

**INDEX OF SHEETS**

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

STANDARDS: 280001-07 - EROSION CONTROL  
 515001-03 - NAME PLATES  
 701901-02 - TRAFFIC CONTROL  
 BLR 21-9 - TRAFFIC CONTROL  
 BLR 22-7 - TRAFFIC CONTROL  
 675106-06

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

TR 167  
 WAYNE COUNTY  
 SECTION 08-18110-00-BR  
 STRUCTURE NO. 096-3448  
 PROJECT NO. BROS-191(059)  
 JOB NO. C-97-106-09

SUMMARY OF QUANTITIES

SCALES

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

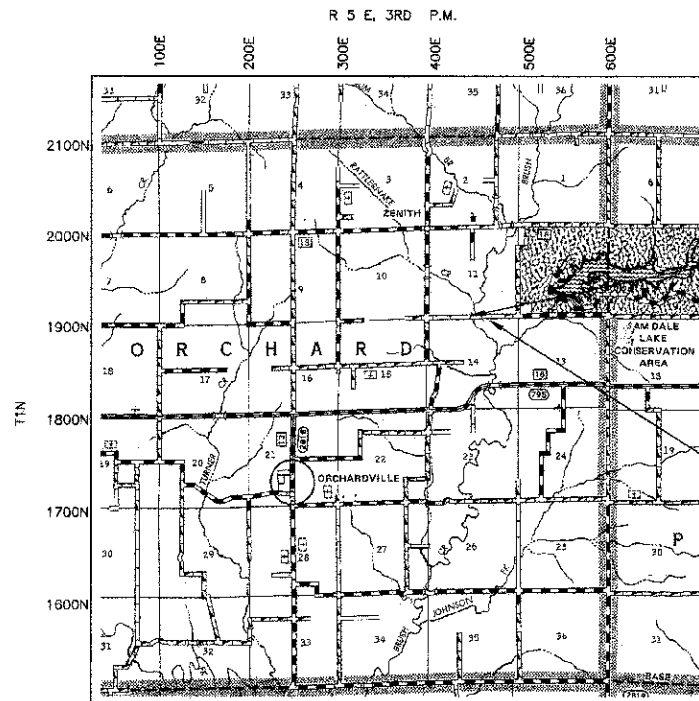
0.6	ACRE	SEEDING, CLASS 2 (SPECIAL)	X2501000
102	TON	AGGREGATE DITCH (SPECIAL)	X2830495
1	L SUM	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	X7010216
50	UNIT	TREE REMOVAL (OVER 15 UNITS DIAMETER)	20100210
0.67	ACRE	TREE REMOVAL, ACRES	20100500
383	CU YD	EARTH EXCAVATION	20200100
290	CU YD	CHANNEL EXCAVATION	20300100
1,884	CU YD	FURNISHED EXCAVATION	20400800
48	FOOT	TEMPORARY DITCH CHECKS	28000305
60	FOOT	PERIMETER EROSION BARRIER	28000400
168	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
560	TON	AGGREGATE BASE COURSE, TYPE B	35101400
1	EACH	REMOVE EXISTING STRUCTURES	50100100
25.2	CU YD	CONCRETE STRUCTURES	50300225
2.8	CU YD	CONCRETE ENCASEMENT	50300280
1,800	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	50400605
2,660	POUND	REINFORCEMENT BARS	50800105
146	FOOT	STEEL RAILING, TYPE S1	50900205 *
435	FOOT	FURNISHING STEEL PILES HP 12 X 53	51201600
435	FOOT	DRIVING PILES	51202305
1	EACH	TEST PILE STEEL HP 12 X 53	51203600
1	EACH	NAME PLATES	51500100
40	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 15"	542D0220
1	L SUM	MOBILIZATION	67100100

\* SPECIALTY ITEMS

FUNCTIONAL CLASS: RURAL LOCAL ROAD  
 ADT = 50  
 DESIGN SPEED = 30 MPH

LOCATION MAP

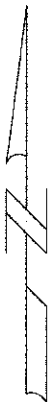
APPROXIMATE SCALE: 1 INCH = 1 MILE  
 NET LENGTH = 800 L.F. = 0.152 MILES



SECTION 08-18110-00-BR  
 BEGINS STA. 0+00

STA. 3+48 - SPECIAL BRIDGE DESIGN  
 PROPOSED PRECAST PRESTRESSED CONCRETE  
 DECK BEAM BRIDGE, 1 SPAN @ 75'  
 FILE BENT SPILL-THRU ABUTMENTS  
 24' ROWY., SKEW = 0'  
 PROPOSED STRUCT. NO. 096-3448  
 EXISTING STRUCT. NO. 096-3078

SECTION 08-18110-00-BR  
 ENDS STA. 8+00



TOLL FREE 800 UTILITY LOCATING  
 INFORMATION FOR EXCAVATORS (I.U.L.L.E.)  
 TELEPHONE NO. 1-800-892-0122 OR 811

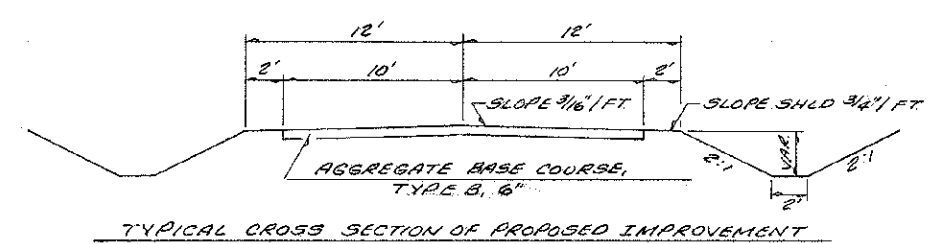


*John A. Stone*  
 10/30/2012  
 ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55012  
 LICENSE EXPIRES NOVEMBER 30, 2013

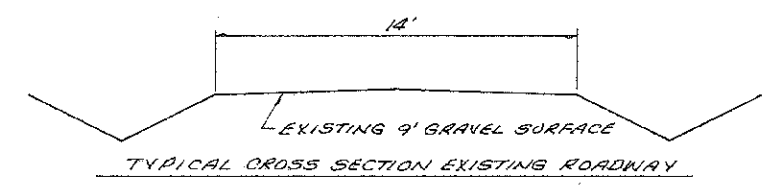
PROFESSIONAL DESIGN FIRM #184-000832

ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	10/30, 2012
<i>Wayne County Engineer</i> WAYNE COUNTY ENGINEER	
PASSED	11/15, 2012
<i>Murphy</i> DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS	
RELEASING FOR BID BASED ON LIMITED REVIEW	11/15, 2012
<i>Roger D. Driskell</i> DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

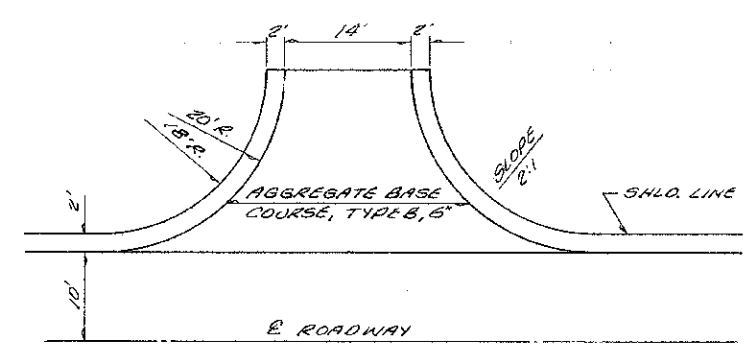
F.S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
08-1810-00-BR	WAYNE	MI	12	2
STA. 0700	TO STA. 8100			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



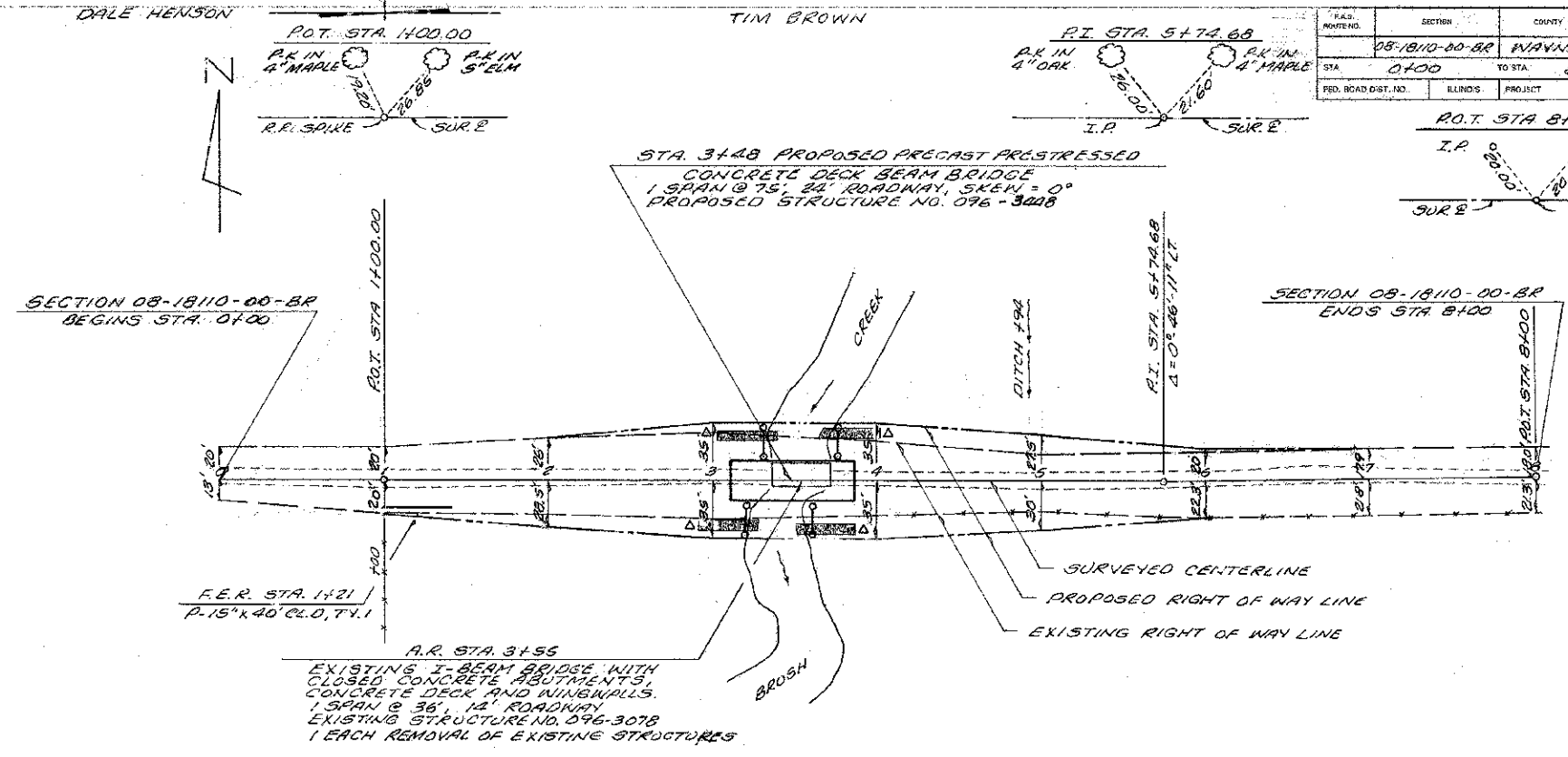
TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT



