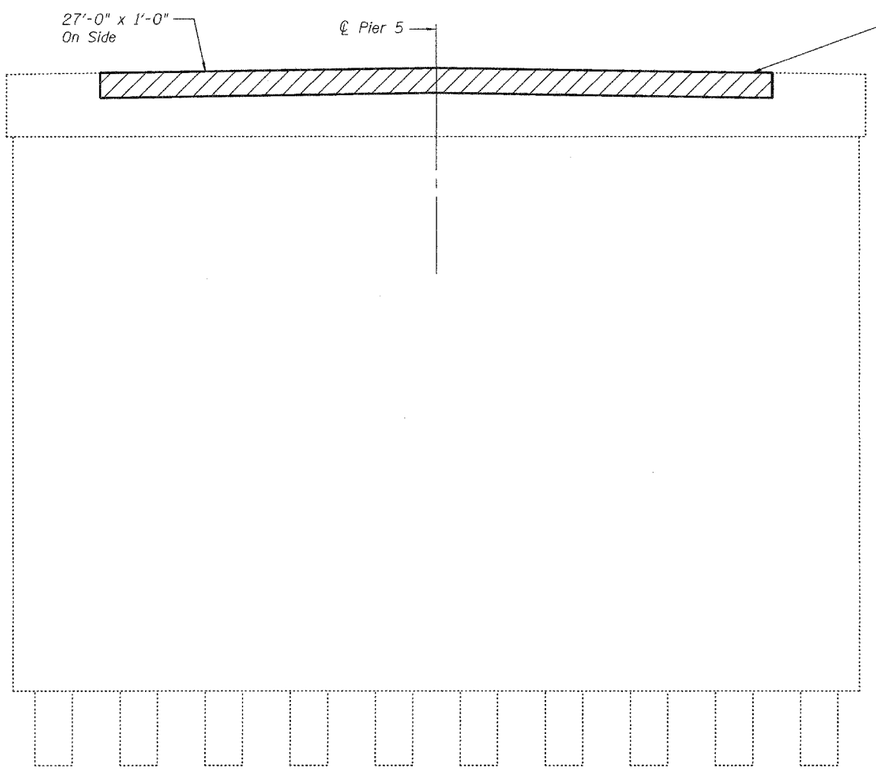
PIER 4 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

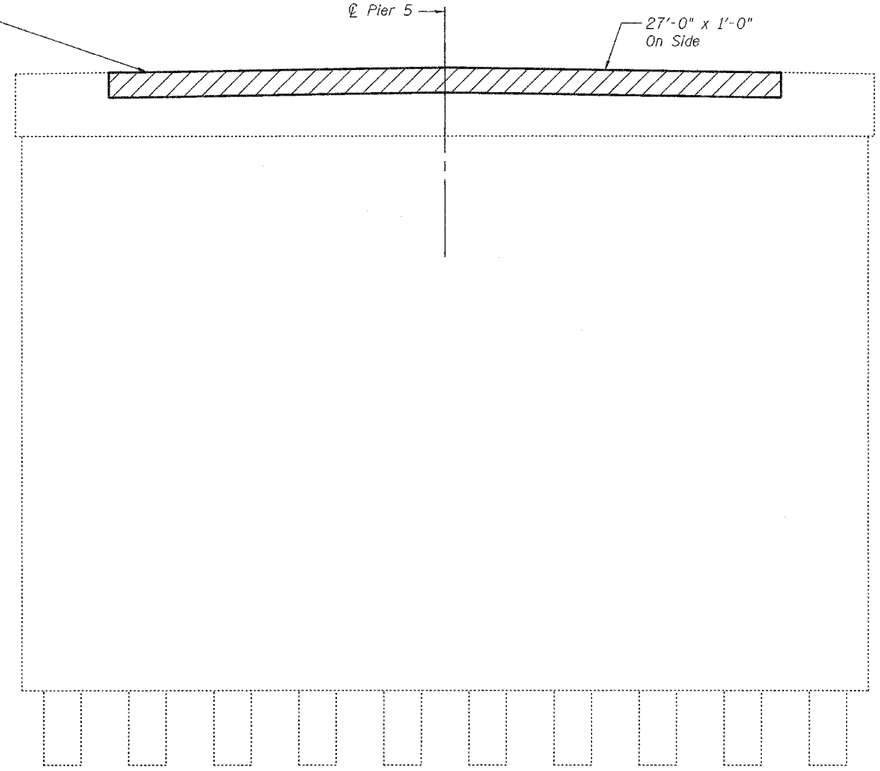
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	19
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 5
(Looking East)



EAST SIDE PIER 5
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	135

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

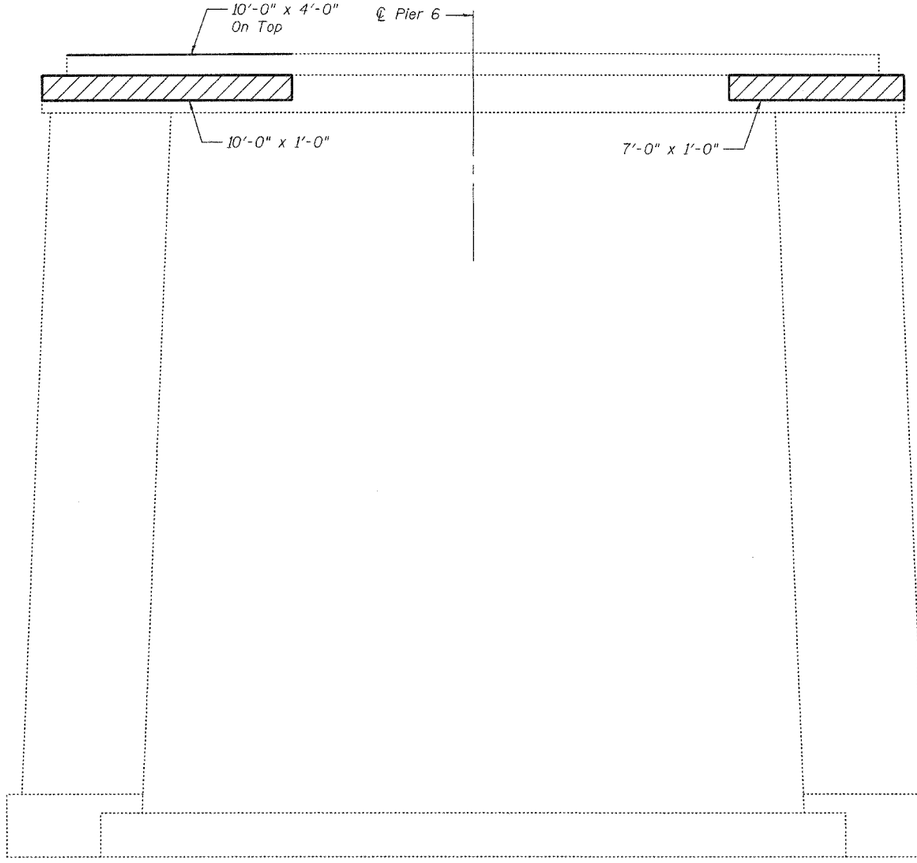
PIER 5 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

