

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 PLANS FOR PROPOSED  
 FEDERAL-AID HIGHWAY BRIDGE PROGRAM

LAWRENCE COUNTY  
 SECTION 05-00102-00-BR  
 RUSSELL ROAD DISTRICT  
 STRUCTURE NO. 051-3283  
 PROJECT NO. BRS-1803(101)  
 JOB NO. C-97-088-09  
 FAS 1803 (CH 17)

INDEX OF SHEETS

- 1 COVER SHEET
- 2 PLAN & PROFILE
- 3 CROSS SECTIONS
- 4-10 BRIDGE PLANS
- 11-12 BORINGS

- STANDARDS:
- 280001-04 - EROSION CONTROL
  - 515001-03 - NAME PLATES
  - 630301-05 - SHOULDER WIDENING
  - 635006-03 - TERMINAL MARKERS
  - 701901-01 - TRAFFIC
  - BLR 21-8 - TRAFFIC
  - BLR 22-6 - TRAFFIC
  - BLR 27-1 - TRAFFIC BAR. TERM. T5A

SUMMARY OF QUANTITIES

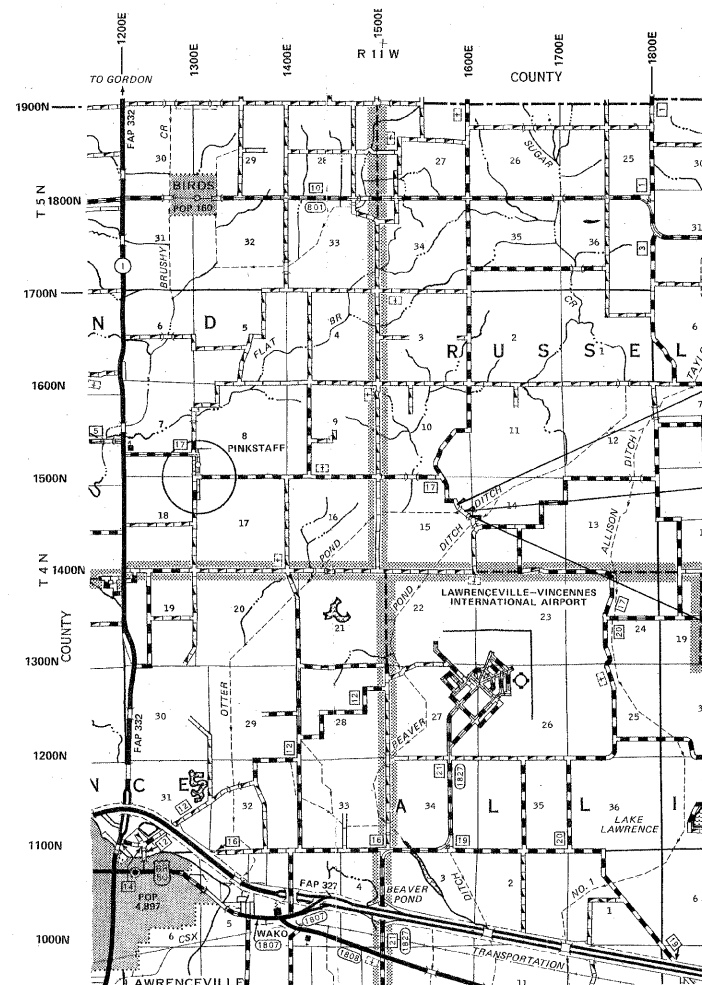
QTY	UNIT	ITEM	CODENO
1393	CU YD	EARTH EXCAVATION	20200100
31	CU YD	CHANNEL EXCAVATION	20300100
0.60	ACRE	SEEDING, CLASS 2 (SPECIAL)	25001000
4	EACH	TEMPORARY DITCH CHECKS	28000300
80	FOOT	PERIMETER EROSION BARRIER	28000400
120	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
808	TON	AGGREGATE BASE COURSE, TYPE B	35101400
40	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
37.8	CU YD	CONCRETE STRUCTURES	50300225
4.0	CU YD	CONCRETE ENCASEMENT	50300280
1680	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	50400505
3810	POUND	REINFORCEMENT BARS	50800105
118	FOOT	STEEL RAILING, TYPE S1	50900205 *
495	FOOT	FURNISHING STEEL PILES HP 10x42	51201400
495	FOOT	DRIVING PILES	51202305
1	EACH	TEST PILE STEEL HP 10x42	51203400
1	EACH	NAME PLATES	51500100
134	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 12"	542D0217
2	EACH	TRAFFIC BARRIER TERMINAL, TYPE 5A	63100075 *
2	EACH	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	63100167 *
1	L SUM	MOBILIZATION	67100100
1	L SUM	TRAFFIC CONTROL AND PROTECTION	70101700
2	EACH	TERMINAL MARKER - DIRECT APPLIED	78201000 *

\* SPECIALTY ITEMS

FUNCTIONAL CLASS: RURAL MAJOR COLLECTOR  
 ADT = 600  
 DESIGN SPEED = 50 MPH

SCALES

- PLAN 1 INCH = 50 FEET
- PROFILE HORZ. 1 INCH = 50 FEET
- PROFILE VERT. 1 INCH = 10 FEET
- CROSS SECTION 1 INCH = 5 FEET



LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE  
 NET LENGTH = 600.00 L.F. = 0.114 MILES

SECTION 05-00102-00-BR  
 ENDS STA. 8+00

STA. 5+00 - SPECIAL BRIDGE DESIGN  
 PROPOSED PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. 1 SPAN @ 60', 28' RDWY., SKEW = 45' L.F.  
 EXISTING STR. NO. 051-3030  
 PROPOSED STR. NO. 051-3283

SECTION 05-00102-00-BR  
 BEGINS STA. 2+00

TOLL FREE JOINT UTILITY LOCATING  
 INFORMATION FOR EXCAVATORS (I.U.L.I.E.)  
 TELEPHONE NO. 1-800-892-0123

PROFESSIONAL DESIGN FIRM #184-000832



*John A. Stone*  
 ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55102  
 LICENSE EXPIRES NOVEMBER 30, 2009  
 03/19/2009

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED: *MARCH 20*, 2009

LOCAL AGENCY REPRESENTATIVE, COUNTY ENGINEER

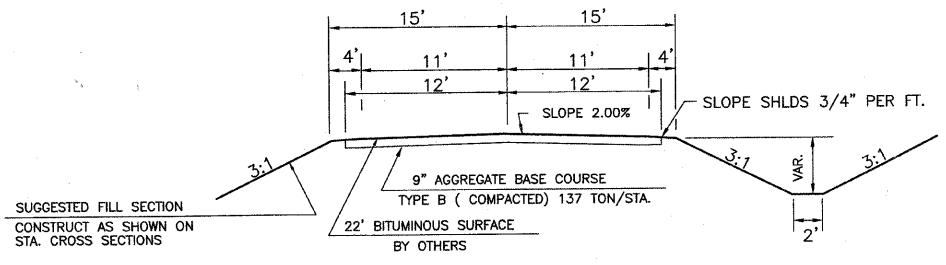
PASSED: *4-1*, 2009

*Marcus L. Koval*  
 DISTRICT SEVEN ENGINEER  
 OF LOCAL ROADS & STREETS

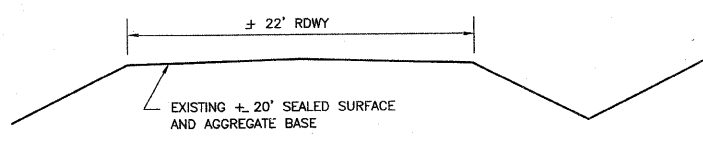
RELEASING FOR BID  
 BASED ON LIMITED  
 REVIEW *4-1*, 2009

*Roger L. Dushell*  
 DEPUTY DIRECTOR OF HIGHWAYS,  
 REGION FOUR ENGINEER

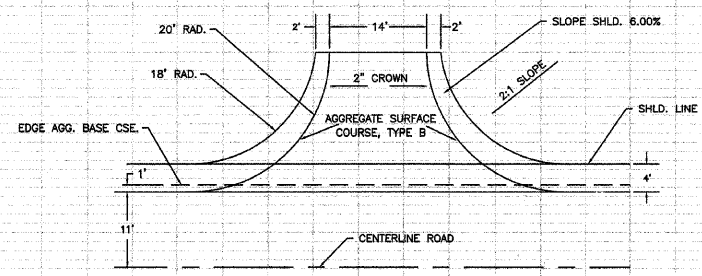
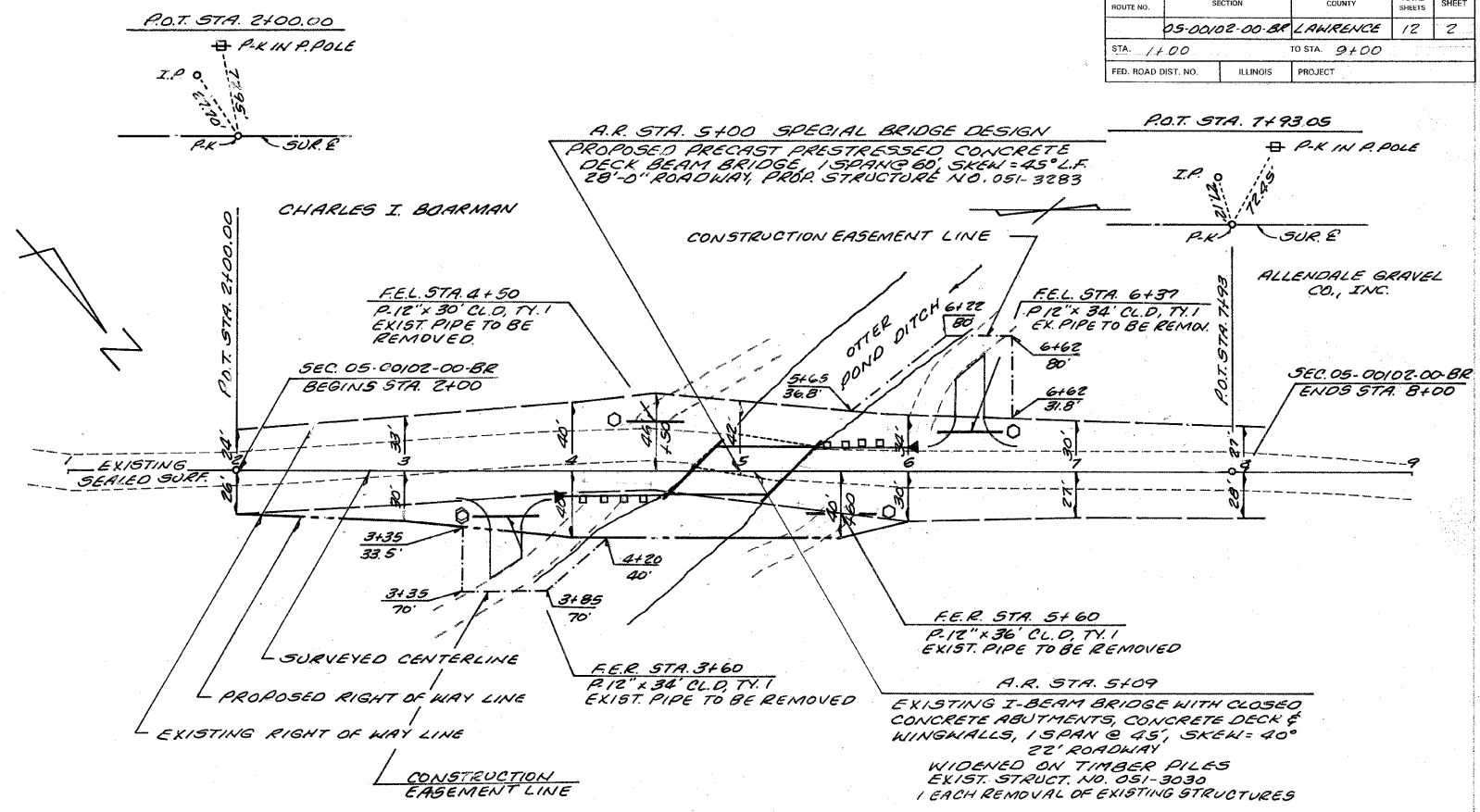
F.A.S. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
05-00102-00-BR	LAWRENCE		12	2
STA. 1+00		TO STA. 9+00		
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT



TYPICAL CROSS SECTION OF EXISTING ROADWAY



DETAIL OF FIELD ENTRANCE

4 @ 10 TON EACH = 40 TONS

UTILITIES  
NONE

EARTHWORK SCHEDULE

EMBANKMENT	=	280 CU. YD.
EARTH EXCAVATION	=	1393 CU. YD.
EARTH EXC. ADJ. 25%	=	1045 CU. YD.
CHANNEL EXCAVATION	=	31 CU. YD.
CHANNEL EXC. ADJ. 25%	=	23 CU. YD.
EXCESS EXCAVATION	=	742 CU. YD.

