

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE**

**PROJECT BROS-0183(318)
SECTION 09-14139-00-BR
OAKWOOD ROAD DISTRICT
VERMILION COUNTY
T.R. 225 / 2050N
PROPOSED STRUCTURE NO. 092-3522
JOB NO. C-95-328-13**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 225	09-14139-00-BR	VERMILION	22	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 91493		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-14.	STATION CROSS SECTIONS
15-21.	BRIDGE PLANS
22.	BORINGS

HIGHWAY STANDARDS:

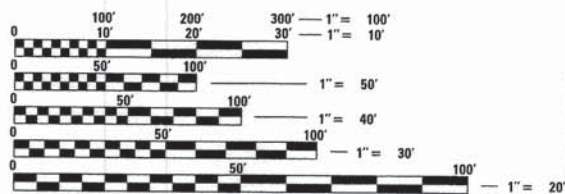
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTIONS FOR PIPE CULVERTS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-03	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

NONE

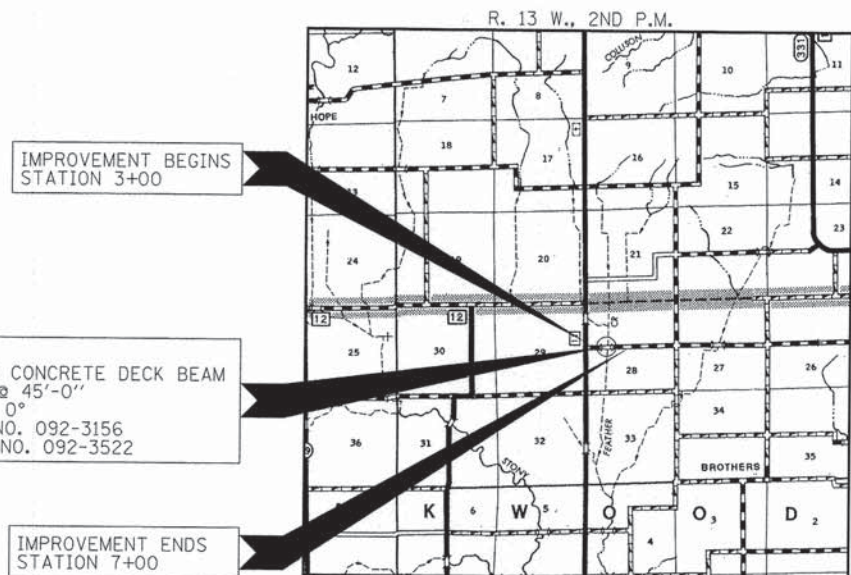


FUNCTIONAL CLASSIFICATION: LOCAL ROAD (0-250 ADT)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 75 ADT



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.

STA. 5+11
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. SINGLE SPAN @ 45'-0"
27'-0" RDWY.; SKEW = 0°
EXISTING STRUCTURE NO. 092-3156
PROPOSED STRUCTURE NO. 092-3522



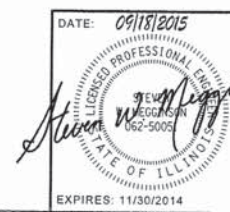
LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 400 FEET = 0.076 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	<i>October 4, 2013</i> <i>Douglas R. Haska</i> COUNTY ENGINEER
APPROVED	<i>9-25, 2013</i> <i>Dennis Hays</i> TOWNSHIP COMMISSIONER
PASSED	<i>October 17, 2013</i> <i>Scott O. Kelly</i> DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	<i>10-17, 2013</i> <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS REGION THREE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 91493



HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
PROJECT NUMBER: 12.0223.130
DATE: 09/18/13

