

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 365	01-19135-00-BR	VERMILION	16	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 91398		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM**

PROJECT BROS-183(100)
SECTION 01-19135-00-BR
VANCE ROAD DISTRICT
VERMILION COUNTY
T.R. 365
PROPOSED STRUCTURE NO. 092-3433
C-95-310-09

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
3.	PLAN AND PROFILE
4.-8.	STATION CROSS SECTIONS
9.-15.	BRIDGE PLANS
16.	BORINGS

HIGHWAY STANDARDS:

515001-03	NAME PLATE FOR BRIDGES
701901-01	TRAFFIC CONTROL DEVICES
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
BLR 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

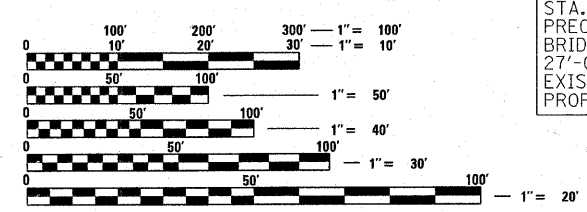
UTILITIES

AMEREN / CILCO
300 LIBERTY STREET
PEORIA, IL 61602

AMEREN IP
1112 WEST ANTHONY DRIVE
P.O. BOX 17070
URBANA, IL 61803-7070

EASTERN ILLINI ELECTRIC COOP
330 WEST OTTAWA STREET
PO BOX 96
PAXTON, IL 60957

VERIZON NORTH
110 E. MONROE
PO BOX 2675
BLOOMINGTON, IL 61701-2675



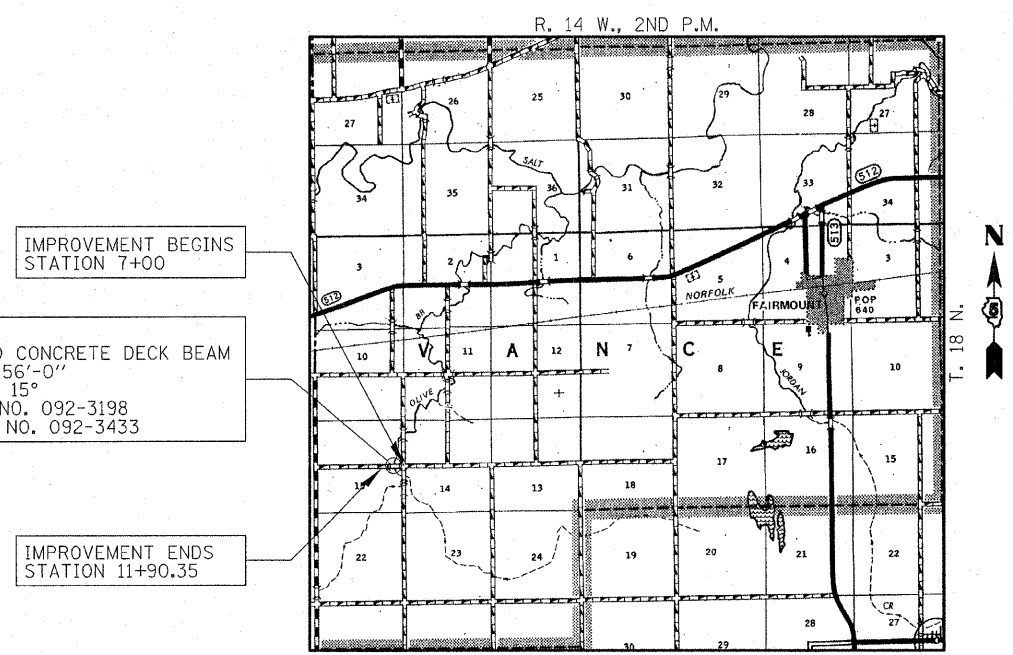
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

FUNCTIONAL CLASSIFICATION: LOCAL ROAD (0-250 ADT)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 125 ADT (2005)

AGENCY RESPONSIBLE FOR LETTING	
APPROVED	<i>Fek 4</i> 20 09 <i>Day Shanks</i> COUNTY ENGINEER
APPROVED	<i>4-9</i> 20 09 <i>Charles L. Knight</i> TOWNSHIP COMMISSIONER
PASSED	<i>4-29</i> 20 09 <i>[Signature]</i> DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	APRIL 30 20 09 <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS REGION THREE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



STA. 9+95
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. SINGLE SPAN 56'-0"
27'-0" RDWY.; SKEW = 15°
EXISTING STRUCTURE NO. 092-3198
PROPOSED STRUCTURE NO. 092-3433

IMPROVEMENT BEGINS STATION 7+00

IMPROVEMENT ENDS STATION 11+90.35

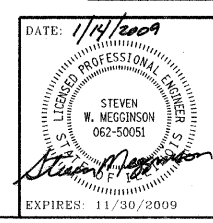
LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 490.35 FEET = 0.093 MILES

CONTRACT NO. 91398

VERMILION COUNTY

SECTION 01-19135-00-BR



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

HLR

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

ELGIN • SPRINGFIELD

PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

SUMMARY OF QUANTITIES			
CODE NO	ITEM	CONSTRUCTION CODE X080-2A	
		UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	230
20300100	CHANNEL EXCAVATION	CU YD	130
20400800	FURNISHED EXCAVATION	CU YD	340
20700110	POROUS GRANULAR EMBANKMENT	TON	100
> 25001000	SEEDING CLASS 2, SPECIAL	ACRE	0.5
> 28101700	RIPRAP, SPECIAL	TON	140
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	450
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	23.0
> 50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,512
50800105	REINFORCEMENT BARS	POUND	2,450
* 50900205	STEEL RAILING, TYPE S1	FOOT	109
51201600	FURNISHING STEEL HP12X53 PILES	FOOT	180
51202305	DRIVING STEEL PILES	FOOT	180
51203600	TEST PILE STEEL HP12X53	EACH	2
51204650	PILE SHOES	EACH	8
51500100	NAME PLATES	EACH	1
67100100	MOBILIZATION	L SUM	1
> 70101830	TRAFFIC CONTROL & PROTECTION STD BLR 21	L SUM	1
> XX004566	CONCRETE CUT-OFF WALL	CU YD	6.6

> SEE SPECIAL PROVISIONS

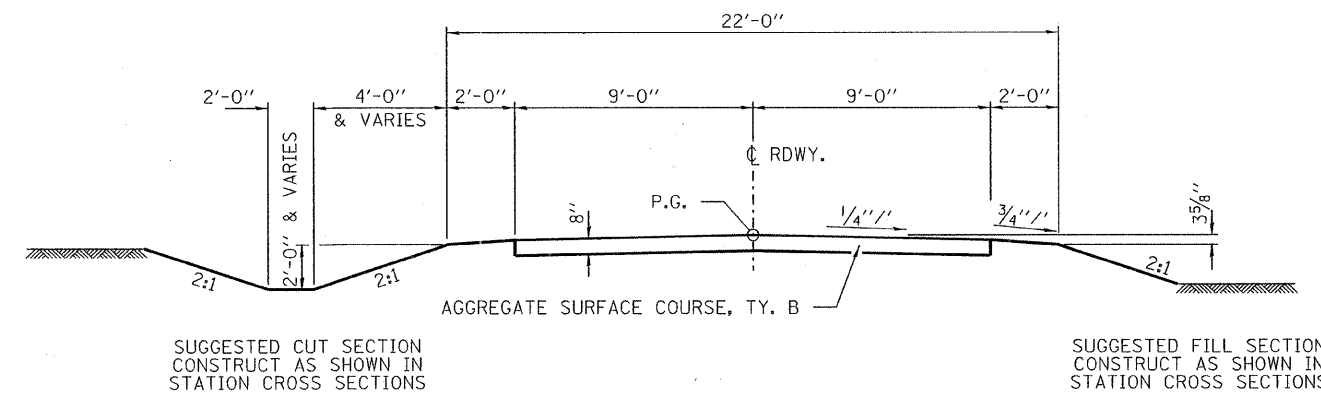
* SPECIALTY ITEMS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE CONTRACT.
- THE LOCATIONS OF EXISTING ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS UNTIL THE OWNER, HIS AGENT, OR A PROFESSIONAL LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES
 AGGREGATE SURFACE CSE. 2.05 TON/CU YD
 RIPRAP, SPECIAL 1.75 TON/CU YD 0.70 TON/50 YD
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY = 0.5 ACRES.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.

EARTHWORK SCHEDULE						
LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE* EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 7+00 TO STA. 9+70.55	173	25%	100%	129	307	-178
STA. 9+70.55 TO STA. 10+39.45	-	25%	100%	-	-	-
STA. 10+39.45 TO STA. 11+90.35	59	25%	100%	44	274	-229
CHANNEL EXCAVATION ENTRANCES	(130)	25%	70%	68	-	68
TOTAL	232			242	581	-339
USE:	230					340

* AVAILABLE EXCAVATION = EXC. x (1-SHRINKAGE FACTOR) x 1/2 USED (FURN. EXC.)



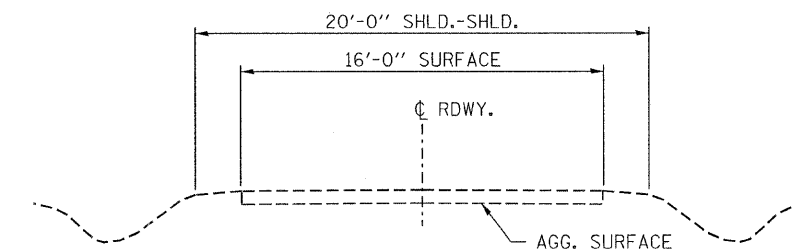
SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

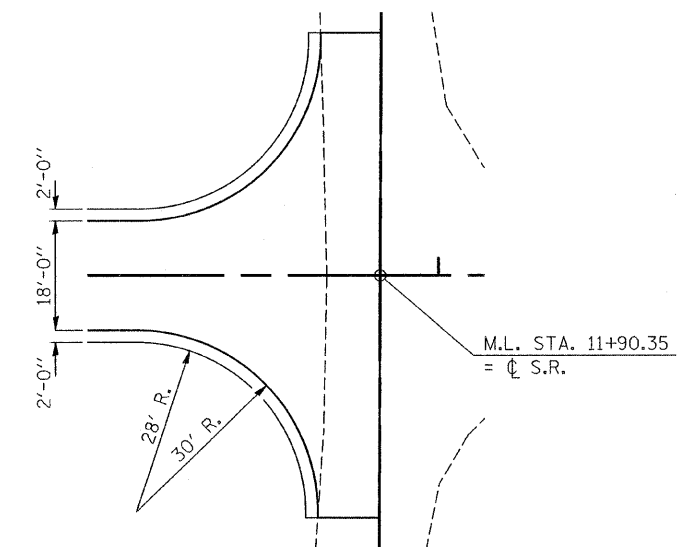
TYPICAL CROSS SECTION

STA. 7+00 TO 13+00

TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 7+00 TO 7+50 AND STA. 12+50 TO 13+00. SEE SHEET 9 FOR TRANSITION AT BRIDGE.

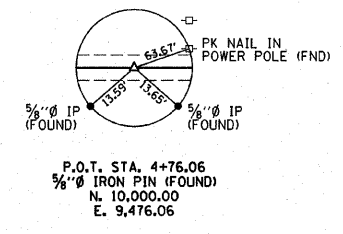
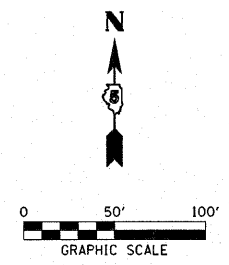


EXISTING CROSS SECTION

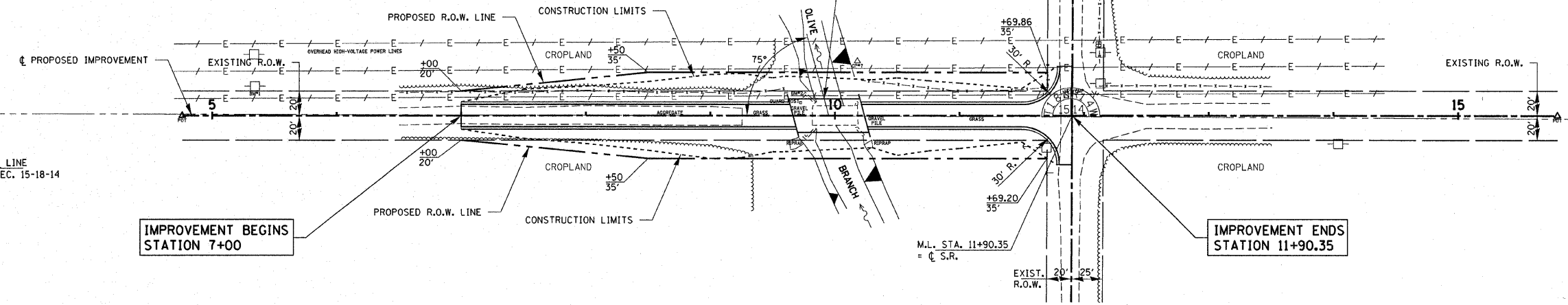
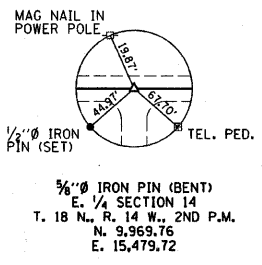
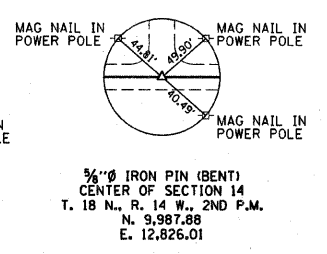
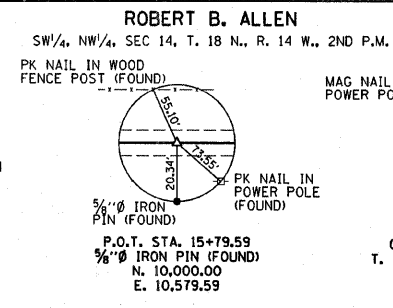


INTERSECTION DETAIL

FILE NAME = 080188-sh1-r-dr.dgn	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	SUMMARY OF QUANTITIES AND GENERAL NOTES	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE =	CHECKED - S.W.M.	REVISED -	365				01-19135-00-BR	VERMILION	16	2	
PLOT DATE = 5/4/2009	DATE - 05/04/09	REVISED -	VANCE ROAD DISTRICT				CONTRACT NO. 91398		ILLINOIS FED. AID PROJECT		
			SCALE:				SHEET NO.	OF	SHEETS	STA.	TO STA.