TYPICAL CROSS SECTION EXISTING ROADWAY



DETAIL OF FIELD ENTRANCE



SECTION 08-1810-00-BR BEGINS STA. 0700

SECTION 08-1810-00-BR ENDS STA. 8100

F.R. STA. 1421  
P-15"x40" C.L.O. T.Y. 1

A.R. STA. 3155  
EXISTING I-BEAM BRIDGE WITH CLOSED CONCRETE ABUTMENTS, CONCRETE DECK AND NINGWALLS. 1 SPAN @ 36' 12" ROADWAY EXISTING STRUCTURE NO. 096-3078 1 EACH REMOVAL OF EXISTING STRUCTURES

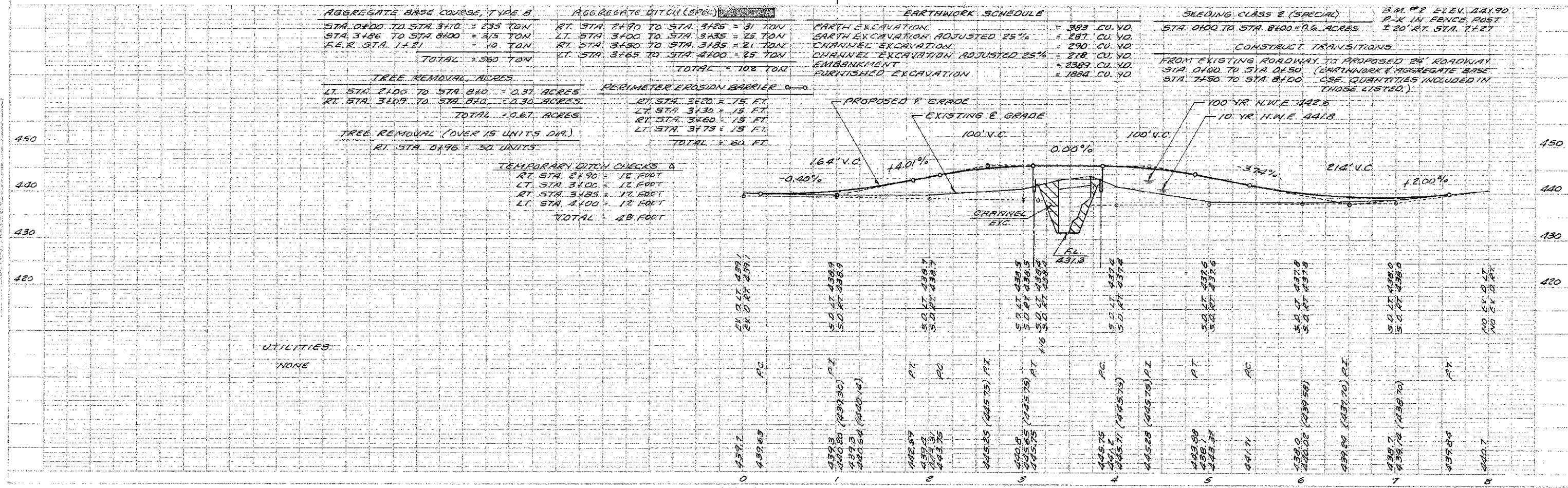
CHARLES L. BURGESS

EARL SMITH

AGGREGATE BASE COURSE, TYPE B	AGGREGATE DITCH (SPAL)	PERIMETER EROSION BARRIER
STA. 0700 TO STA. 3110 = 235 TON	RT. STA. 2490 TO STA. 3125 = 31 TON	RT. STA. 3120 = 15 FT.
STA. 3186 TO STA. 8100 = 315 TON	LT. STA. 3100 TO STA. 3435 = 25 TON	LT. STA. 3130 = 15 FT.
F.R. STA. 1421 = 10 TON	RT. STA. 3150 TO STA. 3485 = 21 TON	RT. STA. 3460 = 15 FT.
TOTAL = 560 TON	LT. STA. 3465 TO STA. 4700 = 25 TON	LT. STA. 3475 = 15 FT.
	TOTAL = 102 TON	TOTAL = 60 FT.
TREE REMOVAL, ACRES		
LT. STA. 2100 TO STA. 810 = 0.87 ACRES		
RT. STA. 3109 TO STA. 810 = 0.30 ACRES		
TOTAL = 0.67 ACRES		
TREE REMOVAL (OVER 15 UNITS DIA.)		
RT. STA. 0796 = 50 UNITS		
TEMPORARY DITCH CHECKS &		
RT. STA. 2490 = 12 FOOT		
LT. STA. 3100 = 12 FOOT		
RT. STA. 3485 = 12 FOOT		
LT. STA. 4700 = 12 FOOT		
TOTAL 48 FOOT		

EARTHWORK SCHEDULE	
EARTH EXCAVATION	= 383 CU. YD.
EARTH EXCAVATION ADJUSTED 25%	= 287 CU. YD.
CHANNEL EXCAVATION	= 290 CU. YD.
CHANNEL EXCAVATION ADJUSTED 25%	= 218 CU. YD.
EMBANKMENT	= 2389 CU. YD.
FURNISHED EXCAVATION	= 1884 CU. YD.

SEEDING CLASS 2 (SPECIAL)	
STA. 0700 TO STA. 8100 = 0.6 ACRES	15 M. #2 ELEV. 711.90
	P.K. IN FENCE POST
	± 20' RT. STA. 7127
CONSTRUCT TRANSITIONS	
FROM EXISTING ROADWAY TO PROPOSED 24' ROADWAY	
STA. 0700 TO STA. 0750 (EARTHWORK & AGGREGATE BASE	
STA. 7150 TO STA. 8100 (CASE QUANTITIES INCLUDED IN	
THOSE LISTED.)	

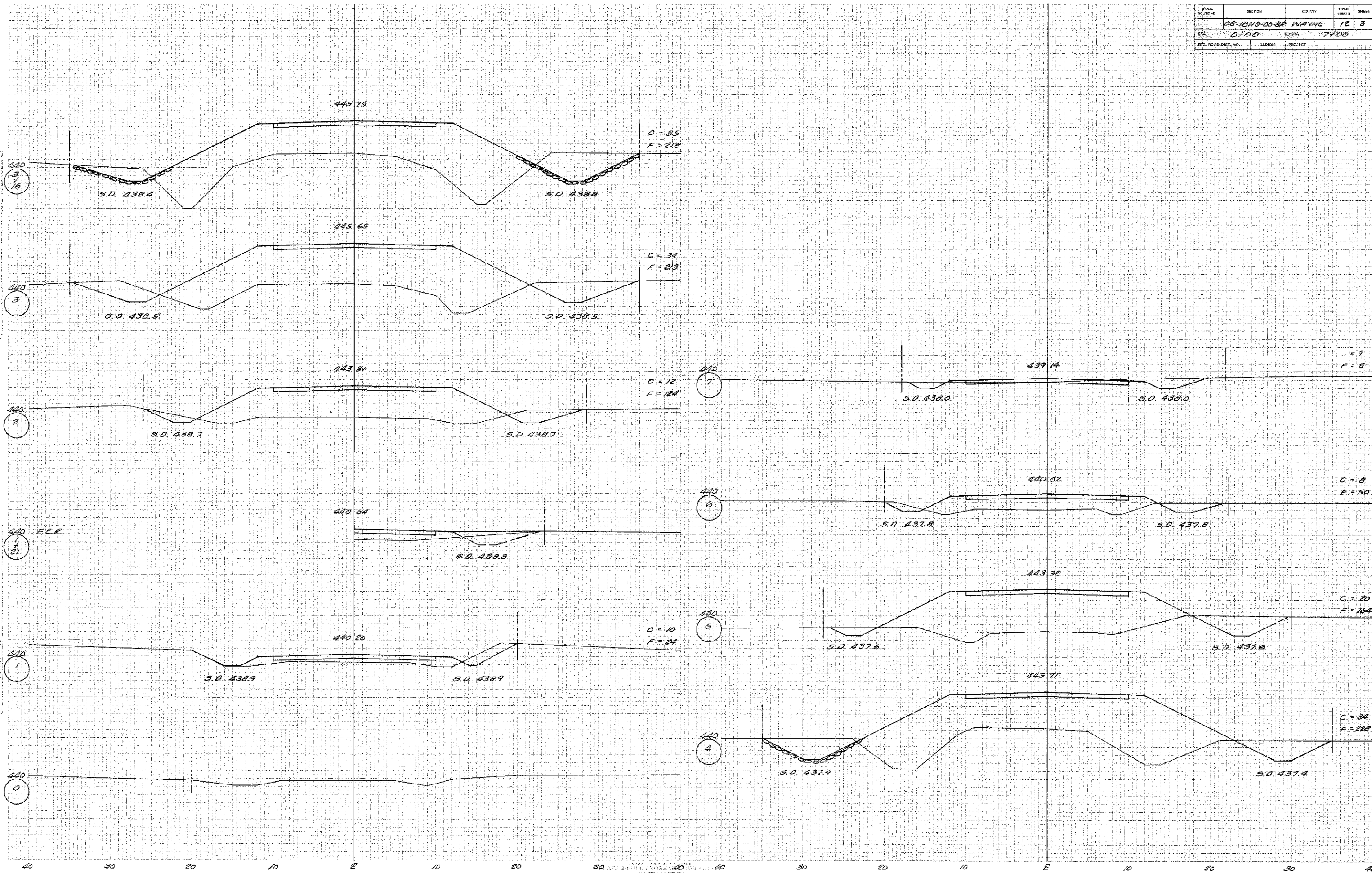


UTILITIES  
NONE

F.A.S. ROUTING	SECTION	COUNTY	TOTAL SHEETS	SHEET
08-18110-00-88	WAYNE		12	3
STA. 0700		TO STA. 7700		
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