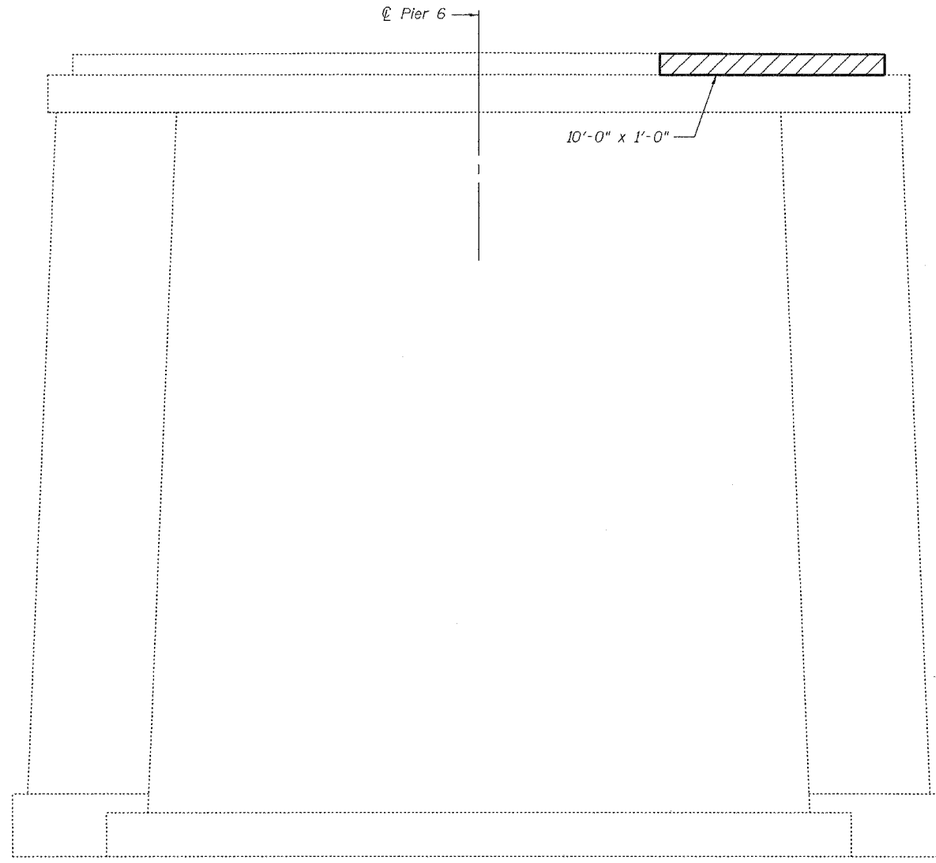
SHEET NO. 11
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 6
(Looking East)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.



EAST SIDE PIER 6
(Looking West)

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	67

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

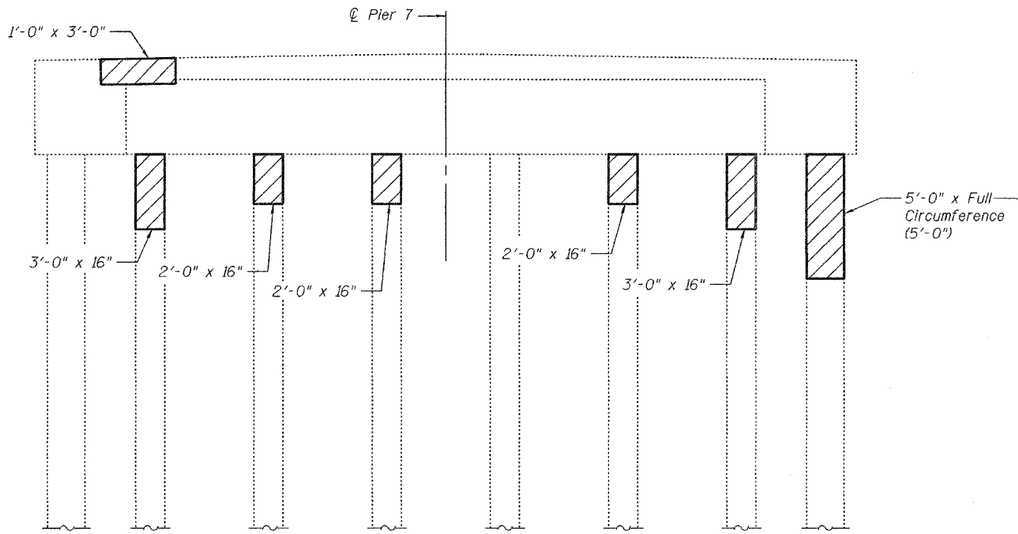
PIER 6 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