STATION 9+95
 PRECAST PRESTRESSED CONCRETE DECK BEAM
 BRIDGE SINGLE SPAN @ 56'-0"
 27'-0" ROWLY SKEW = 15°
 PROPOSED STRUCTURE NO. 092-3433



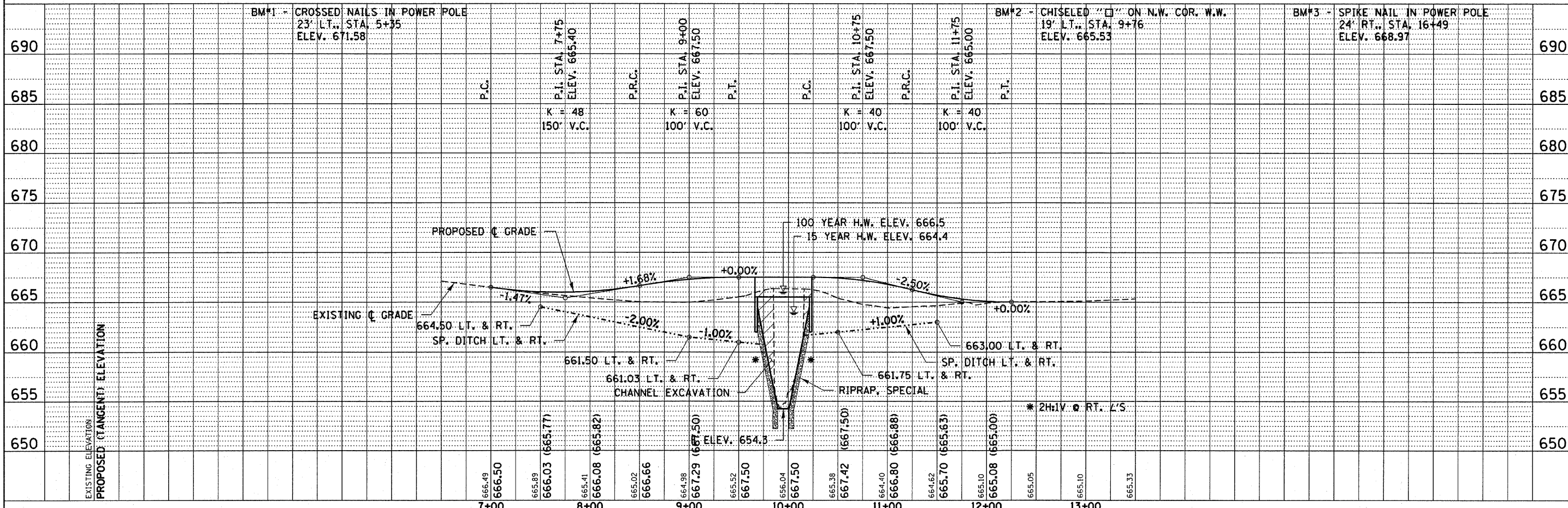
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BY	
PL AN	
SURVEYED	
NOTE BOOK	
ALIGNED	
CHECKED	
NO.	
FILE NAME	

DATE	
BY	
PROFILE	
SURVEYED	
GRADES CHECKED	
NO.	
FILE NAME	

TERRY & JANICE WOLFE
 E 1/2, SE 1/4, SEC 15, T. 18 N., R. 14 W., 2ND P.M.

JAMES K. WIENKE
 W 1/2, SW 1/4, SEC 14, T. 18 N., R. 14 W., 2ND P.M.

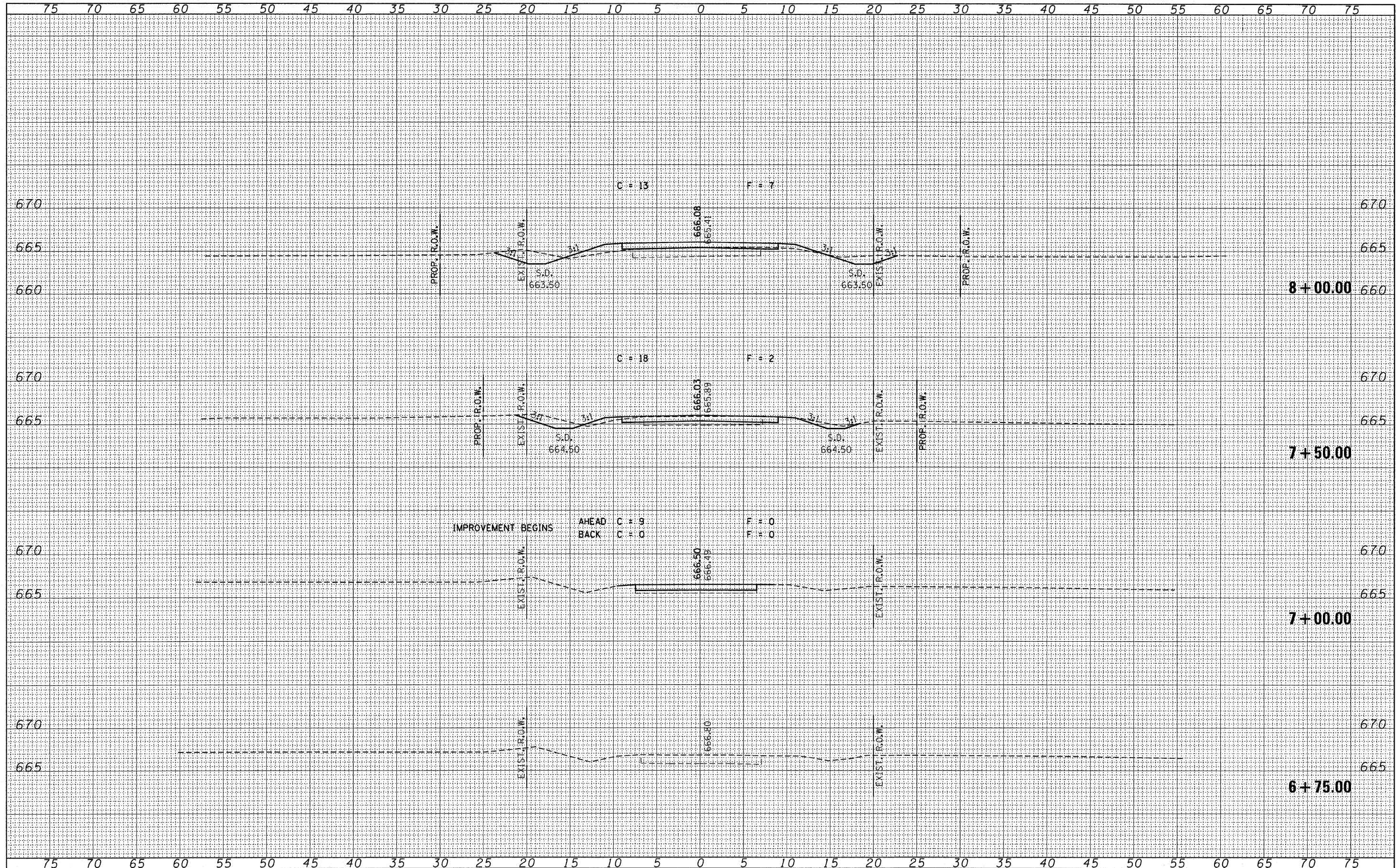
EXISTING STRUCTURE NO. 092-3198
 STATION 10+00 - SINGLE SPAN PONY TRUSS
 BRIDGE WITH CONCRETE DECK ON CLOSED
 CONCRETE ABUTMENTS & WINGWALLS,
 30.5' FC-FC, ABUTTS; 15.7' o.-o. DECK



FILE NAME = 080188-sh1-pp1.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	PLAN & PROFILE VANCE ROAD DISTRICT	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
	PLOT SCALE =	DRAWN - D.T.M.	REVISED -				365	01-19135-00-BR	VERMILION	16	3		
	PLOT DATE = 1/13/2009	CHECKED - S.W.M.	REVISED -				CONTRACT NO. 91398						
		DATE - 01/13/09	REVISED -				FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT						
							SCALE: 50 SHEET NO. 1 OF 1 SHEETS STA. 4+76.06 TO STA. 15+79.59						

DATE	
BY	
FINAL SURVEY	
NOTED BOOK	
NO.	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED BOOK	
NO.	
AREAS CHECKED	



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	DRAWN - D.T.M.	REVISED -
PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 1/13/2009	DATE - 01/13/09	REVISED -

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT



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

CROSS SECTIONS
VANCE ROAD DISTRICT

SCALE: 5

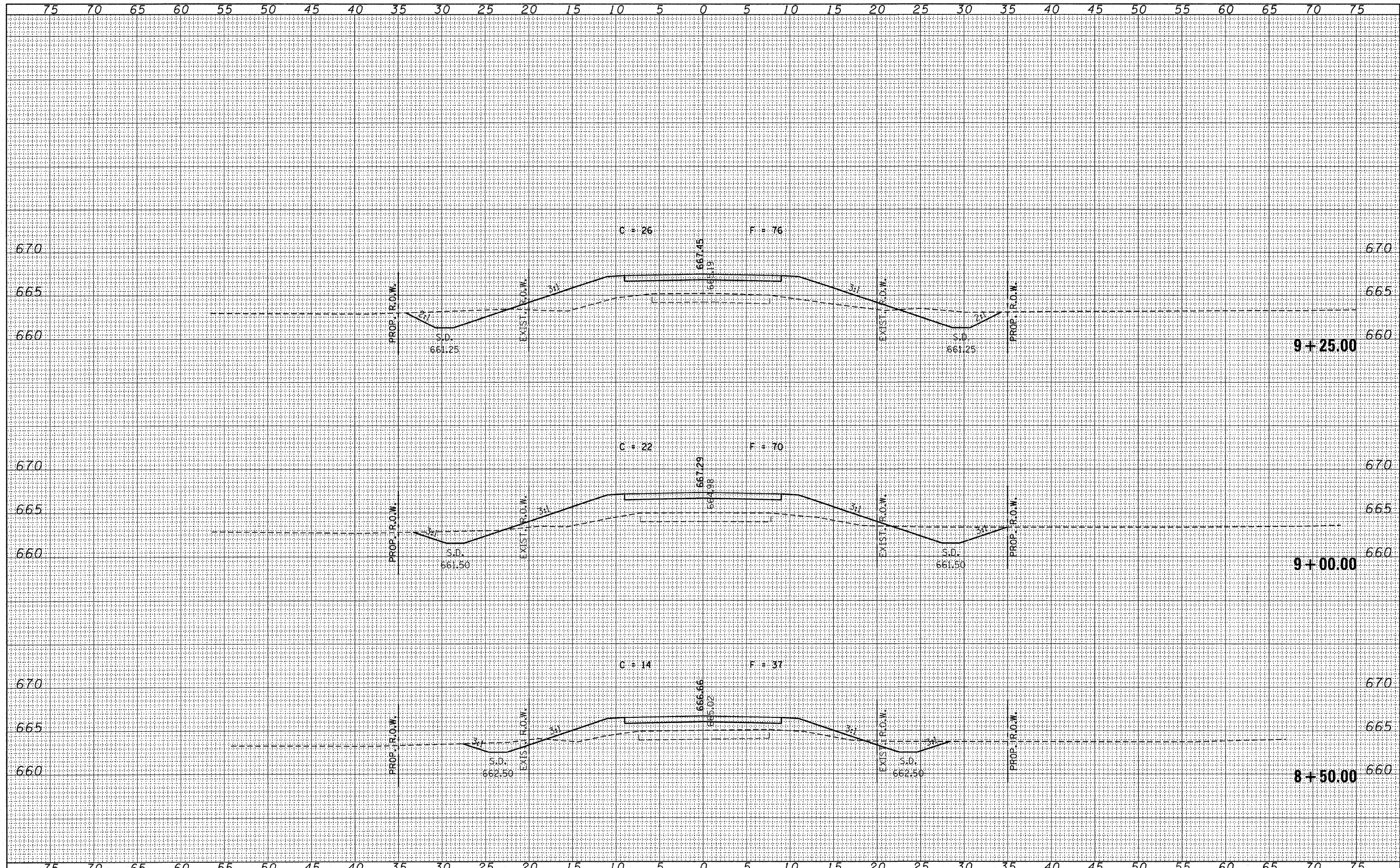
SHEET NO. OF SHEETS


STA. 6+75.00 TO STA. 8+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	15	4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 91398	