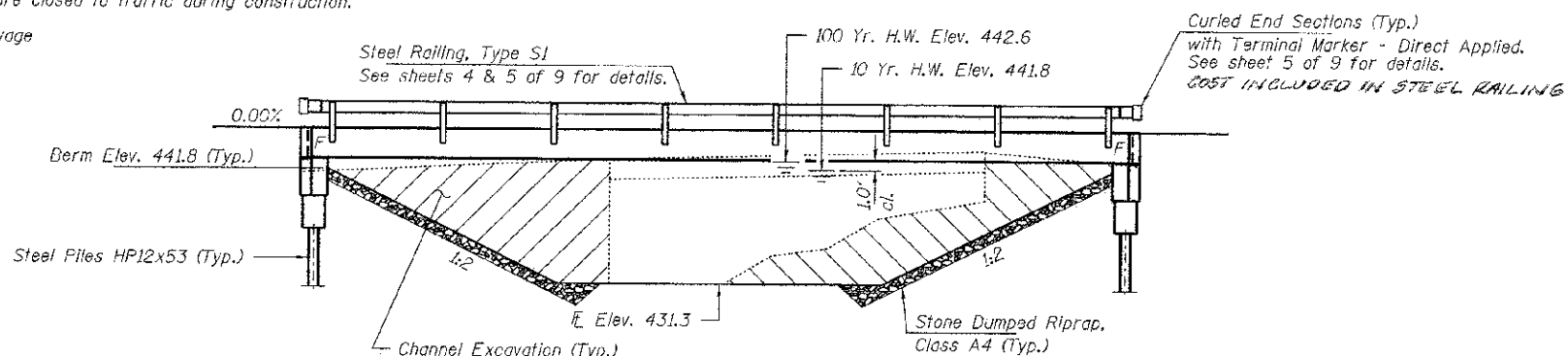
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 DATE: \_\_\_\_\_



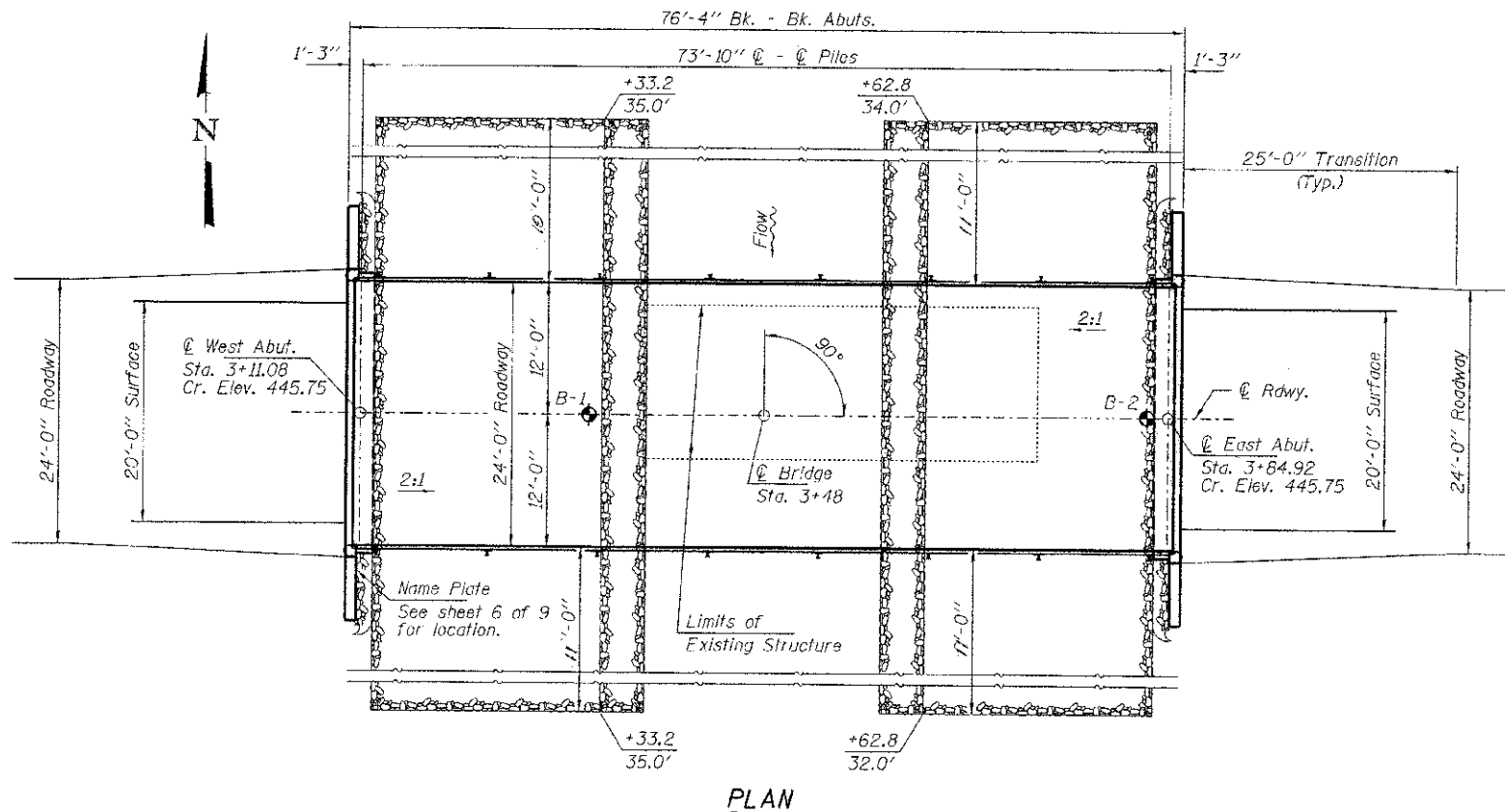
BENCHMARK: P.K. nail in fence post. Sta. 7+27, ±20' Rt., Elev. 441.90

EXISTING STRUCTURE: Single span I-beam bridge with concrete deck on closed concrete abutments and wingwalls. 36.0' bk. - bk. abutts.; 14.0' o.-o. deck Structure closed to traffic during construction.

No Salvage



ELEVATION



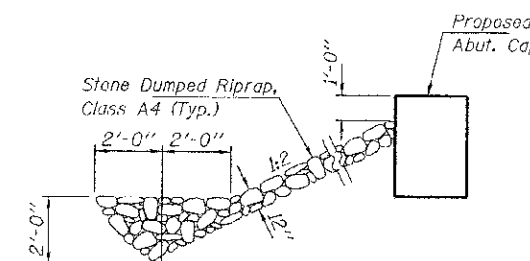
PLAN

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 East Abutment or approved by the Engineer before ordering the remainder of piles. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. 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.

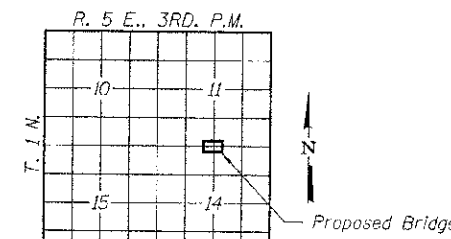
INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 33"x48" PFC Deck Beam
3. 33"x48" PFC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. HP File Details
- 8-9. Borings



SECTION A-A

Note: See Special Provisions for Stone Dumped Riprap, Class A4.



LOCATION SKETCH

BRUSH CREEK  
BUILT 200. BY  
WAYNE COUNTY  
SEC. 08-18110-00-BR  
ORCHARD ROAD DISTRICT  
STR. NO. 096-3448  
LOADING HL-93

NAME PLATE

See Std. 515001

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: 2012 AASHTO LRFD with all applicable Interims. 50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.404g  
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.841g  
Soil Site Class = E

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	439.15	439.15

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exlst.	Prop.	H.W.E. Exlst.	Prop.	Exlst.	Prop.	
Design	10	3,940	246	175	441.8	0.0	0.1	441.8	441.9
Base	100	7,210	246	532	442.6	0.0	0.1	442.6	442.7
Max. Calc.	500	9,780	246	546	443.2	0.0	0.0	443.2	443.2

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 LRFD Specifications."

