

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

LAWRENCE COUNTY
 SECTION 07-05123-00-BR
 DENISON ROAD DISTRICT
 STRUCTURE NO. 051- 3282
 PROJECT NO. BROS-101(28)
 JOB NO. C-97-107-08
 TR 249

INDEX OF SHEETS

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

- STANDARDS: 280001-04 - EROSION CONTROL
 701901 - TRAFFIC
 BLR 21-7 - TRAFFIC
 BLR 22-5 - TRAFFIC
 515001-02 - NAME PLATE

SCALES

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

SUMMARY OF QUANTITIES

QTY	UNIT	ITEM	CODE NO.
236	CU YD	EARTH EXCAVATION	20200100
187	CU YD	CHANNEL EXCAVATION	20300100
1311	CU YD	FURNISHED EXCAVATION	20400800
0.90	ACRE	SEEDING, CLASS 2 (SPECIAL)	25001000
6	EACH	AGGREGATE DITCH CHECKS	28000310
60	FOOT	PERIMETER EROSION BARRIER	28000400
140	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
42	TON	STONE RIPRAP DITCH	28102600
1	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
21.0	CU YD	CONCRETE STRUCTURES	50300225
2.8	CU YD	CONCRETE ENCASEMENT	50300280
1680	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	50400505
3490	POUND	REINFORCEMENT BARS	50800105
116	FOOT	STEEL RAILING, TYPE S1	50900205 *
234	FOOT	FURNISHING STEEL PILES HP 12x53	51201600
234	FOOT	DRIVING PILES	51202305
1	EACH	TEST PILE STEEL HP 12x53	51203600
1	EACH	NAME PLATES	51500100
36	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 18"	542D0223
1	L SUM	MOBILIZATION	67100100
1	L SUM	TRAFFIC CONTROL AND PROTECTION	70101700
286	TON	AGGREGATE SURFACE COURSE, TYPE B (CA-6)	XX003658
138	TON	AGGREGATE SURFACE COURSE, TYPE B (CA-9)	XX003659

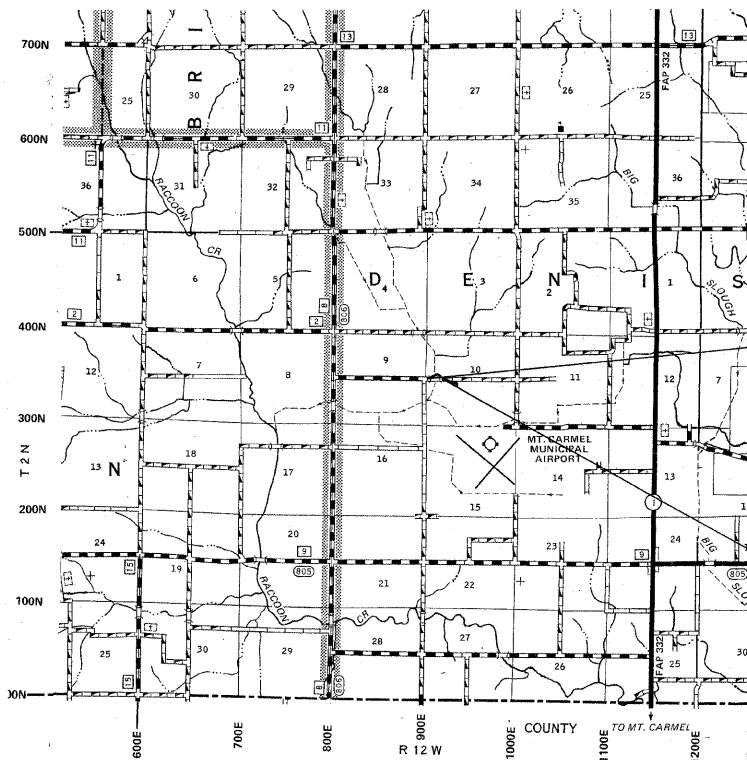
* SPECIALTY ITEMS

FUNCTIONAL CLASS: RURAL LOCAL ROAD
 ADT = 75
 DESIGN SPEED = 30 MPH

CONTRACT NO. 95560

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

PROFESSIONAL DESIGN FIRM #184-000832



LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE
 NET LENGTH = 650 L.F. = 0.123 MILES

SECTION 07-05123-00-BR
 BEGINS STA. 1+00

STA. 4+35 - SPECIAL BRIDGE DESIGN
 PROPOSED PRECAST PRESTRESSED CONCRETE DECK
 BEAM BRIDGE. 1 SPAN @ 60', 28' RDWY., SKEW = 10' L.F.
 EXISTING STR. NO. 051-3109
 PROPOSED STR. NO. 051-3282

SECTION 07-05123-00-BR
 ENDS STA. 7+50

APPROVED JULY 9, 2008

LOCAL AGENCY REPRESENTATIVE

PASSED JULY 15, 2008

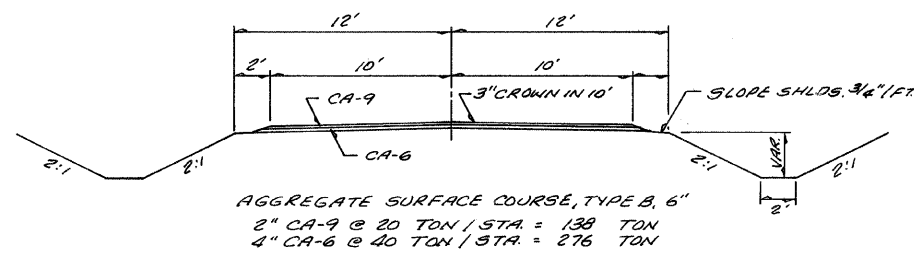
DISTRICT SEVEN ENGINEER
 OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW

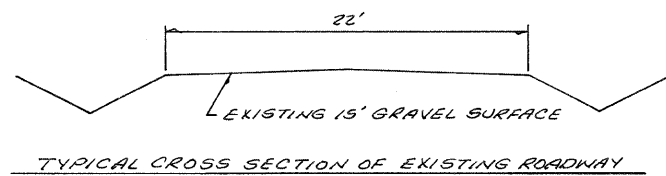
JULY 15, 2008

DEPUTY DIRECTOR OF HIGHWAYS
 REGION FOUR ENGINEER
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

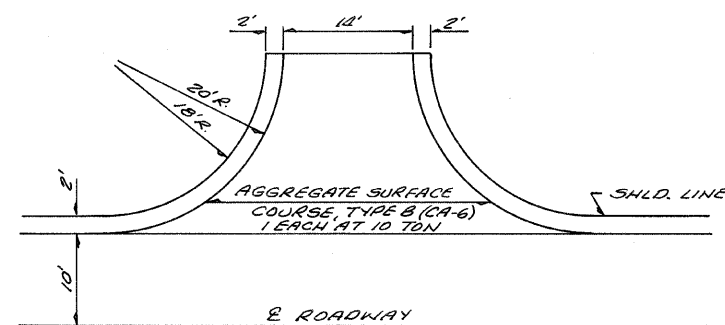
John A. Stone
 JOHN A. STONE
 002-086012
 REGISTERED
 PROFESSIONAL
 ENGINEER
 ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55012
 LICENSE EXPIRES NOVEMBER 30, 2009
 JULY 9, 2008



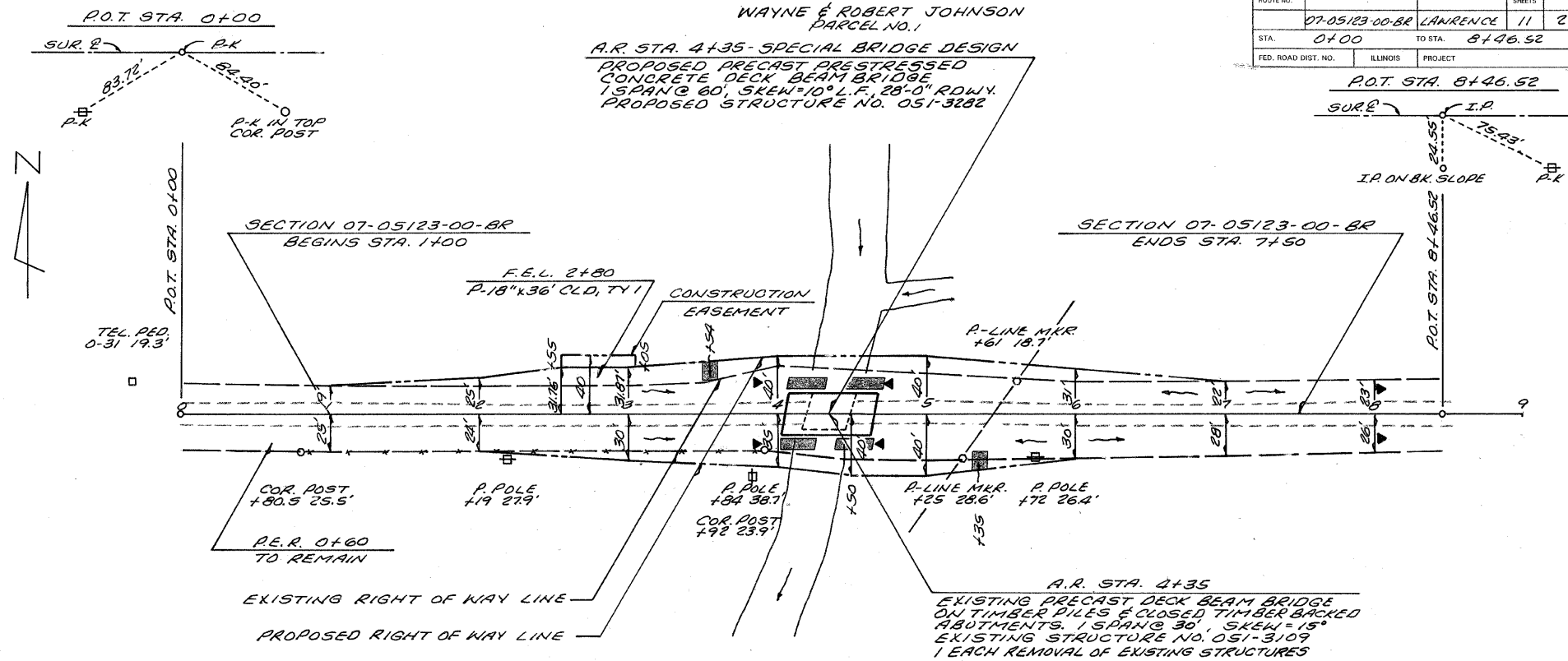
TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT



TYPICAL CROSS SECTION OF EXISTING ROADWAY



DETAIL OF FIELD ENTRANCE



TEL. PED. 0-31 19.3'