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	CONSTRUCTION
			TYPE CODE 0011 TOTAL
20200100	EARTH EXCAVATION	CU YD	175
20300100	CHANNEL EXCAVATION	CU YD	120
20400800	FURNISHED EXCAVATION	CU YD	205
28000500	INLET AND PIPE PROTECTION	EACH	4
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	320
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	510
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	65
50300225	CONCRETE STRUCTURES	CU YD	23.6
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,215
50800105	REINFORCEMENT BARS	POUND	2,560
50900205	STEEL RAILING, TYPE S1	FOOT	88
51201400	FURNISHING STEEL PILES HP10X42	FOOT	440
51202305	DRIVING PILES	FOOT	440
51203400	TEST PILE STEEL HP10X42	EACH	2
51204650	PILE SHOES	EACH	10
51500100	NAME PLATES	EACH	1
54215583	METAL END SECTIONS 48"	EACH	1
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	120
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	66
542D0253	PIPE CULVERTS, CLASS D, TYPE 1 48"	FOOT	62
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	44
61139900	STORM SEWER (SPECIAL), 6"	FOOT	40
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4
XX004566	CONCRETE CUT-OFF WALL	CU YD	6.4
Z0013798	CONSTRUCTION LAYOUT	L SUM	1

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, 2012," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- THE REVISION NUMBERS OF THE STANDARDS LISTED IN THE PLANS ARE TO BE USED FOR CONSTRUCTING OF THIS SECTION.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS 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.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

AGGREGATE SURFACE COURSE	1.80 TON/CU YD
STONE DUMPED RIPRAP	1.75 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.
ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.4 ACRES

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100 CU.YD.	20300100 CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 225 / 2050 N							
STA 3+00 TO STA 4+87.84	88		25.00%	100.00%	66	176	-110
STA 4+87.84 TO STA 5+34.17		120	25.00%	70.00%	63		63
STA 5+34.17 TO STA 7+00	83		25.00%	100.00%	62	170	-108
STRUCTURE EXCAVATION	(65)		25.00%	70.00%	34		34
ENTRANCE EMBANKMENT						80	-80
TOTAL	171	120			225		-201
USE	175	120					205

FURNISHED EXCAVATION 205 CU YDS

ROADWAY SCHEDULE

LOCATION	AGGREGATE SURFACE COURSE TYPE B 12"	AGGREGATE SURFACE COURSE TYPE B 6"
	40200800 TON	40200800 TON
TR 225 / 2050N		
STA 3+00 TO STA 4+87.03	222.1	
STA 5+34.17 TO STA 7+00	192.3	
F.E. RT STA 4+60		22.4
F.E. LT STA 4+60		22.4
F.E. RT STA 5+65		26.3
F.E. LT STA 5+65		22.4
TOTAL	414	94
USE	415	95

EROSION CONTROL SCHEDULE

LOCATION	INLET AND PIPE PROTECTION 28000500
	EACH
TR 225 / 2050N	
RT. STA 4+40	1
LT. STA 4+40	1
RT. STA 5+85	1
LT. STA 5+82	1
TOTAL	4