Steven W. McGinnis 10/30/2012  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064

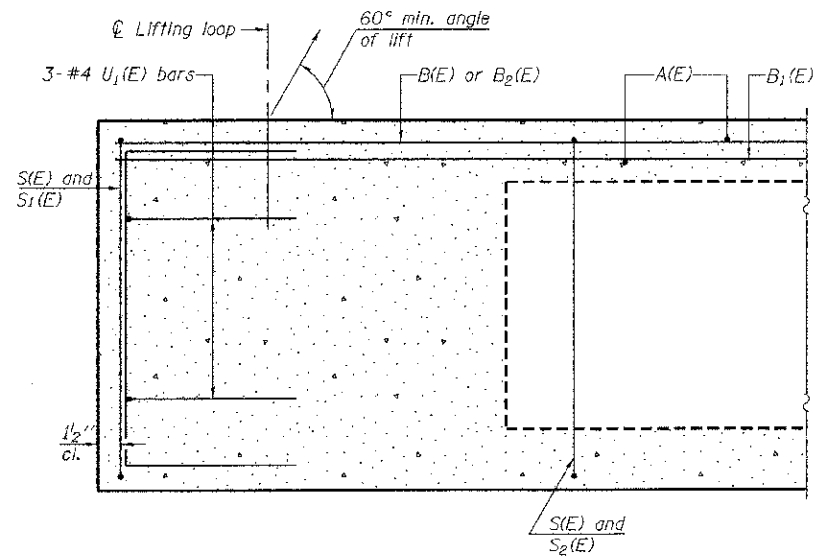


Expires 11-30-2014

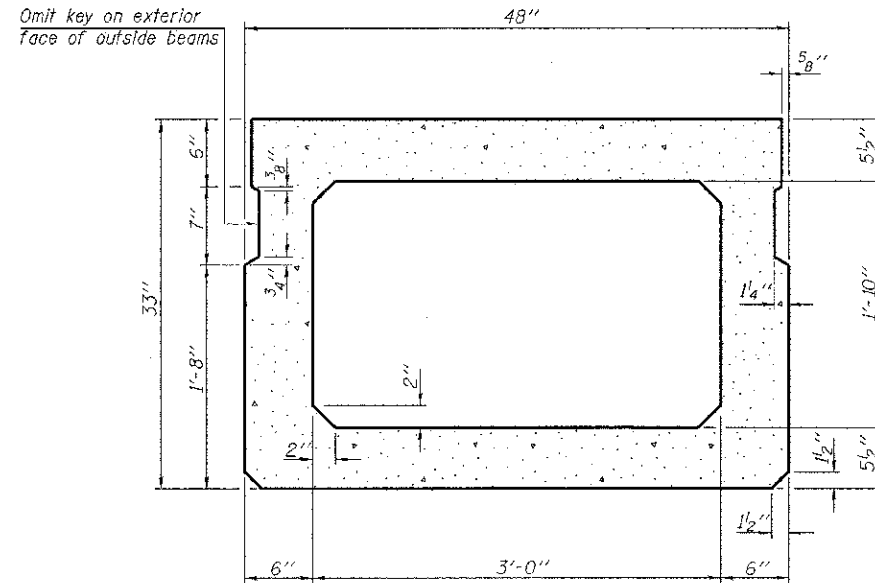
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			290
Stone Dumped Riprap, Class A4	Ton			168
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		25.2	25.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,800		1,800
Reinforcement Bars	Pound		2,660	2,660
Steel Railing, Type S1	Foot	148		148
Furnishing Steel Piles HP12x53	Foot		455	455
Driving Piles	Foot		455	455
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each		1	1

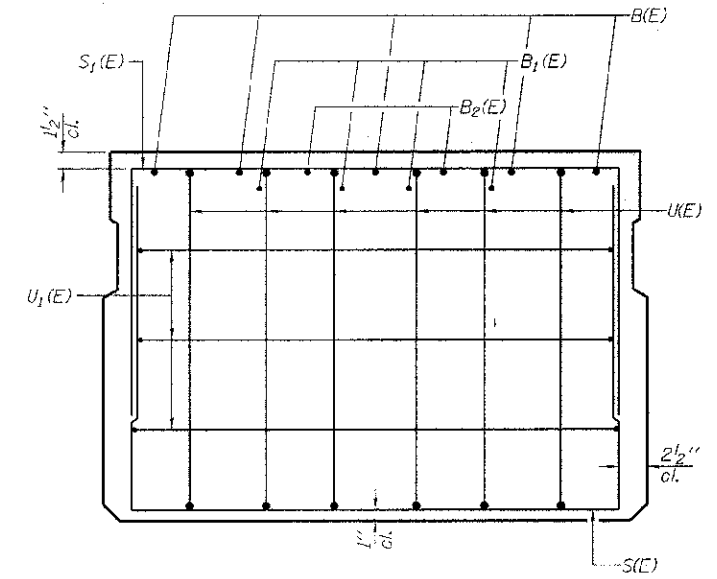
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HAMPTON, LENZINI AND RENWICK, INC. 3335 W. WASHINGTON ST. SUITE 201 SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			167A	08-18110-00-BR	WAYNE	12	4
ILLINOIS PROFESSIONAL DESIGN FIRM LSI/PE/USE/COMP. 18-000000	PLOT DATE = 10/30/2012	DRAWN - D.A.B.	REVISED -			ORCHARD ROAD DISTRICT				
		CHECKED - S.W.M.	REVISED -							CONTRACT NO. 95588



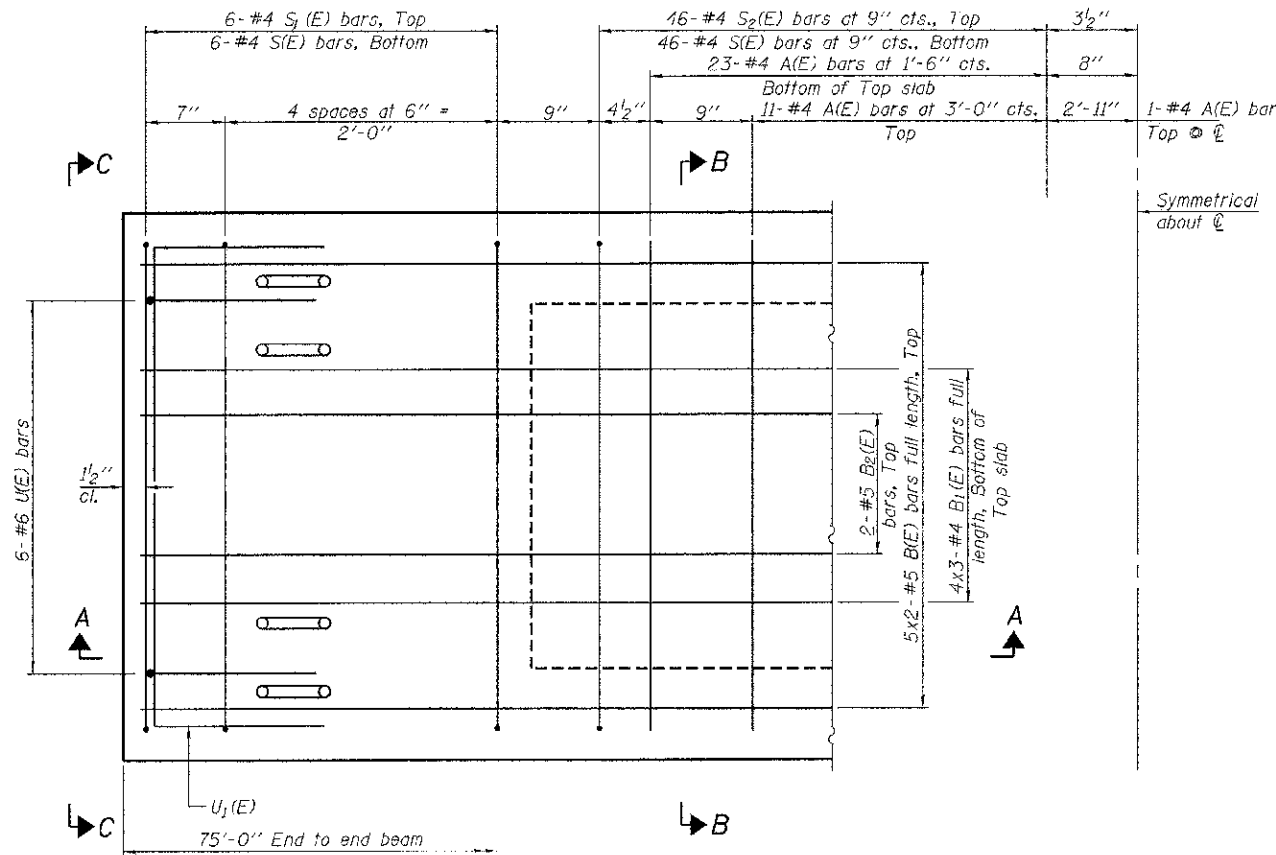
SECTION A-A



SECTION B-B  
(Showing dimensions)



VIEW C-C



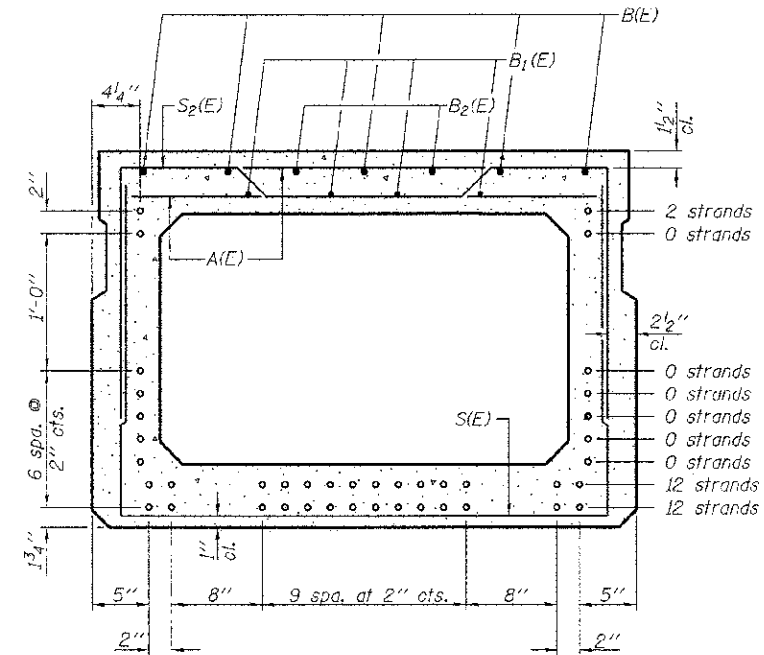
PLAN VIEW

Note: Spacing of S(E) and S<sub>2</sub>(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.

Bars indicated thus 5x2- #5 etc. indicates 5 lines of bars with 2 lengths per line.