TRAFFIC BARRIER TERMINAL, TYPE 5A  
APPROACHING CORNERS = 2 EACH

TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)  
APPROACHING CORNERS = 2 EACH

TERMINAL MARKERS - DIRECT APPLIED  
APPROACHING CORNERS = 2 EACH

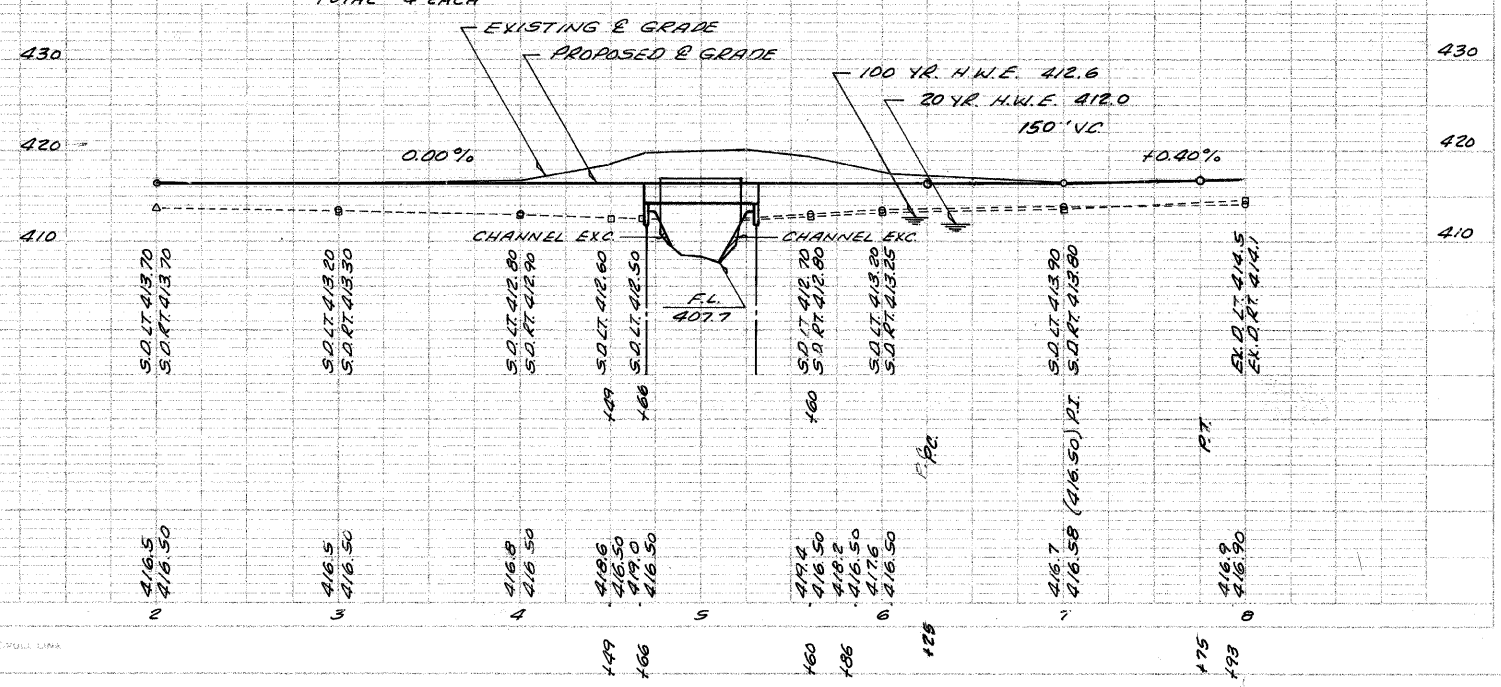
B.M. #1 ELEV. 418.38  
P.K. NAIL IN POWER POLE  
180' LT. STA. 5+00

CONSTRUCT TRANSITIONS  
FROM EXIST. ROWY. TO PROP. 30' ROWY.  
STA. 1+50 TO STA. 2+00  
STA. 7+50 TO STA. 8+00

EARTHWORK QUANTITIES INCLUDED IN THOSE LISTED

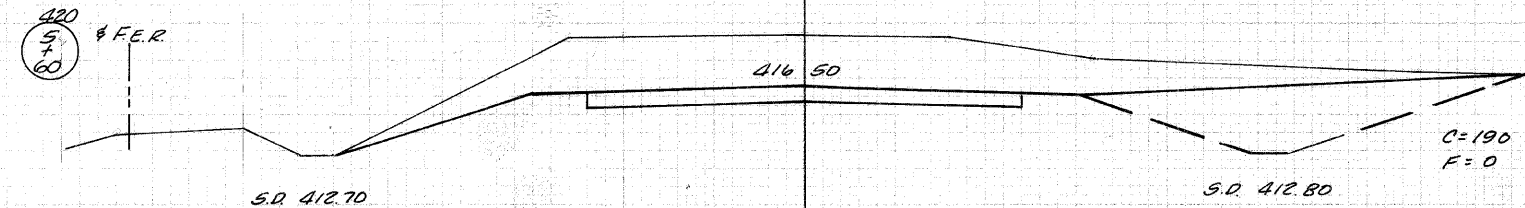
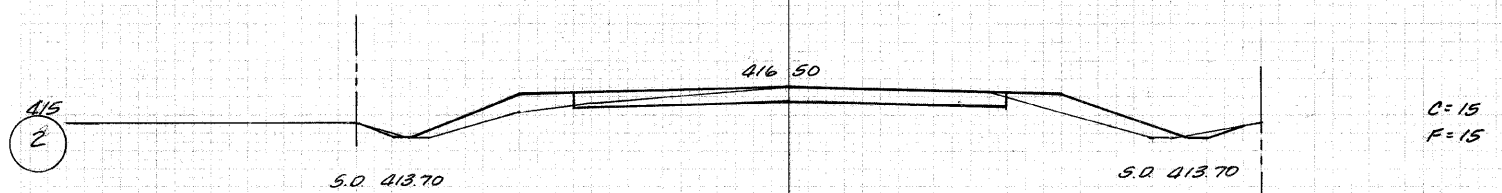
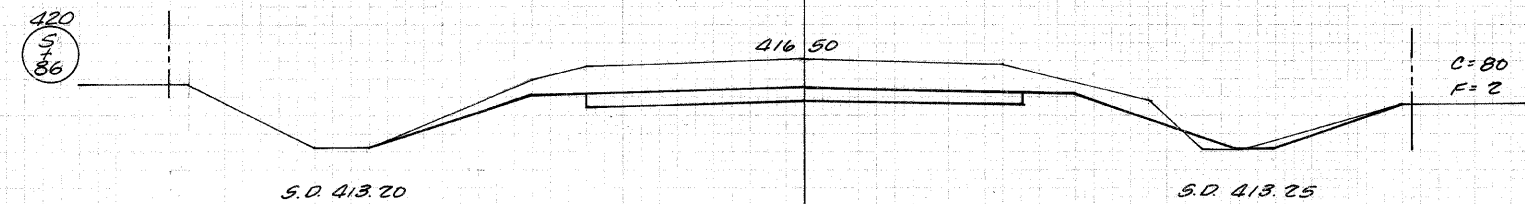
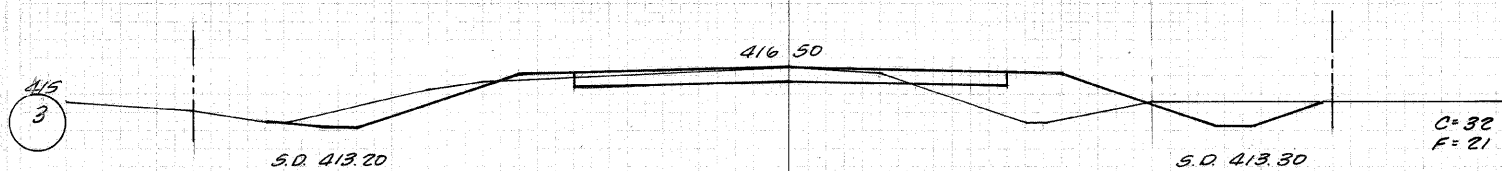
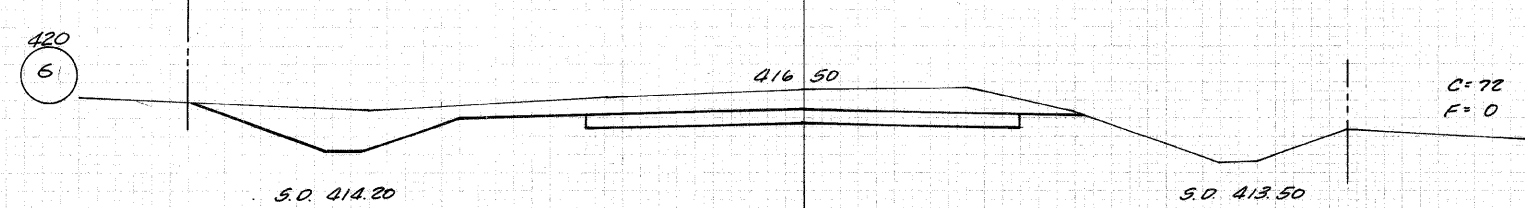
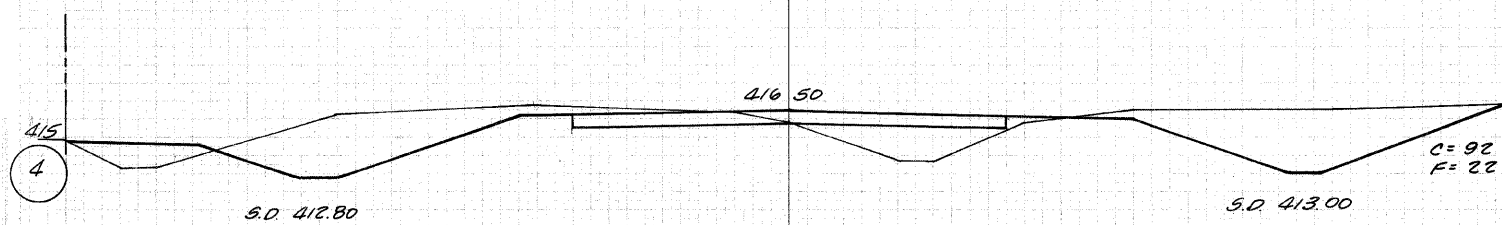
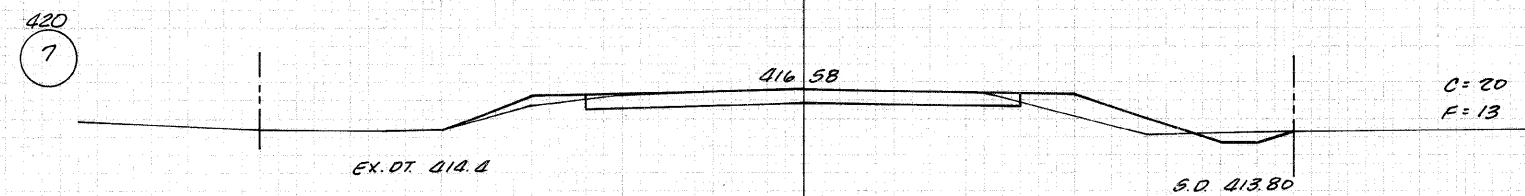
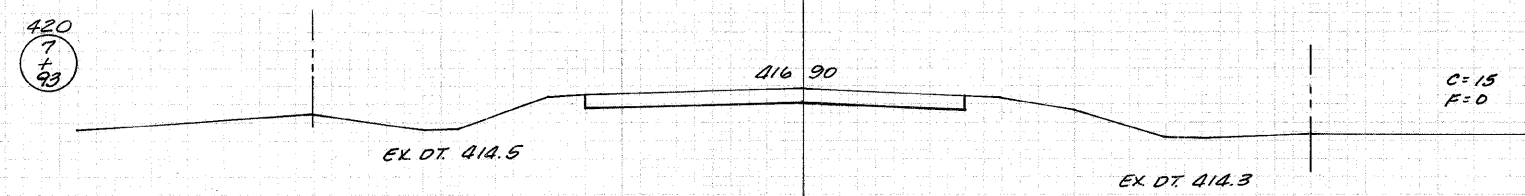
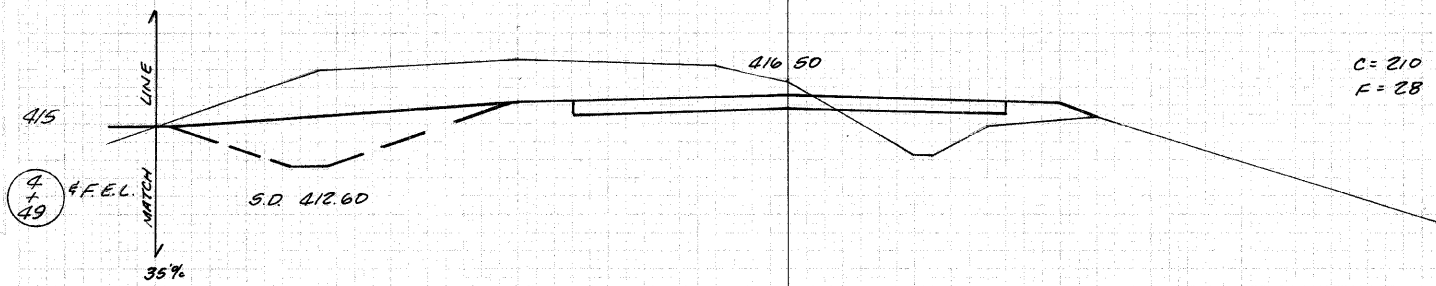
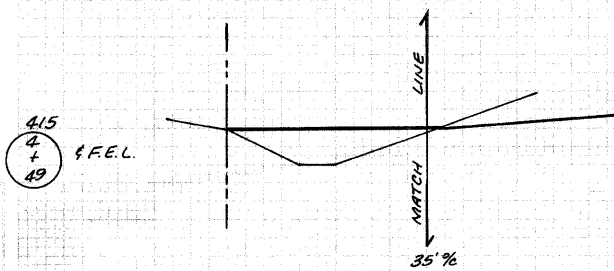
PERIMETER EROSION BARRIER  
20' @ EACH COR. BRIDGE = 80 FEET  
(SEE SPEC. PROV.)