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BY	
SURVEYED	
NOTE BOOK	
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AREAS CHECKED	

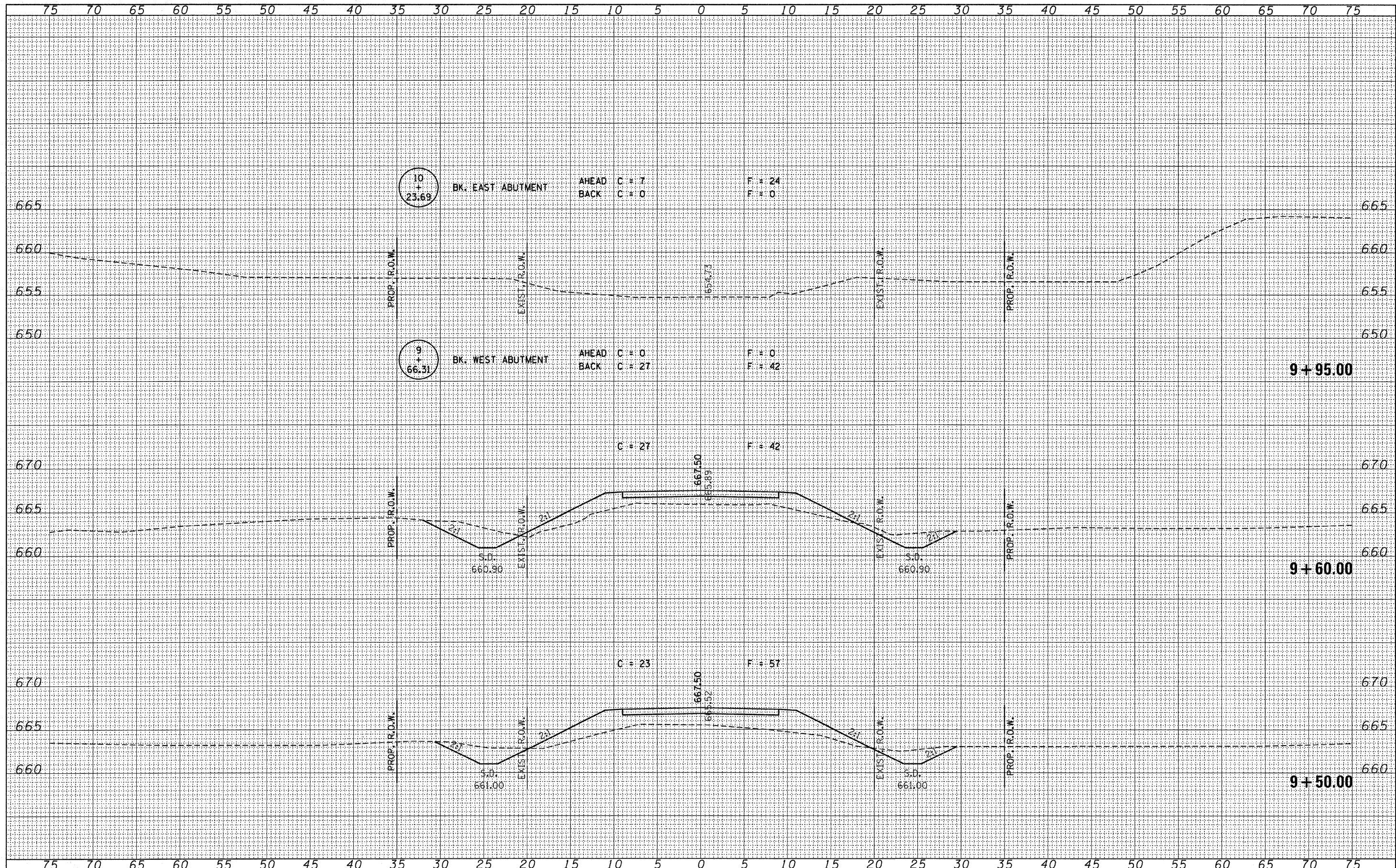
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SURVEYED	
NOTE BOOK	
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AREAS CHECKED	



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PLOT DATE = 1/13/2009	DATE - 01/13/09	REVISED -	SCALE: 5		SHEET NO. OF SHEETS		CONTRACT NO. 91398		
					STA. 8+50.00 TO STA. 9+25.00		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

DATE _____
 BY _____
 SURVEYED _____
 CHECKED _____
 ORIGINAL SURVEY _____
 NOTE BOOK _____
 TEMPLATE _____
 AREAS CHECKED _____
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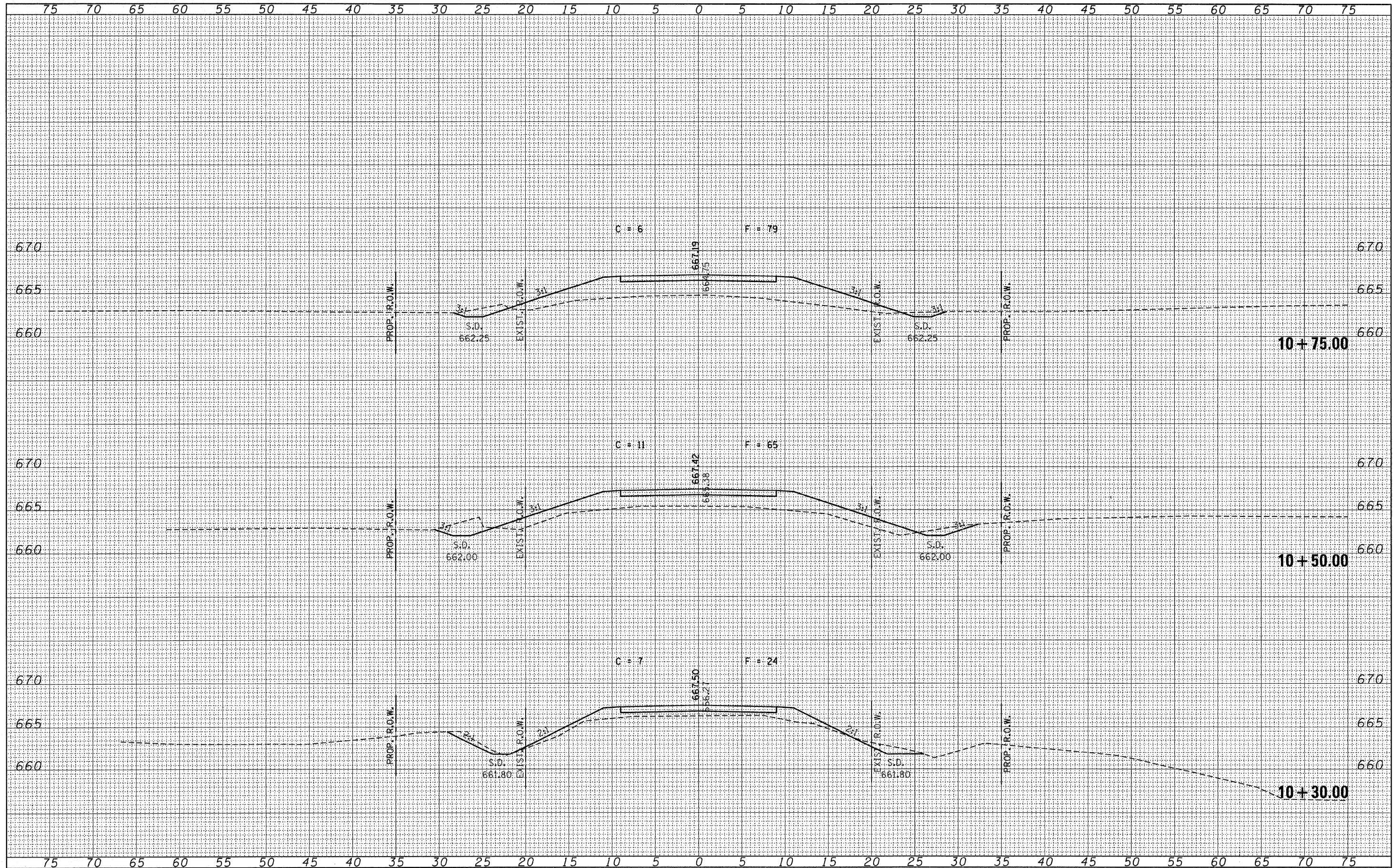
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 AREAS CHECKED _____
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	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			365	01-19135-00-BR	VERMILION	15	6		
	PLOT DATE = 1/13/2009	CHECKED - S.W.M.	REVISED -			STA. 9+50.00 TO STA. 9+95.00		CONTRACT NO. 91398				
		DATE - 01/13/09	REVISED -			SCALE: 5		SHEET NO. OF SHEETS		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

DATE	
BY	
SURVEYED	
NOTED	
TEMP. DATE	
NO. OF SHEETS	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED	
TEMP. DATE	
NO. OF SHEETS	
AREAS CHECKED	



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PLOT SCALE =	DRAWN - D.T.M.	REVISED -
PLOT DATE = 1/13/2009	CHECKED - S.W.M.	REVISED -
	DATE - 01/13/09	REVISED -

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

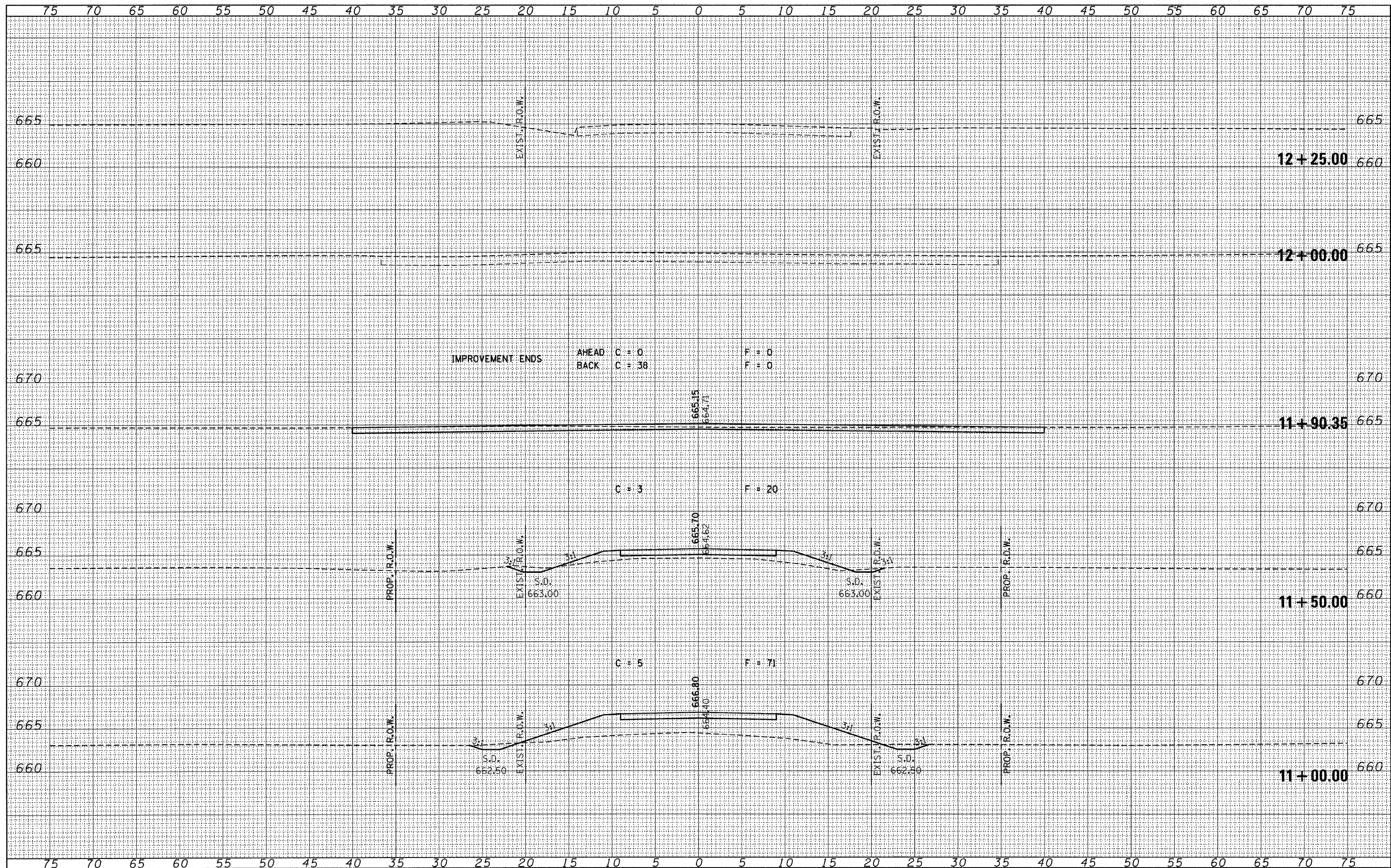
HLR HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
SCALE: 5 SHEET NO. OF SHEETS

**CROSS SECTIONS
VANCE ROAD DISTRICT**

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	15	7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 91398	

DATE	
BY	
SURVEYED	
NOTED	
TEMP. DATE	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
TEMP. DATE	
AREAS CHECKED	
NO.	