Symmetrical about C

**MINIMUM BAR LAP**  
#4 bar = 2'-0"  
#5 bar = 2'-6"



SECTION B-B

(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)	69	#4	3'-7"	—
B(E)	10	#5	38'-5"	—
B <sub>1</sub> (E)	12	#4	26'-3"	—
B <sub>2</sub> (E)	4	#5	38'-5"	—
S(E)	104	#4	8'-5"	U
S <sub>1</sub> (E)	12	#4	7'-3"	U
S <sub>2</sub> (E)	92	#4	7'-6"	U
U(E)	12	#6	5'-0"	U
U <sub>1</sub> (E)	6	#4	6'-0"	U

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

PD-3348-0

7-1-10

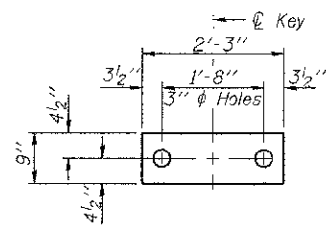
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3935 STEVENSON DRIVE, SUITE 214 SPRINGFIELD, ILL. 62704	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM EST. 1962 / SE. 0494 194.001950	PLOT DATE = 12/27/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS  
WAYNE COUNTY HIGHWAY DEPARTMENT

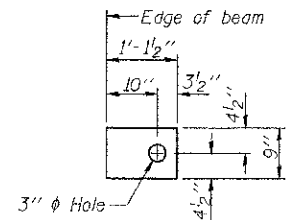
33" x 48" PPC DECK BEAM  
STRUCTURE NO. 096-3448

SHEET NO. 2 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167A	08-18110-CO-BR	WAYNE	12	5
ORCHARD ROAD DISTRICT			CONTRACT NO. 95588	
[ILLINOIS] FED. AID PROJECT				



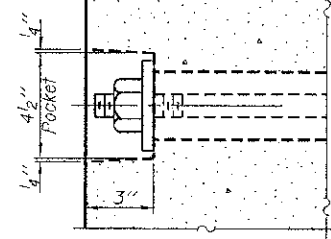
**FABRIC BEARING PAD**  
(Interior - 10 Req'd.)



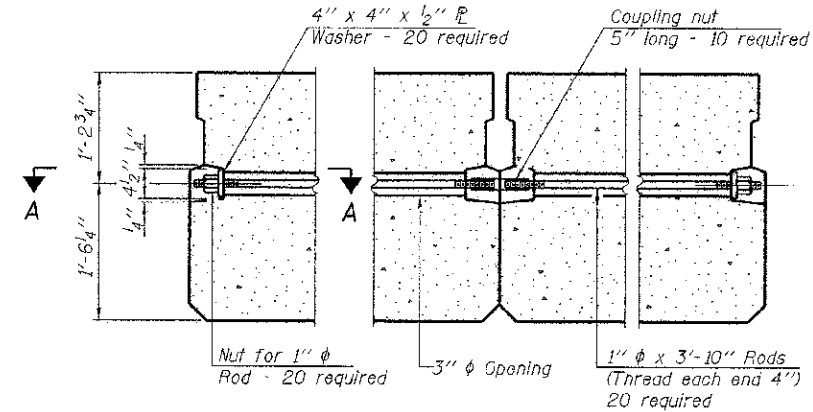
**FABRIC BEARING PAD**  
(Exterior - 4 Req'd.)

**FIXED**

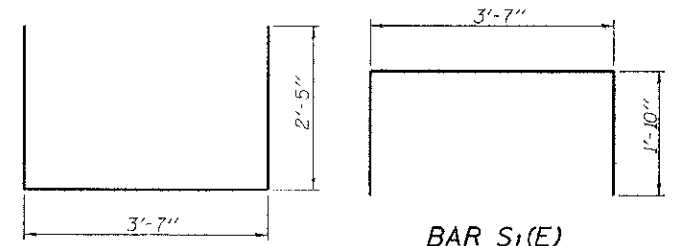
Notes:  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



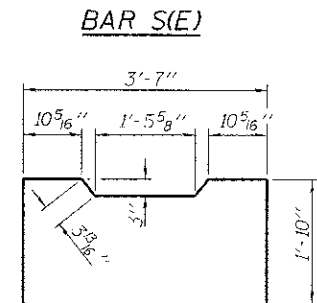
**SECTION A-A**



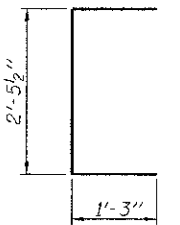
**TYPICAL TRANSVERSE TIE ASSEMBLY**



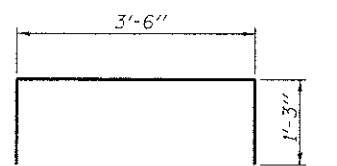
**BAR S<sub>1</sub>(E)**



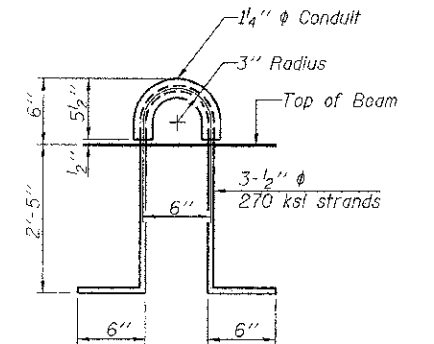
**BAR S(E)**



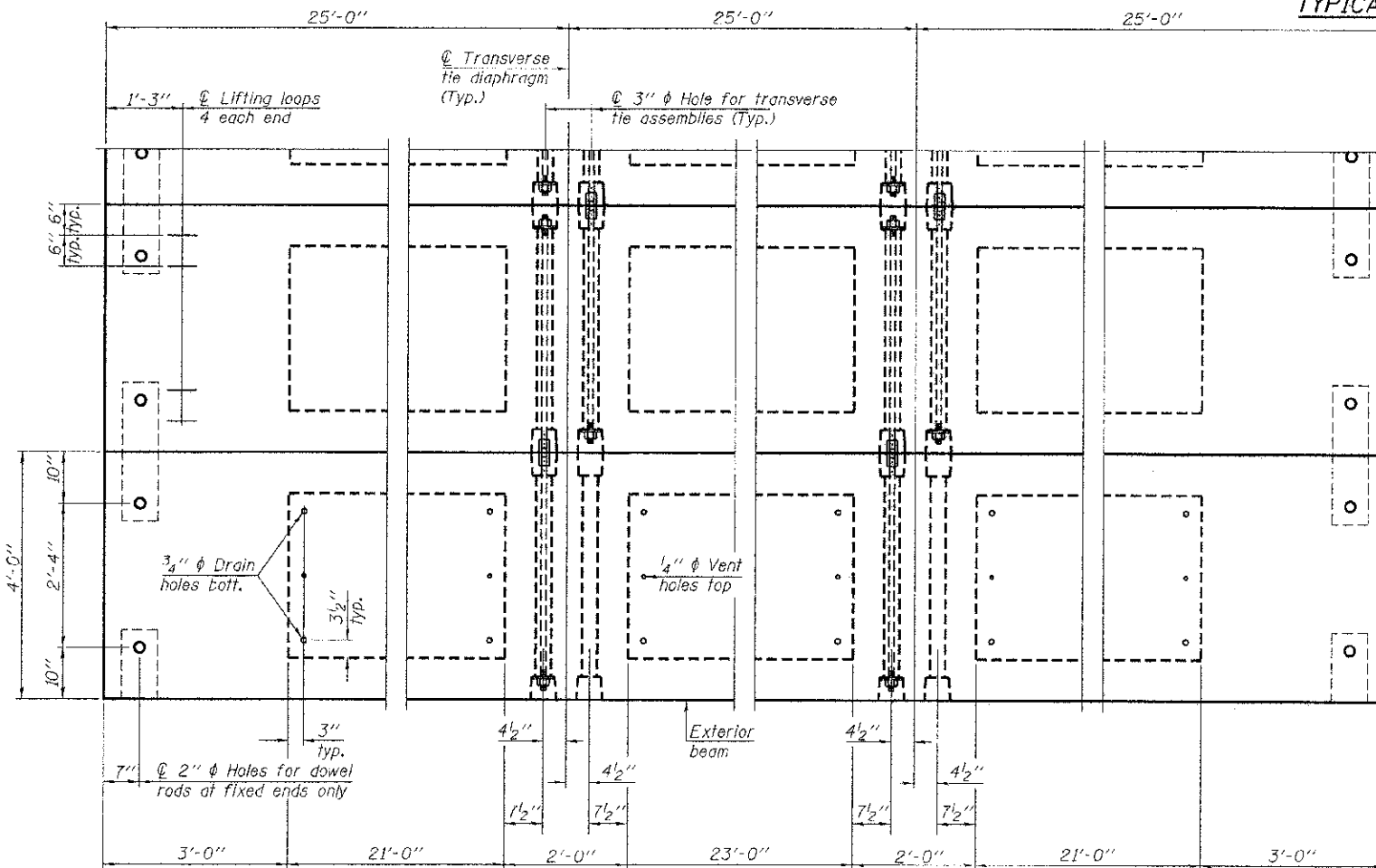
**BAR U(E)**



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



**LIFTING LOOP DETAIL**



**PLAN VIEW**

**NOTES**

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

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" diameter 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 1/4" 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 1021.07 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.  
All reinforcement shall be epoxy coated.

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	1,800
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PD-3348-0D

7-1-10

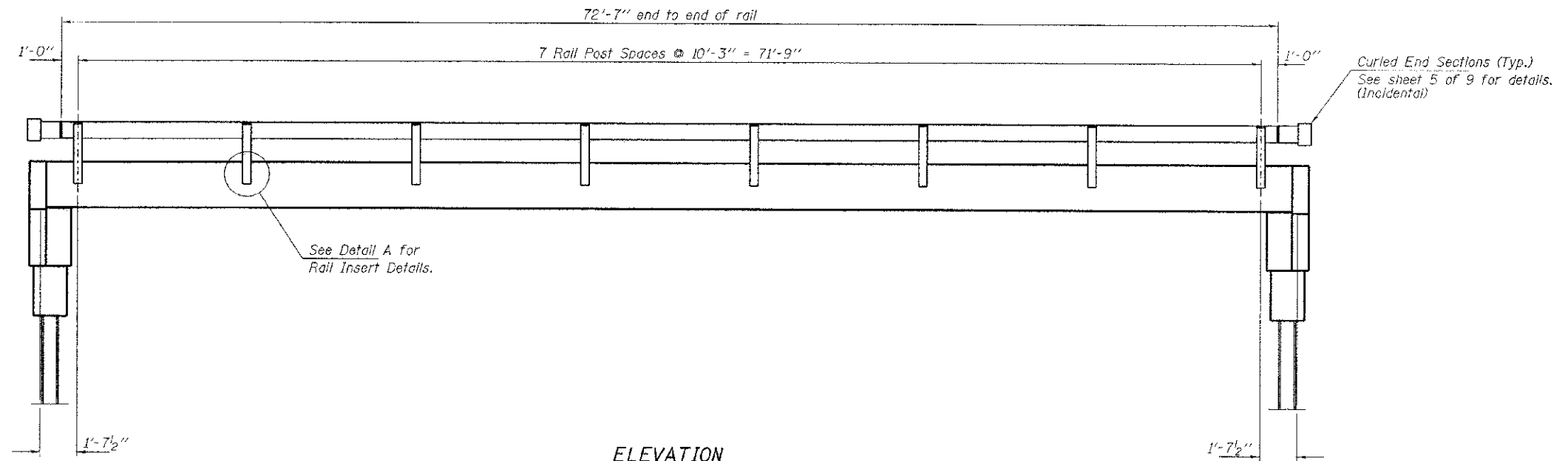
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3000 STEVENSON DRIVE, SUITE 801 CHICAGO, ILLINOIS 60631	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LD 176 / SE-001P 10420255	PLOT DATE = 10/27/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS  
WAYNE COUNTY HIGHWAY DEPARTMENT