COR. POST +80.5 25.5'
 P. POLE +19 27.9'
 P.E.R. 0+60 TO REMAIN

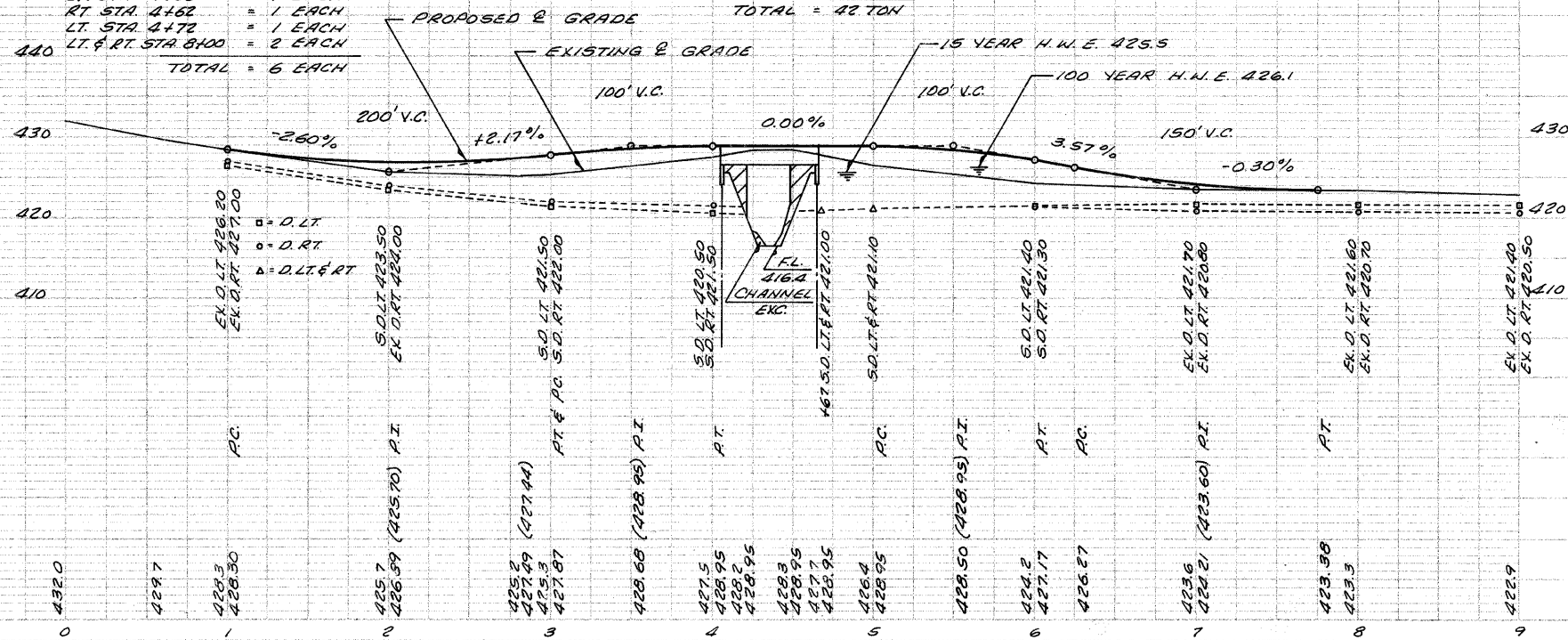
EXISTING RIGHT OF WAY LINE
 PROPOSED RIGHT OF WAY LINE

RUSSEL & MURDITH SIMMS PARCEL NO. 2

EARTHWORK SCHEDULE		STONE RIPRAP DITCH		CONSTRUCT TRANSITION	
EARTH EXCAVATION =	236 CU. YD.	LT. STA. 3+54	= 5 TON	FROM EXIST. RDWY TO PROP. 28' RDWY.	STA. 0+50 TO STA. 1+00
EARTH EXCAVATION ADJUSTED 25% =	177 CU. YD.	RT. STA. 3+98 TO STA. 4+23	= 8 TON	STA. 1+00 TO STA. 8+00	
CHANNEL EXCAVATION =	187 CU. YD.	LT. STA. 4+08 TO STA. 4+33	= 8 TON	FROM PROP. 28' RDWY TO PROP. 28' RDWY.	STA. 3+30 TO STA. 3+80
CHANNEL EXCAVATION ADJUSTED 25% =	140 CU. YD.	RT. STA. 4+37 TO STA. 4+62	= 8 TON	STA. 4+90 TO STA. 5+40	
EMBANKMENT =	1628 CU. YD.	LT. STA. 4+47 TO STA. 4+72	= 8 TON		
FURNISHED EXCAVATION =	1311 CU. YD.	RT. STA. 5+35	= 5 TON		
TOTAL = 6 EACH		TOTAL = 42 TON		SEEDING, CLASS 2 (SPECIAL) = 0.9 ACRES	

PERIMETER EROSION BARRIER
 15 FOOT @ EACH CORNER OF BRIDGE
 ON CHANNEL SLOPE = 60 FOOT

TEMPORARY DITCH CHECKS
 RT. STA. 3+96 = 1 EACH
 LT. STA. 4+06 = 1 EACH
 RT. STA. 4+62 = 1 EACH
 LT. STA. 4+72 = 1 EACH
 LT. & RT. STA. 8+00 = 2 EACH



UTILITIES

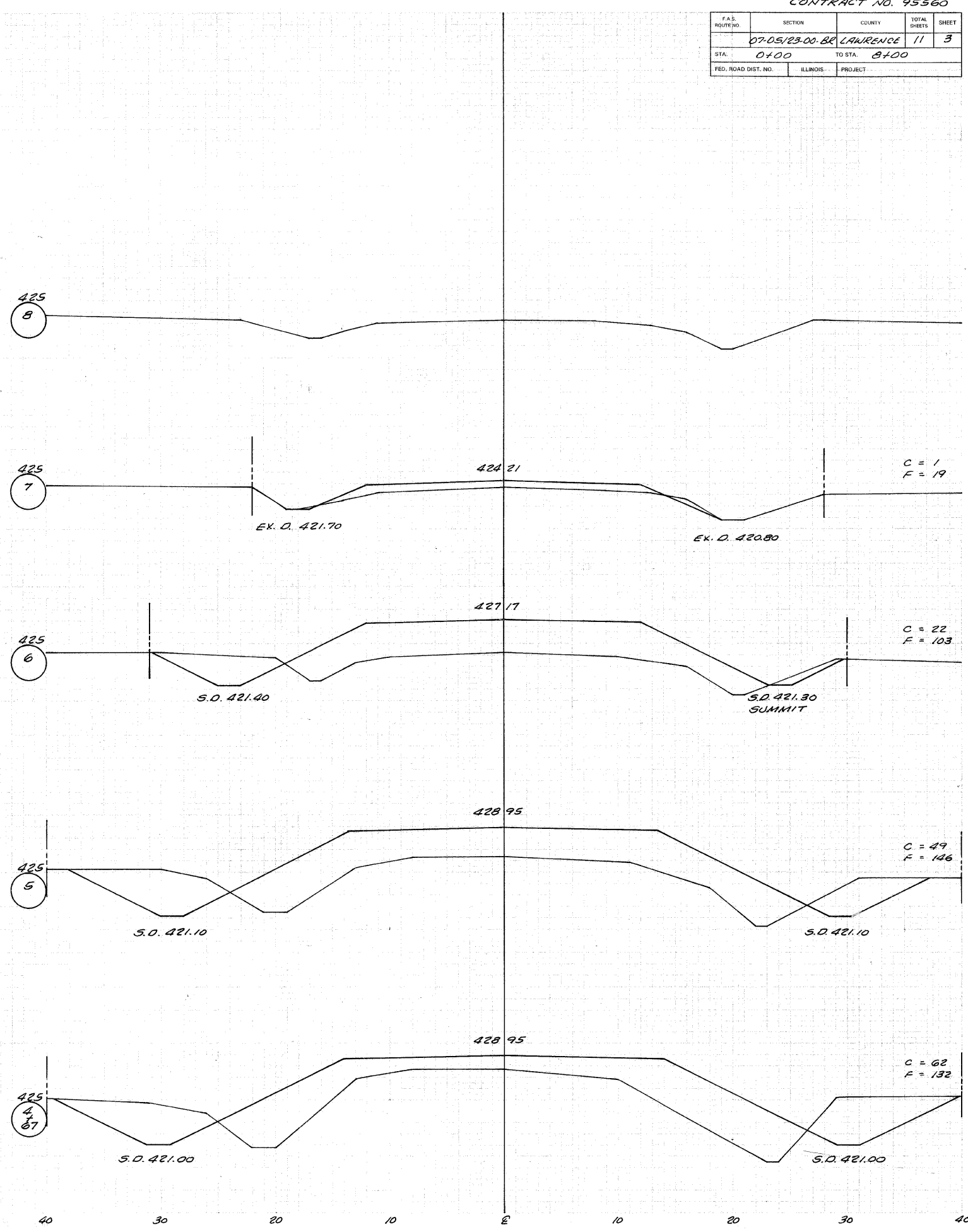
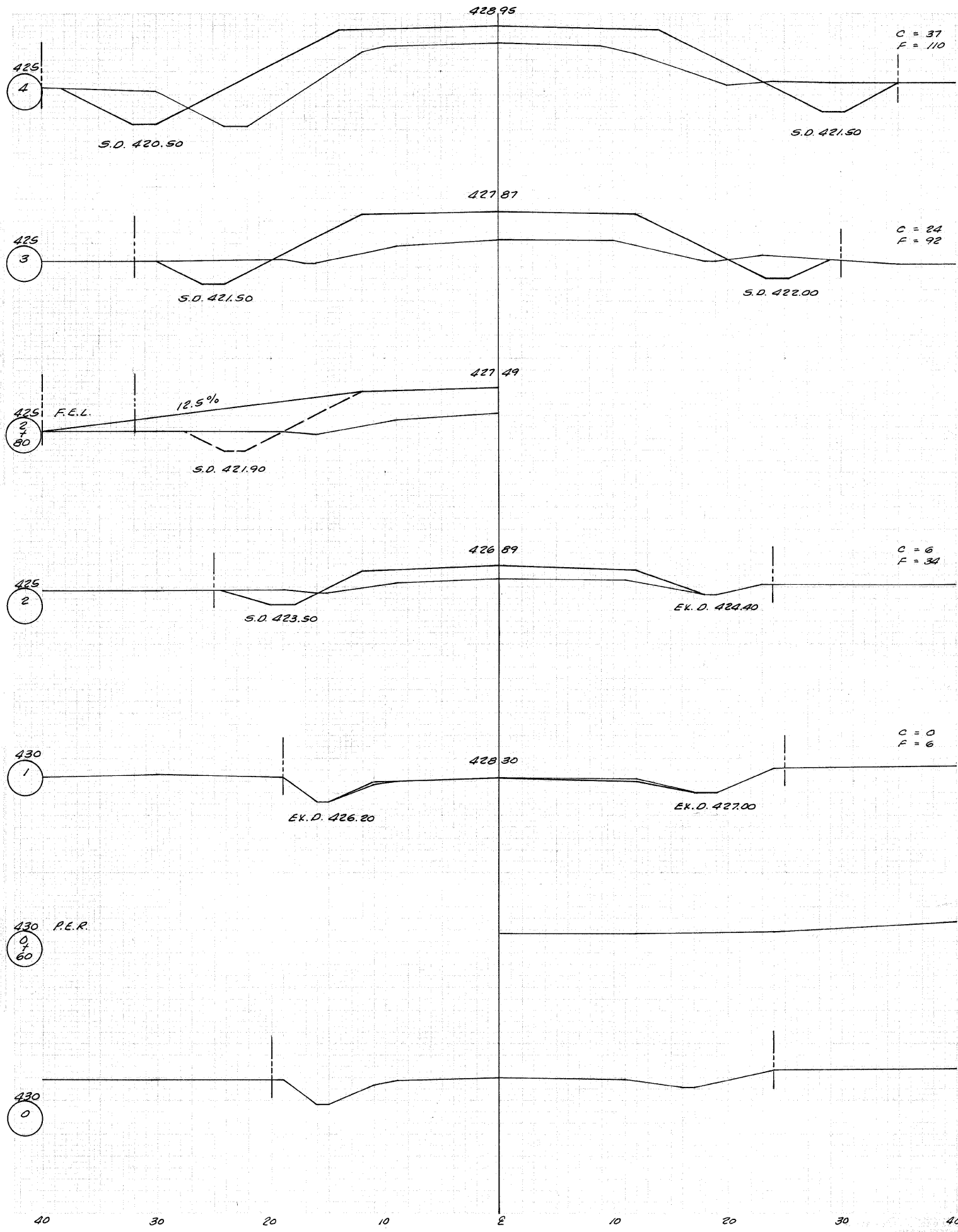
ELECTRIC: NORRIS ELECTRIC COOP
 8543 N. STATE HWY. 130
 NEWTON, IL 62448
 618-793-8765