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 PLOT SCALE =
 PLOT DATE = 1/13/2009

DESIGNED - J.W.F.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 01/13/09

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 VERMILION COUNTY HIGHWAY DEPARTMENT

HLR HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 SCALE: 5 SHEET NO. OF SHEETS

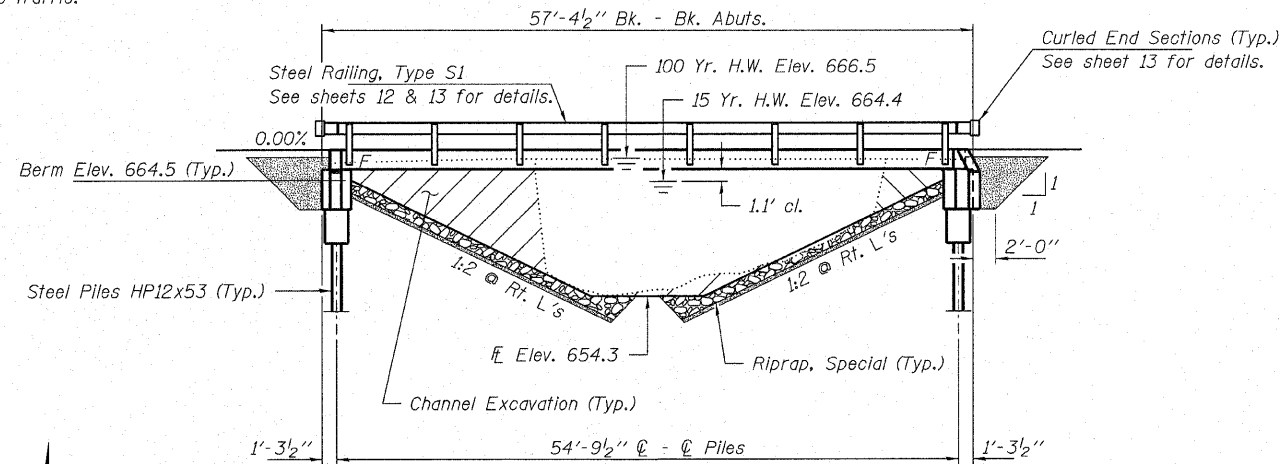
CROSS SECTIONS
VANCE ROAD DISTRICT

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	15	8
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 91398	

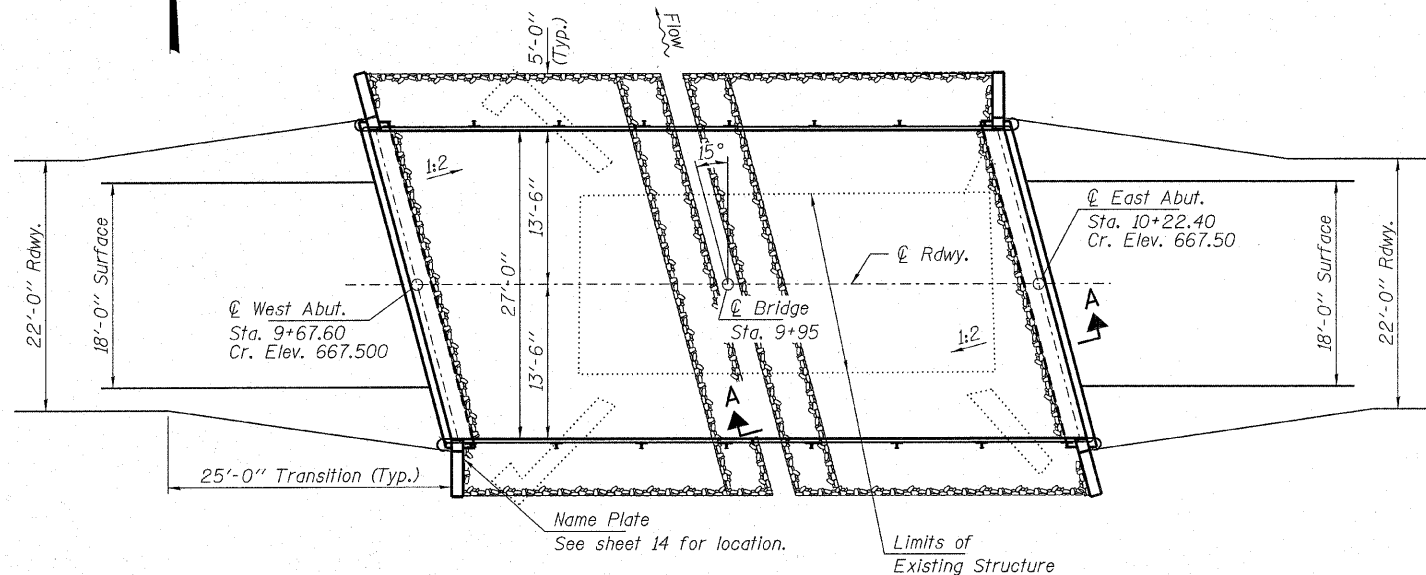
BENCHMARK: Chiseled "□" on N.W. Corner Wingwall. 19' Lt., Sta. 9+76, Elev. 665.53

EXISTING STRUCTURE: Single span pony truss bridge with concrete deck on closed concrete abutments and wingwalls. 30.5' fc.-fc. abuts.; 15.7' o.-o. deck. Structure closed to traffic.

No Salvage



ELEVATION



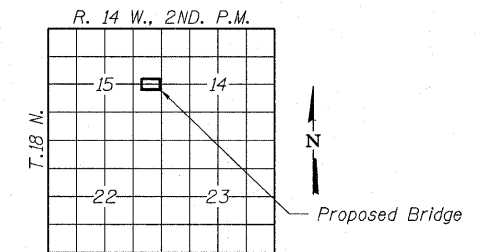
PLAN

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 100% 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 16 for Borings.

OLIVE BRANCH
 BUILT 200_ BY
 VERMILION COUNTY
 SEC. 01-19135-00-BR
 VANCE ROAD DISTRICT
 STR. NO. 092-3433
 LOADING HL-93

NAME PLATE
 See Std. 515001



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			130
Porous Granular Embankment	Ton			100
Riprap, Special	Ton			140
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		23.0	23.0
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,512		1,512
Reinforcement Bars	Pound		2,450	2,450
Steel Railing, Type S1	Foot	109		109
Furnishing Steel Piles HP12x53	Foot		210	210
Driving Piles	Foot		210	210
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		8	8
Name Plates	Each		1	1
Concrete Cut-Off Wall	Cu. Yd.		6.6	6.6

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) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.139g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.245g
 Soil Site Class = D

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	1,189	240	300	664.4	0.1	0.1	664.5	664.5	
Base										
Overtopping	100	1,901	270	360	666.5	0.1	0.1	666.6	666.6	
Max. Calc.	500	2,524	270	360	667.5	0.1	0.1	667.6	667.6	

10 Year Velocity through Existing Bridge = 4.8 Tps 10 Year Velocity through Proposed Bridge = 3.8 Tps

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. Magnuson 1/4/09
 ILLINOIS STRUCTURAL NO. 081-6064



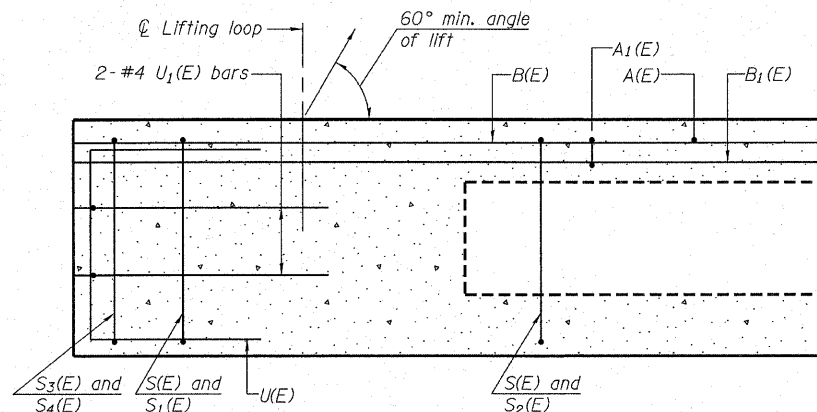
Expires 11-30-10

**GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 092-3433**

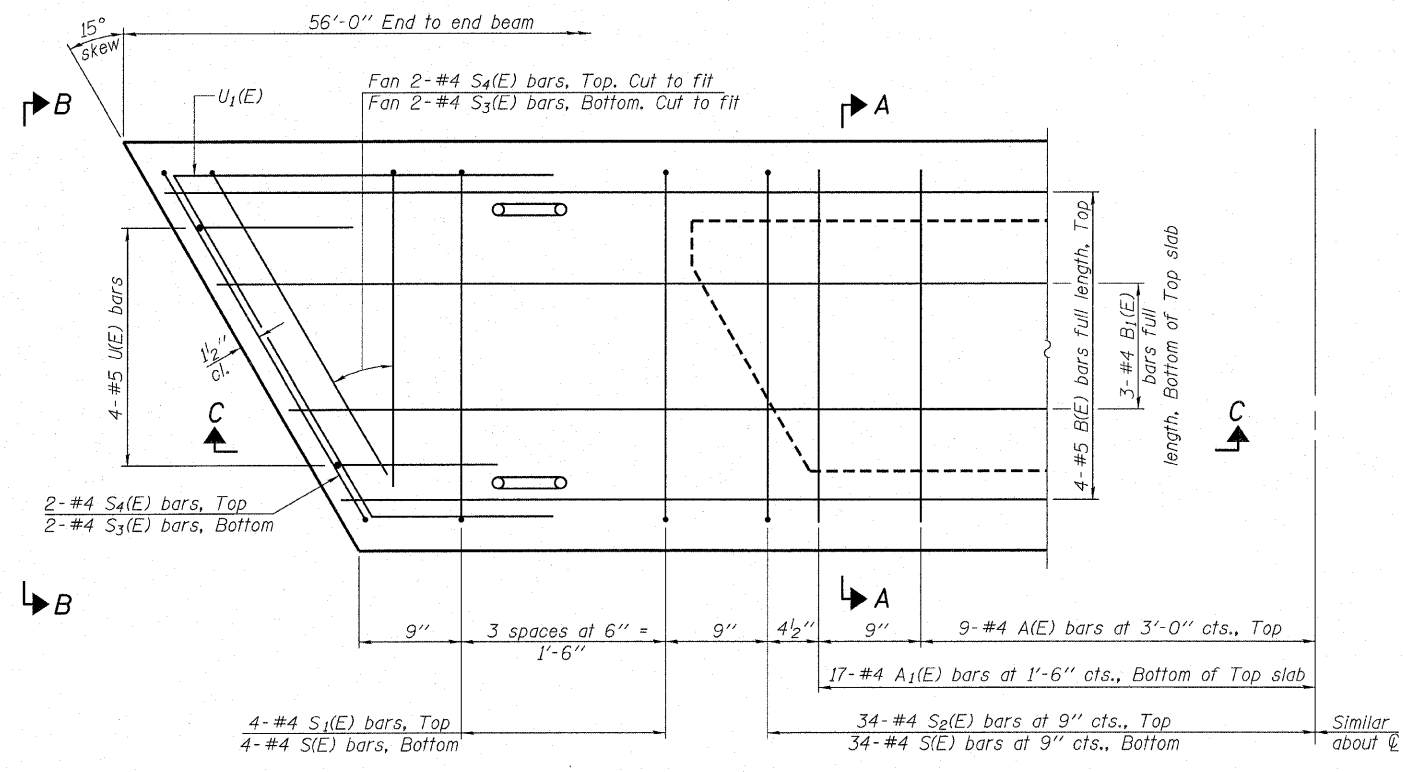
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
HLR 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	9
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