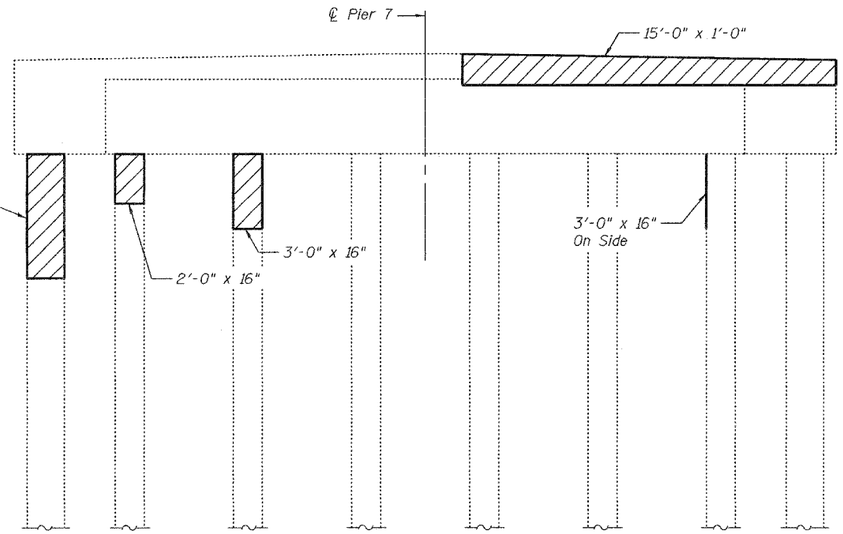
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
12 SHEETS

Contract Number: 76860



WEST SIDE PIER 7
(Looking East)



EAST SIDE PIER 7
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	70

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 7 FORMED CONCRETE REPAIRS
F.A.P. RT. 785
BOND COUNTY
SN 003-0024

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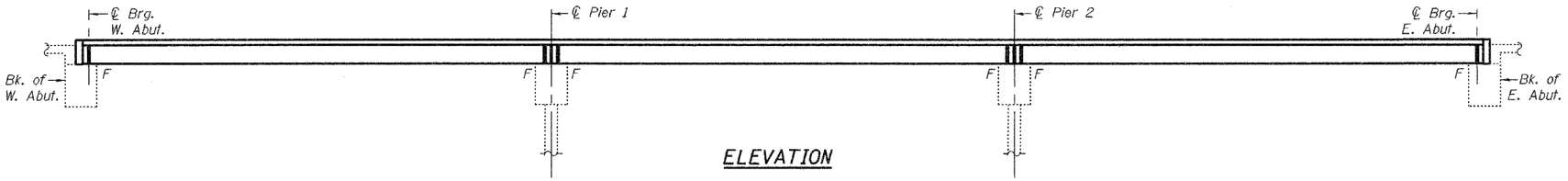
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

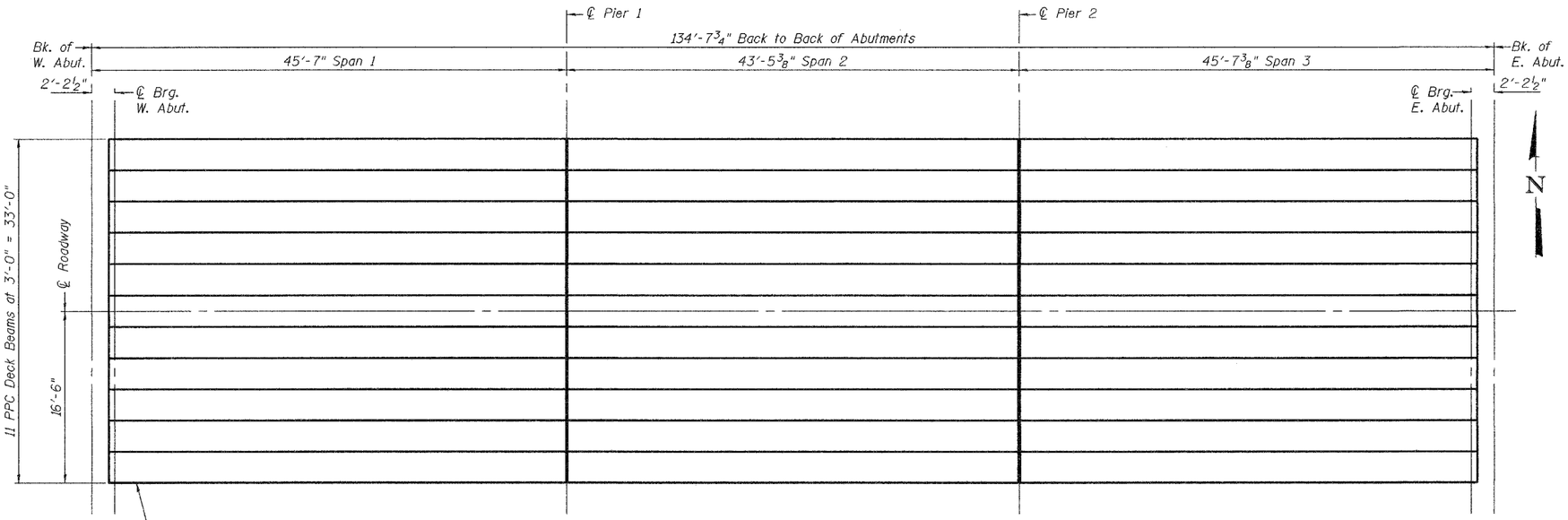
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	22
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
6 SHEETS

Contract Number: 76860



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
PPC Deck Beams (21" Depth)	Sq. Ft.	4,329
Concrete Structures	Cu. Yd.	3.5
Reinforcement Bars, Epoxy Coated	Pound	6,070
Steel Bridge Rail, Type SM	Foot	269
Concrete Wearing Surface, 5"	Sq. Yd.	457
Bridge Deck Grooving	Sq. Yd.	451
Formed Concrete Repair (≤5")	Sq. Ft.	151
Name Plates	Each	1

LOADING HS20-44

No allowance for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½" ϕ low lax strands)
f'si = 201,960 psi (½" ϕ low lax strands)

STATION 1808+75.00
BUILT 20 BY
STATE OF ILLINOIS
F.A. RT. 785 SEC. 138BR-3
LOADING HS20
STR. NO. 003-0025

NAME PLATE

(See Std. 515001)

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.

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

Reinforcement bars shall conform to AASHTO M31 or M322, Grade 60.

Concrete sealer shall be applied to the exterior vertical face of each fascia beam. Cost included with PPC Deck Beams (21").

All construction joints shall be bonded.

No instream work will be allowed on this project.