TELEPHONE: VERIZON
 225 E. CHESTNUT ST.
 OLNEY, IL 62450
 618-395-6189

PLAN
 DATE: 11/11/10
 DRAWN BY: J. H. HARRIS
 CHECKED BY: J. H. HARRIS
 IN CHARGE: J. H. HARRIS
 NOTE BOOK: ADVANTAGE CHANGING
 NO. 27-01-WAY CHECKS

PLAN
 DATE: 11/11/10
 DRAWN BY: J. H. HARRIS
 CHECKED BY: J. H. HARRIS
 IN CHARGE: J. H. HARRIS
 NOTE BOOK: ADVANTAGE CHANGING
 NO. 27-01-WAY CHECKS

F.S. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
07-05/23-00-BE	LAWRENCE		11	3
STA. 0+00	TO STA. 8+00			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



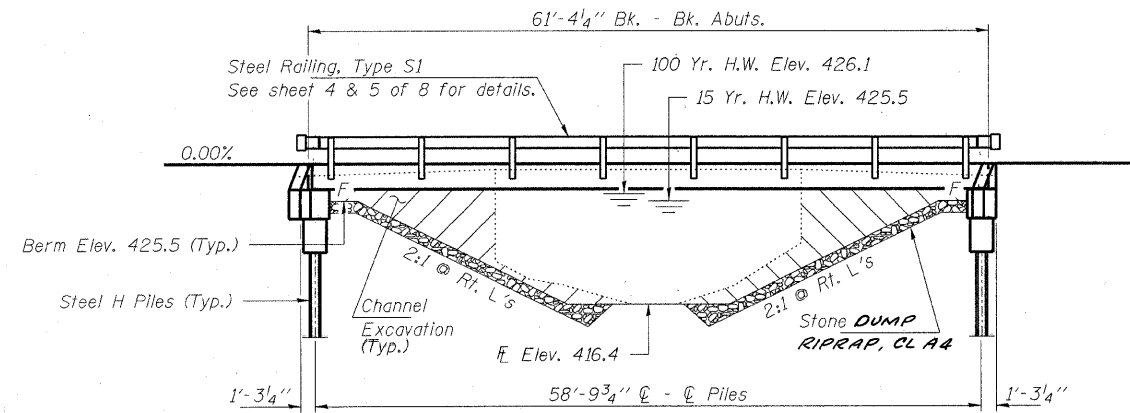
BENCHMARK: PK Nail in power pole. Sta. 3+84. 38.7' Rt., Elev. 424.83

EXISTING STRUCTURE: Precast deck beam bridge on timber piles & closed timber backed abutments. 1 span @ 30'-0", skew = 15°. Existing Structure No. 051-3109. Structure closed to traffic.

Salvage - SEE SPECIAL PROVISIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 249	07-05123-00-BR	LAWRENCE	11	4
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95560	

Sheet 1 of 8



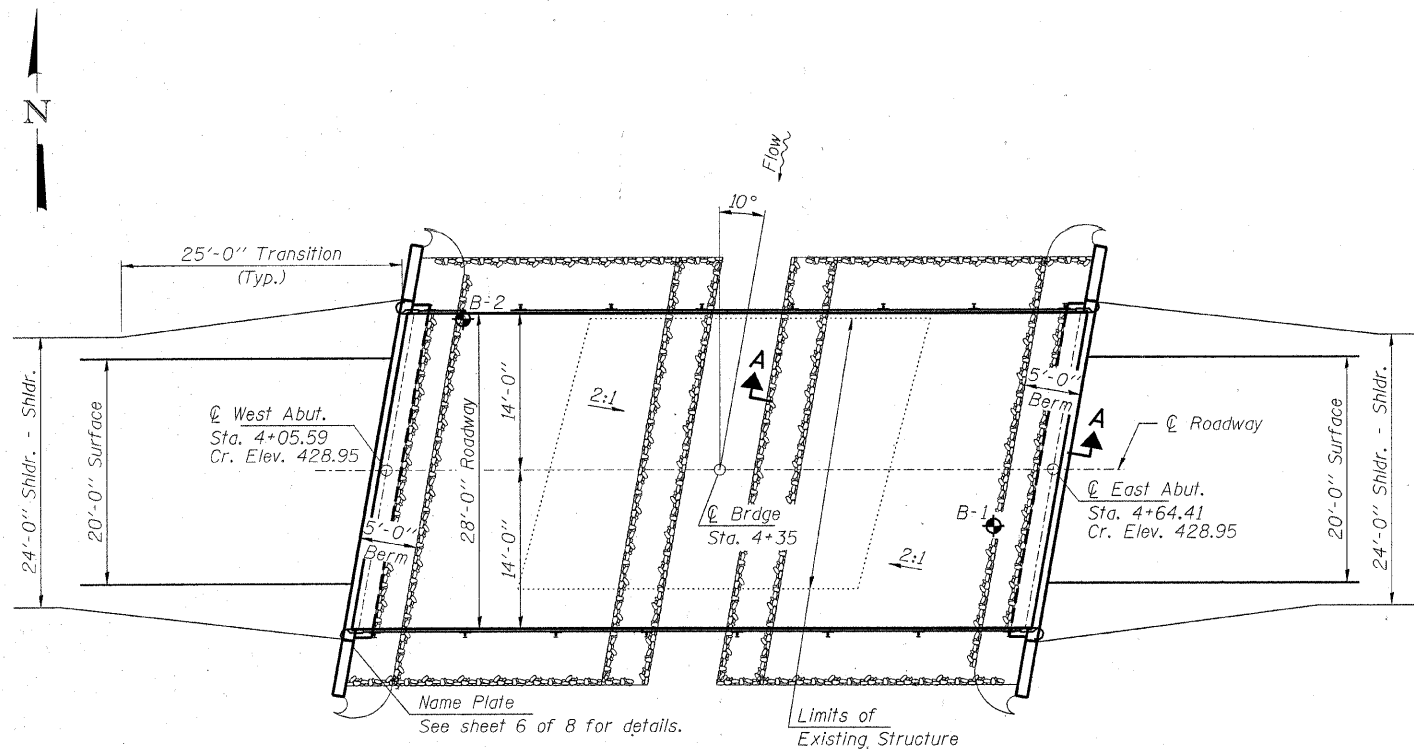
ELEVATION

GENERAL NOTES

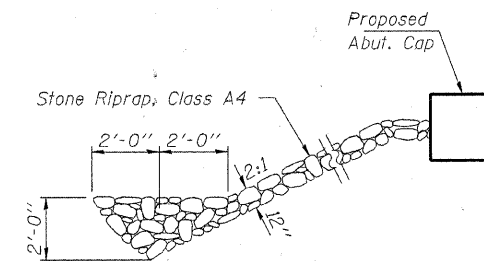
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). 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 Sheet 8 of 8 for Borings.

BUILT 200_ BY
 LAWRENCE COUNTY
 SEC. 07-05123-00-BR
 DENISON ROAD DISTRICT
 STR. NO. 051-3282
 PROJECT NO. 8K05-101 (28)
 LOADING HL - 93

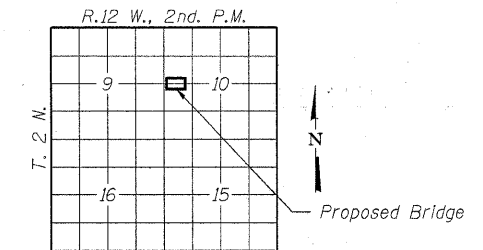
NAME PLATE
 See Std. 515001



PLAN



SECTION A-A



LOCATION SKETCH

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
 f's = 270,000 psi (1/2" low lax. strands)
 f'si = 201,960 psi (1/2" low lax. strands)
 fy = 60,000 psi (Reinf.)

Loading HL-93
 Design Specifications: 2004 AASHTO LRFD with all applicable Interims.
 25#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

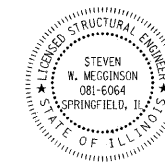
Seismic Performance Zone (SPZ) = 1
 Bedrock Acceleration Coefficient (A) = 0.09g
 Site Coefficient (S) = 1.0

WATERWAY DATA

Drainage Area..... 8.36 Sq. Mi.
 Existing Opening (15 yr.)..... 195 Sq. Ft.
 Req'd Opening (15 yr.)..... 296 Sq. Ft.
 Proposed Opening (15 yr.)..... 296 Sq. Ft.
 Design Discharge (15 yr.)..... 1,428 C.F.S.
 Created Head (15 yr.)..... 0.2 Ft.
 100 Yr. Discharge..... 2,268 C.F.S.
 100 Yr. Created Head..... 0.2 Ft.
 DESIGN (15 YR.) H.W.E. 425.5
 100 YR. H.W.E. 426.1

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 4-18-08
 ILLINOIS STRUCTURAL NO. 081-6064



TOTAL BILL OF MATERIAL

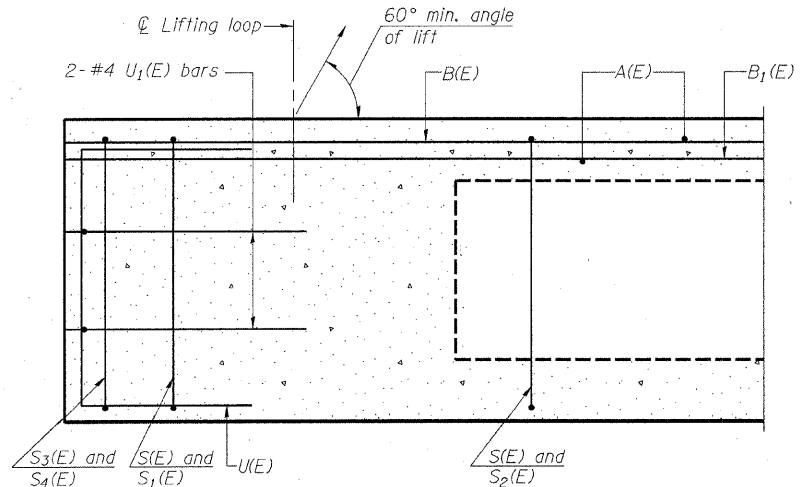
ITEM	UNIT	SUPER	SUB	TOTAL
Stone DUMPED RIPRAP, CL. A4	Ton			140
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		21.0	21.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars	Pound		3,490	3,490
Steel Railing, Type S1	Foot	116		116
Furnishing Steel Piles HP12x53	Foot		234	234
Driving Piles	Foot		234	234
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each		1	1