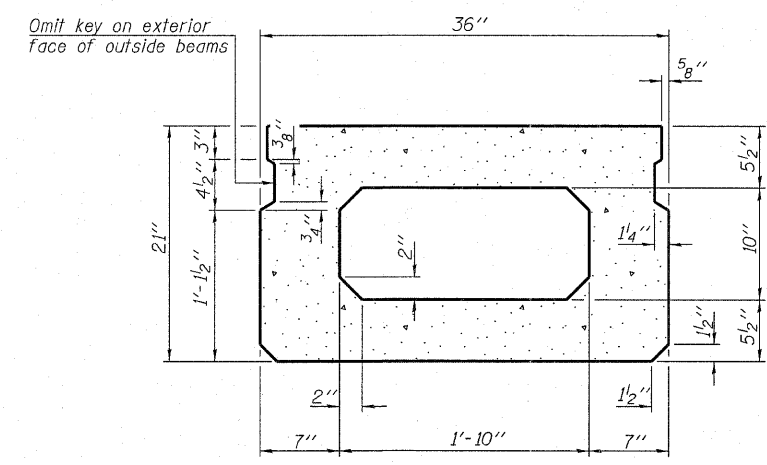


SECTION C-C

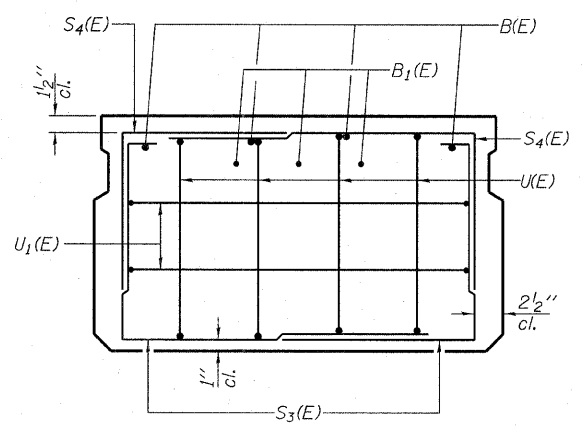


PLAN VIEW

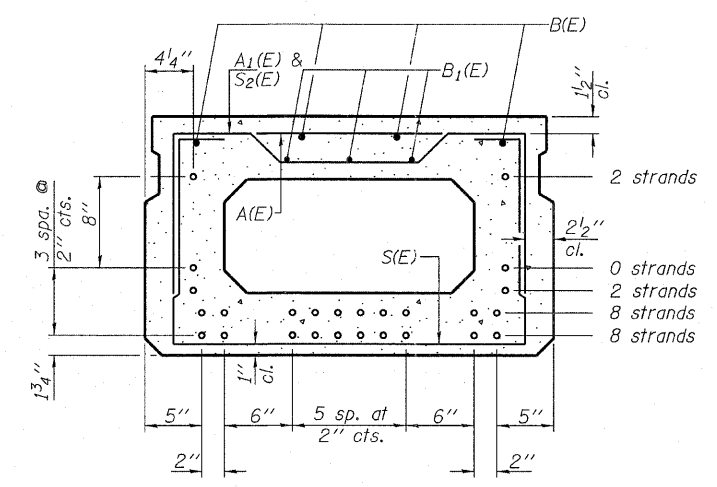
Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A
(Showing dimensions)



VIEW B-B



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)	18	#4	2'-7"	—
A1(E)	34	#4	2'-11"	~
B(E)	4	#5	55'-8"	—
B1(E)	3	#4	55'-8"	—
S(E)	76	#4	6'-5"	U
S1(E)	8	#4	4'-11"	U
S2(E)	68	#4	5'-2"	U
S3(E)	4	#4	4'-2"	U
S4(E)	4	#4	3'-5"	U
U(E)	8	#5	4'-0"	U
U1(E)	4	#4	5'-9"	U

Note: See sheets 11 & 12 for additional details and Bill of Material.

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

PD-2136-R 5-16-08

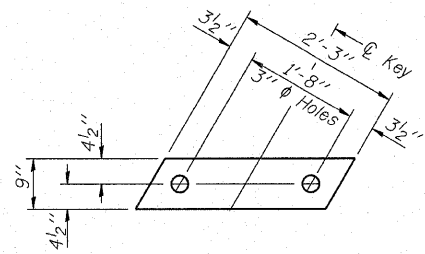
HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

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

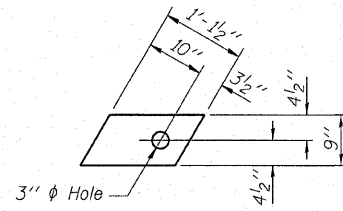
PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	10
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SUPERSTRUCTURE
21" x 36" PPC DECK BEAM
STRUCTURE NO. 092-3433



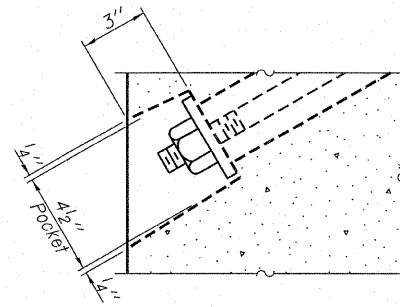
FABRIC BEARING PAD
(Interior - 16 Req'd)



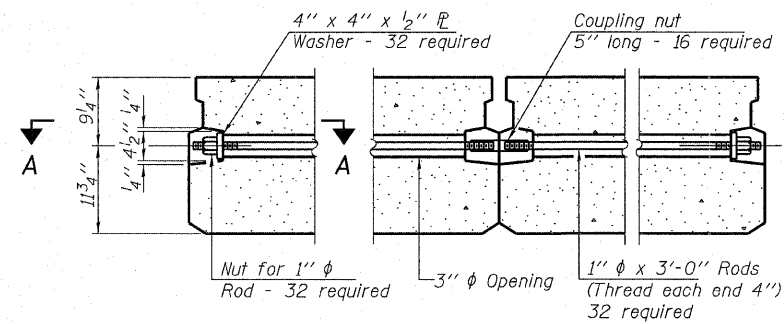
FABRIC BEARING PAD
(Exterior - 4 Req'd)

FIXED

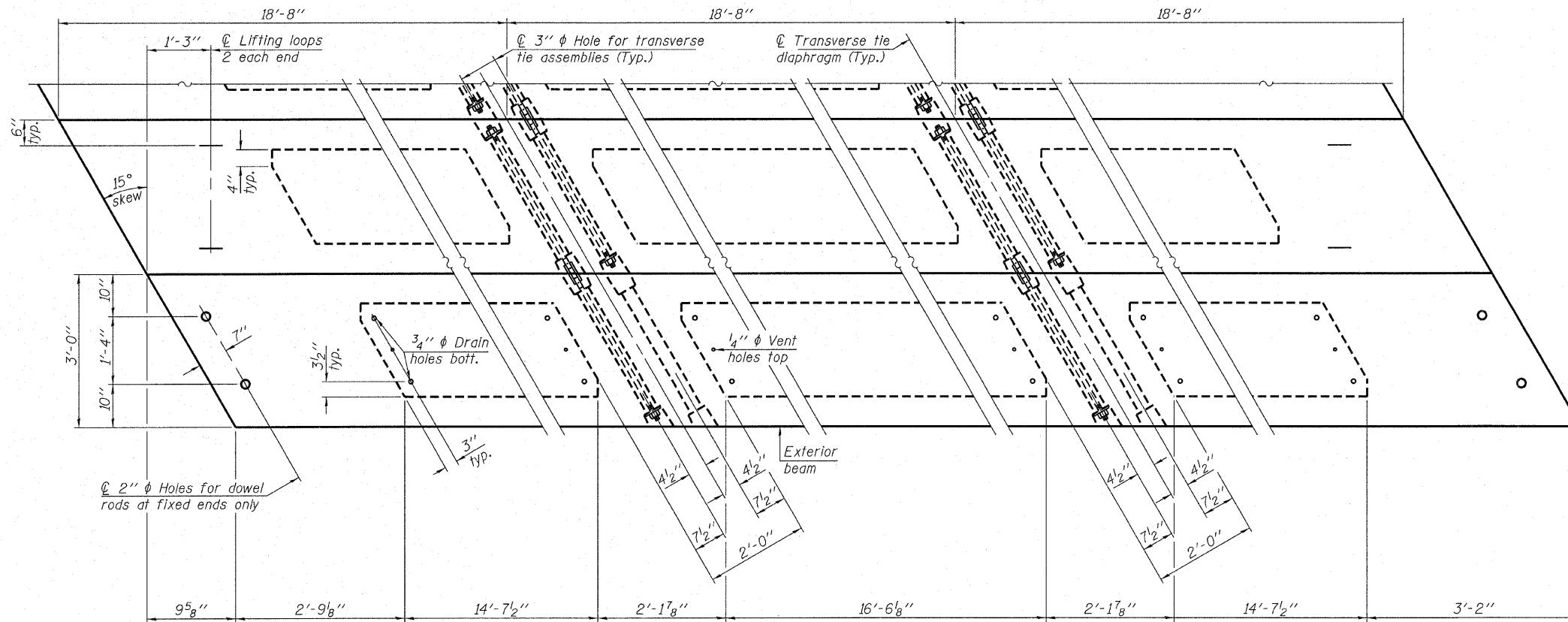
Note: Omit holes when using expansion bearings.



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

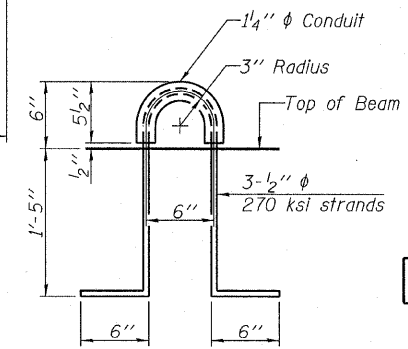
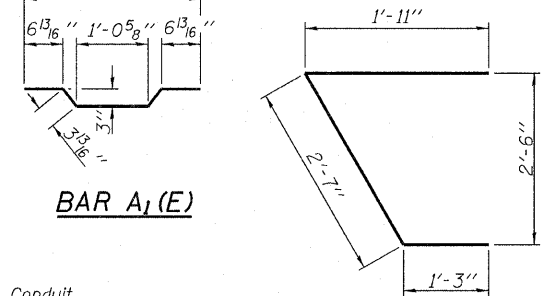
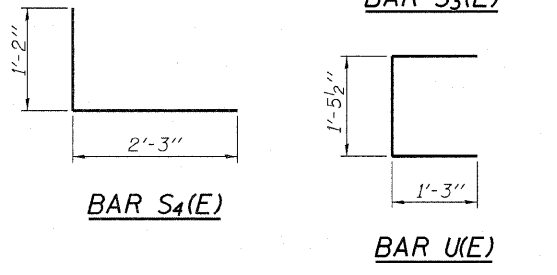
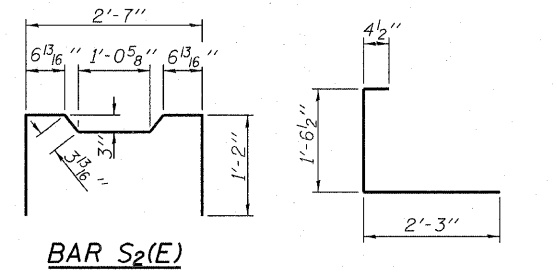
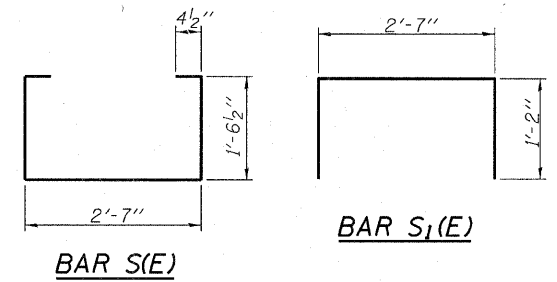
Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 inch 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 1/8 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 inch 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.