SEEDING, CLASS 2 (SPECIAL)  
STA. 2+00 TO STA. 8+00 = 0.6 AC.



F.A.S. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
95-00102-00-BR	LAWRENCE	IL	12	3
STA. 2+00	TO STA. 7+93			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

CONT. NO. 95581



40 30 20 10 0 10 20 30 40 40 30 20 10 0 10 20 30 40

BENCHMARK: P.K. Nail in Power Pole, ±80' Lt., Sta. 5+40, Elev. 418.38

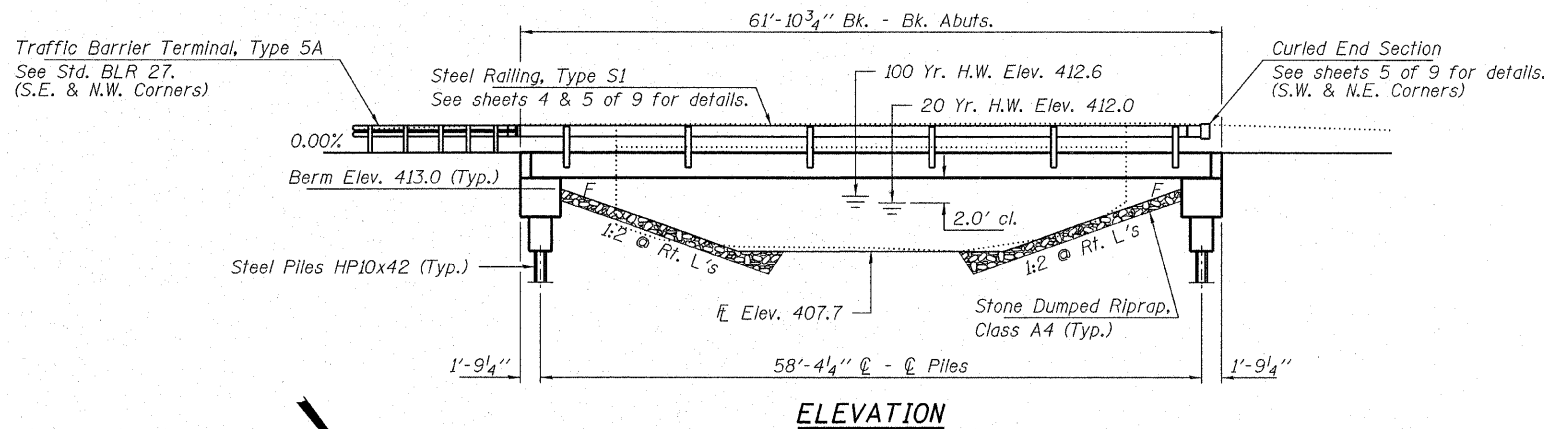
EXISTING STRUCTURE NO. 051-3030: I-Beam bridge with closed concrete abutments, concrete deck & wingwalls, single span @ 45°, Skew = 40°, 22' Rdwy. Structure closed to traffic. No Salvage

**GENERAL NOTES**

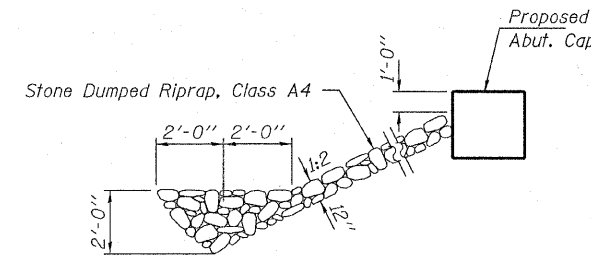
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at South Abutment or approved by the Engineer before ordering the remainder of piles. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
 Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.  
 All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions. See Sheets 8 & 9 of 9 for Borings.

OTTER POND DITCH  
 BUILT 200\_ BY  
 LAWRENCE COUNTY  
 SEC. 05-00102-00-BR  
 STR. NO. 051-3283  
 LOADING HL-93

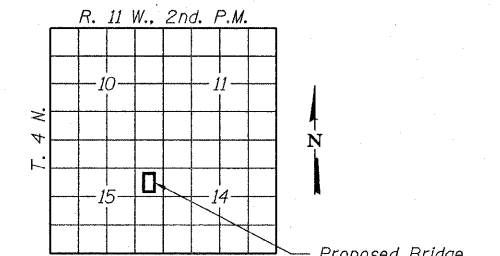
**NAME PLATE**  
 See Std. 515001



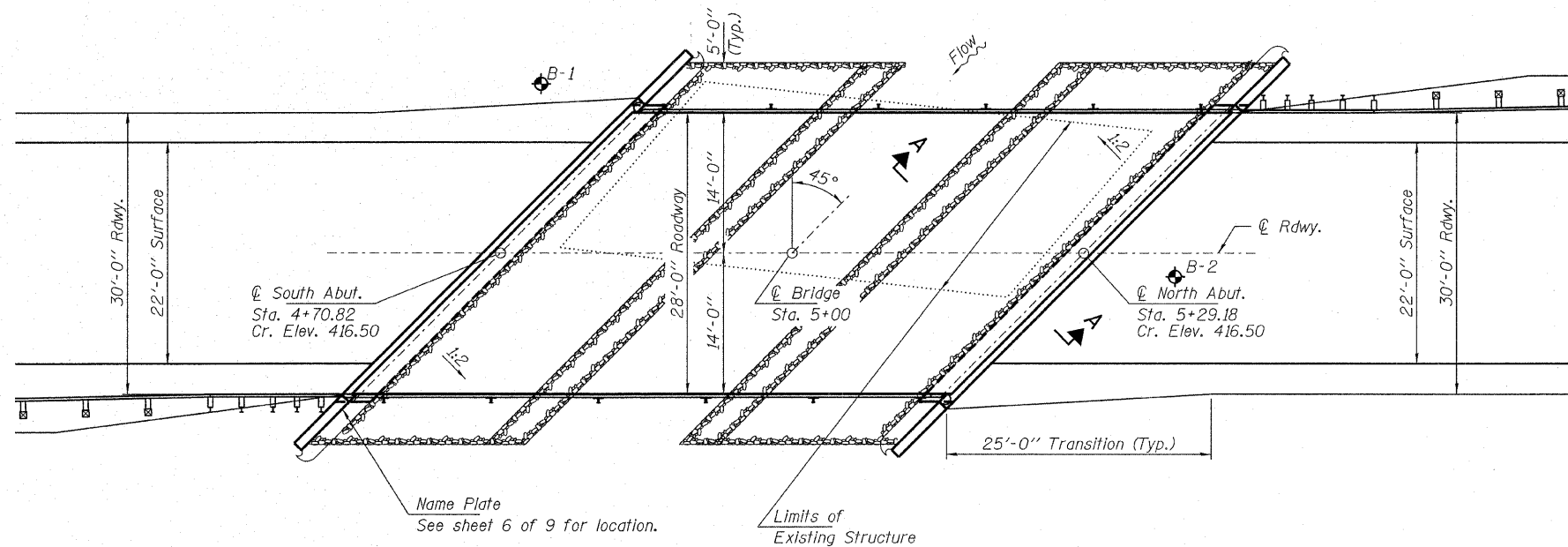
**ELEVATION**



**SECTION A-A**



**LOCATION SKETCH**



**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			120
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		37.8	37.8
Concrete Encasement	Cu. Yd.		4.0	4.0
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars	Pound		3,810	3,810
Steel Railing, Type S1	Foot	118		118
Furnishing Steel Piles HP10x42	Foot		495	495
Driving Piles	Foot		495	495
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1

**DESIGN STRESSES**

**FIELD UNITS**

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

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
 f'ci = 5,000 psi  
 fpu = 270,000 psi (1/2" low lax. strands)  
 fpbt = 201,960 psi (1/2" low lax. strands)  
 fy = 60,000 psi (Reinf.)