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

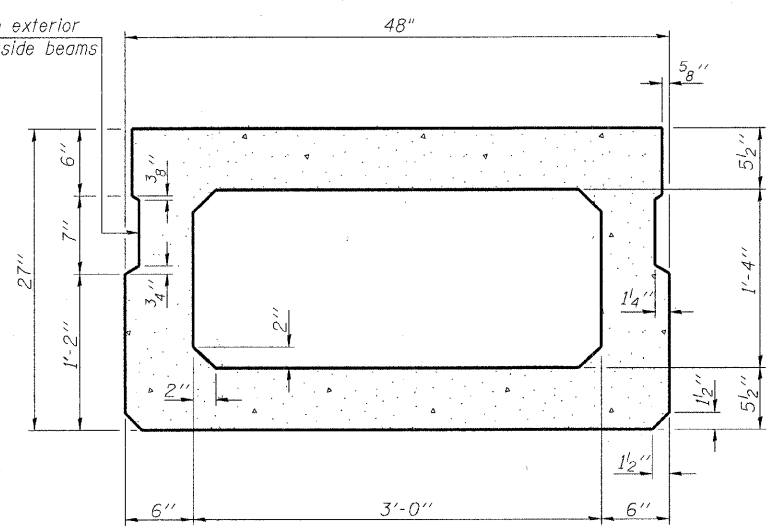
PROJECT NUMBER: 08.0075.130 DATE: 04/18/08
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

GENERAL PLAN AND ELEVATION
 SECTION 07-05123-00-BR
 DENISON ROAD DISTRICT
 LAWRENCE COUNTY
 STRUCTURE NO. 051-3282 / STATION 4+35

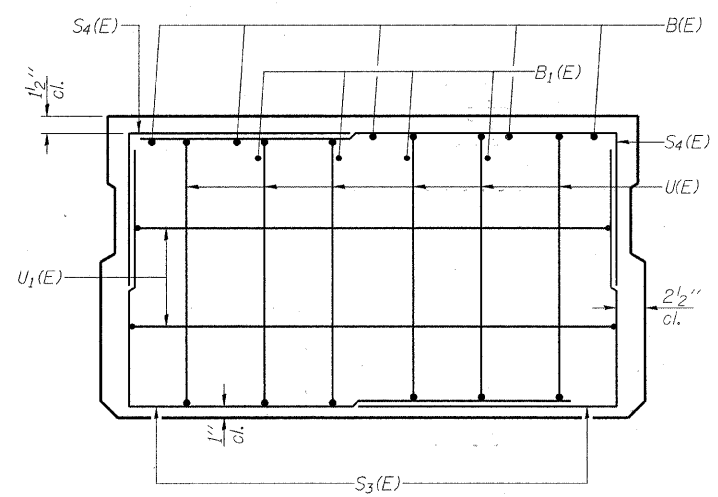


SECTION C-C

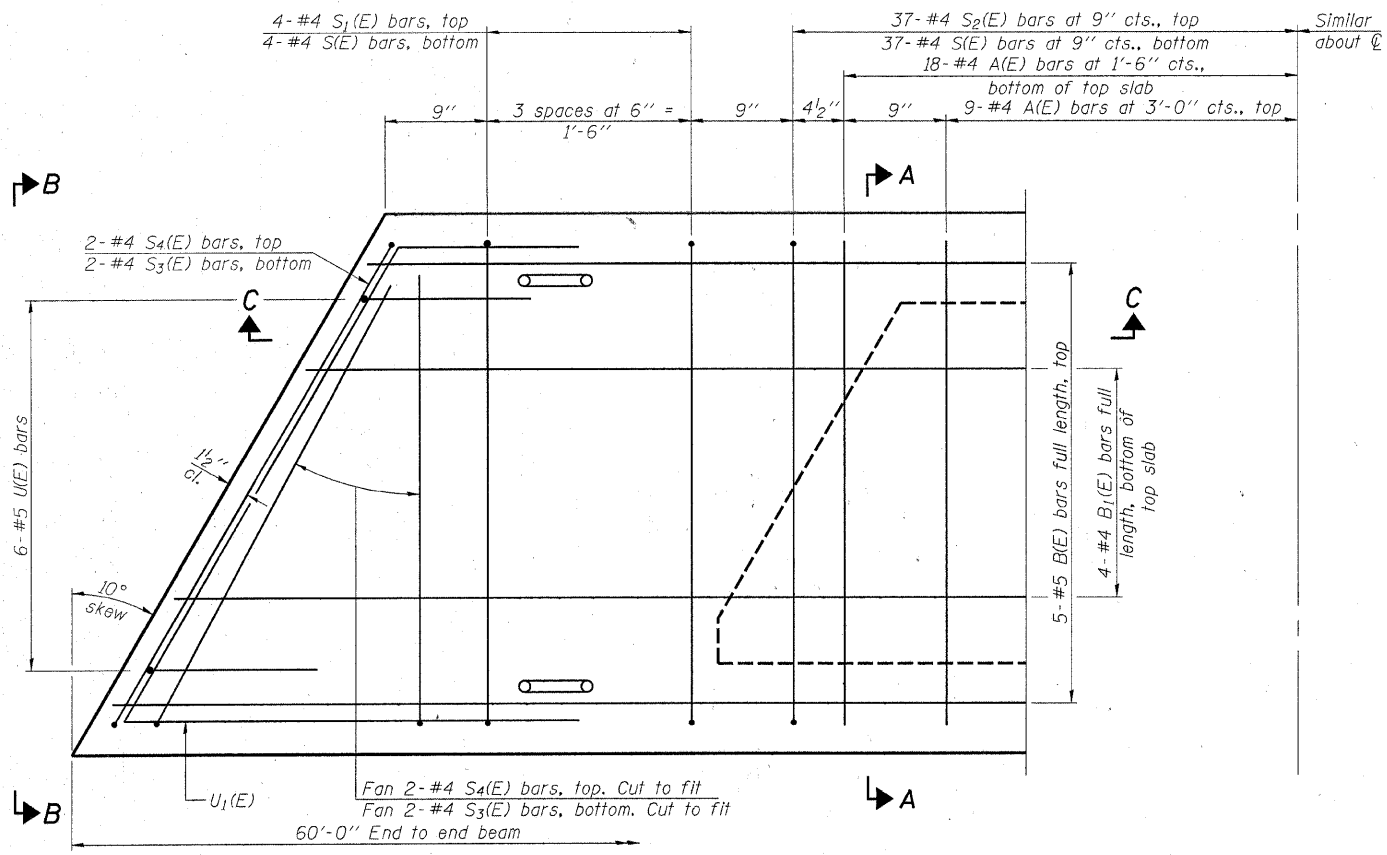
Omit key on exterior face of outside beams



SECTION A-A
(Showing dimensions)

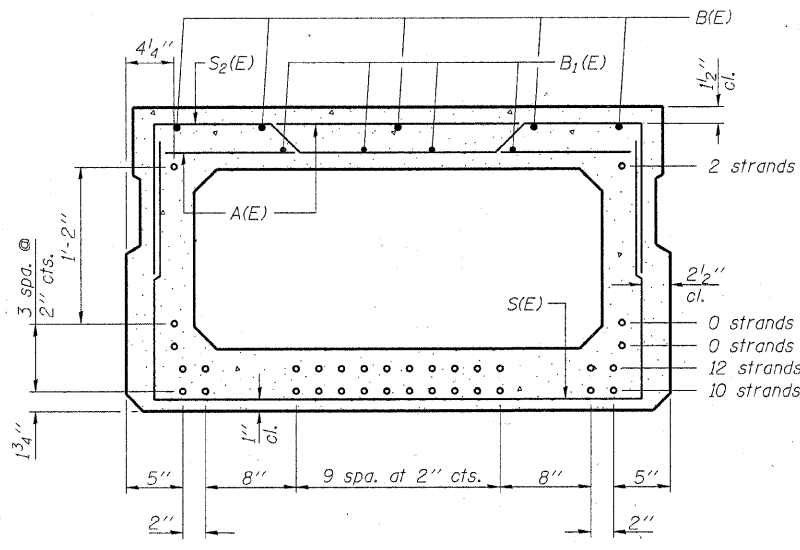


VIEW B-B



PLAN VIEW

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



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)	54	#4	3'-7"	—
B(E)	5	#5	59'-8"	—
B1(E)	4	#4	59'-8"	—
S(E)	82	#4	7'-5"	┌┐
S1(E)	8	#4	7'-3"	┌┐
S2(E)	74	#4	7'-6"	┌┐
S3(E)	8	#4	5'-3"	┌┐
S4(E)	8	#4	5'-2"	┌┐
U(E)	12	#5	4'-6"	┌┐
U1(E)	4	#4	6'-9"	┌┐

Note: See sheet 3 of 8 for additional details and Bill of Material.

27" X 48" PPC DECK BEAM

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

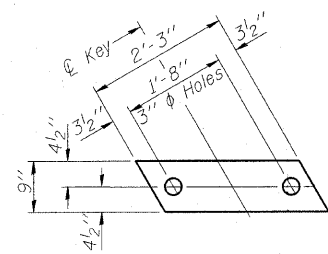
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

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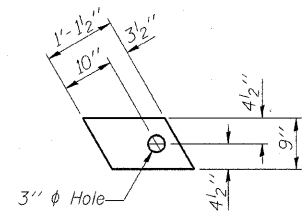
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DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

SUPERSTRUCTURE
SECTION 07-05123-00-BR
DENISON ROAD DISTRICT
LAWRENCE COUNTY
STRUCTURE NO. 051-3282 / STATION 4+35

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 249	07-05123-00-BR	LAWRENCE	//	6
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95560	
Sheet 3 of 8				



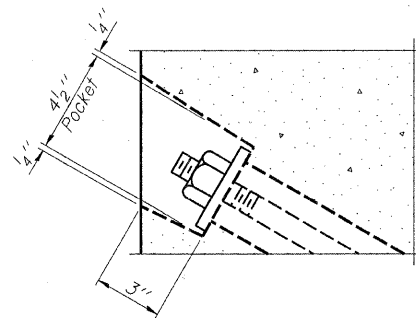
FABRIC BEARING PAD
(12 Req'd - Interior)



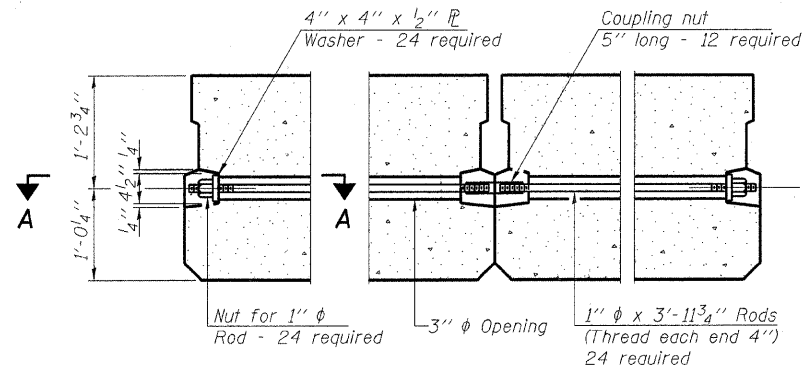
FABRIC BEARING PAD
(4 Req'd - Exterior)

FIXED

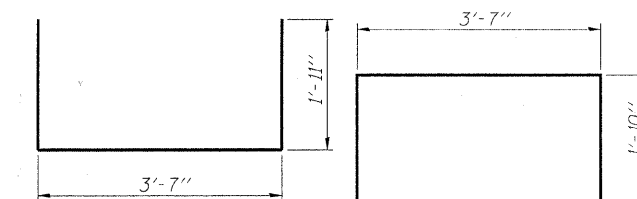
Note: Omit holes when using expansion bearings.