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

PD-2136-RD 5-16-08



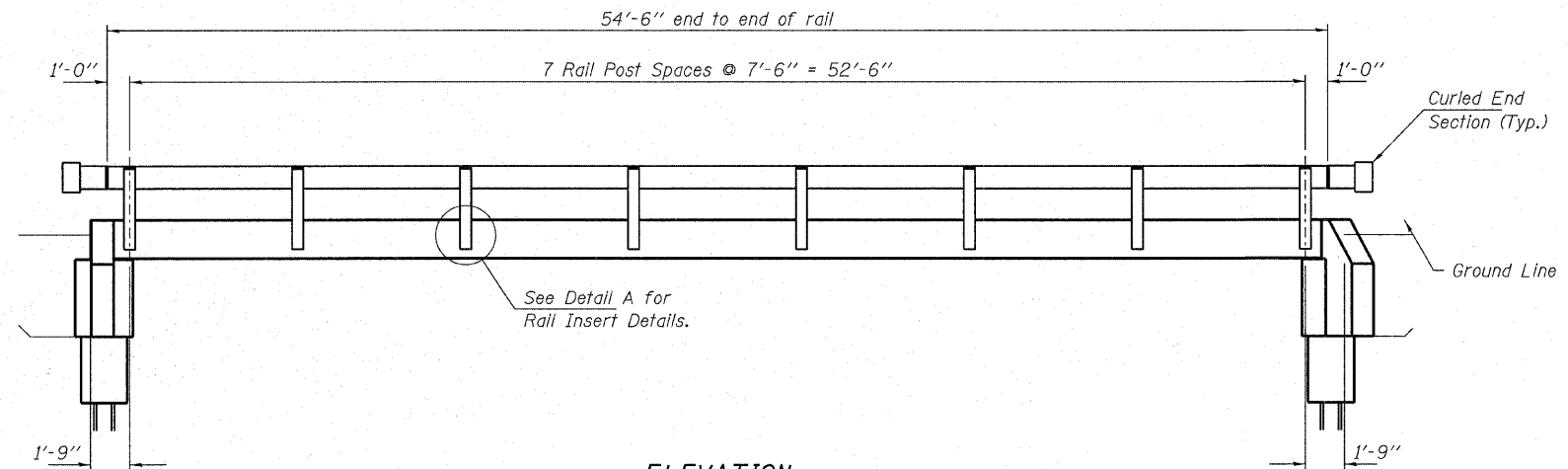
LIFTING LOOP DETAIL

BILL OF MATERIAL

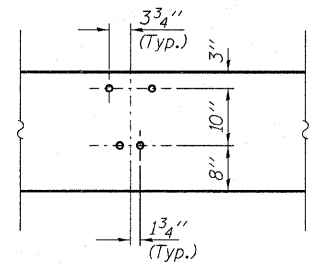
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,512
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SUPERSTRUCTURE DETAILS
21" X 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 092-3433

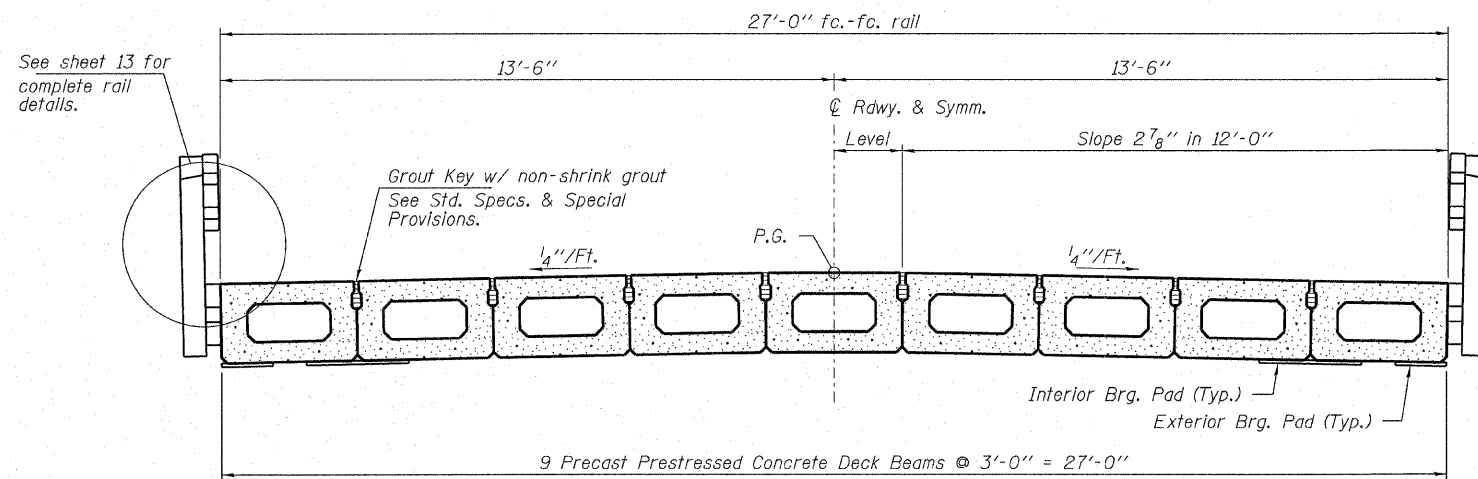
HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0168.130 DATE: 01/13/09	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	365	01-19135-00-BR	VERMILION	16	11
VANCE ROAD DISTRICT			CONTRACT NO. 91398		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			



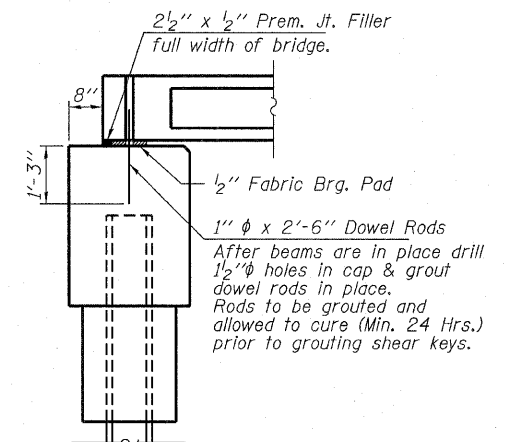
ELEVATION
Showing Rail Post Spaces
See sheet 13 for Railing Details.



DETAIL A



CROSS SECTION
See sheets 10 & 11 for Superstructure.



SECTION AT ABUTMENTS

© Rt. L's

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

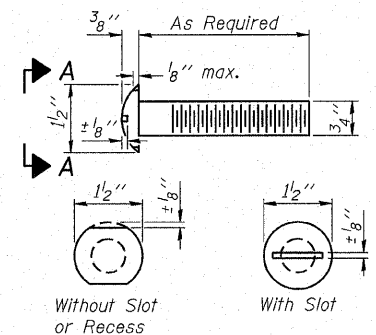
HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

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

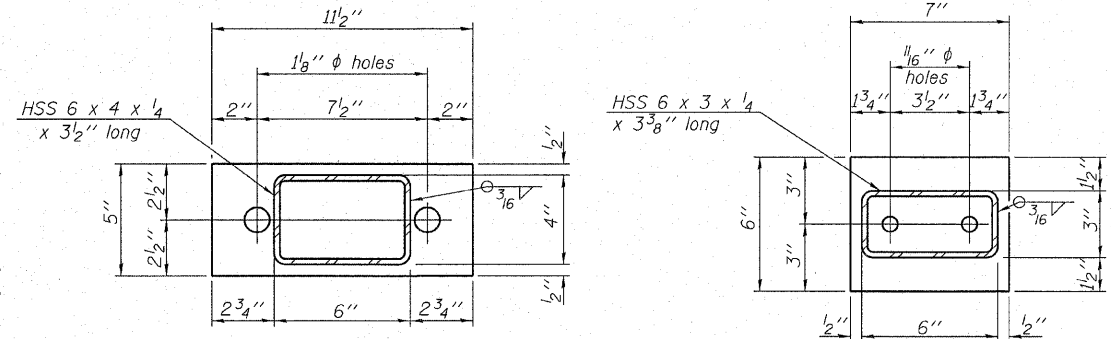
PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 092-3433

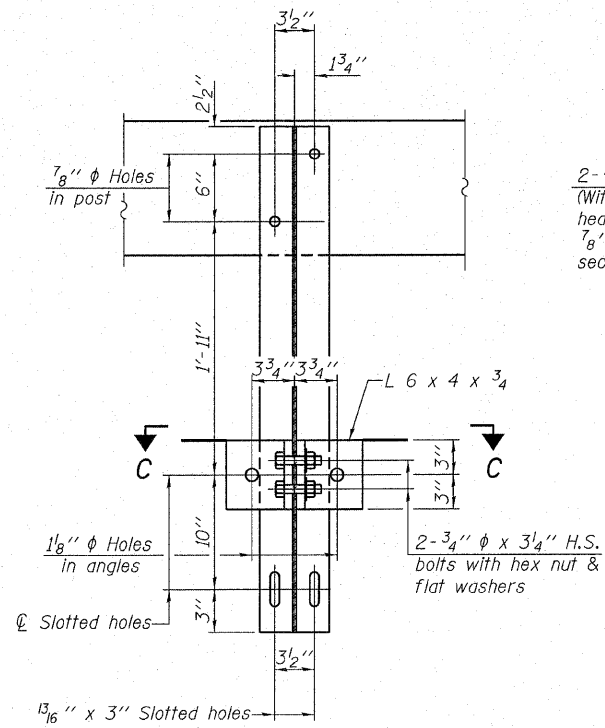
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	12
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



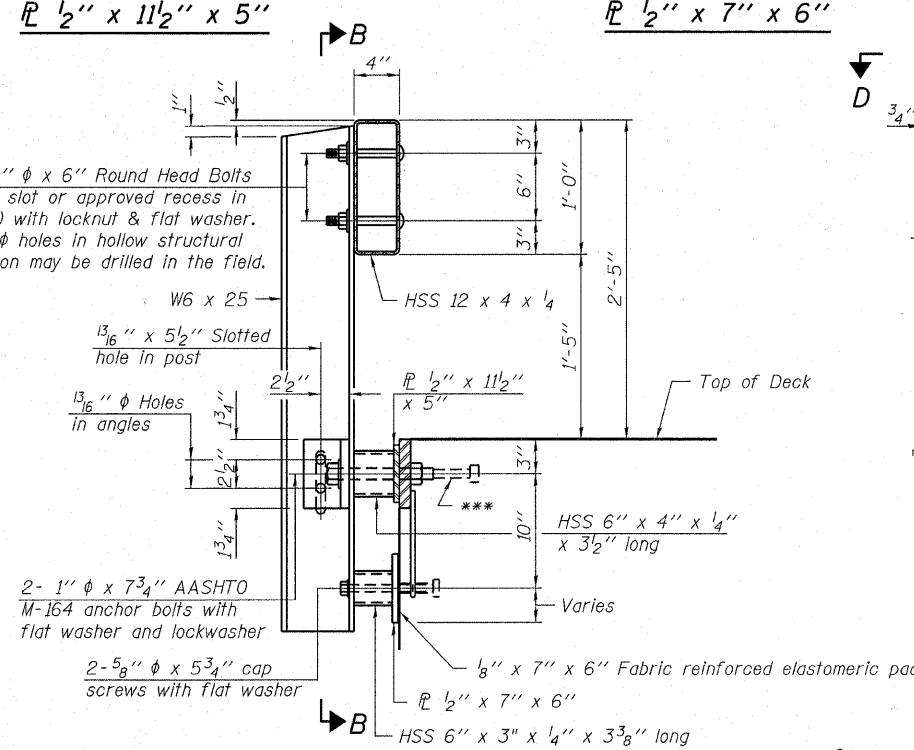
VIEW A-A ROUND HEAD BOLT



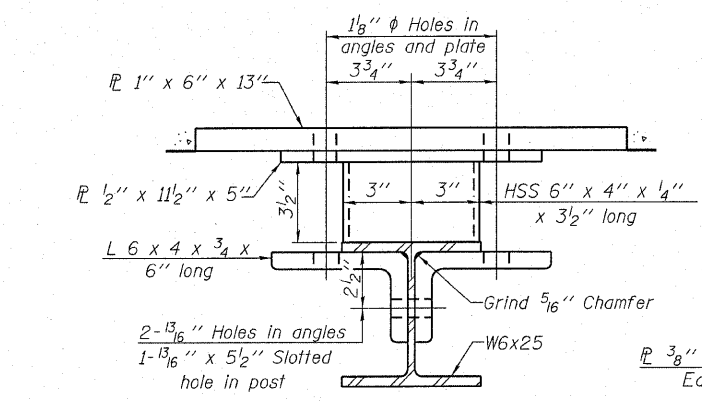
PL 1/2" x 11 1/2" x 5" PL 1/2" x 7" x 6"