**LOADING HL-93**

Design Specifications: 2007 AASHTO LRFD with all applicable Interims.  
 50#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

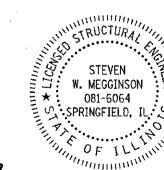
Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.217g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.493g  
 Soil Site Class = D

**WATERWAY DATA**

Drainage Area..... 0.35 Sq. Mi.  
 Existing Opening (20 yr)..... 102 Sq. Ft.  
 Req'd Opening (20 yr)..... 85 Sq. Ft.  
 Proposed Opening (20 yr)..... 85 Sq. Ft.  
 Design Discharge (20 yr)..... 97 C.F.S.  
 Created Head (20 yr)..... 0.0 Ft.  
 100 Yr. Discharge..... 139 C.F.S.  
 100 Yr. Created Head..... 0.1 Ft.

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

Steven W. Megginson 1/15/2009  
 ILLINOIS STRUCTURAL NO. 081-6064

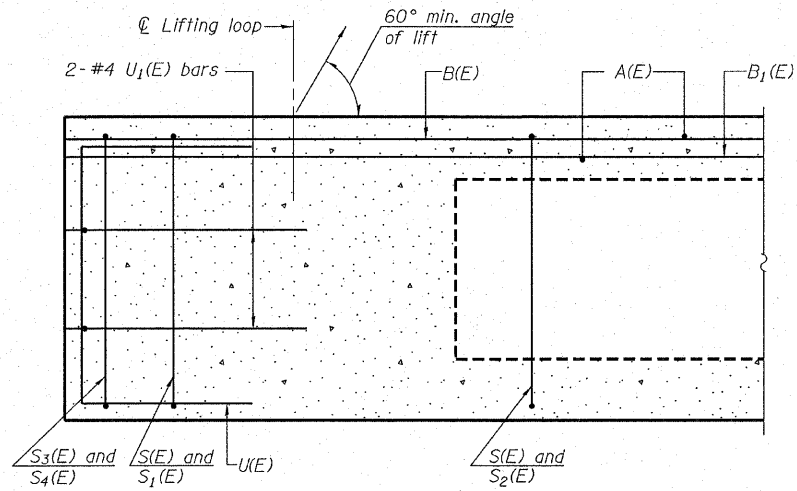


Expires 11-30-10

**GENERAL PLAN AND ELEVATION**  
**STRUCTURE NO. 051-3283**

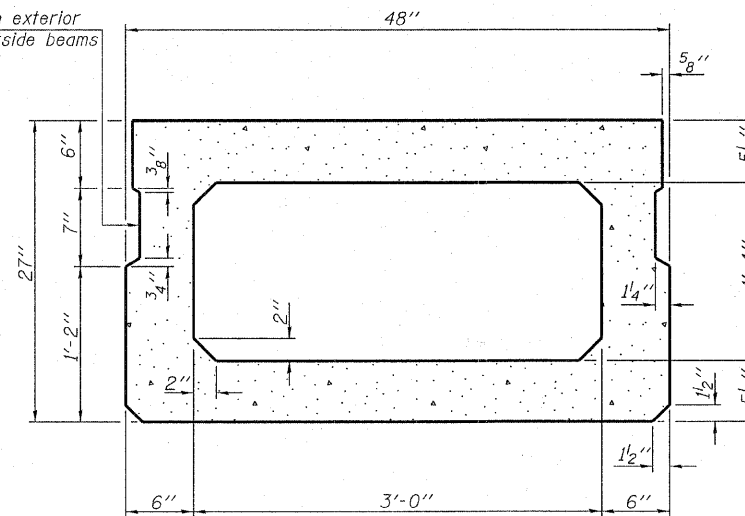
DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS <b>HLR</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0148.130 DATE: 01/15/09	SHEET NO. 1  9 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	4
		CONTRACT NO. 95581				
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

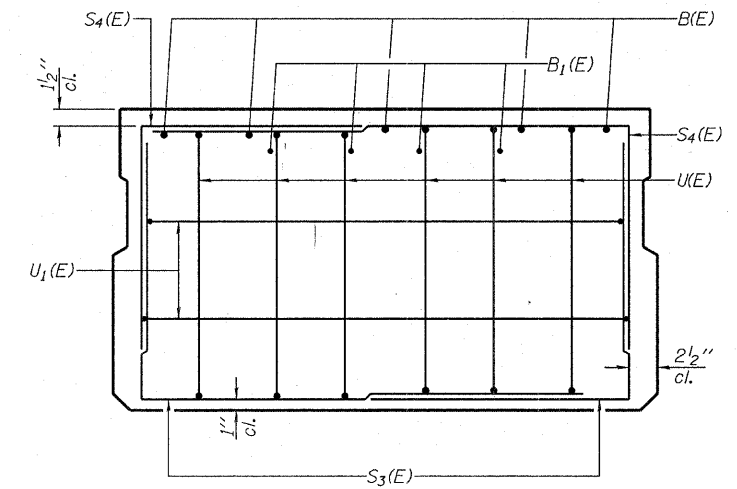


SECTION C-C

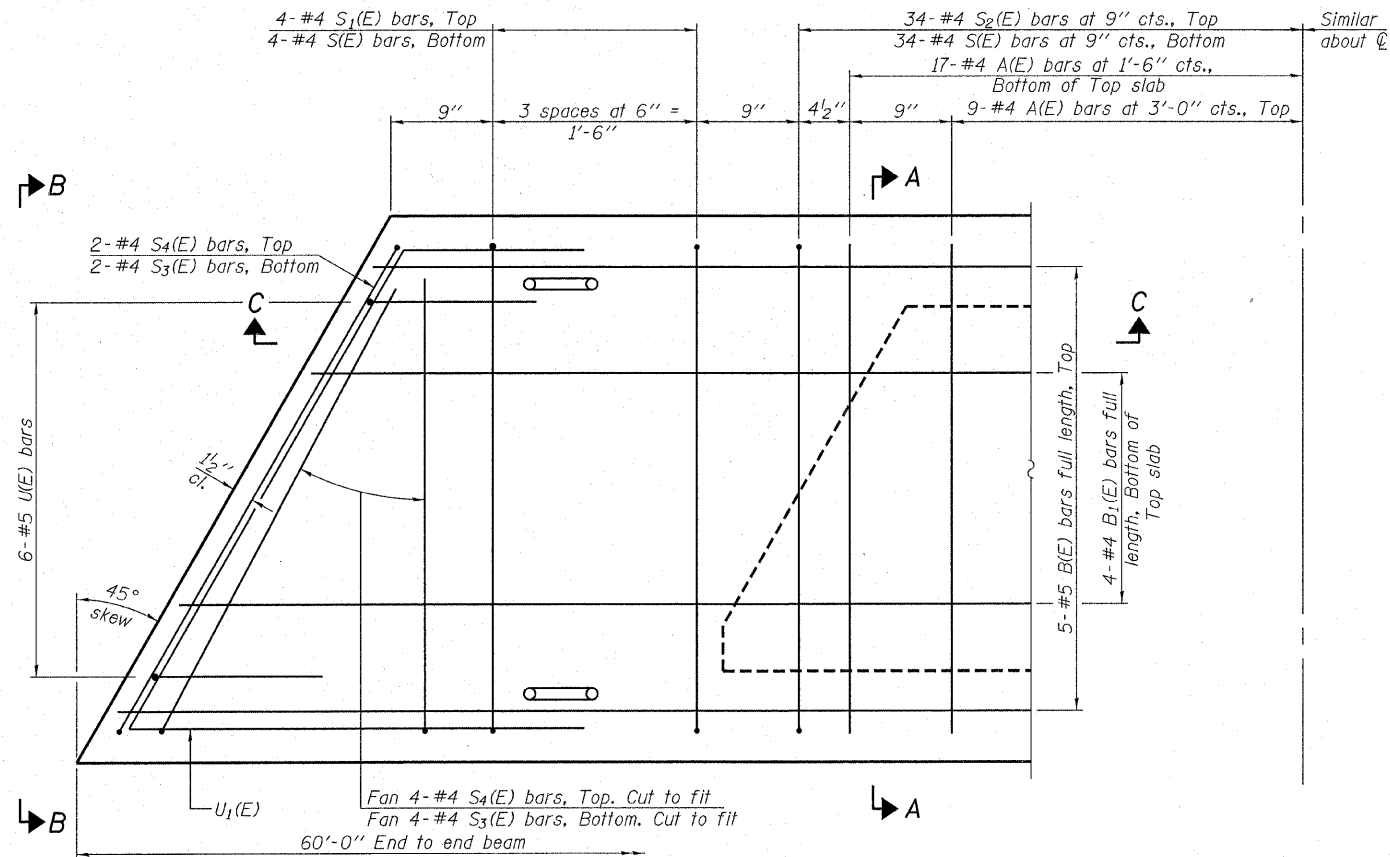
Omit key on exterior face of outside beams



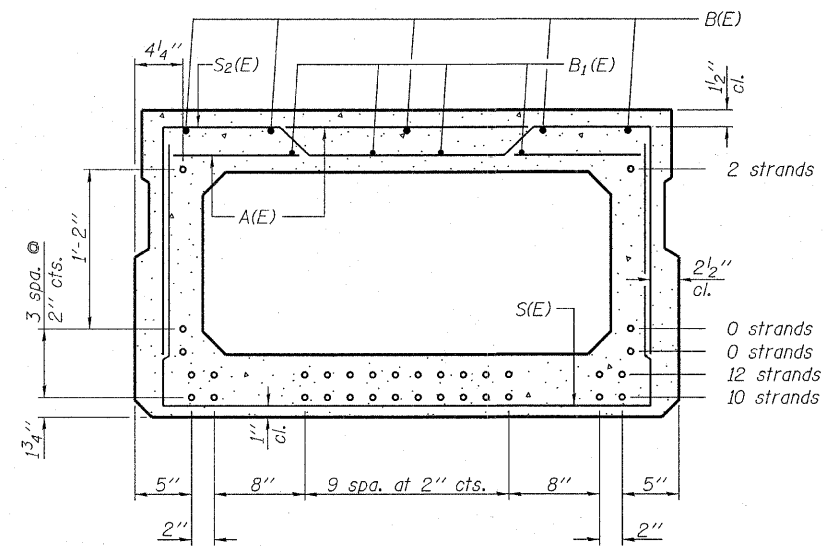
SECTION A-A  
(Showing dimensions)



VIEW B-B



PLAN VIEW



SECTION A-A

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

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	52	#4	3'-7"	—
B(E)	5	#5	59'-8"	—
B1(E)	4	#4	59'-8"	—
S(E)	76	#4	7'-5"	┌
S1(E)	8	#4	6'-11"	┌
S2(E)	68	#4	7'-2"	┌
S3(E)	12	#4	3'-6"	┌
S4(E)	12	#4	3'-6"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	11'-0"	┌

Note: See sheet 3 & 4 of 9 for additional details and Bill of Material.