SECTION A-A

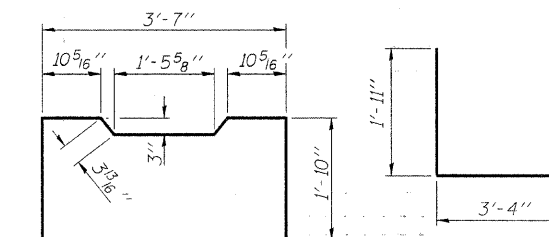


TYPICAL TRANSVERSE TIE ASSEMBLY



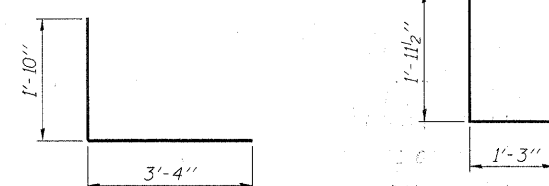
BAR S(E)

BAR S1(E)



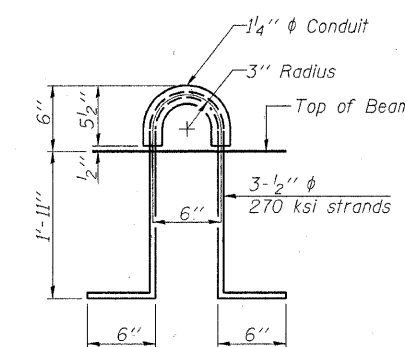
BAR S2(E)

BAR S3(E)

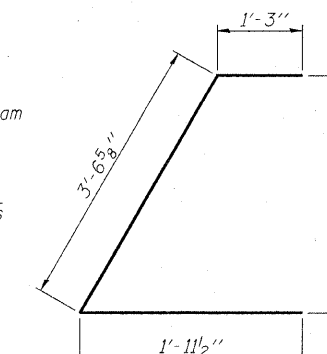


BAR S4(E)

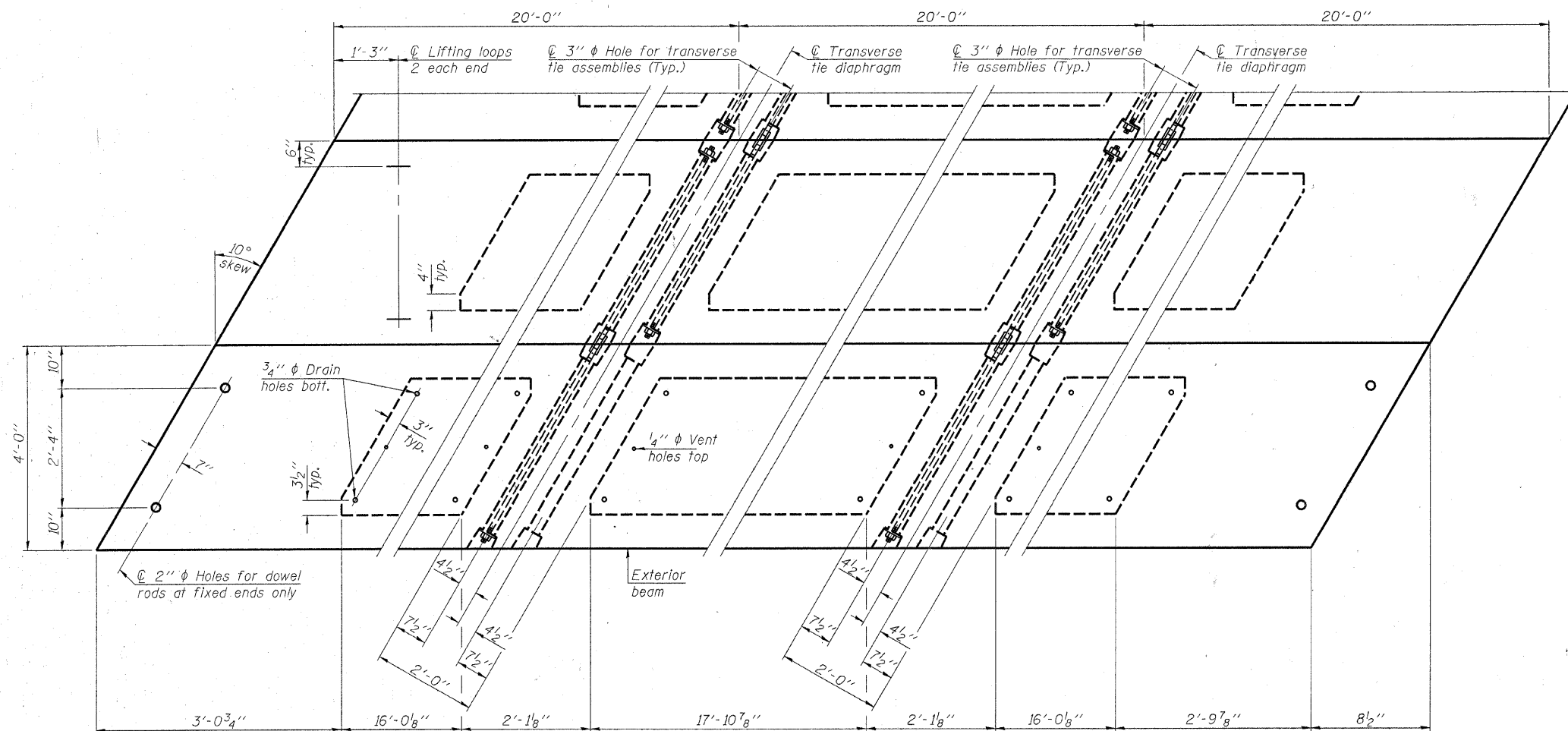
BAR U(E)



LIFTING LOOP DETAIL



BAR U1(E)



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 (IL MOD), 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'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,680
---	---------	-------

27" X 48" PPC DECK BEAM DETAILS

PD-2748-LD 8-29-07

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

3085 STEVENSON DRIVE, SUITE 201
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(217) 546-3400

ELGIN • SPRINGFIELD

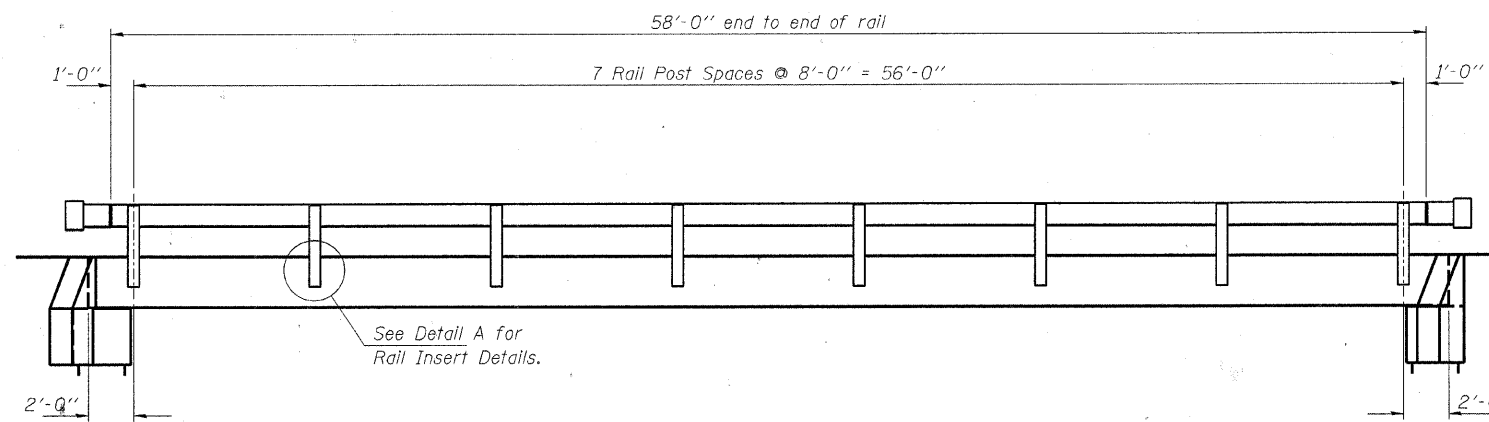
PROJECT NUMBER: 08.0075.130 DATE: 04/18/08
DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

SUPERSTRUCTURE
SECTION 07-05123-00-BR
DENISON ROAD DISTRICT
LAWRENCE COUNTY

STRUCTURE NO. 051-3282 / STATION 4+35

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 249	07-05123-00-BR	LAWRENCE	//	7
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95560	

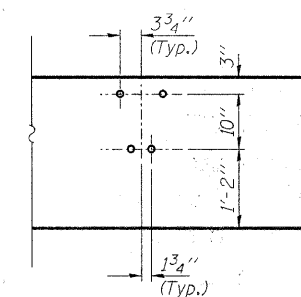
Sheet 4 of 8



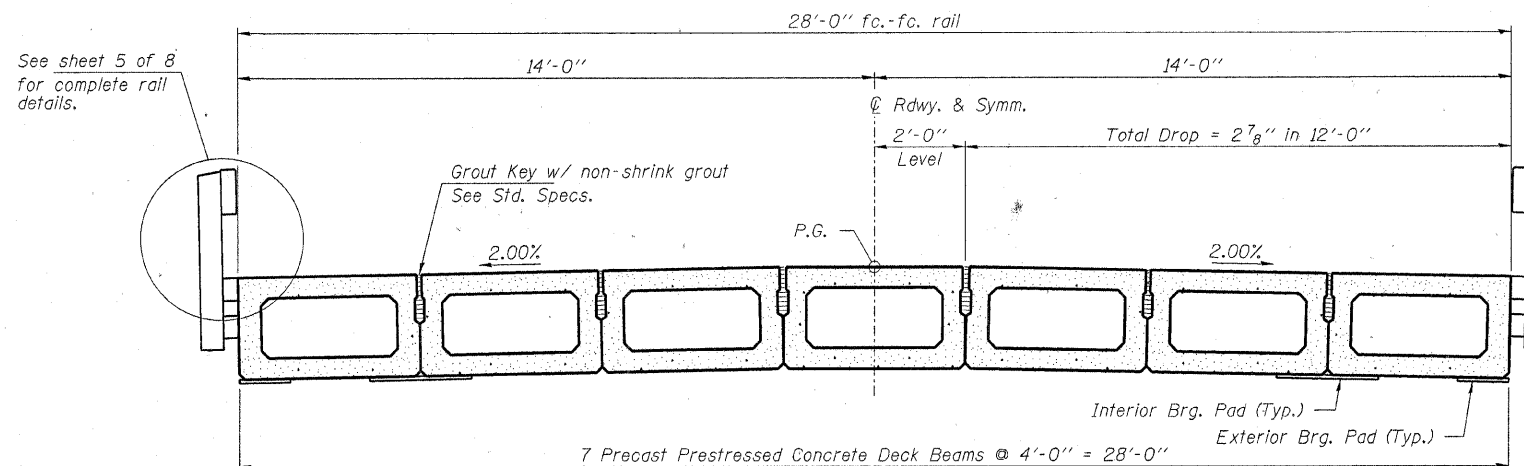
ELEVATION

Showing Rail Post Spaces

See sheet 5 of 8 for Railing Details.