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

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

If the contractors procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If cranes or other heavy equipment will be placed on new beams prior to placement of the concrete wearing surface, it shall be done after the dowel rods are grouted and cured for 24 hours minimum and prior to grouting the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

DESIGNED	Paul A. Johnson
CHECKED	Victor H. Veliz
DRAWN	
CHECKED	PSJ VHV

May 10, 2005

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2006

PLAN AND ELEVATION
IL 140 / INDIAN CR.
F.A. RT. 785
SEC. 138BR-3
BOND COUNTY
STA. 1808+75.00
SN 003-0025

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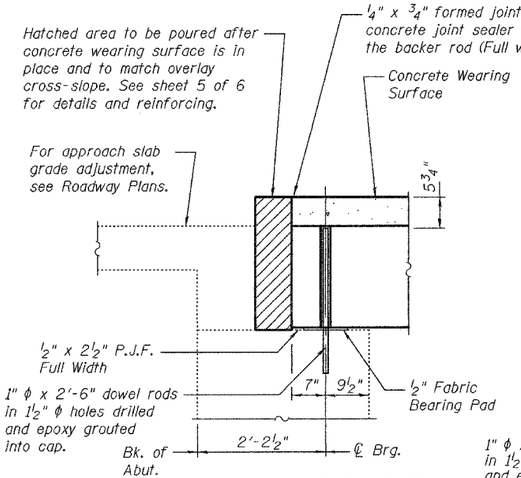
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	29	23
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

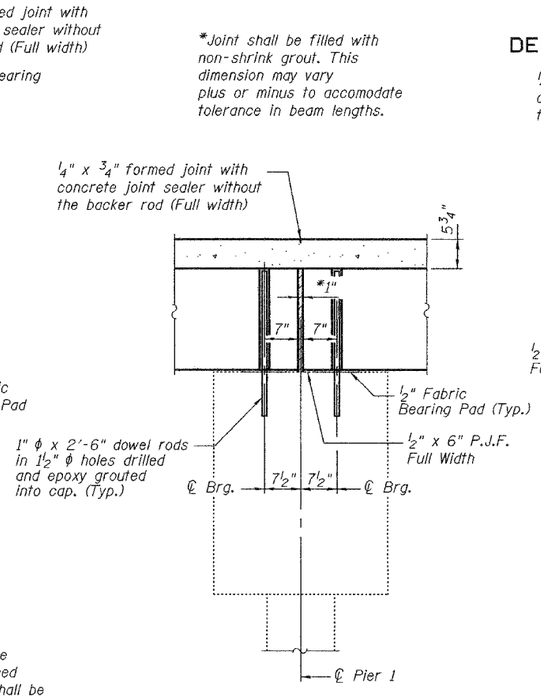
SHEET NO. 2
6 SHEETS

Contract Number: 76860

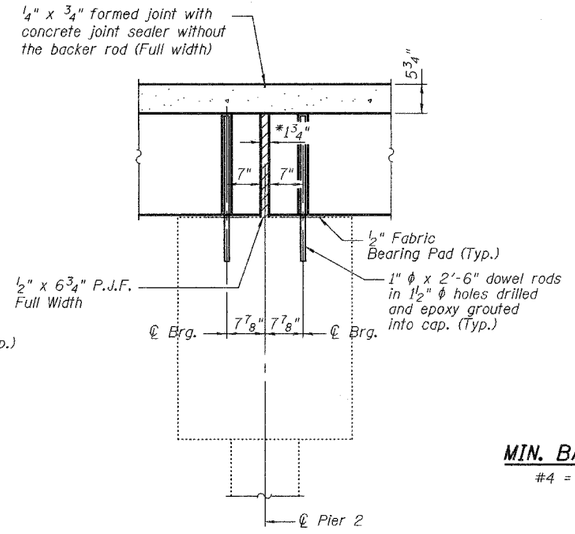
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TYPICAL SECTION THRU FIXED ABUTMENTS



PIER 1 SECTION FIXED

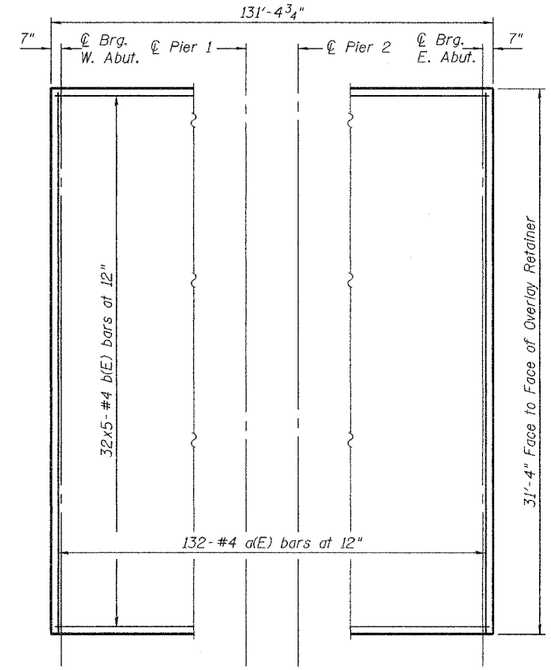


PIER 2 SECTION FIXED

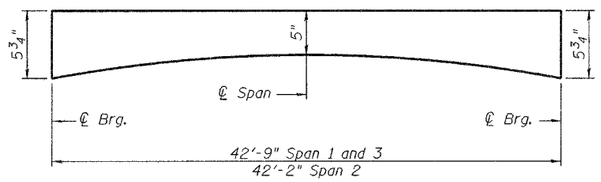
MIN. BAR LAP

#4 = 1'-4"

Notes:
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed 1'-3" Minimum into existing caps. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min 24 hours prior to grouting the shear keys.