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

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-2748-L 5-16-08

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

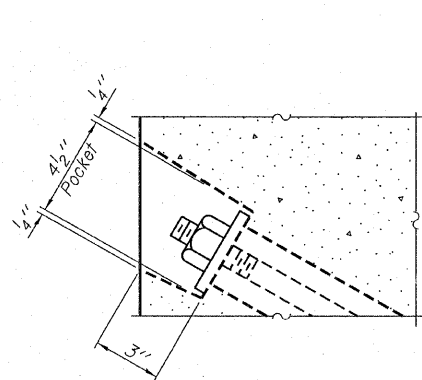
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

PROJECT NUMBER: 08.0148.130 DATE: 01/15/09

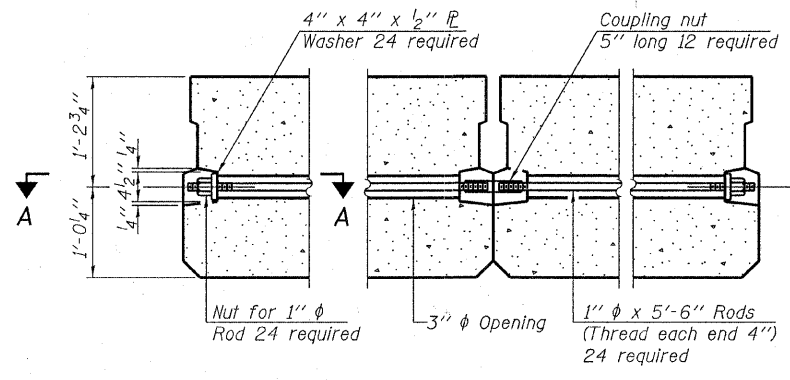
SHEET NO. 2	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12
9 SHEETS	CONTRACT NO. 955B1		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

**SUPERSTRUCTURE**  
**27" x 48" PPC DECK BEAM**  
**STRUCTURE NO. 051-3283**

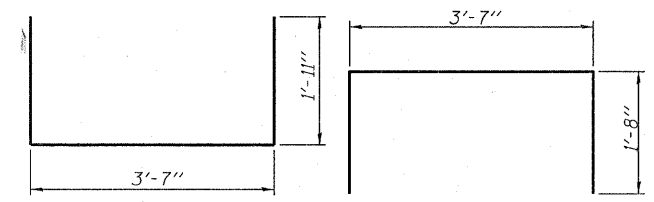




SECTION A-A

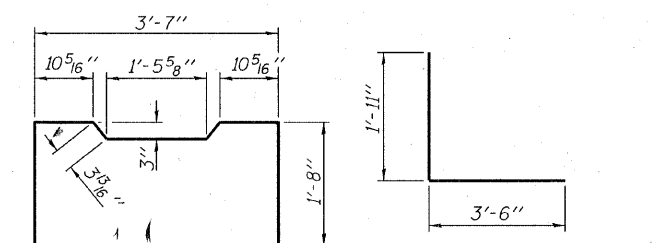


TYPICAL TRANSVERSE TIE ASSEMBLY



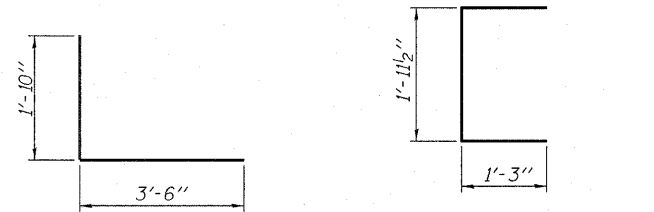
BAR S(E)

BAR S1(E)



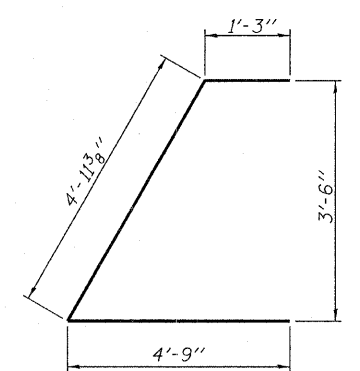
BAR S2(E)

BAR S3(E)

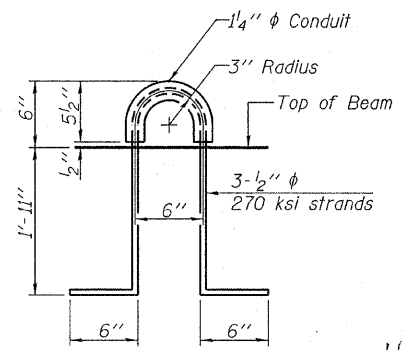


BAR S4(E)

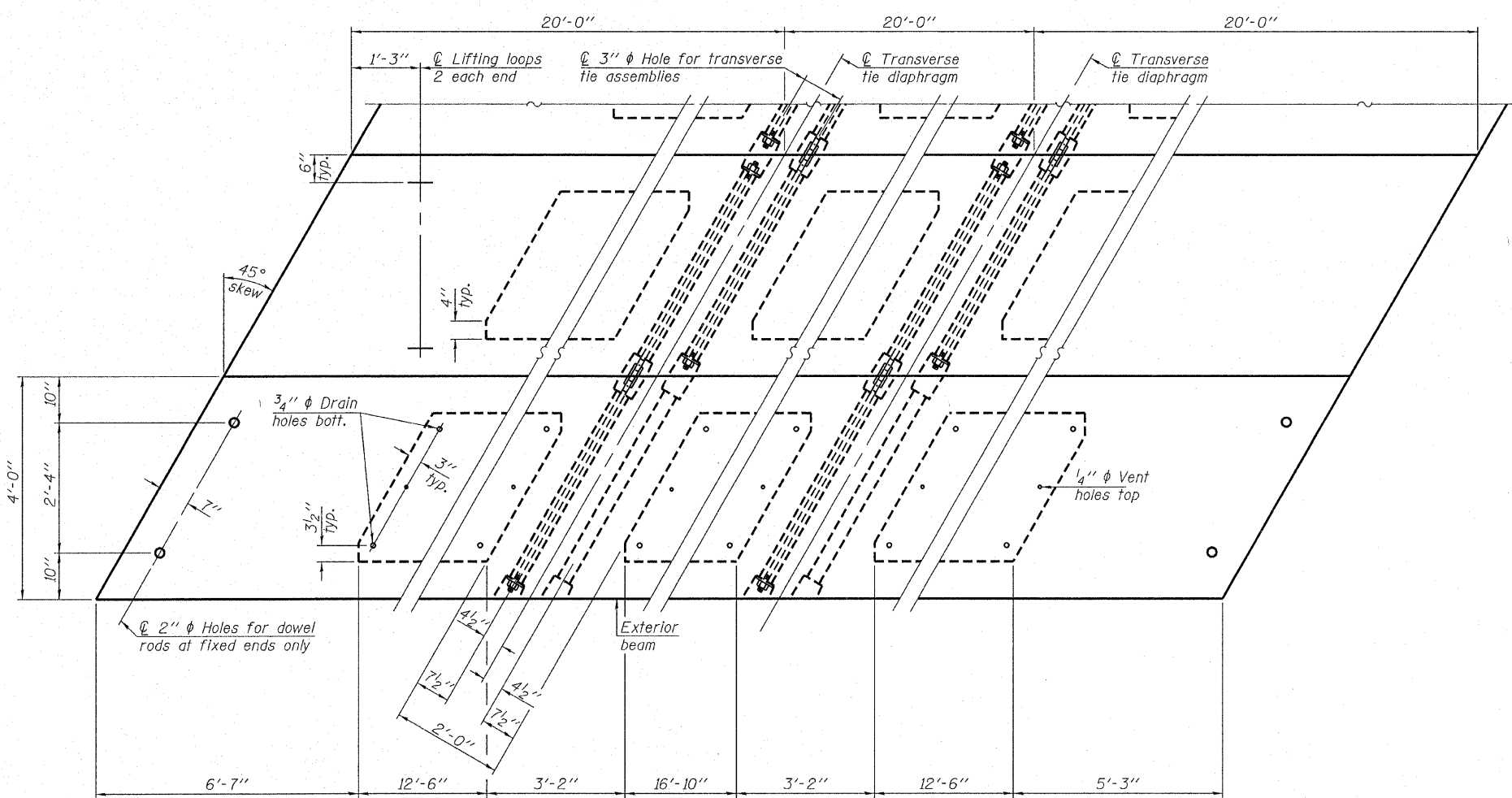
BAR U(E)



BAR U1(E)



LIFTING LOOP DETAIL



PLAN VIEW

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

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, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- 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'cl, shall be 5000 psi.

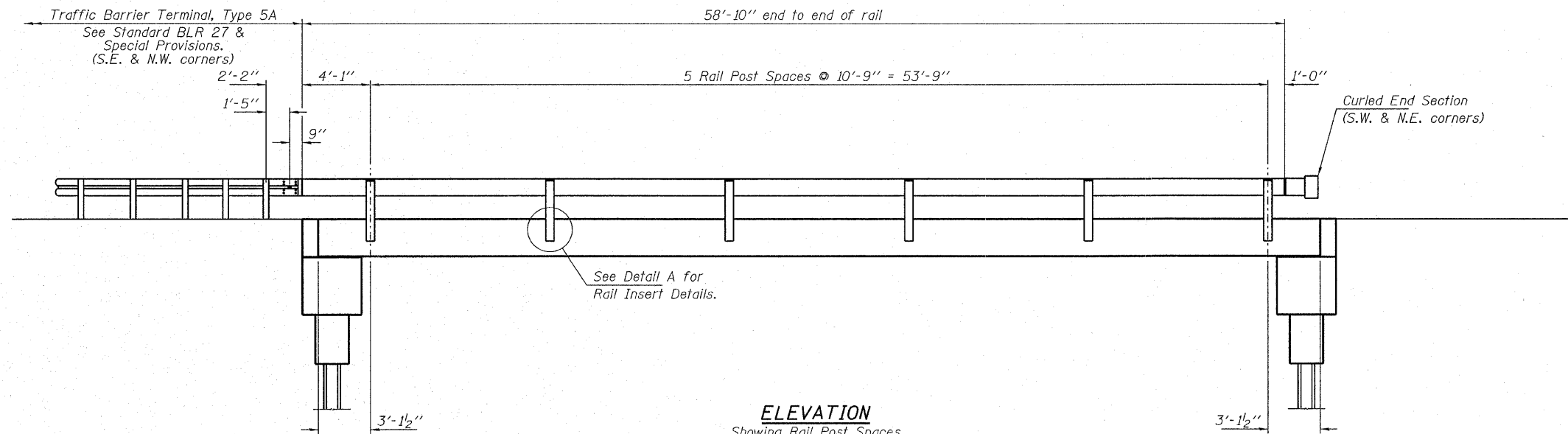
DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