DETAIL A



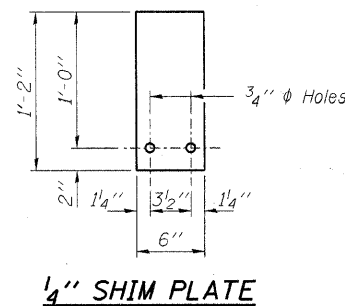
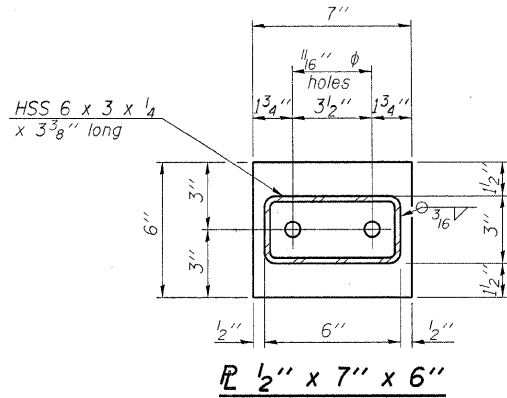
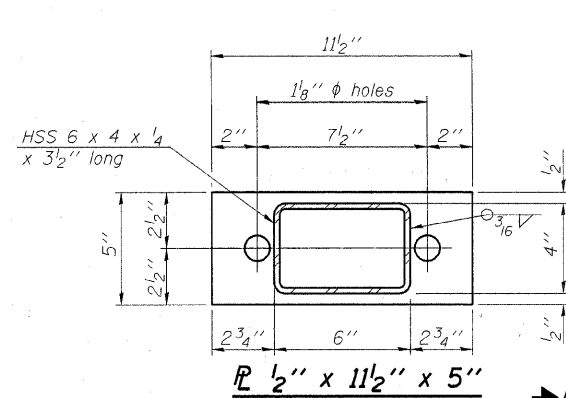
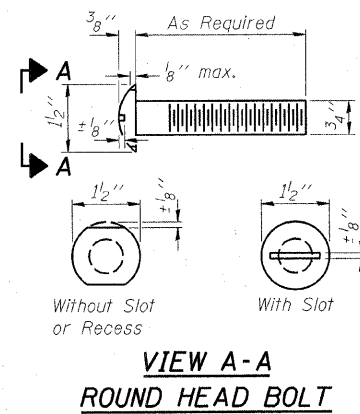
CROSS SECTION

See sheets 2 & 3 of 8 for Superstructure Details.

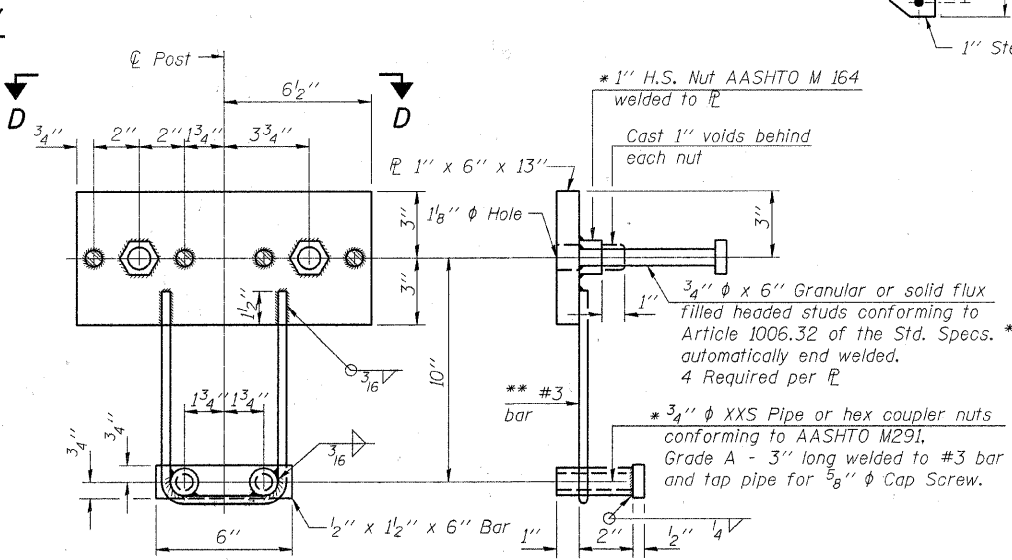
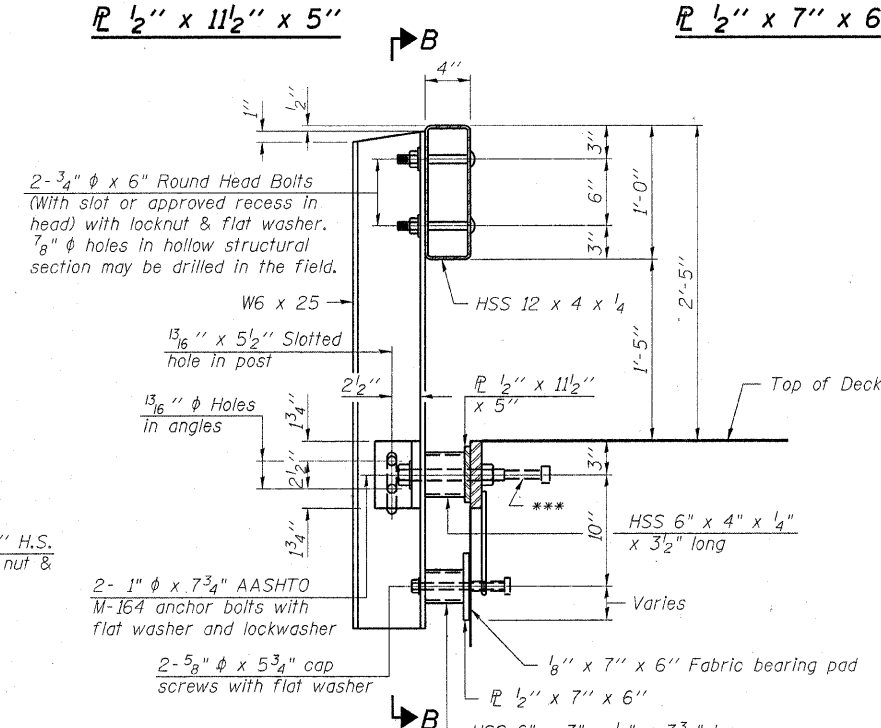
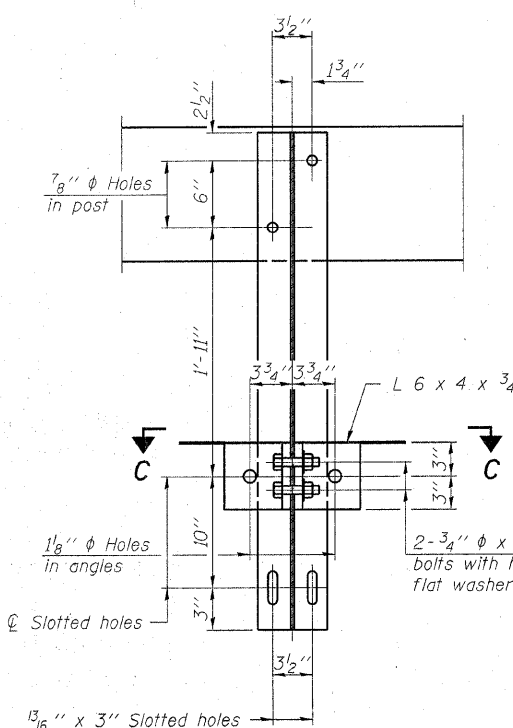
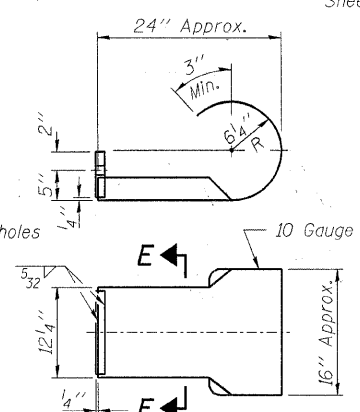
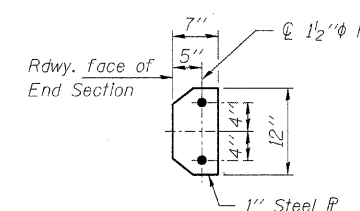
 <p>HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS</p> <p>3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400</p>	<p>SUPERSTRUCTURE</p> <p>SECTION 07-05123-00-BR</p> <p>DENISON ROAD DISTRICT</p> <p>LAWRENCE COUNTY</p>	
	<p>ELGIN • SPRINGFIELD</p> <p>PROJECT NUMBER: 08 0075 130 DATE: 04/18/08</p> <p>DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.</p>	<p>STRUCTURE NO. 051-3282 / STATION 4+35</p>

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 249	07-05123-00-BR	LAWRENCE	11	8
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95560	

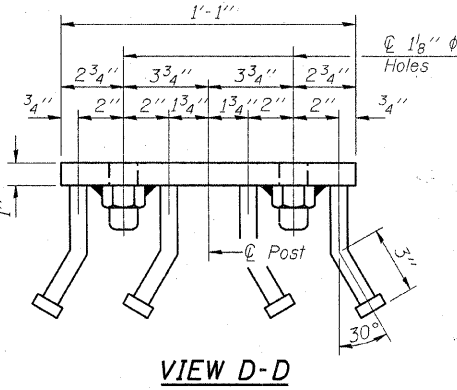
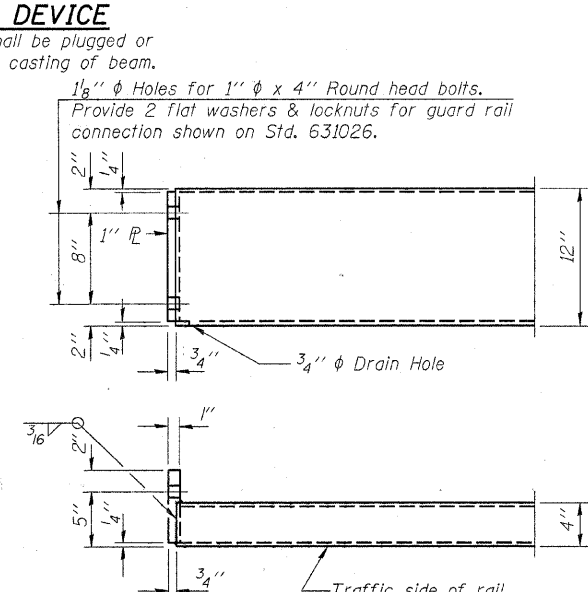
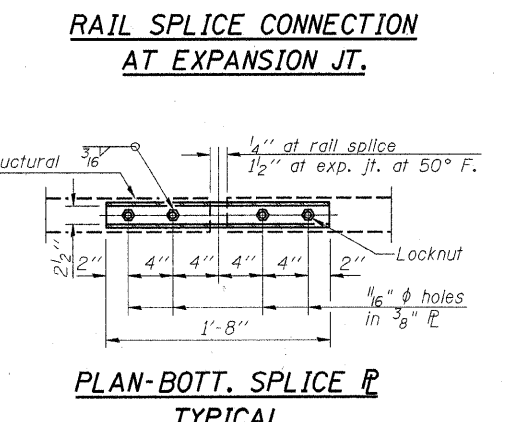
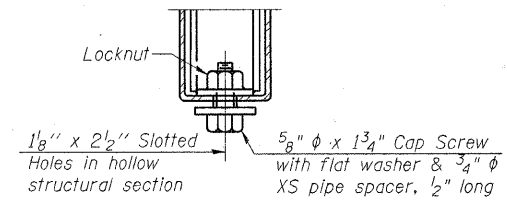
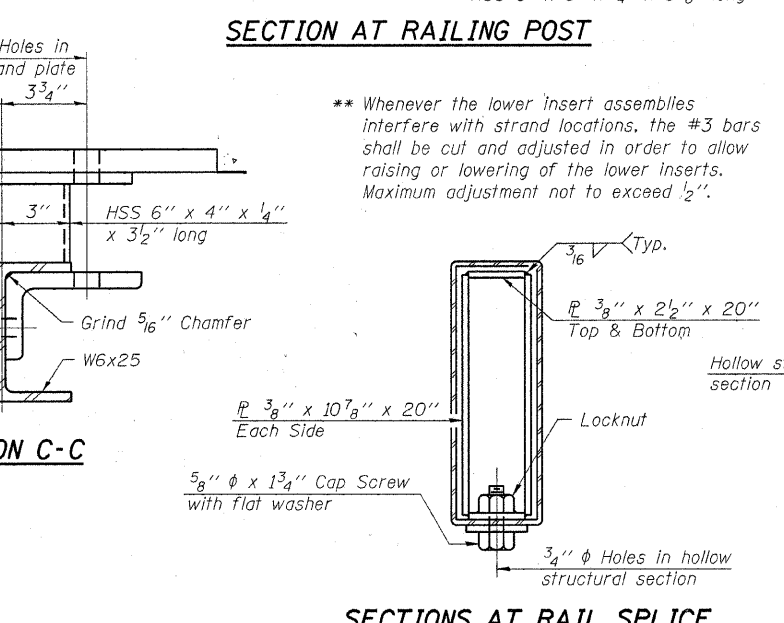
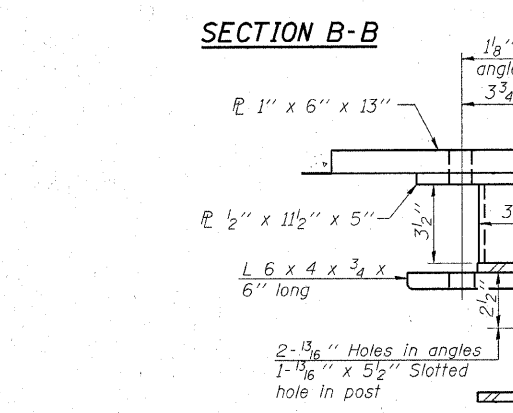
Sheet 5 of 8



Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch 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.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	116

R-23A

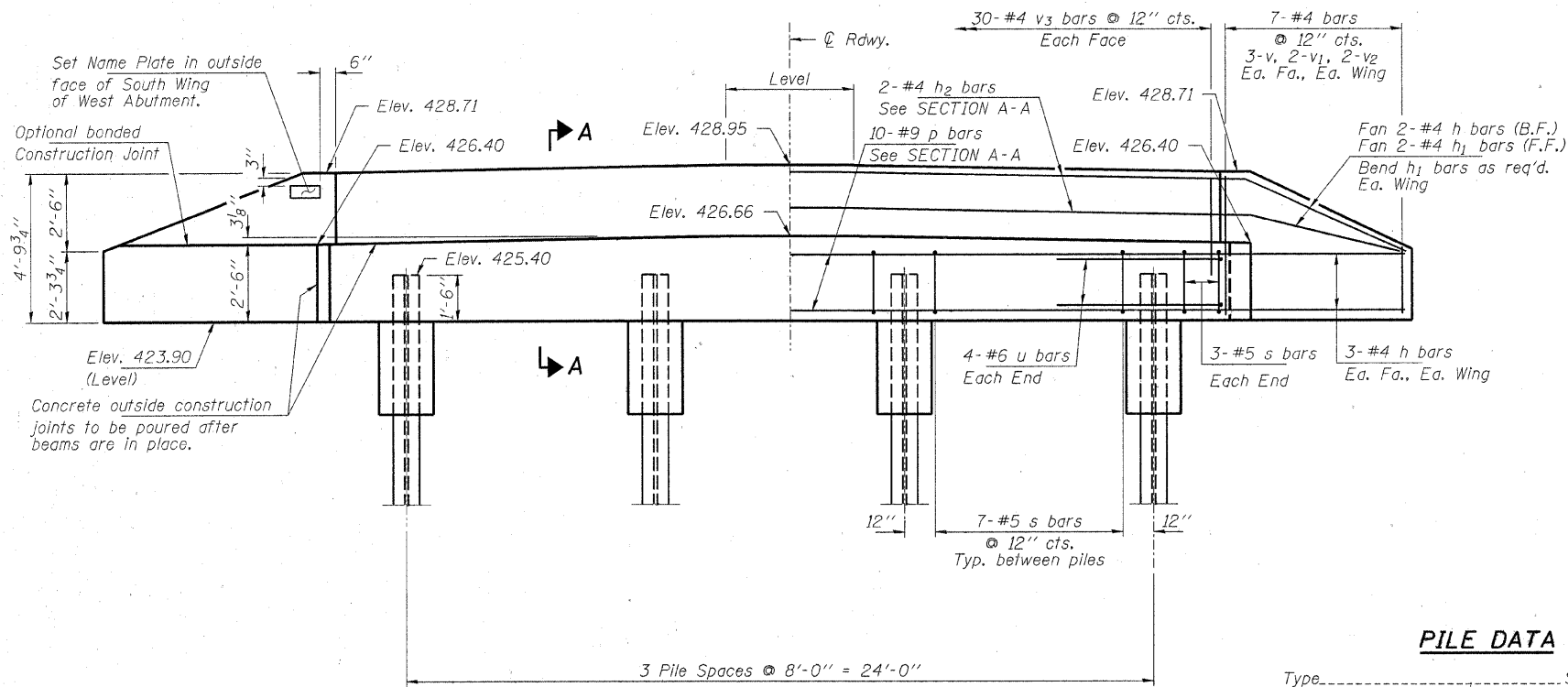
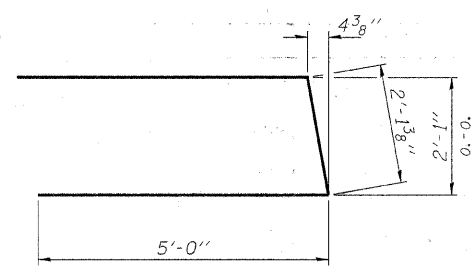
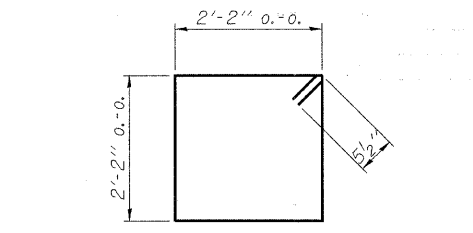
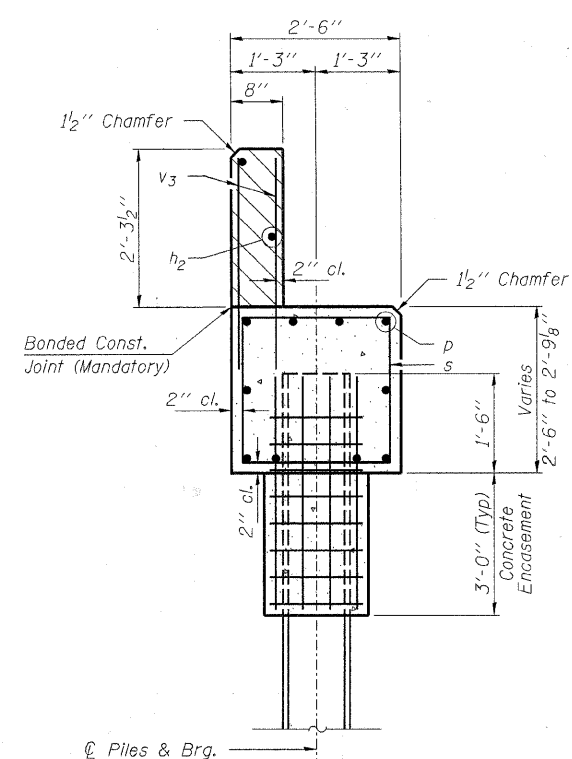
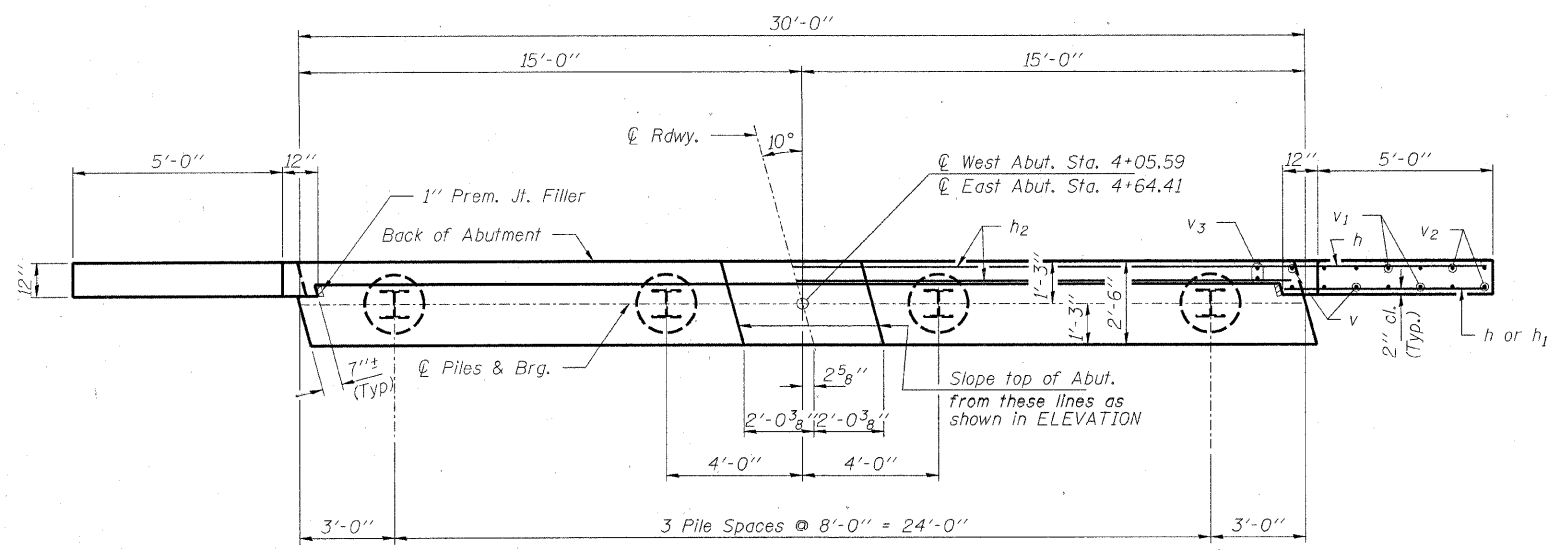
11-1-06 (10'-9" Maximum Post Spacing)

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 08.0075.130 DATE: 04/18/08
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

RAILING DETAILS
 SECTION 07-05123-00-BR
 DENISON ROAD DISTRICT
 LAWRENCE COUNTY
 STRUCTURE NO. 051-3282 / STATION 4+35



Note: Extend h bars into abut. cap.

SECTION A-A
Hatched area to be poured after beams are in place.