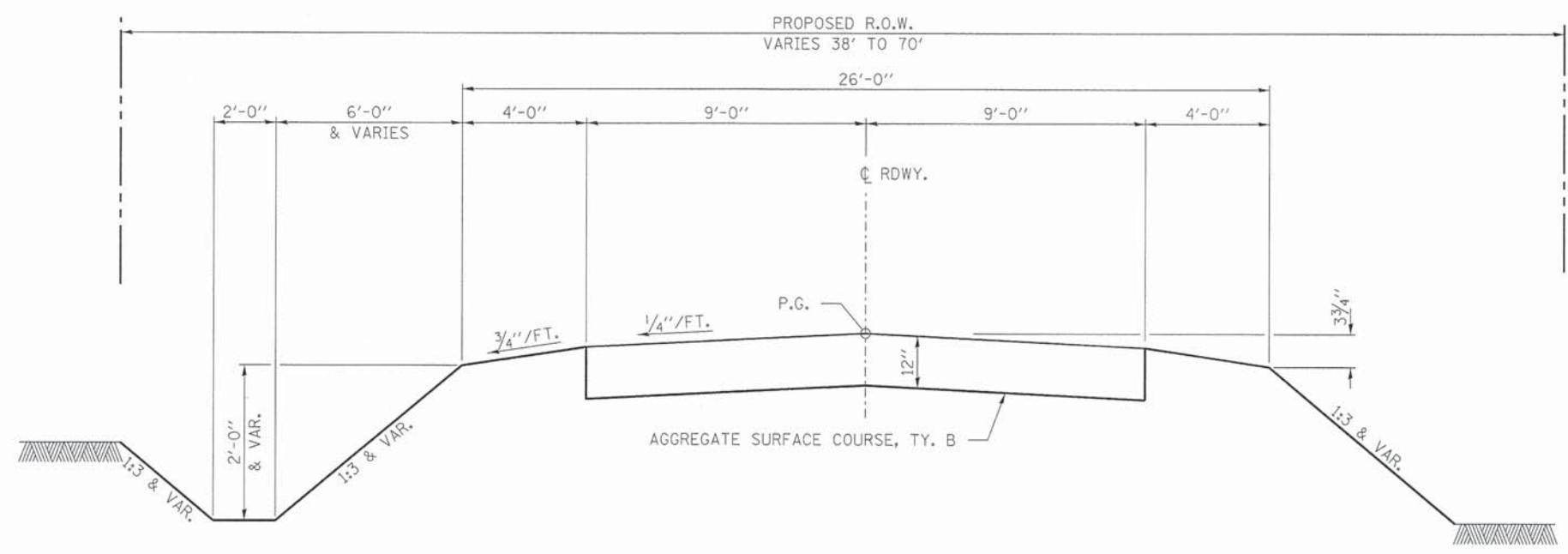
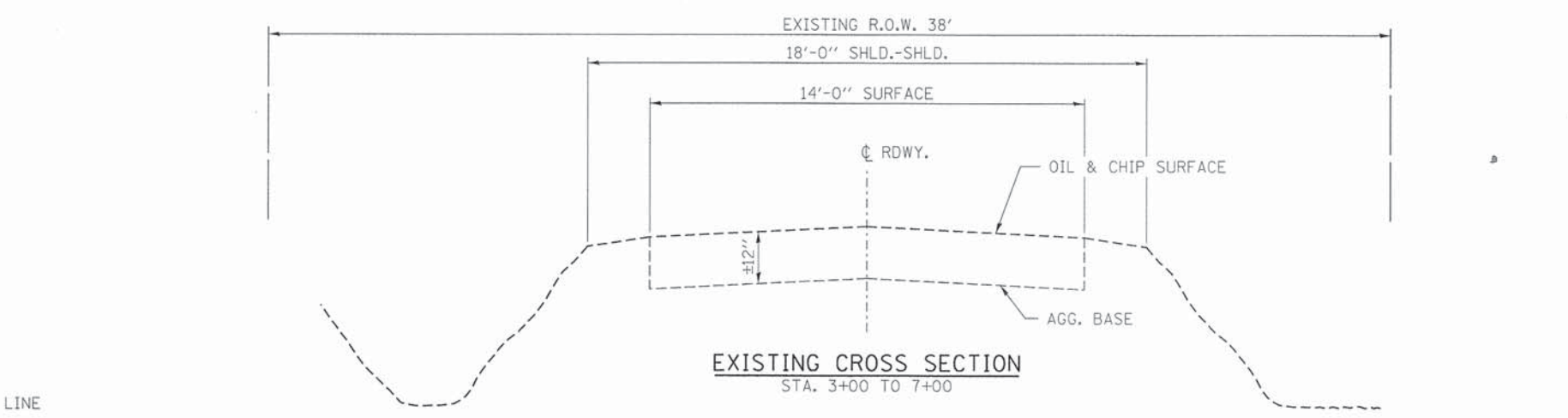
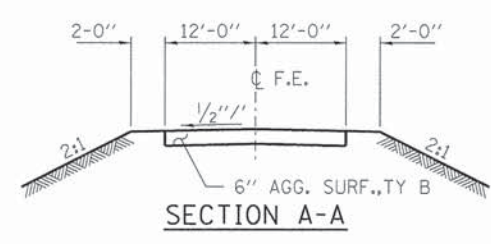
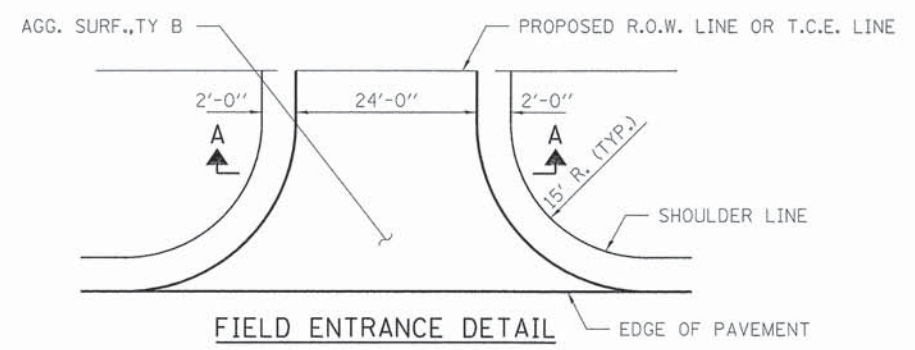
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HLR ILLINOIS PROFESSIONAL DESIGN FIRM LD / PE / SE CORP. 184-000089	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -
		DATE - 09/18/13	REVISED -