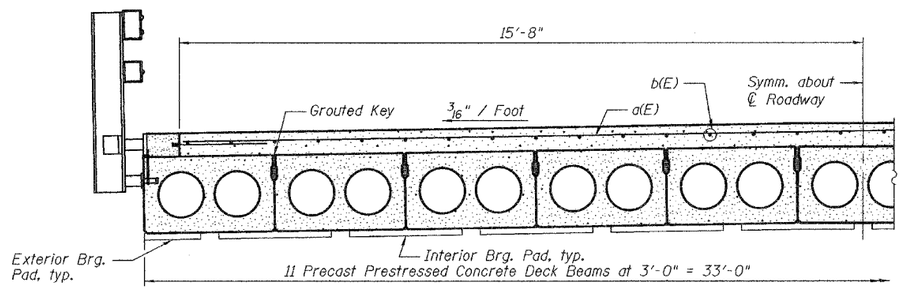


CONCRETE OVERLAY PARTIAL PLAN



CONCRETE WEARING SURFACE PROFILE

Note:
Thicknesses shown are for Beams 1 thru 5 and 7 thru 11. Thickness for Beam 6 will vary from those shown at beam edges to 1/4" additional at ℄ Roadway.



HALF CROSS SECTION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	132	#4	31'-0"	
b(E)	160	#4	27'-6"	
Reinforcement Bars, Epoxy Coated			Pound	5,670

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2- #5 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

OVERLAY AND JOINT DETAILS
F.A. RT. 785
BOND COUNTY
SN 003-0025

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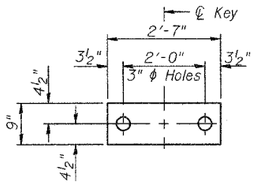
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

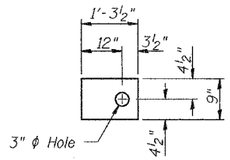
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
6 SHEETS

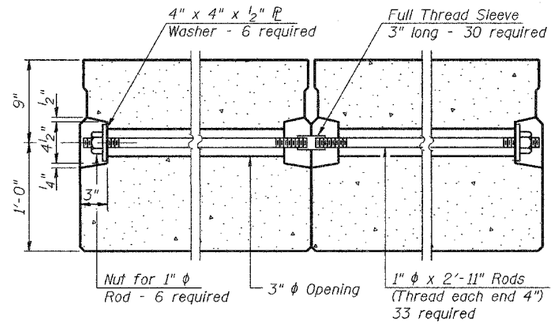
Contract Number: 76860



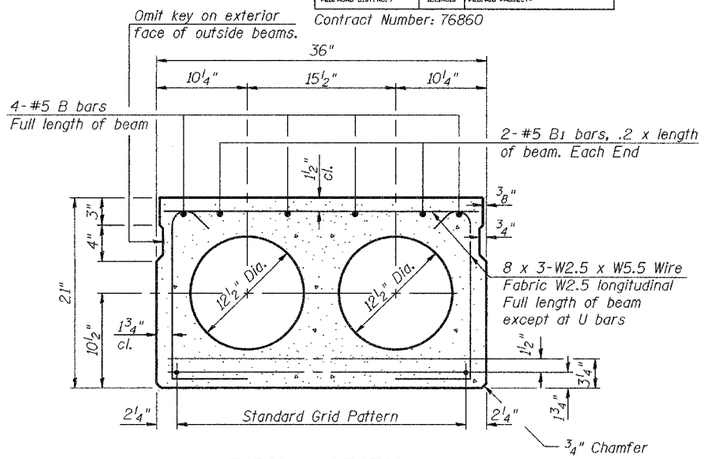
FABRIC BEARING PAD
(Interior)



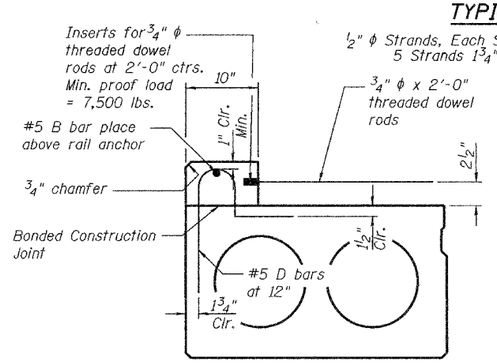
FABRIC BEARING PAD
(Exterior)



TYPICAL TRANSVERSE TIE ASSEMBLY



TYPICAL SECTION

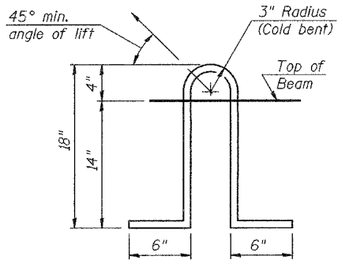


TYPICAL SECTION AT FASCIA BEAM

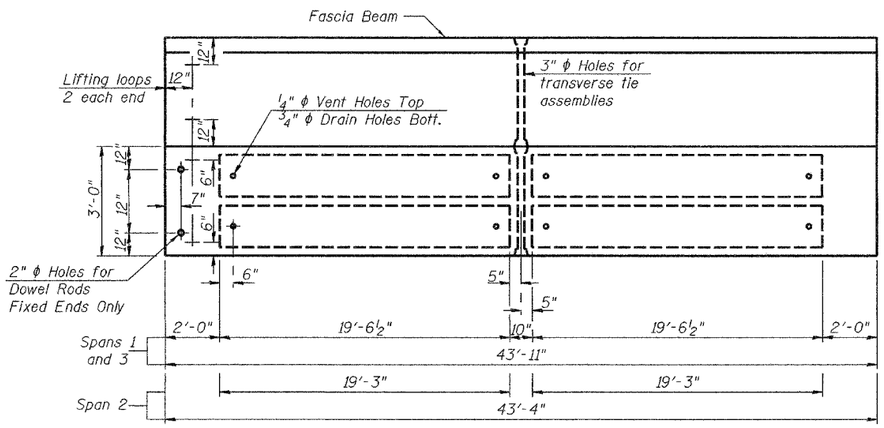
½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
5 Strands 1¾" up - 6 Strands 3¼" up

Note:
Place strands symmetrically about ℄ of beam.

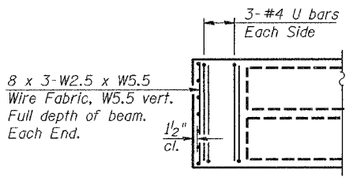
*2'-0" anchor spacing is to be placed at the abutment end of Spans 1 and 3.