**BILL OF MATERIAL**

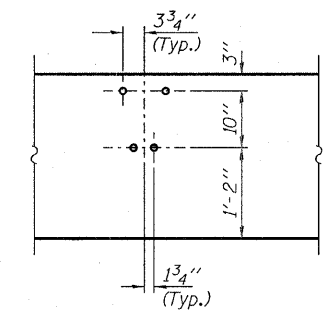
Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,680
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**SUPERSTRUCTURE**  
**27" X 48" PPC DECK BEAM DETAILS**  
**STRUCTURE NO. 051-3283**

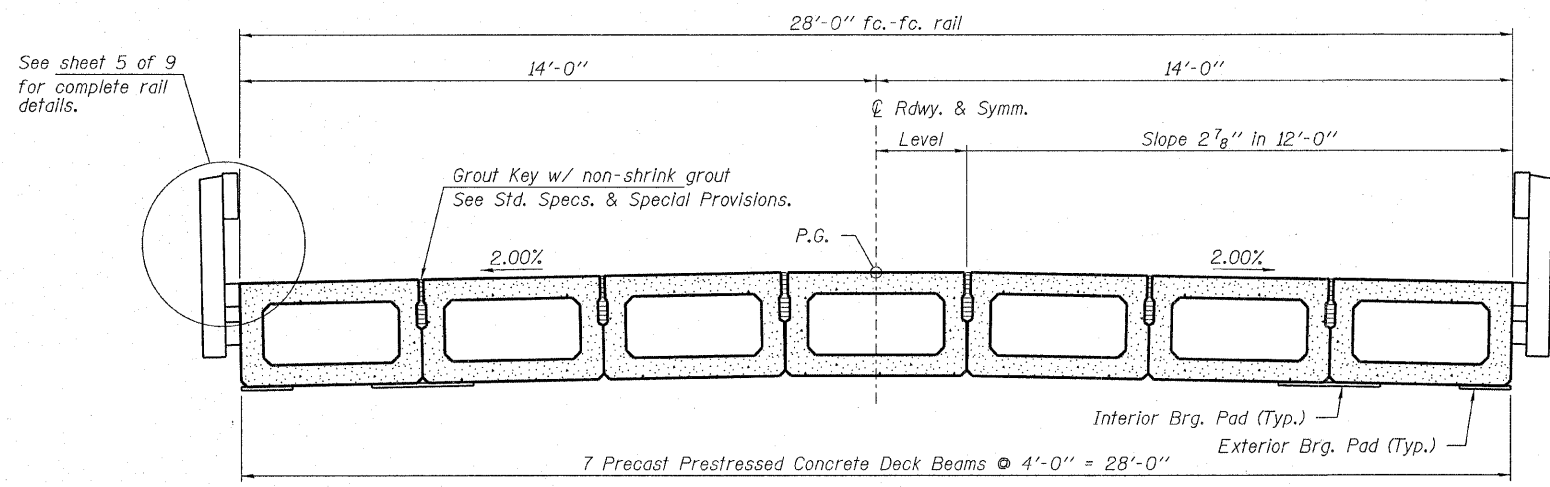
<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 3  9 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	6
PROJECT NUMBER: 08.0148.130		DATE: 01/15/09		CONTRACT NO. 95581		
		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



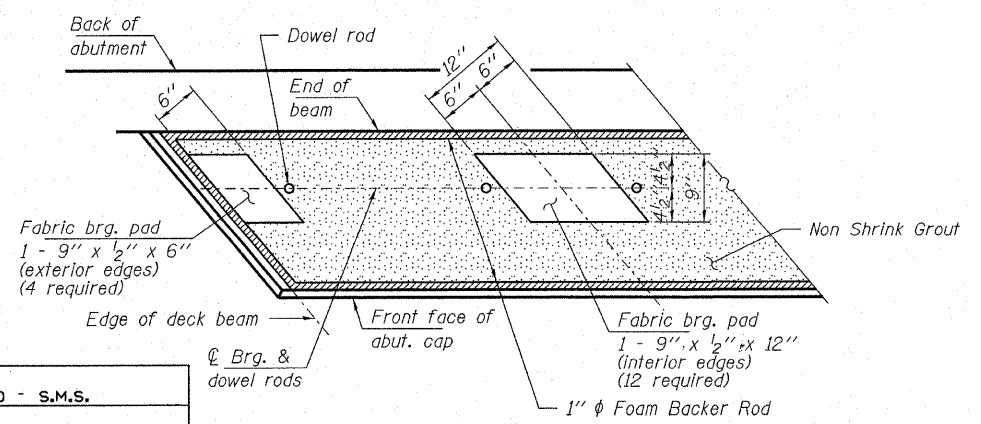
**ELEVATION**  
Showing Rail Post Spaces  
See sheet 5 of 9 for Railing Details.



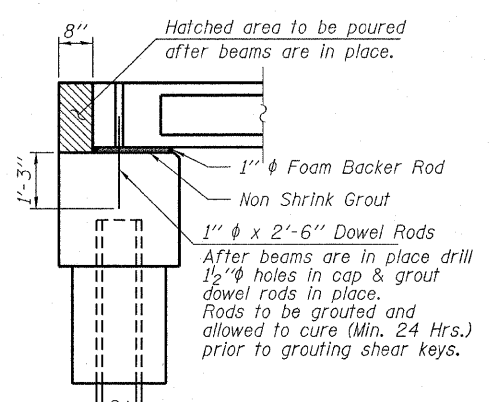
**DETAIL A**



**CROSS SECTION**  
See sheets 2 & 3 of 9 for Superstructure.



**GRAUTED BEARING SEAT DETAIL AT ABUTMENT**  
Cost included with PPC deck beams.

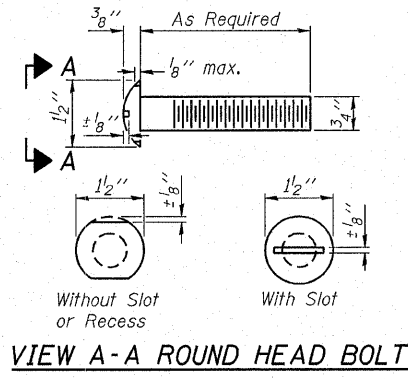


**SECTION AT ABUTMENTS**  
© Rt. L's

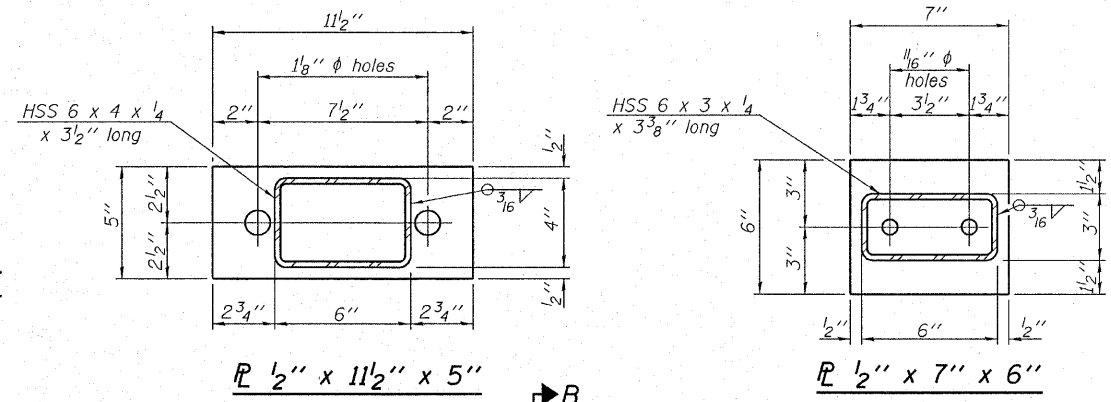
DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 051-3283**

<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS <b>HLR</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0148.130    DATE: 01/15/09	SHEET NO. 4  9 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	7
		CONTRACT NO. 95581				
		FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT				

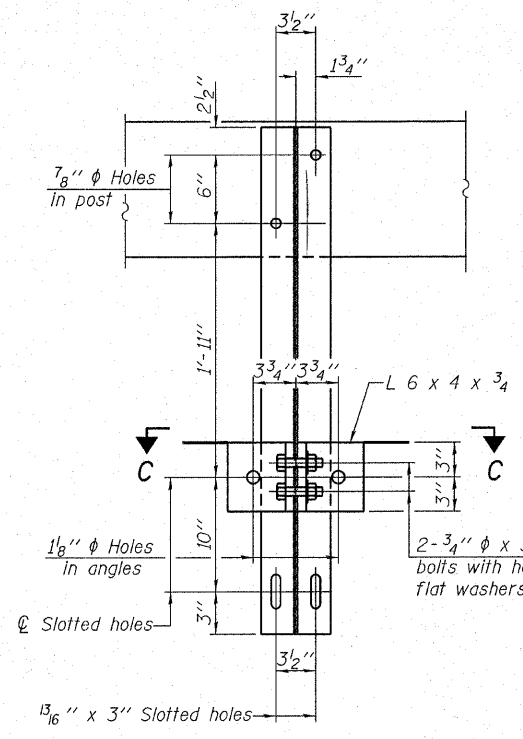


VIEW A-A ROUND HEAD BOLT

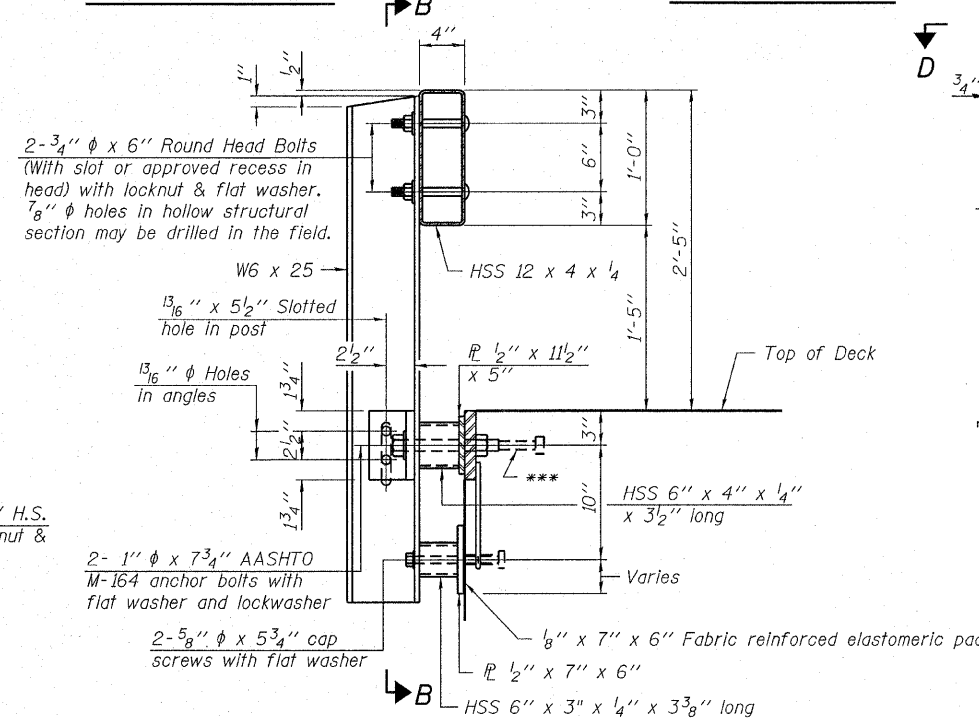


PL 1/2" x 11 1/2" x 5"