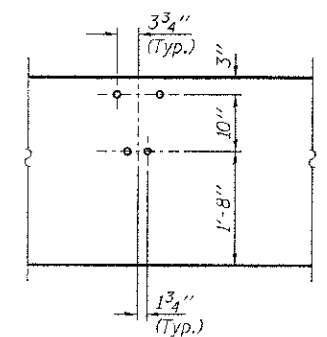
33" x 48" PPC DECK BEAM DETAILS  
STRUCTURE NO. 096-3448

SHEET NO. 3 OF 9 SHEETS

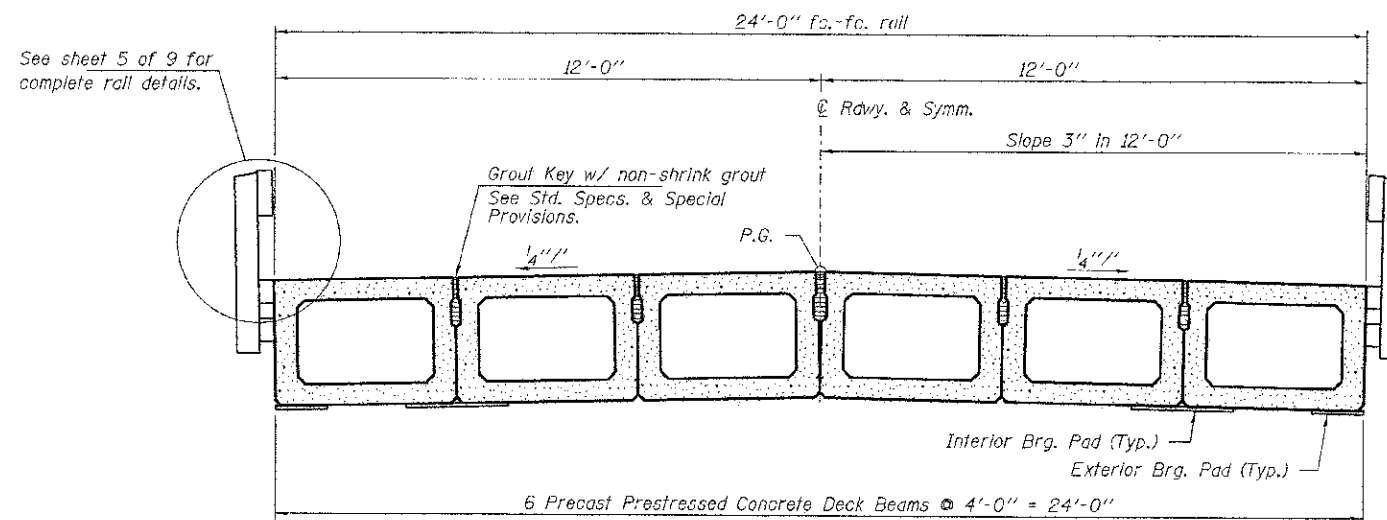
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167A	09-18110-00-BR	WAYNE	12	6
ORCHARD ROAD DISTRICT			CONTRACT NO. 95588	
ILLINOIS FED. AID PROJECT				



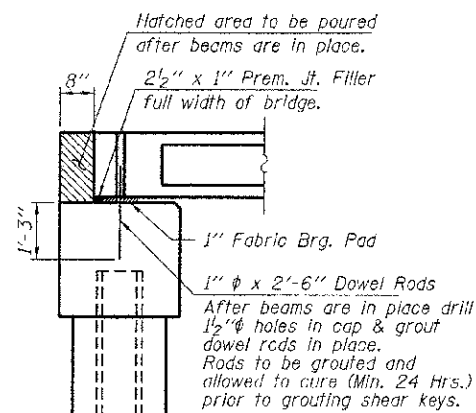
**ELEVATION**  
Showing Rail Post Spaces  
See sheet 5 of 9 for Railing Details.



**DETAIL A**



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

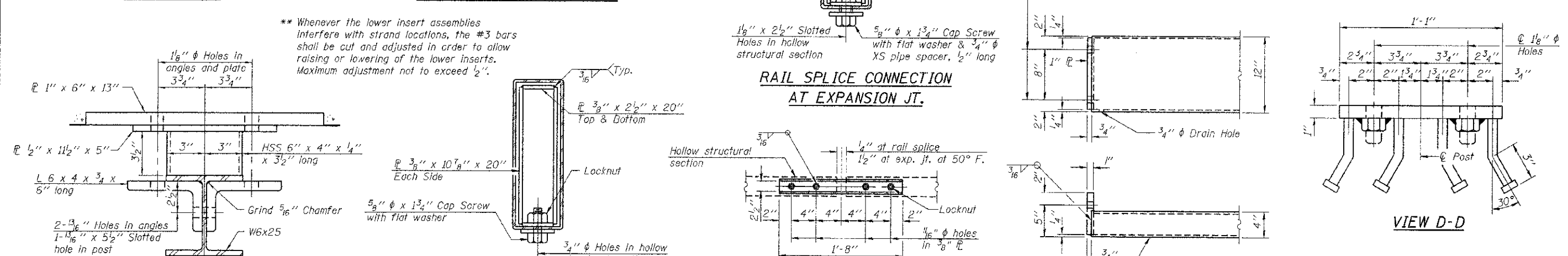
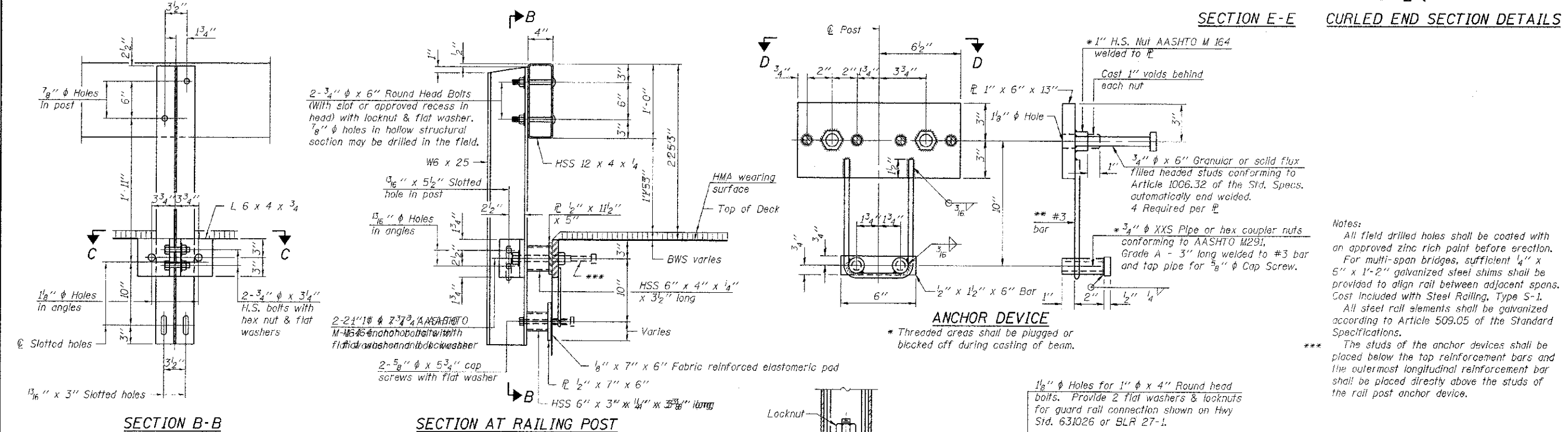
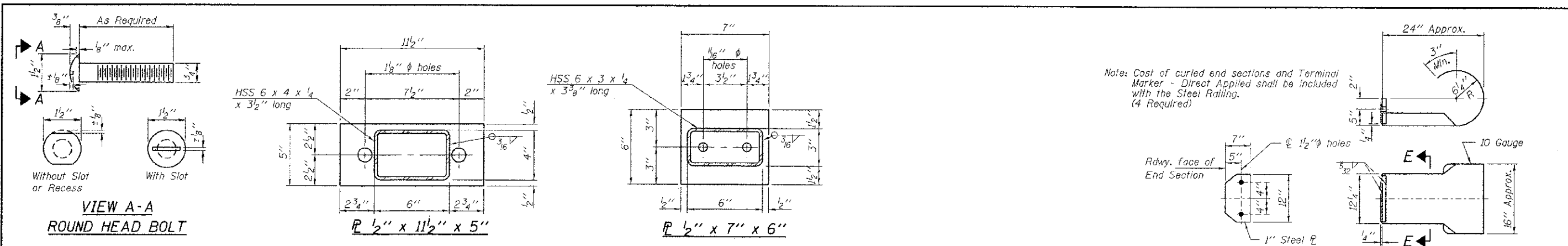


**SECTION AT ABUTMENTS**

© Pt. L's

FILE NAME = 090240-sh+bridgedgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	<b>STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>SUPERSTRUCTURE DETAILS STRUCTURE NO. 096-3448</b>	I.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3305 STATE STREET, SUITE 101 SPRINGFIELD, ILLINOIS 62762	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			167A	08-18110-00-BR	WAYNE	12	7	
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / P8 / SE CORP. 184 003086	PLOT DATE = 10/25/2012	DRAWN - D.A.B.	REVISED -			ORCHARD ROAD DISTRICT	CONTRACT NO. 95588				
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					