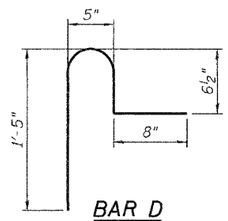
LIFTING LOOP DETAIL



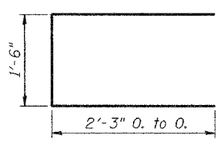
PLAN



END PLAN



BAR D



BAR U

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be 2-½" ϕ-270 ksi strands, as shown.

The 1" ϕ 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.

Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

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

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

Required Release Strength, f'ci, shall be 4000 p.s.i.

See section thru Interior Beams for strand pattern, dimensions and bar call outs.

Bridge rail inserts shall be cast in precast beams and curbs. Curbs shall be cast by the precast prestressed concrete supplier after strands have been released and prior to shipping the beam. The concrete in the curb shall be the same as specified for the deck beams.

The curb inserts and threaded dowel rods may be either epoxy coated or galvanized and the cost shall be included with PPC Deck Beams (21").

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Conc. Deck Bms. (21")			Sq. Ft.	4,329

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

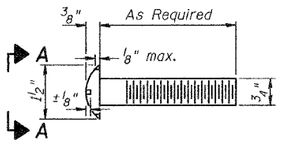
BEAM DETAILS
F.A. RT. 785
BOND COUNTY
SN 003-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

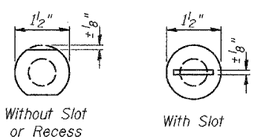
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
6 SHEETS

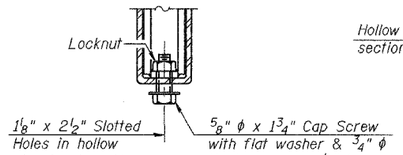
Contract Number: 76860



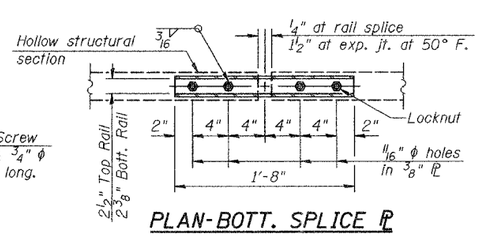
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



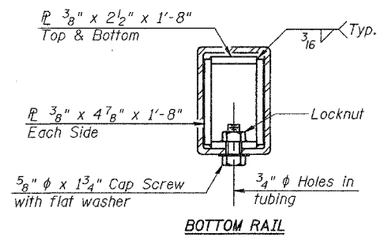
VIEW A-A



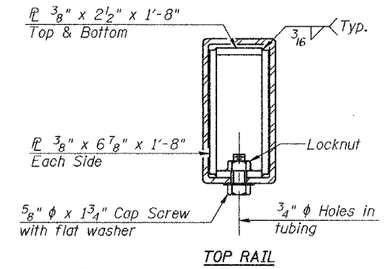
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL TYPICAL