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	32	#4	7'-3"	—
h ₁	8	#4	5'-9"	—
h ₂	4	#4	29'-8"	—
p	20	#9	29'-8"	—
s	54	#5	9'-7"	□
u	16	#6	12'-2"	┌
v	24	#4	4'-1"	—
v ₁	16	#4	3'-1"	—
v ₂	16	#4	2'-1"	—
v ₃	120	#4	3'-2"	—
Concrete Structures			Cu. Yd.	21.0
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	3,490
Steel Piles HP12x53			Foot	234
Test Pile Steel HP12x53			Each	1
Name Plates			Each	1

PILE DATA

Type	Steel HP12x53
No. Req'd. (2 Abut.)	8
Allowable Resistance Available	139 Kips/Pile
Nominal Req'd Bearing	418 Kips/Pile
Est. Length	34 Ft/Pile (W. Abut.) 33 Ft/Pile (E. Abut.)

Notes: * Includes one test pile to be driven in permanent location at the West Abutment.

The Steel H-Piles shall be according to AASHTO M270 Grade 50.

The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

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

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

ELGIN • SPRINGFIELD

PROJECT NUMBER: 08.0075.130 DATE: 04/18/08
DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

ABUTMENTS

SECTION 07-05123-00-BR

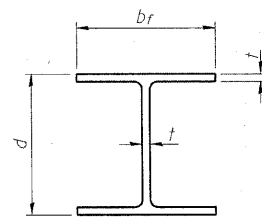
DENISON ROAD DISTRICT

LAWRENCE COUNTY

STRUCTURE NO. 051-3282 / STATION 4+35

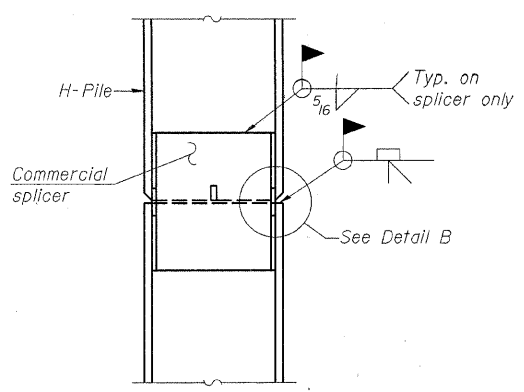
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 249	07-05123-00-BR	LAWRENCE	11	10
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 95560		

Sheet 7 of 8

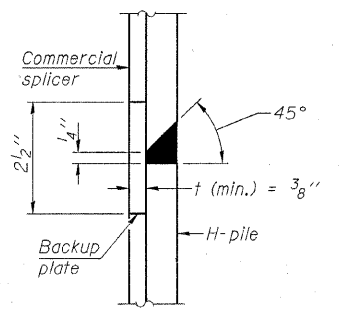


STEEL PILE TABLE

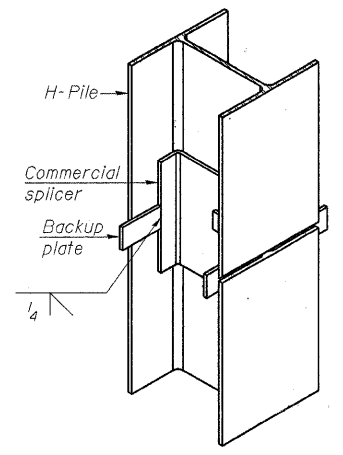
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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

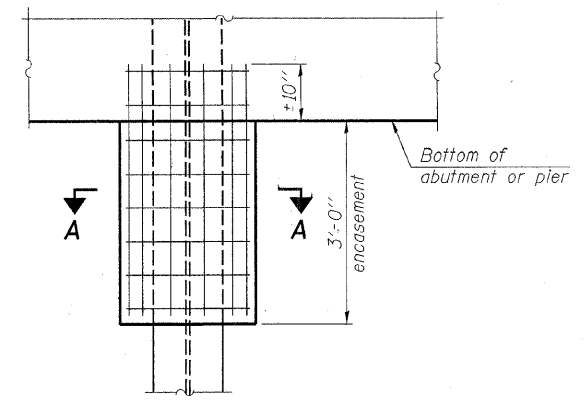


DETAIL "B"



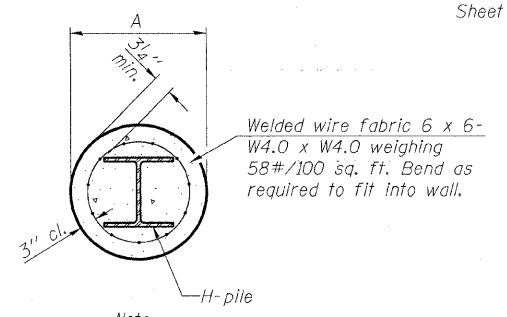
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



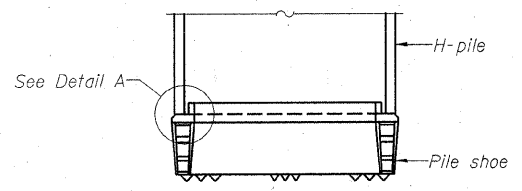
ELEVATION

PILE ENCASEMENT

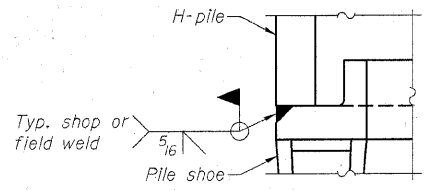


Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

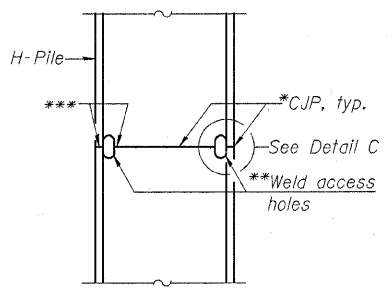


ELEVATION



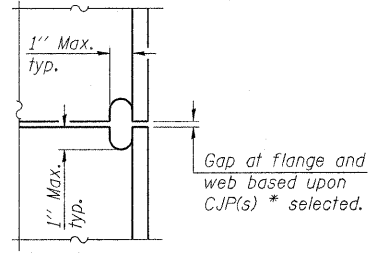
DETAIL A

H-PILE SHOE ATTACHMENT

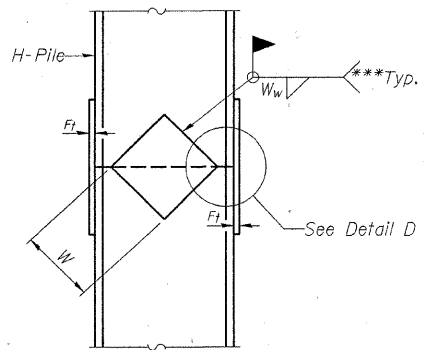


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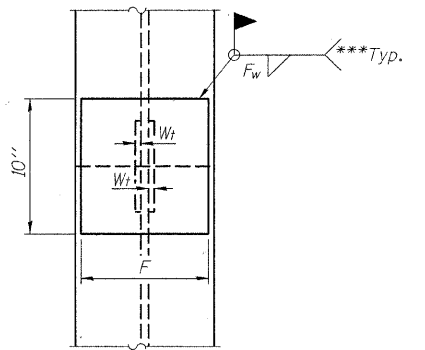
COMPLETE PENETRATION WELD SPLICE



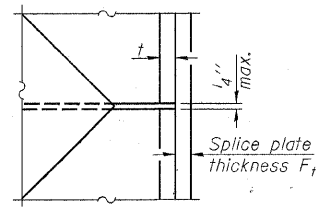
DETAIL C



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

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

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 1/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 1/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 1/8"	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"

*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.

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 08.0075.130 DATE: 04/18/08
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

STEEL H PILE DETAILS
 SECTION 07-05123-00-BR
 DENISON ROAD DISTRICT
 LAWRENCE COUNTY
 STRUCTURE NO. 051-3282 / STATION 4+35

HOLCOMB FOUNDATION ENGINEERING INC. P.O. Box 88 618-529-5262 Carbondale, Il. 62903 618-457-8991 fax										Page 1 of 1					
Bridge Foundation Boring Log															
Project: H-07267 Bridge _____ Date: 10/26/07					Section: 07-05123-00-BR Station: 4+35					Bored by: D. Russell					
Route: _____					Checked By: T. Holcomb					County: Lawrence					
Boring No: 1		Station: 4+5.7		Offset: 4' RT.		Surface Water Elev. _____		Ground Water Elev. During Drilling: 401.7		Upon Completion: plugged		Elevation		N Qu w %	
Ground Surface 428.2		0				sandy clay (continued)						Elevation		N Qu w %	
2" A-3 Surface over 4" Silty Clay and Gravel 427.7						404.7									
Brown Silty CLAY (A-6) with sand and gravel		8		2.5B 23				-25		9		0.85 19			
						402.2									
		7		1.4B 14		Brown Fine to Medium SAND (A-2-4)		15				17			
422.2															
Gray Mottled Brown Silty CLAY to CLAY (A-6 to A-6-7)		5		1.0S 40				-30		17		18			
						397.2									
		5		1.4B 34		Gray SHALE									
						393.7		100/4"				B			
		8		1.9S 27		LIMESTONE		-35							
						Auger Refusal End of Boring @ -35.0'									
		3		1.2B 26											
412.2															
Brown Mottled Gray Sandy CLAY (A-6) with sand lenses		3		1.2B 20				-40							
		4		1.7B 22											
		18		1.1S 25											

BORING 1

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 1 of 1					
Bridge Foundation Boring Log															
Project: H-07267 Bridge _____ Date: 10/26/07					Section: 07-05123-00-BR Station: 4+35					Bored by: D. Russell					
Route: _____					Checked By: T. Holcomb					County: Lawrence					
Boring No: 2		Station: 4+1.3		Offset: 9' LT.		Surface Water Elev. _____		Ground Water Elev. During Drilling: 404.3		Upon Completion: plugged		Elevation		N Qu w %	
Ground Surface 427.8		0				clayey sand (continued)						Elevation		N Qu w %	
2" A-3 Surface over 4" Silty Clay and Gravel 427.3															
Brown Silty CLAY (A-6) with trace sand		5		1.5B 26				-25		11		21			
						400.3						15		1.0S 23	
		2		0.6B 19											
421.8															
Gray Clayey SAND to Sandy CLAY (A-2-4 to A-6)		2		0.5B 29		Gray Silty CLAY (A-6) (A-2-4)		398.3		22		2.2S 21			
								395.8							
		5		1.0B 40		Gray Weathered SHALE		-30							
						395.8									
		5		1.0B 40		Gray SHALE									
						416.8		100/4"				6			
Gray to Gray Mottled Brown Silty CLAY (A-6) with sand		5		30				-35							
						391.8		100/1"				16			
		4		1.0B 25		LIMESTONE		390.8							
						Auger Refusal End of Boring @ -37.0'									
		5		1.4B 24											
		7		1.5B 19											
		11		1.6S 21											
406.8															
Brown Clayey SAND (A-2-4)															

BORING 2

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

HAMPTON, LENZINI & RENWICK, INC.
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 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 ELGIN • SPRINGFIELD
 PROJECT NUMBER: 08.0076.130 DATE: 04/18/08
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.A.B.

BORINGS
 SECTION 07-05123-00-BR
 DENISON ROAD DISTRICT
 LAWRENCE COUNTY
 STRUCTURE NO. 051-3282 / STATION 4+35