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES & GENERAL NOTES

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
225	09-14139-00-BR	VERMILION	22	2
OAKWOOD ROAD DISTRICT			CONTRACT NO. 91493	
[ILLINOIS] FED. AID PROJECT BR05-0183(318)				



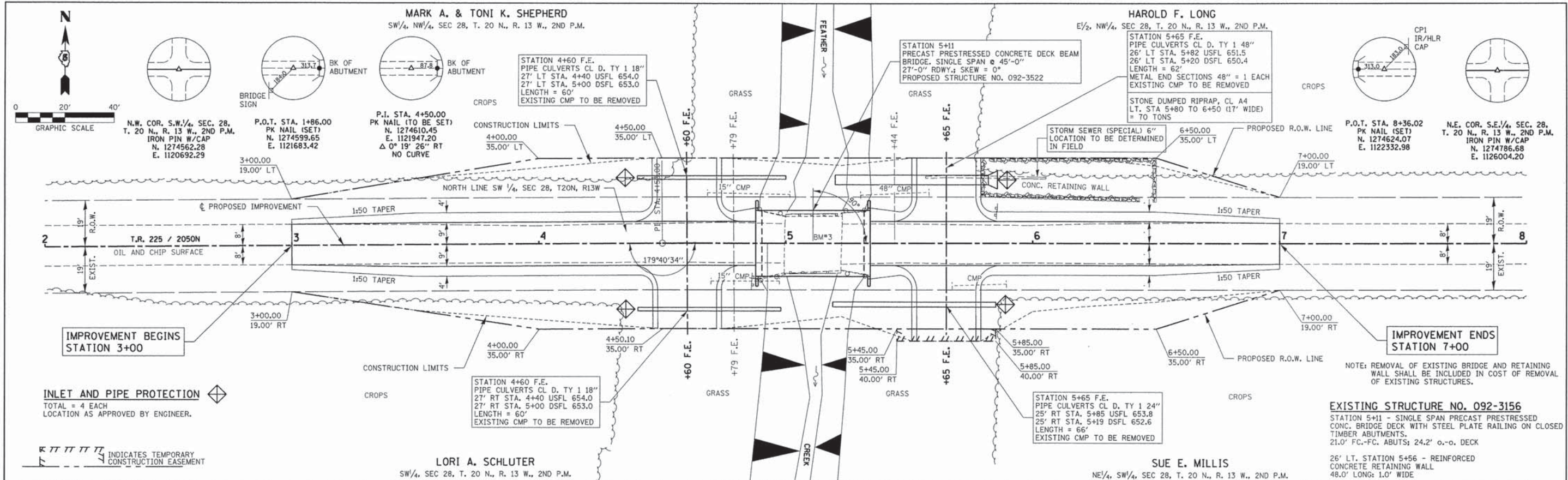
SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL CROSS SECTION
STA. 3+00 TO 4+87.83
STA. 5+34.17 TO 7+00