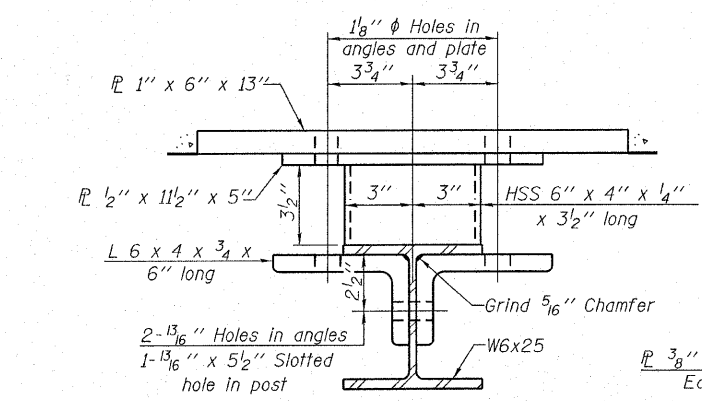
PL 1/2" x 7" x 6"



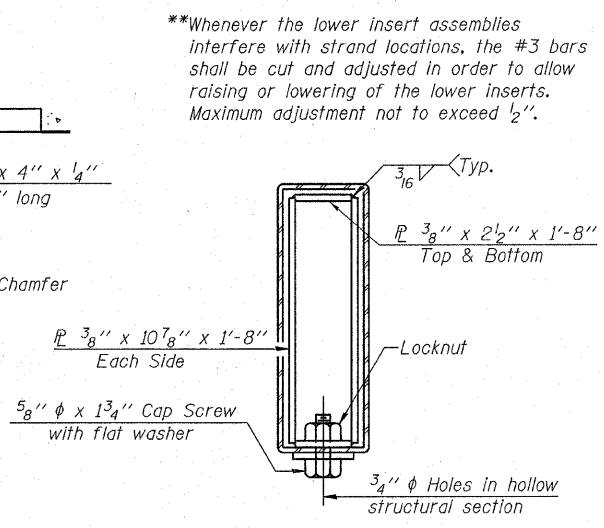
SECTION B-B



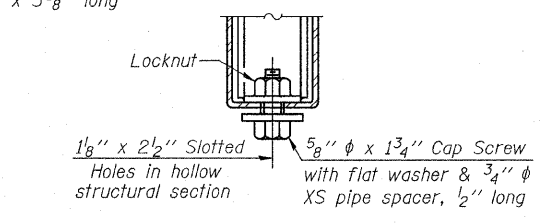
SECTION AT RAILING POST



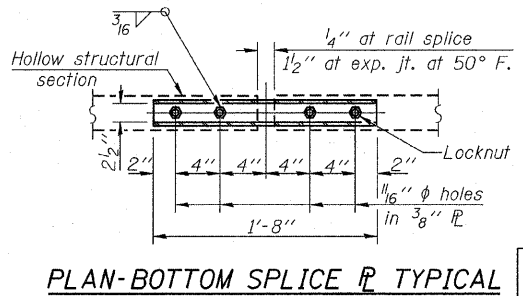
SECTION C-C



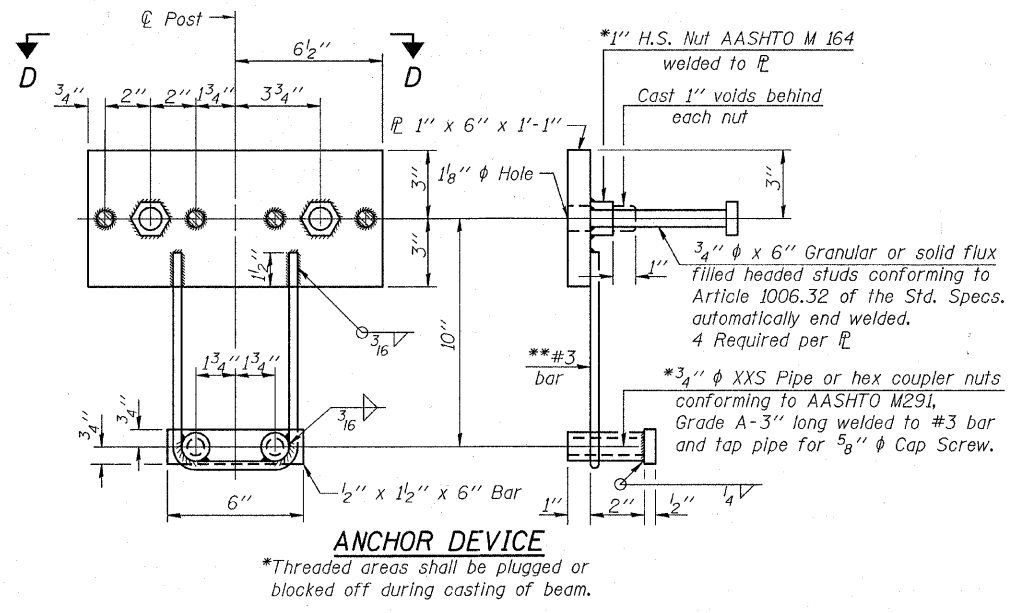
SECTIONS AT RAIL SPLICE



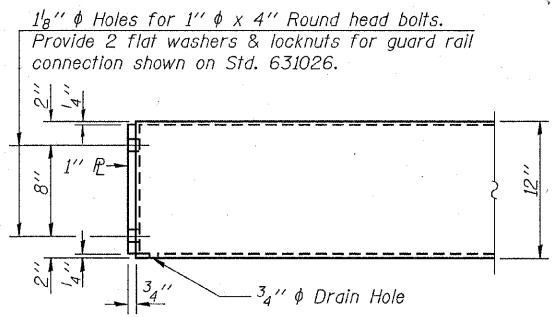
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTTOM SPLICE PL TYPICAL

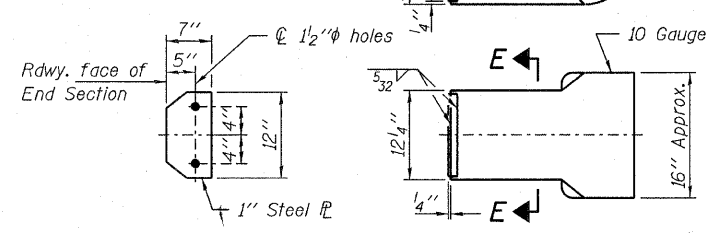


ANCHOR DEVICE



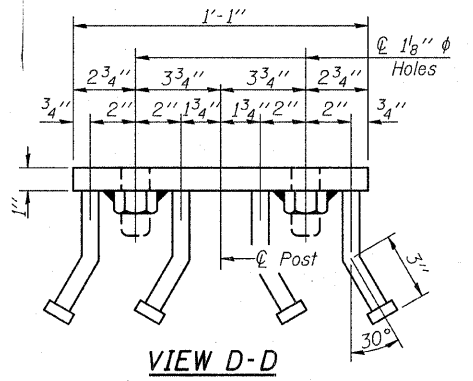
END OF RAIL DETAILS

Note: Cost of curled end sections shall be included with the Steel Railing. (2 Required)



SECTION E-E CURLED END SECTION DETAILS

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



VIEW D-D

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

(10'-9" Maximum Post Spacing)

BILL OF MATERIAL

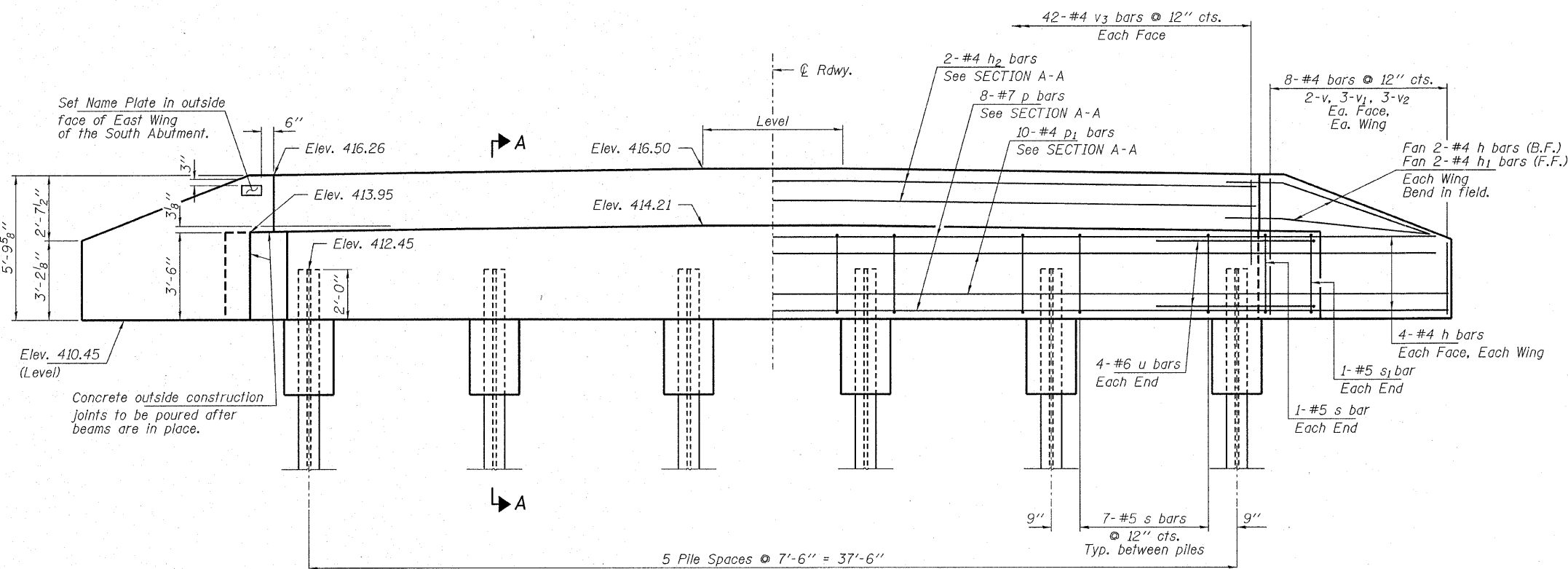
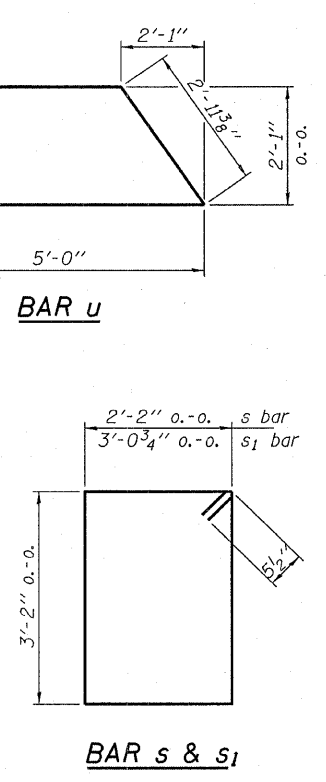
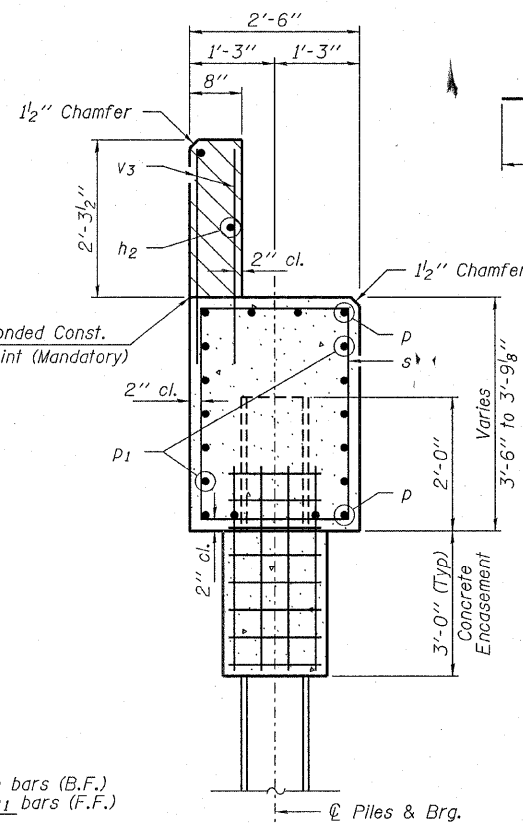
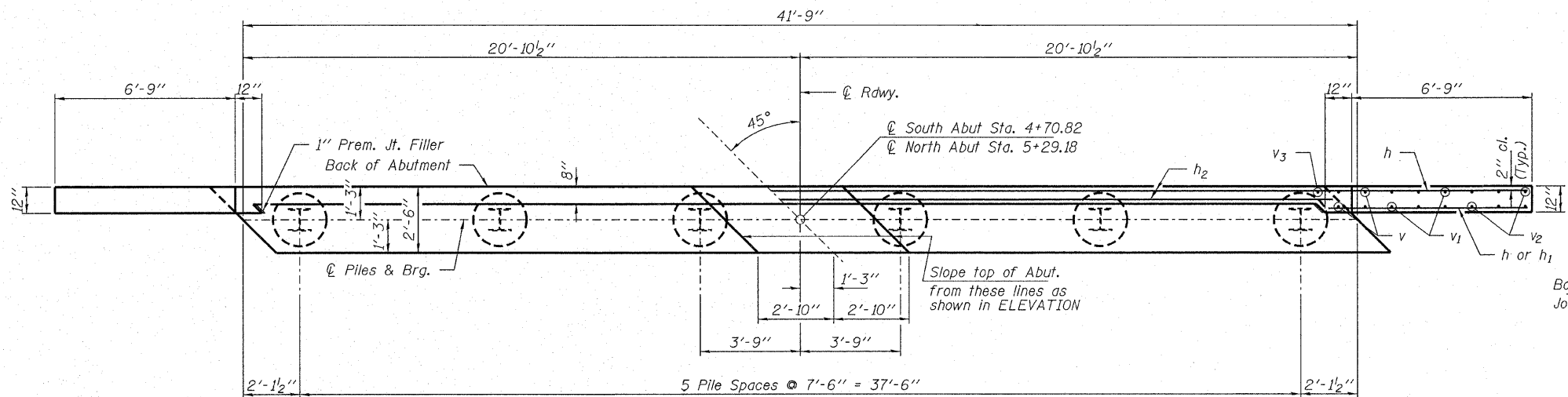
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	118