SHEET NO. 4 OF 9 SHEETS



**VIEW D-D**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	148

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = 008240*ah-tr-bridged.dgn	USER NAME =	DESIGNED = A.S.L.	REVISED =
HAMPTON, LENZINI AND RENICK, INC. 3048 SPRINGFIELD BLVD., SUITE 301 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM 151 PEASLEE BLDG. - 114-00008	PLOT SCALE =	CHECKED = S.W.M.	REVISED =
	PLOT DATE = 10/29/2012	DRAWN = D.A.B.	REVISED =
		CHECKED = S.W.M.	REVISED =

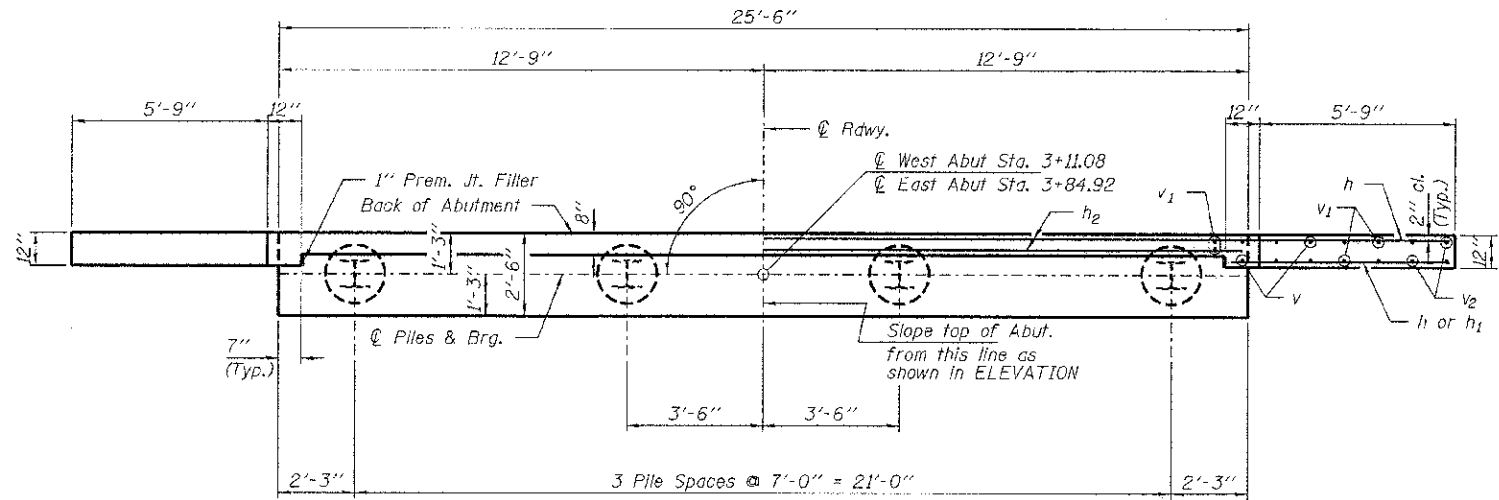
**STATE OF ILLINOIS**  
**WAYNE COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1**  
**STRUCTURE NO. 096-3448**

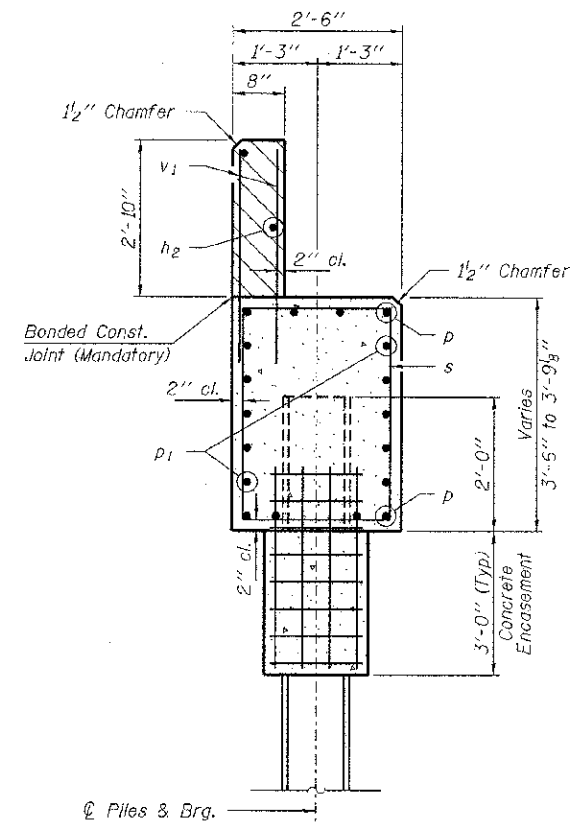
SHEET NO. 5 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167A	08-18110-00-BR	WAYNE	12	8
ORCHARD ROAD DISTRICT		CONTRACT NO. 95588		
ILLINOIS FED. AID PROJECT				



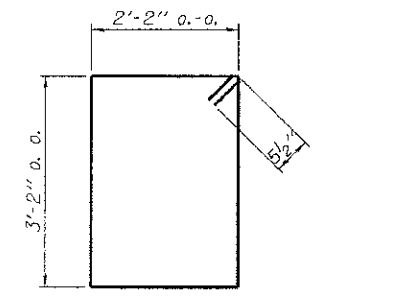


PLAN

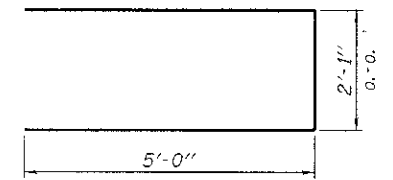


SECTION A-A

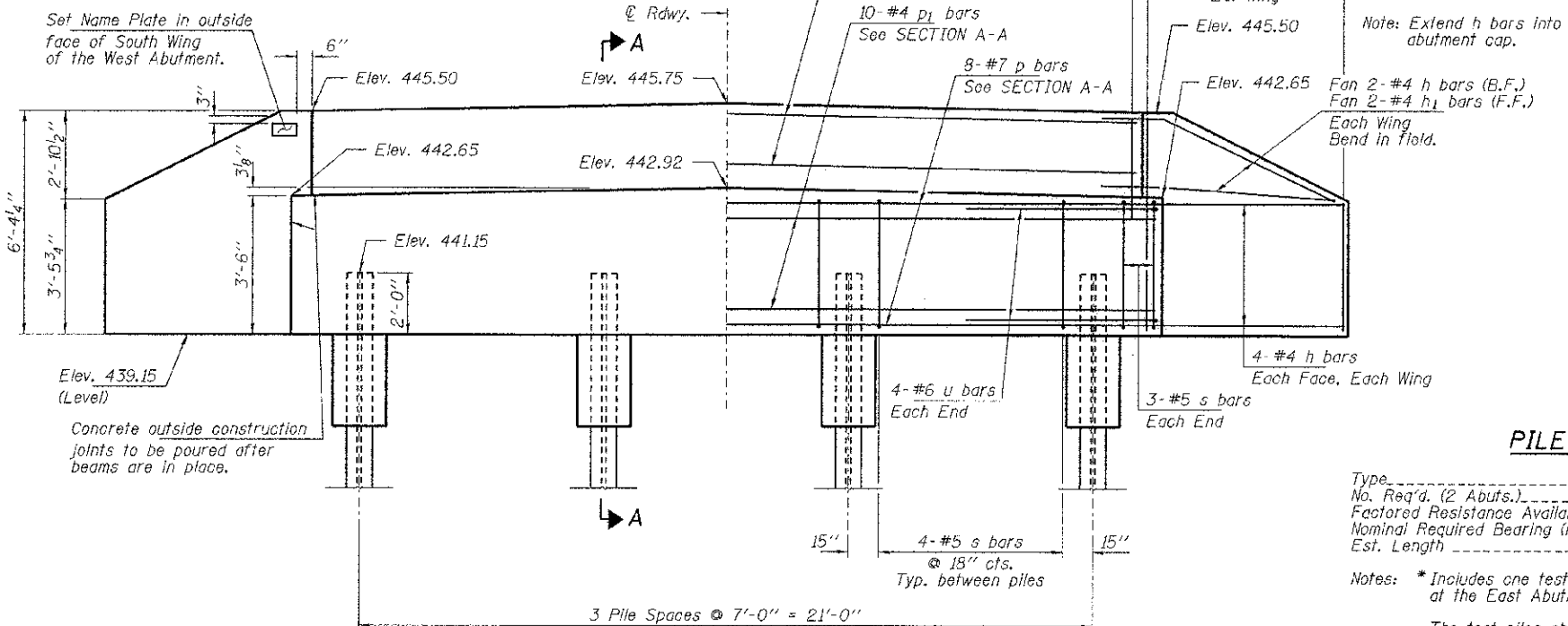
Hatched area to be poured after beams are in place.