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

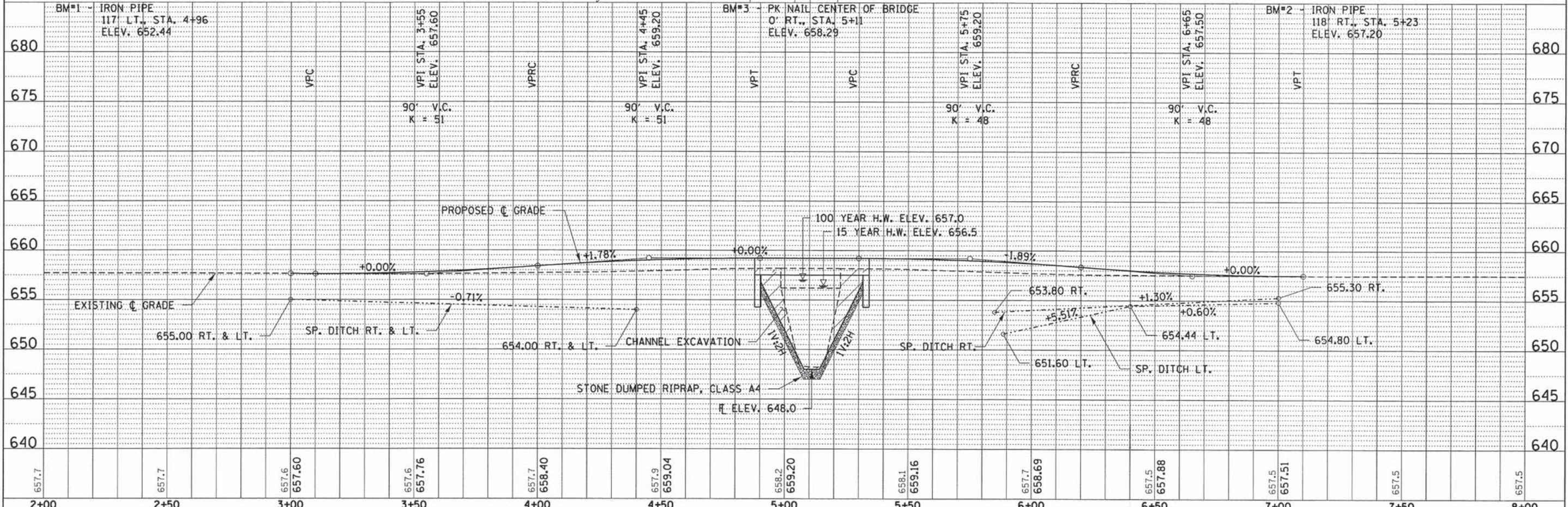
TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING
ROADWAY IS TO BE CONSTRUCTED FROM STA. 3+00 TO 3+50 AND
STA. 6+50 TO 7+00. SEE SHEET 15 FOR TRANSITION AT BRIDGE.

FILE NAME = 128223-ah-typesections.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 200 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62705	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			225	09-14139-00-BR	VERMILION	22	3
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184 002989	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -			OAKWOOD ROAD DISTRICT		CONTRACT NO. 91493		
		DATE - 09/18/2013	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT BROS-0183(318)