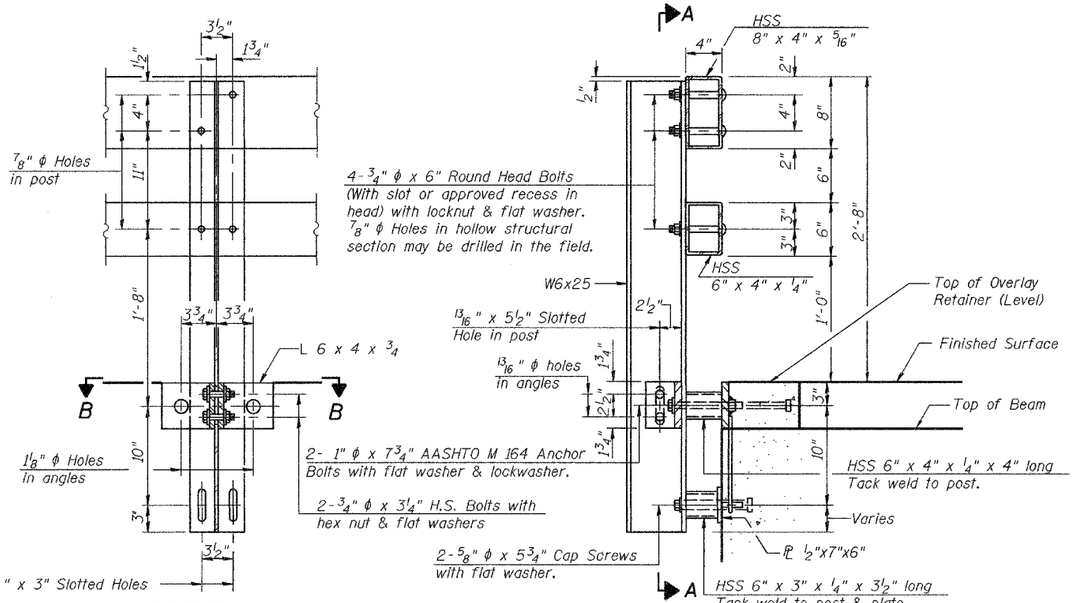


BOTTOM RAIL



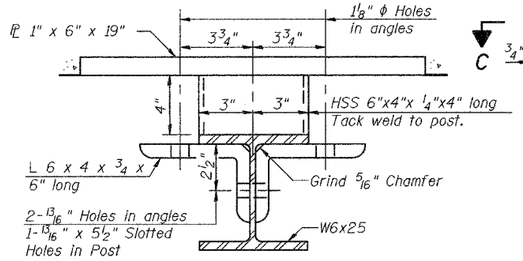
TOP RAIL

SECTIONS AT RAIL SPLICE

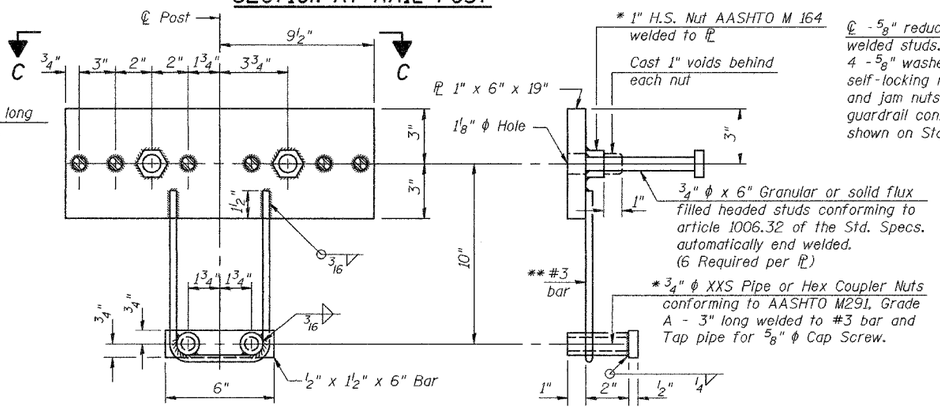


SECTION A-A

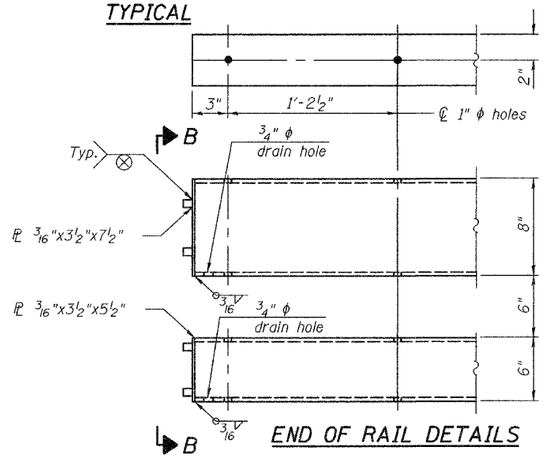
SECTION AT RAIL POST



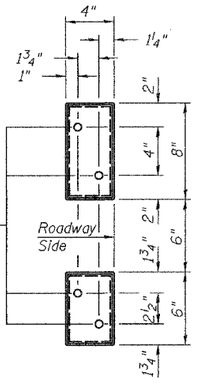
SECTION B-B



ANCHOR DEVICE



END OF RAIL DETAILS



VIEW B-B

℄ -5/8" reduced base welded studs. Provide 4 -5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032

NOTES

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

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

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

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

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

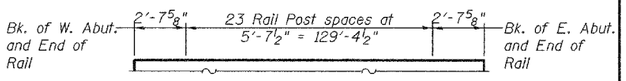
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

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

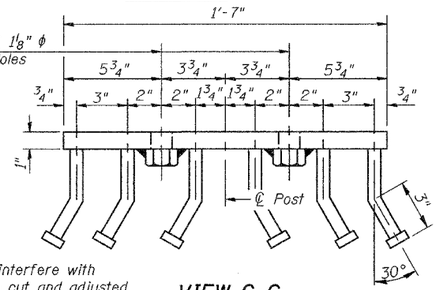
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.



RAIL POST SPACING



VIEW C-C

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	269

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

(6'-3" Max Post Spacing)

* 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".

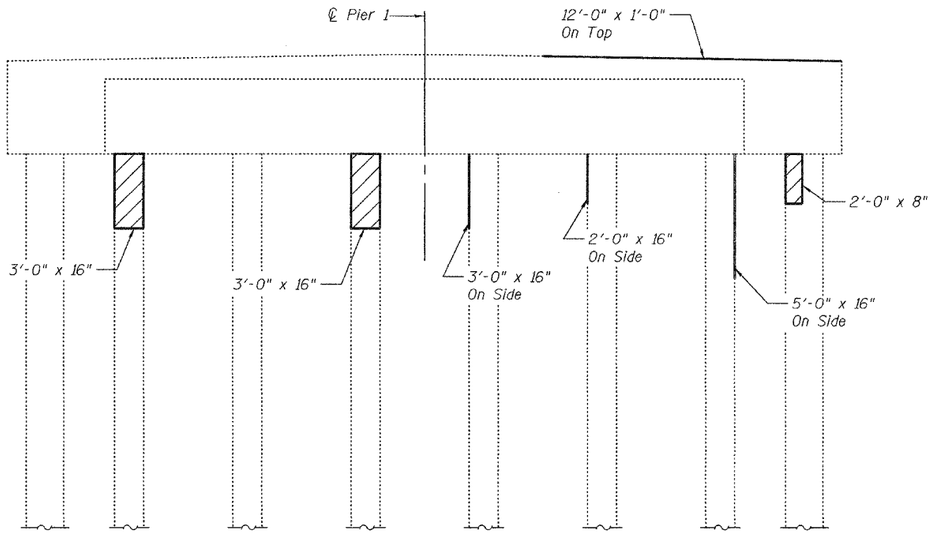
SIDE MOUNT BRIDGE RAIL DETAILS
F.A. RT. 785
BOND COUNTY
SN 003-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

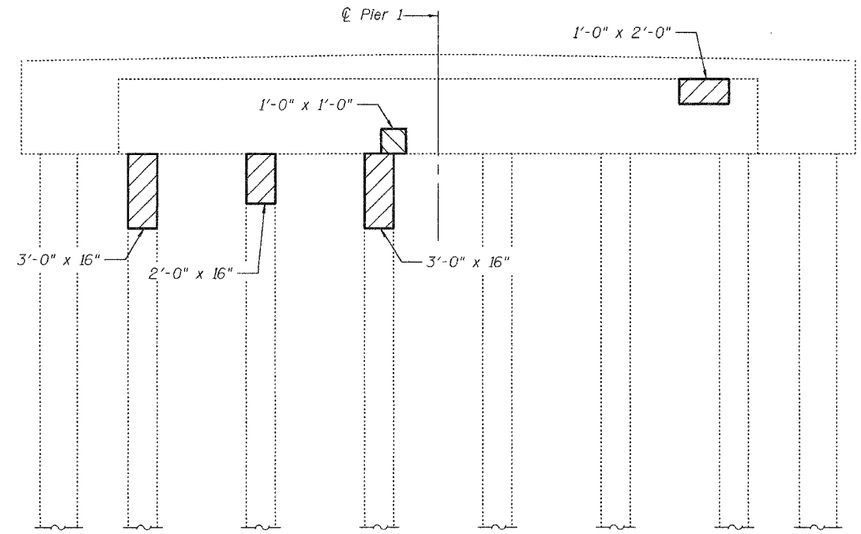
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	24	24
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
6 SHEETS