BAR s



BAR u



ELEVATION

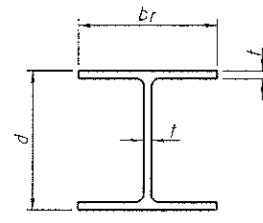
PILE DATA

Type ----- Steel HP12x53  
 No. Req'd. (2 Abutts.) ----- \*8  
 Factored Resistance Available (Rf) ----- 209 Kips/Pile  
 Nominal Required Bearing (Rn) ----- 419 Kips/Pile  
 Est. Length ----- 65 Ft/Pile

Notes: \* Includes one test pile to be driven in a permanent location at the East Abutment.  
 The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

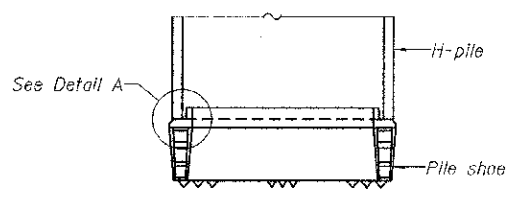
BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE	
h	40	#4	8'-0"	—	
h1	8	#4	6'-6"	—	
h2	4	#4	25'-2"	—	
p	16	#7	25'-2"	—	
p1	20	#4	25'-2"	—	
s	36	#5	11'-7"	□	
u	16	#6	12'-1"	—	
v	24	#4	5'-3"	—	
v1	120	#4	4'-3"	—	
v2	16	#4	3'-3"	—	
Concrete Structures				Cu. Yd.	25.2
Concrete Encasement				Cu. Yd.	2.8
Reinforcement Bars				Pound	2,660
Steel Piles HP12x53				Foot	455
Test Pile Steel HP12x53				Each	1
Name Plates				Each	1

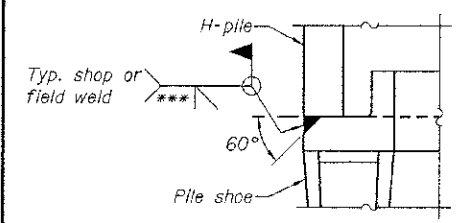


**STEEL PILE TABLE**

Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	3/8"	30"
x102	14"	14 3/4"	1/8"	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"	1/8"	24"
x74	12 3/8"	12 1/4"	5/8"	24"
x63	12"	12 5/8"	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"

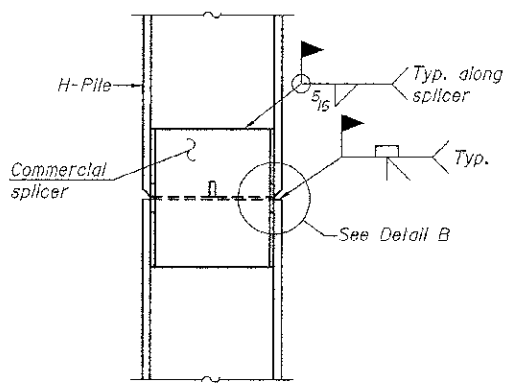


**ELEVATION**

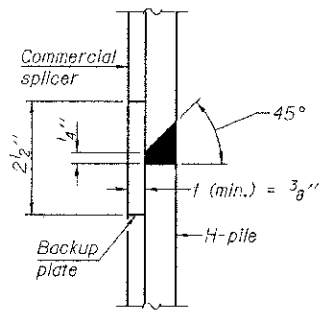


**DETAIL A**

**H-PILE SHOE ATTACHMENT**

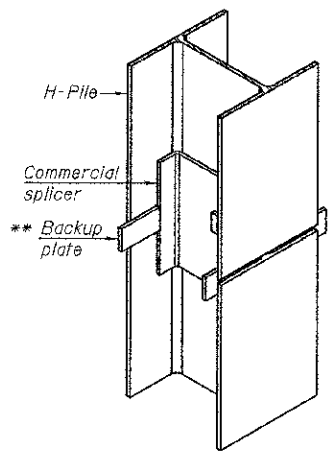


**ELEVATION**

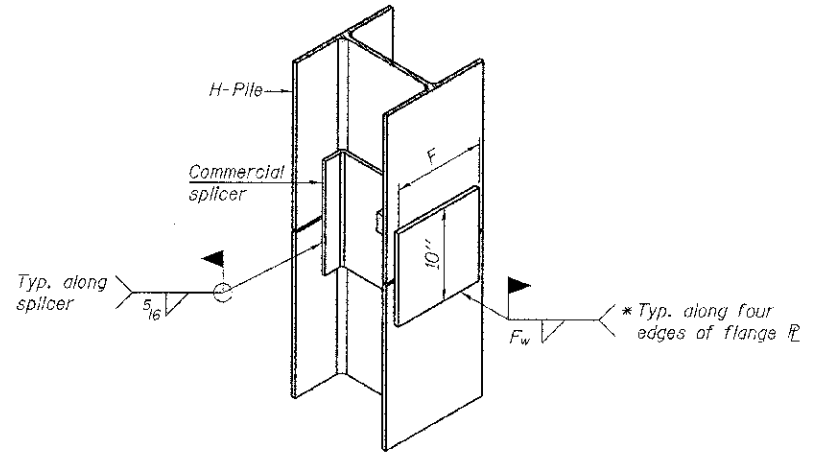


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**



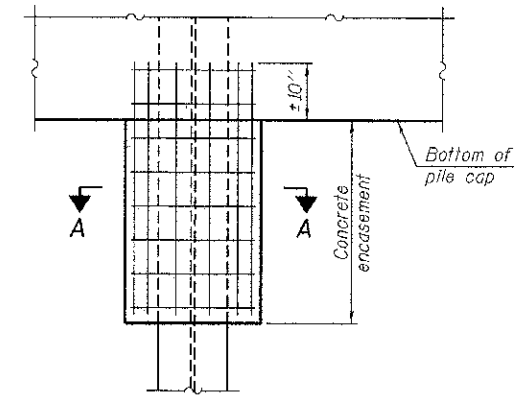
**ISOMETRIC VIEW**



**ISOMETRIC VIEW**

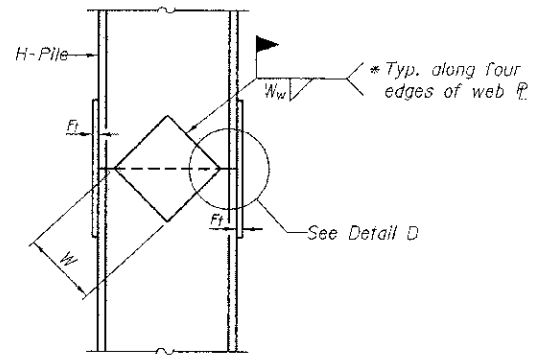
**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

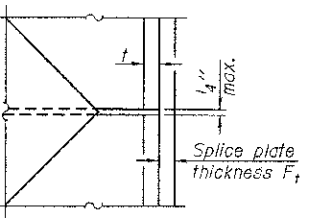


**ELEVATION**

**PILE ENCASEMENT**

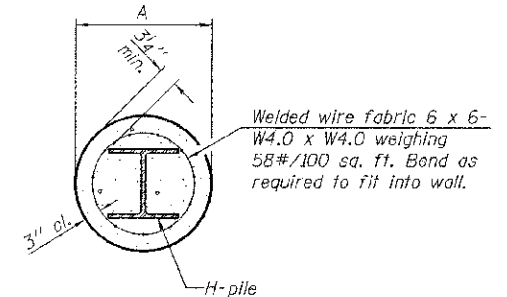


**ELEVATION**



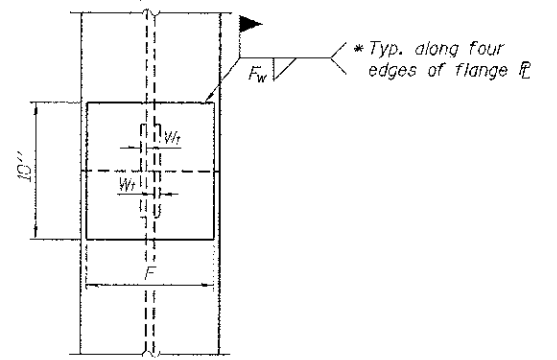
**DETAIL D**

**WELDED PLATE FIELD SPLICE**



**SECTION A-A**

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



**END VIEW**

Designation	F	F <sub>s</sub>	F <sub>w</sub>	W	W <sub>f</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/8"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/8"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/8"	6 1/2"	5/8"	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"

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

F-HP 1-27-12

FILE NAME = 08B248-wh-bndgn.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	<b>STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>HP PILE DETAILS STRUCTURE NO. 096-3448</b>	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.	CHECKED - S.W.M.	REVISED -	167A			08-1810-00-BR	WAYNE	12	10	
300 S. BIRCHWOOD DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769	DRAWN - D.A.B.	REVISED -	ORCHARD ROAD DISTRICT			CONTRACT NO. 95588				
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 181-001-899	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -			SHEET NO. 7 OF 9 SHEETS		ILLINOIS FED. AID PROJECT		



HOLCOMB FOUNDATION ENGINEERING INC.  
P.O. Box 88 618-529-5262  
Carbondale, IL 62903 618-457-8991 fax Page 1 of 2

Bridge Foundation Boring Log

Project: H-08115 Bridge Over Brush Creek Date: 6-03-08  
Section: 08-18110-00-BR Station: Bored by: D. Russell  
Dist.: Orchard Checked By: T. Holcomb  
County: Wayne

Boring No. 2 Station: 3+83 Offset: C.L.	Elevation	N		Qu tsf	w %	Surface Water Elev.	Elevation	N		Qu tsf	w %
	433.75						389.75				
	433.25						397.75				
Ground Surface	433.75	0									
6" C. Stone	433.25										
Brown Clayey SILT (A-4)		5	1.0S	23				31	7.3B	13	
		0	0.7S	29				23	5.8B	14	
	427.25										
Brown Mottled Gray Clayey SAND (A-2-4)		1		23				22	5.1B	15	
		2		27							
	422.25					399.75					
Gray Mottled Brown Sandy CLAY (A-6)		2	0.6B	23				35	1.2S	17	
	419.75										
Brown Mottled Gray Sandy CLAY (A-6)		4	1.4B	24							
						394.75					
		24	4.8S	18				40	3.3S	13	
	414.75										
Gray Sandy CLAY (A-6)		24	6.1S	14							
		31	4.7B	14				45	4.3S	11	

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
Qu - Unconfined Compressive Strength in tons/sq.ft.  
w - Water Content - percentage of oven dry weight - %  
B = Bulge Failure  
S = Shear Failure  
E = Estimated Value  
P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.  
P.O. Box 88 618-529-5262  
Carbondale, IL 62903 618-457-8991 fax Page 2 of 2

Bridge Foundation Boring Log

Project: H-08115 Bridge Over Brush Creek Date: 6-03-08  
Section: 08-18110-00-BR Station: Bored by: D. Russell  
Route: Orchard Checked By: T. Holcomb  
County: Wayne

Boring No. 2 Station: 3+83 Offset: C.L.	Elevation	N		Qu tsf	w %	Surface Water Elev.	Elevation	N		Qu tsf	w %
	433.75										
	433.25										
sandy clay (continued)											
		72	1.1S	14							
		31	2.0S	15							
		78	3.1S	11							
	374.75										
Gray Sandy CLAY (A-6)		31	2.3B	22							
	369.75										
Gray SHALE		137		10							
	367.75										
Gray LIMESTONE	367.25	100	2.1S	17							
End of Boring @ -66.5'											

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
Qu - Unconfined Compressive Strength in tons/sq.ft.  
w - Water Content - percentage of oven dry weight - %  
B = Bulge Failure  
S = Shear Failure  
E = Estimated Value  
P = Penetrometer

BORING 2