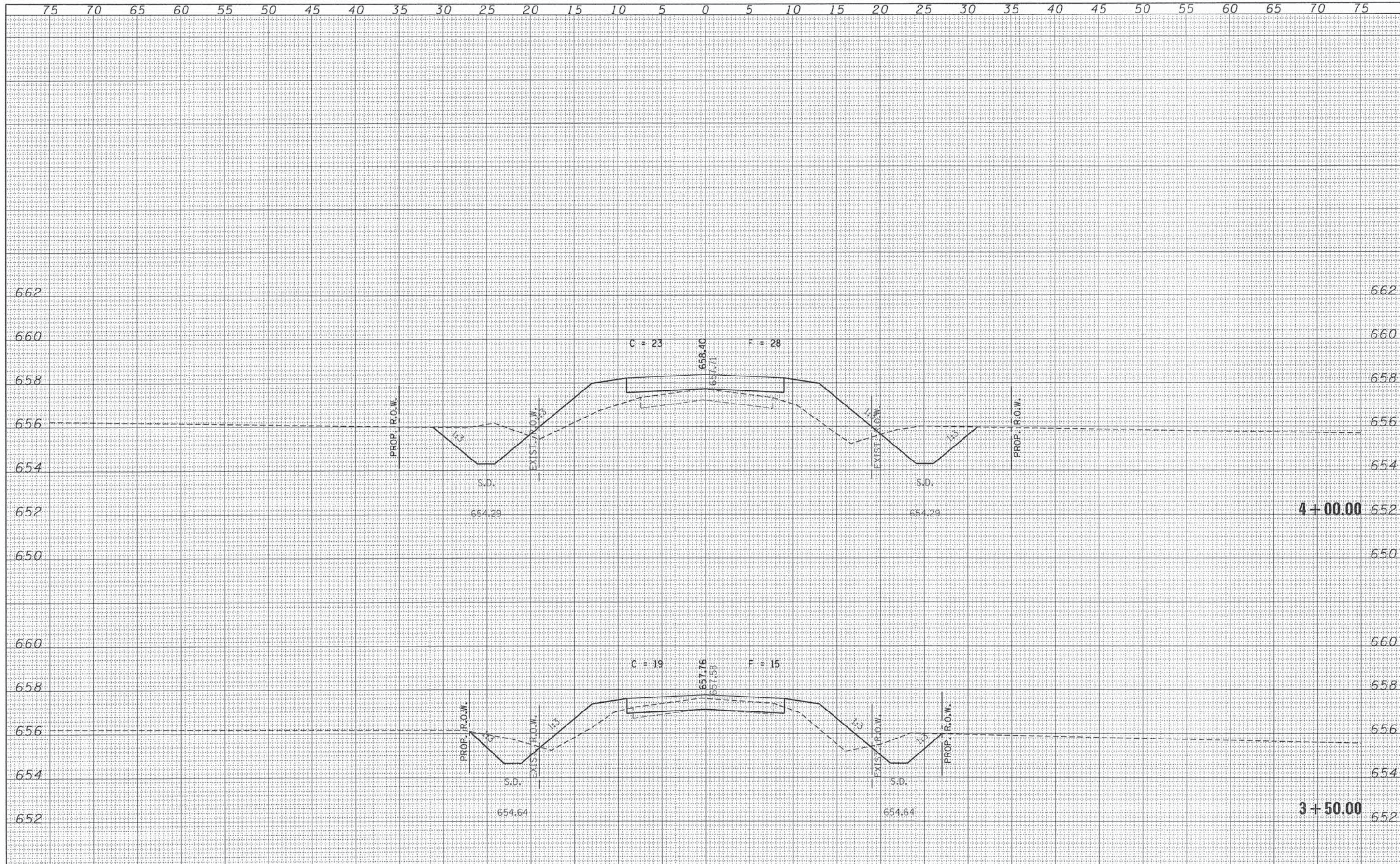


INLET AND PIPE PROTECTION
 TOTAL = 4 EACH
 LOCATION AS APPROVED BY ENGINEER.

EXISTING STRUCTURE NO. 092-3156
 STATION 5+11 - SINGLE SPAN PRECAST PRESTRESSED CONC. BRIDGE DECK WITH STEEL PLATE RAILING ON CLOSED TIMBER ABUTMENTS.
 21.0' FC-FC. ABUTS; 24.2' o-o. DECK
 26' LT. STATION 5+56 - REINFORCED CONCRETE RETAINING WALL 48.0' LONG; 1.0' WIDE