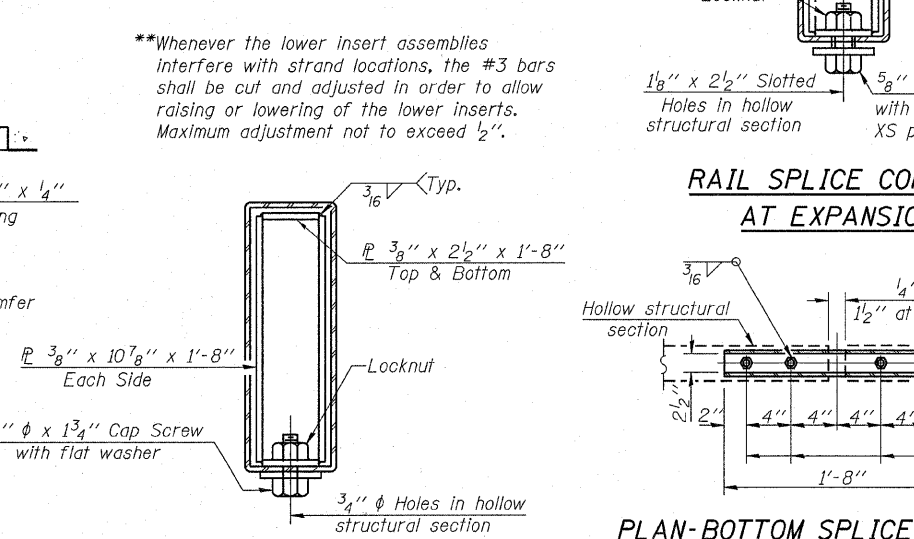
SECTION B-B



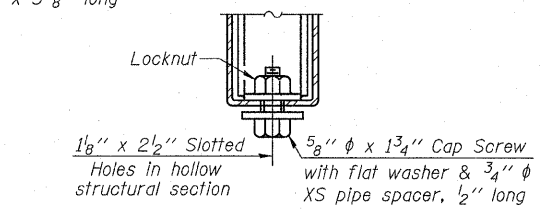
SECTION AT RAILING POST



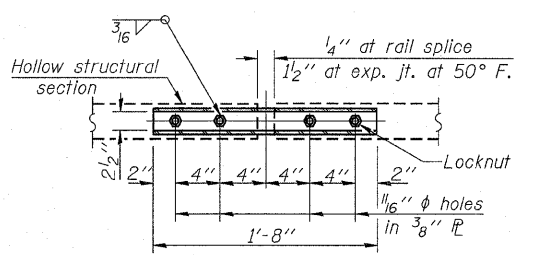
SECTION C-C



SECTIONS AT RAIL SPLICE

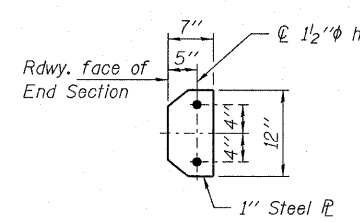


RAIL SPLICE CONNECTION AT EXPANSION JT.

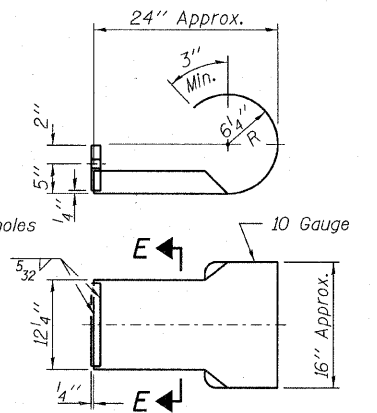


PLAN-BOTTOM SPLICE PL TYPICAL

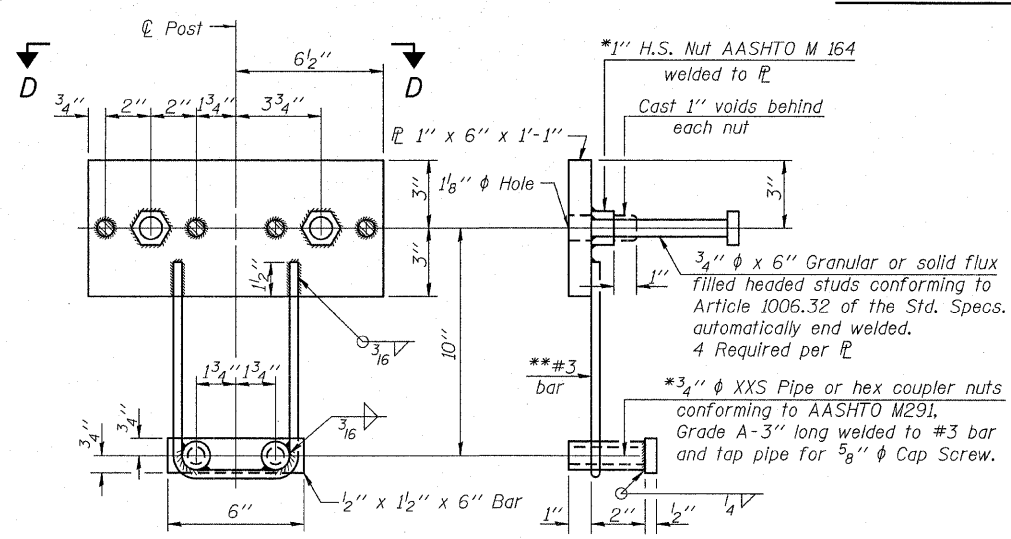
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



SECTION E-E

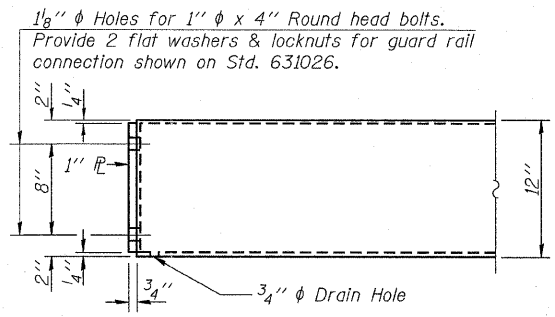


CURLED END SECTION DETAILS



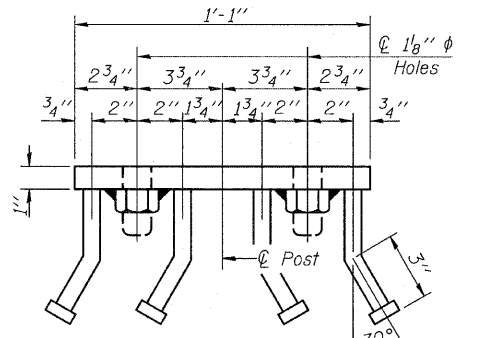
ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during casting of beam.



END OF RAIL 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 - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

R-23A

5-16-08 (10'-9" Maximum Post Spacing)

BILL OF MATERIAL

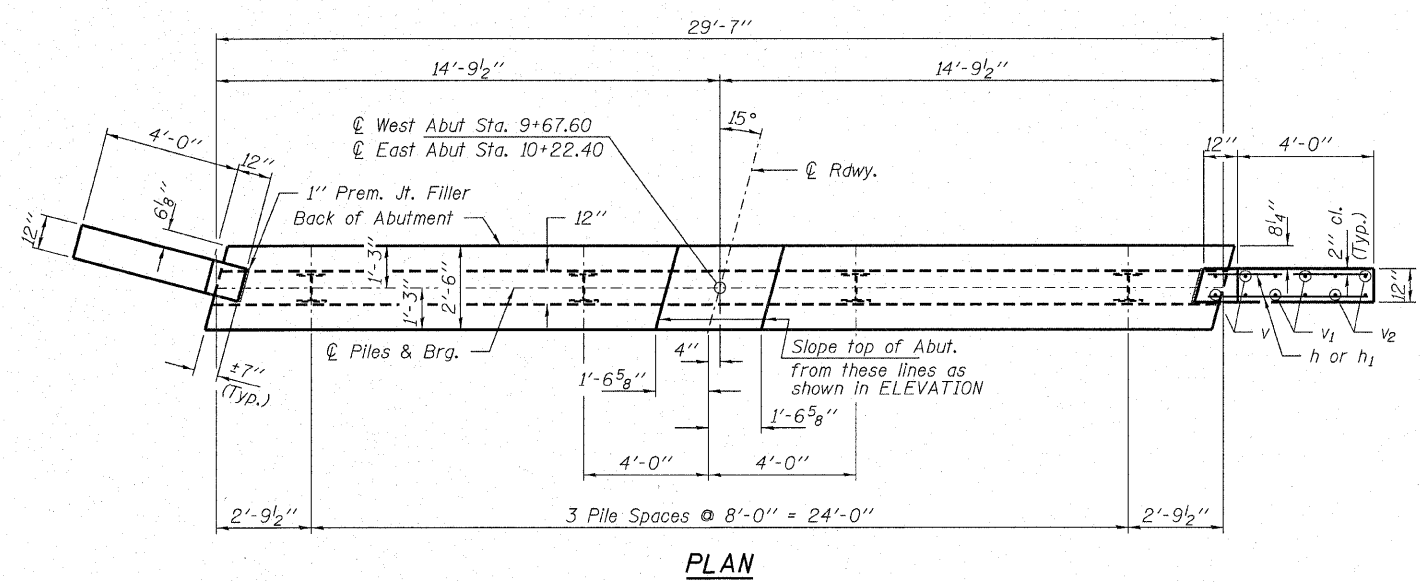
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	109

STEEL RAILING, TYPE S-1
 STRUCTURE NO. 092-3433

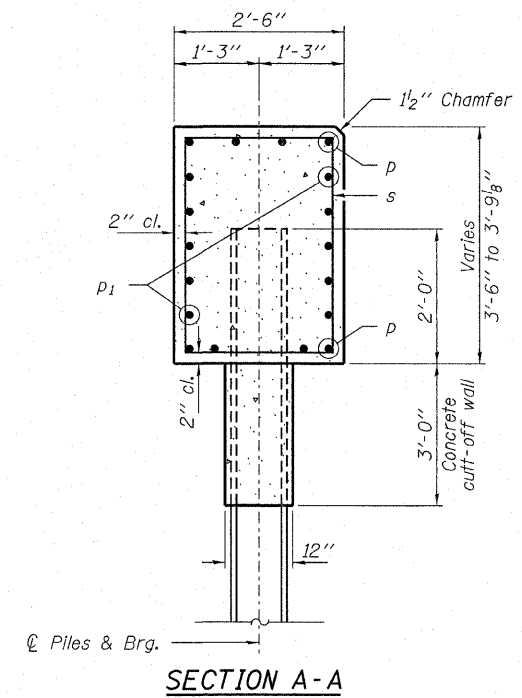
PROJECT NUMBER: 08 0198.130	DATE: 01/13/09	T.R.		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		365	01-19135-00-BR	VERMILION	16	13	
VANCE ROAD DISTRICT		CONTRACT NO. 91398		ILLINOIS FED. AID PROJECT			

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

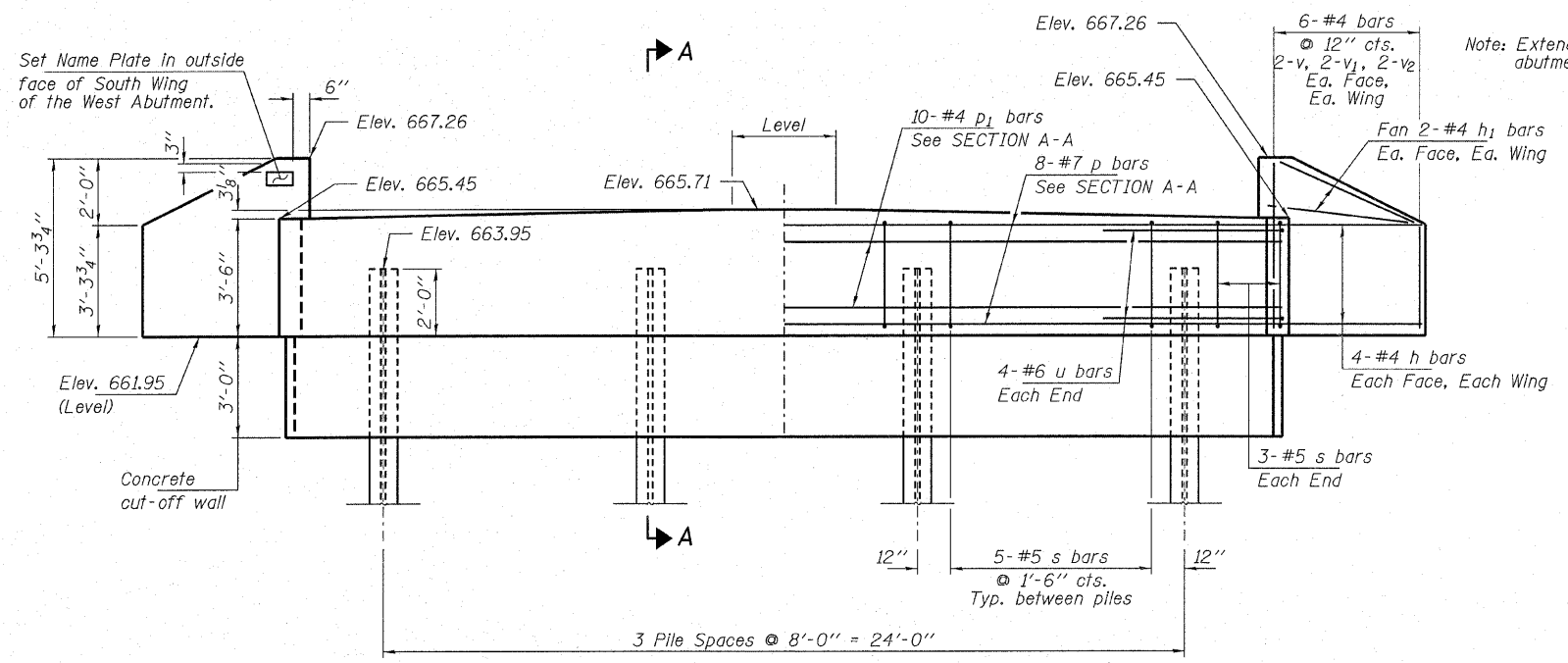
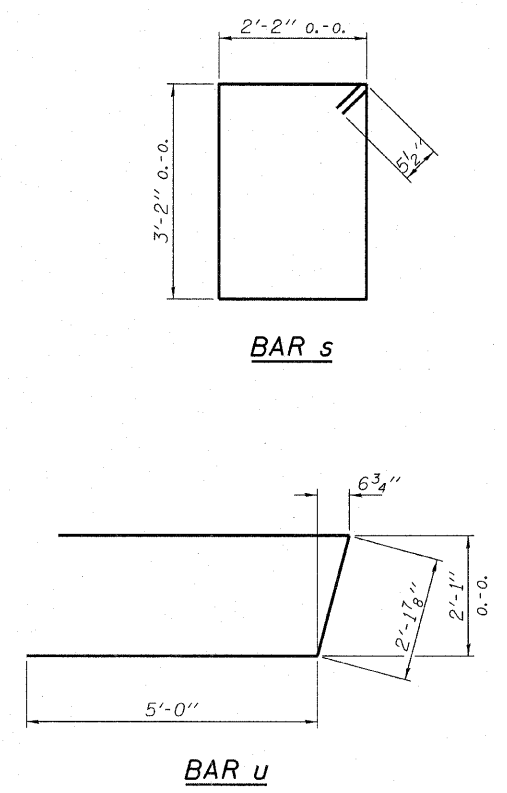
HLR 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400