Contract Number: 76860

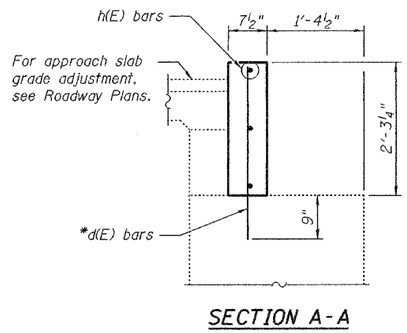


WEST SIDE PIER 1
(Looking East)

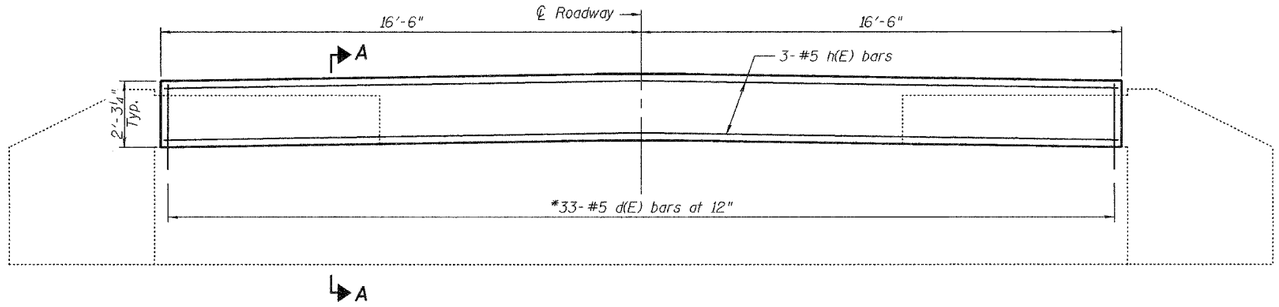


EAST SIDE PIER 1
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.



SECTION A-A



TYPICAL ABUTMENT ELEVATION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	66	#5	2'-10"	
h(E)	6	#5	32'-9"	
Formed Concrete Repair (≤5")			Sq. Ft.	48
Reinforcement Bars, Epoxy Coated			Pound	400
Concrete Structures			Cu. Yd.	3.5

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

*Drill and epoxy grout in accordance with Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

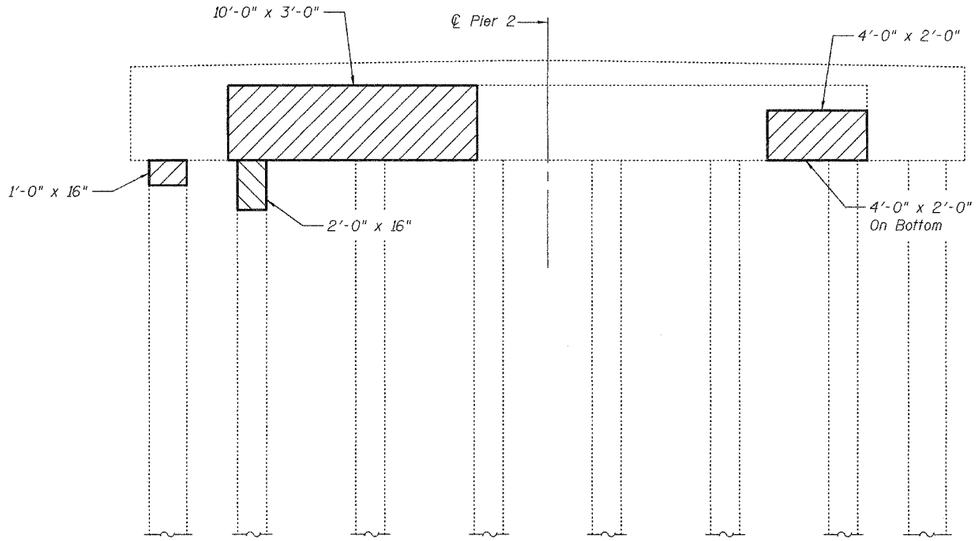
PIER 1 FORMED CONCRETE REPAIRS AND ABUTMENT DETAILS
F.A. RT. 785
BOND COUNTY
SN 003-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

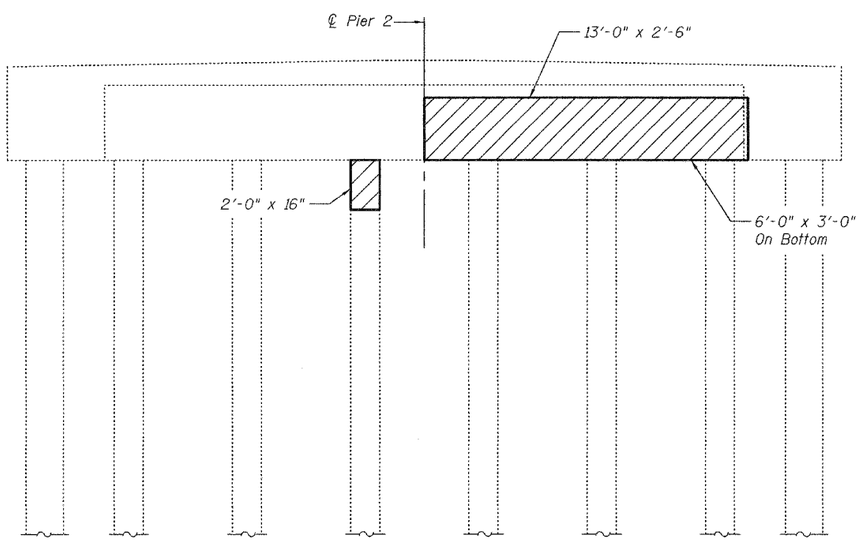
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Bond	26	26A
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
6 SHEETS

Contract Number: 76860



WEST SIDE PIER 2
(Looking East)



EAST SIDE PIER 2
(Looking West)

Note
Hatched area indicates approximate area of Formed Concrete Repair. Exact repair area to be determined by Engineer.

BILL OF MATERIAL

Formed Concrete Repair (≤5")	Sq. Ft.	103

DESIGNED	P.S.J.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	P.S.J. V.H.V.

May 9, 2005
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 2 FORMED CONCRETE REPAIRS
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BOND COUNTY
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