STEEL RAILING, TYPE S-1  
 STRUCTURE NO. 051-3283

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 5 9 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	8
		CONTRACT NO. 95581				
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PROJECT NUMBER: 08.0148.130 DATE: 01/15/09





ELEVATION

PILE DATA

Type ----- Steel HP10x42  
 No. Req'd. (2 Abutments) ----- \*12  
 Factored Resistance Available (Rf) ----- 167 Kips/Pile  
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile  
 Est. Length ----- 45 Ft/Pile

Notes: \* Includes one test pile to be driven in permanent location at the South Abutment.  
 The Steel H-Piles shall be according to AASHTO M270 Grade 50.  
 The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

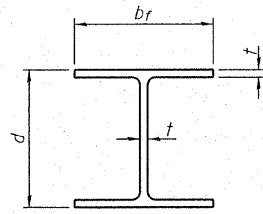
BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	9'-0"	—
h1	8	#4	7'-6"	—
h2	4	#4	41'-5"	—
p	16	#7	41'-5"	—
p1	20	#4	41'-5"	—
s	74	#5	11'-7"	□
s1	4	#5	13'-5"	□
u	16	#6	13'-0"	▤
v	16	#4	5'-3"	—
v1	24	#4	4'-1"	—
v2	24	#4	2'-11"	—
v3	168	#4	3'-2"	—
Concrete Structures			Cu. Yd.	37.8
Concrete Encasement			Cu. Yd.	4.0
Reinforcement Bars			Pound	3,810
Steel Piles HP10x42			Foot	495
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

ABUTMENTS  
 STRUCTURE NO. 051-3283

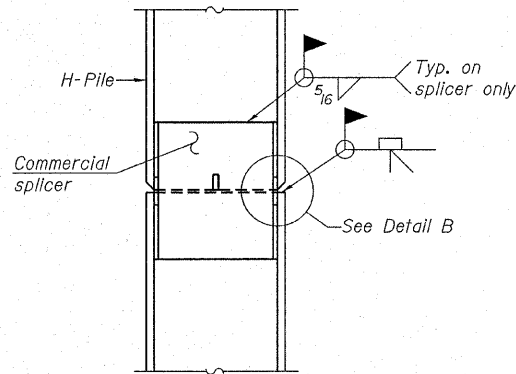
HAMPSON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 6  9 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	9
PROJECT NUMBER: 08.0148.130 DATE: 01/15/09		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 95581

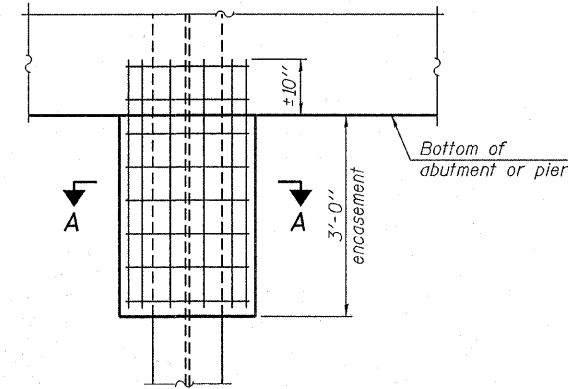


**STEEL PILE TABLE**

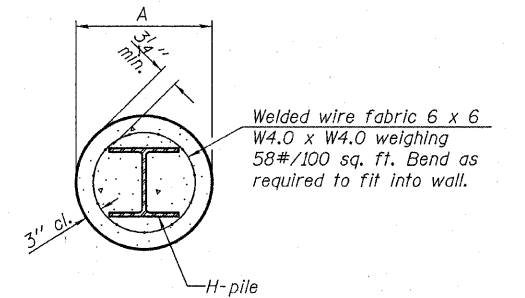
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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



**ELEVATION**



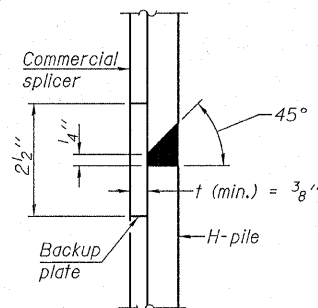
**ELEVATION**



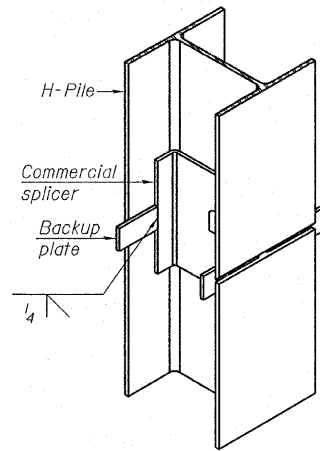
**SECTION A-A**

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

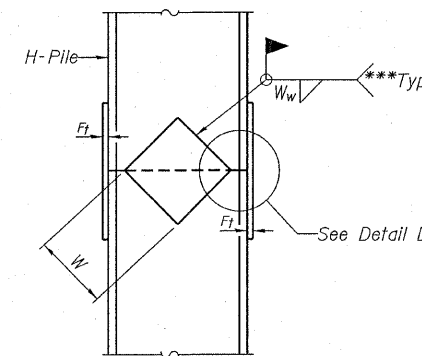
**PILE ENCASEMENT**



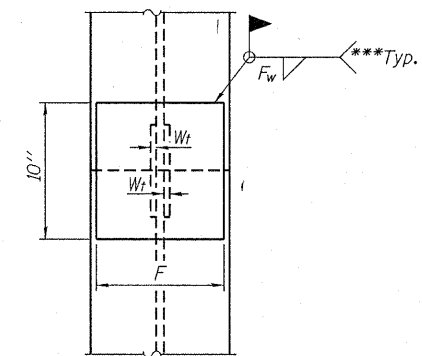
**DETAIL "B"**



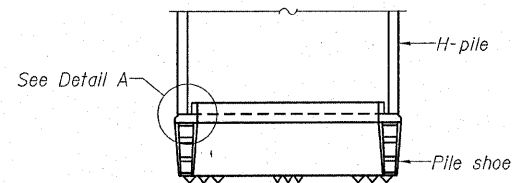
**ISOMETRIC VIEW**



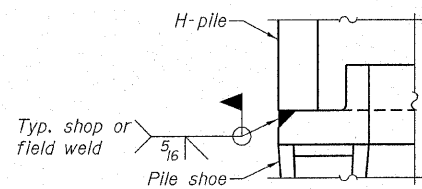
**ELEVATION**



**END VIEW**

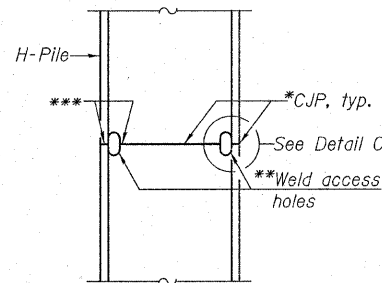


**ELEVATION**

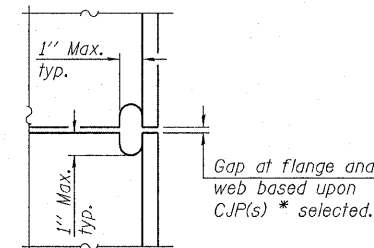


**DETAIL A**

**H-PILE SHOE ATTACHMENT**

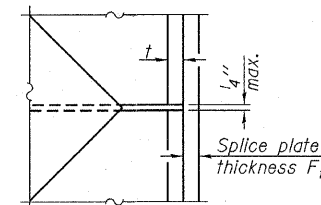


**ELEVATION**



**DETAIL C**

**COMPLETE PENETRATION WELD SPLICE**



**DETAIL D**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

**STEEL H PILE DETAILS  
STRUCTURE NO. 051-3283**

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

\*Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code-Steel.

\*\*Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code-Steel.

\*\*\*Interrupt welds 1/4" from end of each pile.

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

F-HP

5-16-08

<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS <b>HLR</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 7	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		17	05-00102-00-BR	LAWRENCE	12	10
9 SHEETS		CONTRACT NO. 95581				
PROJECT NUMBER: 08.0148.130		DATE: 01/15/09				
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