PLAN



SECTION A-A



ELEVATION

PILE DATA

Type: Steel HP12x53 w/ Pile Shoes
 No. Req'd. (2 Abuts.): 8
 Factored Resistance Available (Rf): 168 Kips/Pile
 Nominal Required Bearing (Rn): 336 Kips/Pile
 Est. Length: 30 Ft./Pile

Notes: * Includes two test piles to be driven in permanent locations one at the West Abutment and one at the East 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.

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	32	#4	6'-3"	—
h1	16	#4	4'-9"	—
p	16	#7	29'-3"	—
p1	20	#4	29'-3"	—
s	42	#5	11'-7"	□
u	16	#6	12'-2"	—
v	16	#4	4'-10"	—
v1	16	#4	3'-10"	—
v2	16	#4	3'-0"	—
Concrete Structures			Cu. Yd.	23.0
Concrete Cut-Off Wall			Cu. Yd.	6.6
Reinforcement Bars			Pound	2,450
Steel Piles HP12x53			Foot	180
Driving Piles			Foot	180
Test Pile Steel HP12x53			Each	2
Pile Shoes			Each	8
Name Plates			Each	1

ABUTMENTS
 STRUCTURE NO. 092-3433

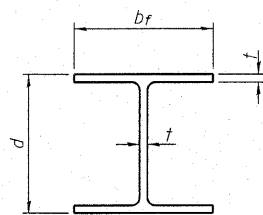
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
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HLR 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
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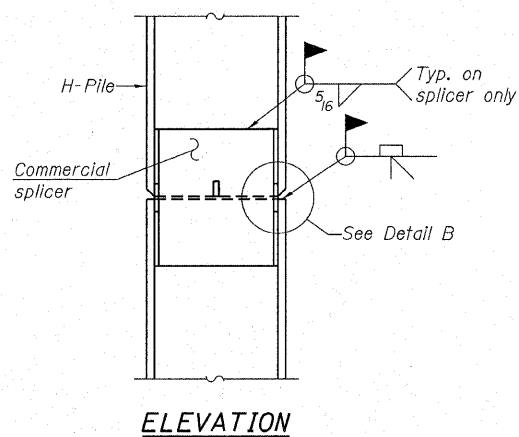
PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	14
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

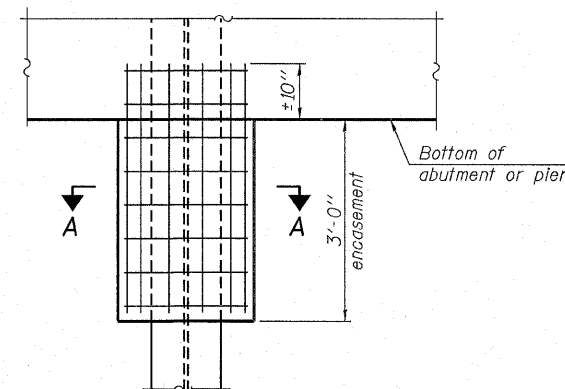


STEEL PILE TABLE

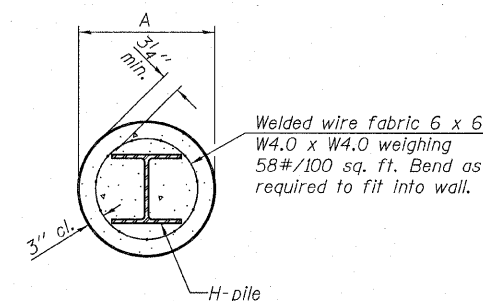
Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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



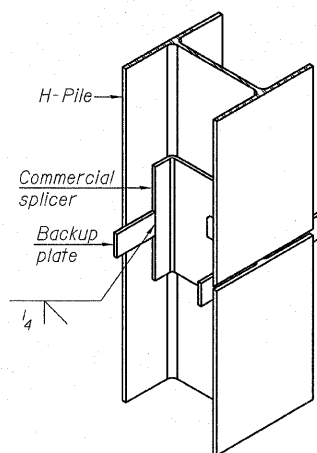
ELEVATION



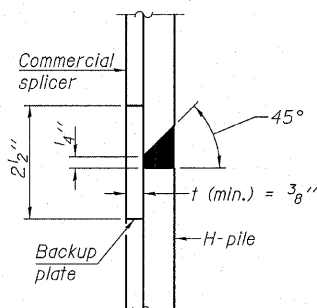
SECTION A-A

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

PILE ENCASEMENT

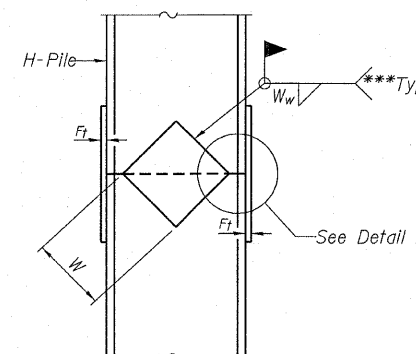


ISOMETRIC VIEW

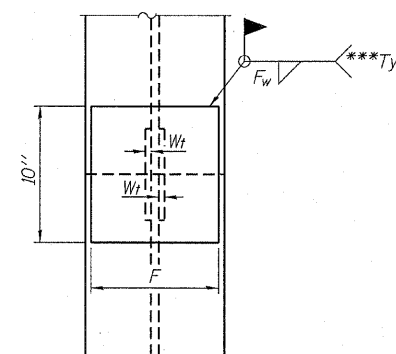


DETAIL "B"

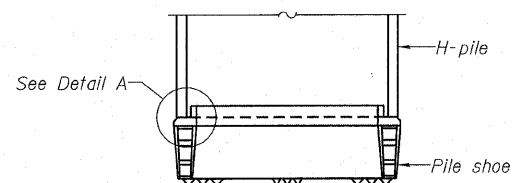
WELDED COMMERCIAL SPLICE



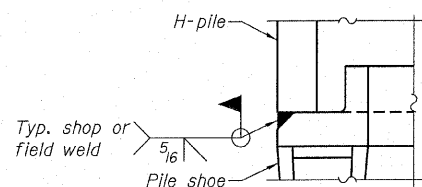
ELEVATION



END VIEW

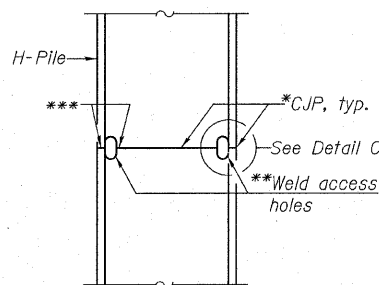


ELEVATION

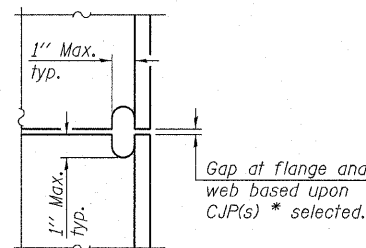


DETAIL A

H-PILE SHOE ATTACHMENT

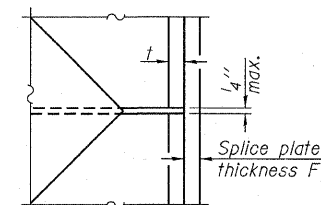


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

Designation	F	F _t	F _w	W	W _t	W _w
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 1/16"	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 1/16"	6 1/2"	5 8"	1/2"
x74	10"	7/8"	1 1/16"	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"

**STEEL H PILE DETAILS
STRUCTURE NO. 092-3433**

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

F-HP

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: 08.0188.130 DATE: 01/13/09

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	15
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-1

Project Name: Section 90-19127-00-BR Date of Boring: October 28, 1992
 Site: Vance Road District/Vermillion County, Illinois Project No.: 001-25044

DESCRIPTION	DEPTH	SAMPLE	N	Q _u	Q _p	M _c	REMARKS
SURFACE <u>646.8</u> Dark Brown Clayey SILT, Some Organic Material		1-AU	-	-	-	17	
<u>663.8</u> Gray Mottled Brown Silty CLAY, Trace Sand & Gravel		2-SS	15	-	3.0	22	
	5	3-SS	10	1.9	1.75	21	
<u>660.8</u> Brown Mottled Gray Clayey SILT Trace Sand & Gravel		4-SS	4	-	1.0	18	
	10	5-SS	10	-	1.0	23	water on sampler @ 10'
<u>653.8</u> Brown SILT, Trace Sand		6-SS	16	-	3.75	11	
	15	7-SS	20	-	4.5+	10	
Gray Clayey SILT, Trace Small Gravel (TILL)		8-SS	25	-	4.5+	10	
	20	9-SS	31	3.9	4.5+	13	
		10-SS	19	4.3	4.5+	12	
	25	11-SS	38	-	4.5+	11	
		12-SS	50	-	4.5+	7	
	30	13-SS	61	-	4.5+	9	
		14-SS	64	-	4.5+	9	
	35	15-SS	77	-	4.5+	8	
<u>626.8</u> Dark Brown Clayey SILT		16-SS	63	-	-	7	
	40	17-SS	37	-	4.5+	32	
End of Boring							

1A-100-9

BORING 1

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-2

Project Name: Section 90-19127-00-BR Date of Boring: October 28, 1992
 Site: Vance Road District, Vermillion County, Illinois Project No.: 001-25044

DESCRIPTION	DEPTH	SAMPLE	N	Q _u	Q _p	M _c	REMARKS
SURFACE <u>646.3</u> Black Clayey SILT, Some Sand & Small Gravel		1-AU	-	-	-	-	
<u>660.3</u> Brown Mottled Gray Clayey SILT, Little Sand		2-SS	15	-	4.5+	16	
	5	3-SS	13	-	3.0	27	
<u>653.3</u> Brown Mottled Gray Clayey SILT, Little Sand		4-SS	6	-	0.75	15	water on sampler @ 8'
	10	5-SS	10	-	2.0	17	
Gray Clayey SILT, Trace Small Gravel (TILL)		6-SS	28	5.2	4.5+	10	
	15	7-SS	27	5.1	4.5+	9	
		8-SS	53	-	4.5+	8	
	20	9-SS	31	-	4.5+	14	
		10-SS	21	5.4	4.5+	11	
	25	11-SS	65	5.8	4.5+	10	
		12-SS	-	-	-	-	sample refusal
	30	13-SS	-	-	-	-	sample refusal
		14-SS	68	-	4.5+	9	
	35	15-SS	77	-	4.5+	8	
<u>625.3</u> End of Boring		16-SS	50@3"	-	4.5+	7	
	40	17-SS	-	-	-	-	sample refusal

100-9

BORING 2

BORINGS
STRUCTURE NO. 092-3433

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

HAMPTON, LENZINI & RENWICK, INC.
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 PROJECT NUMBER: 08.0188.130 DATE: 01/13/09

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	01-19135-00-BR	VERMILION	16	16
VANCE ROAD DISTRICT		CONTRACT NO. 91398		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		