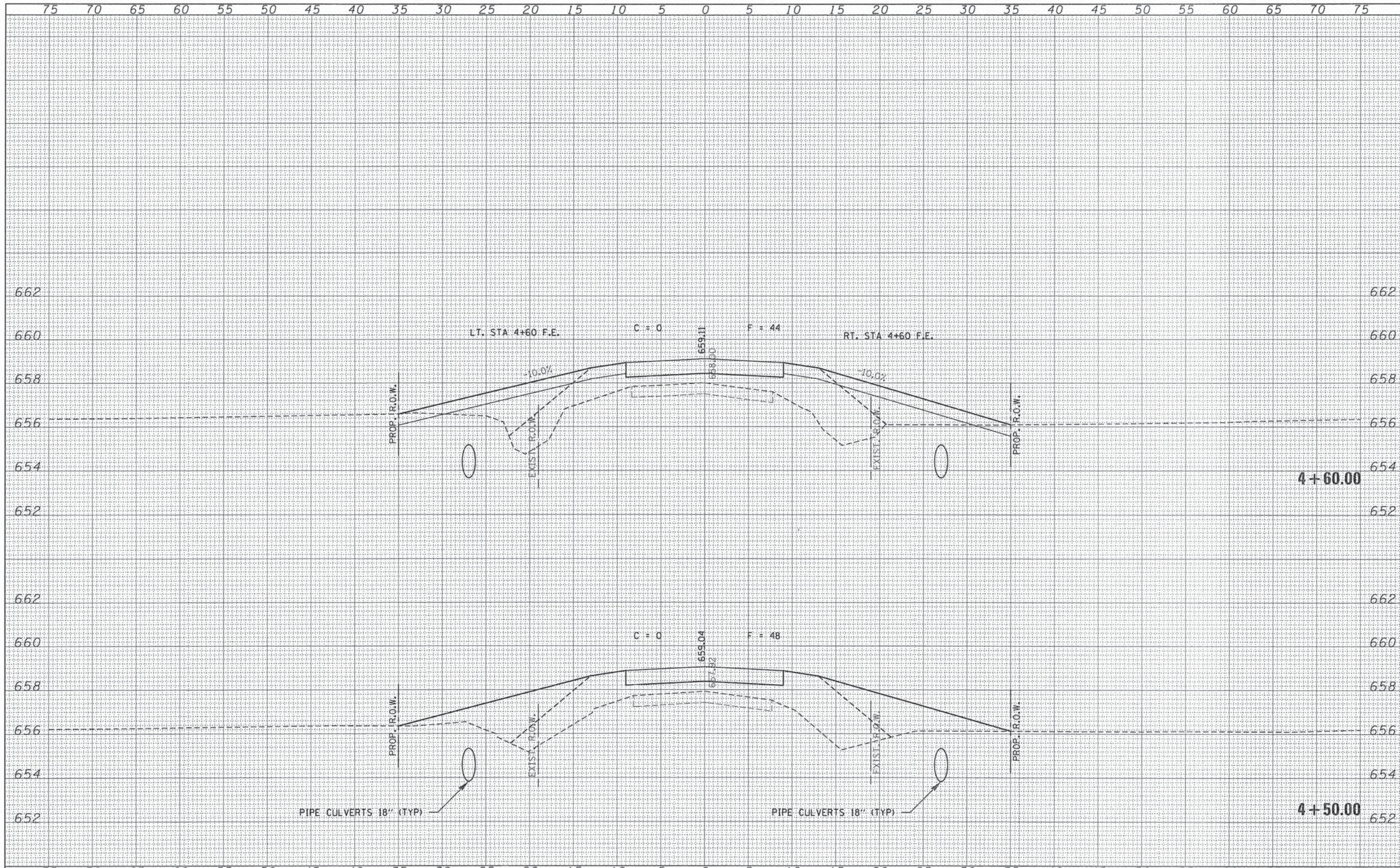
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	VERMILION COUNTY HIGHWAY DEPARTMENT		225	09-14139-00-BR	VERMILION	22	4
3801 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			OAKWOOD ROAD DISTRICT			CONTRACT NO. 91493	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. COMP. 194-00099	PLOT DATE = 9/30/2013	DATE - 09/18/13	REVISED -			SCALE: H20xV5	SHEET NO. 1 OF 1 SHEETS	STA. 2+00.00 TO STA. 8+00.00	ILLINOIS FED. AID PROJECT BR05-0183(318)	



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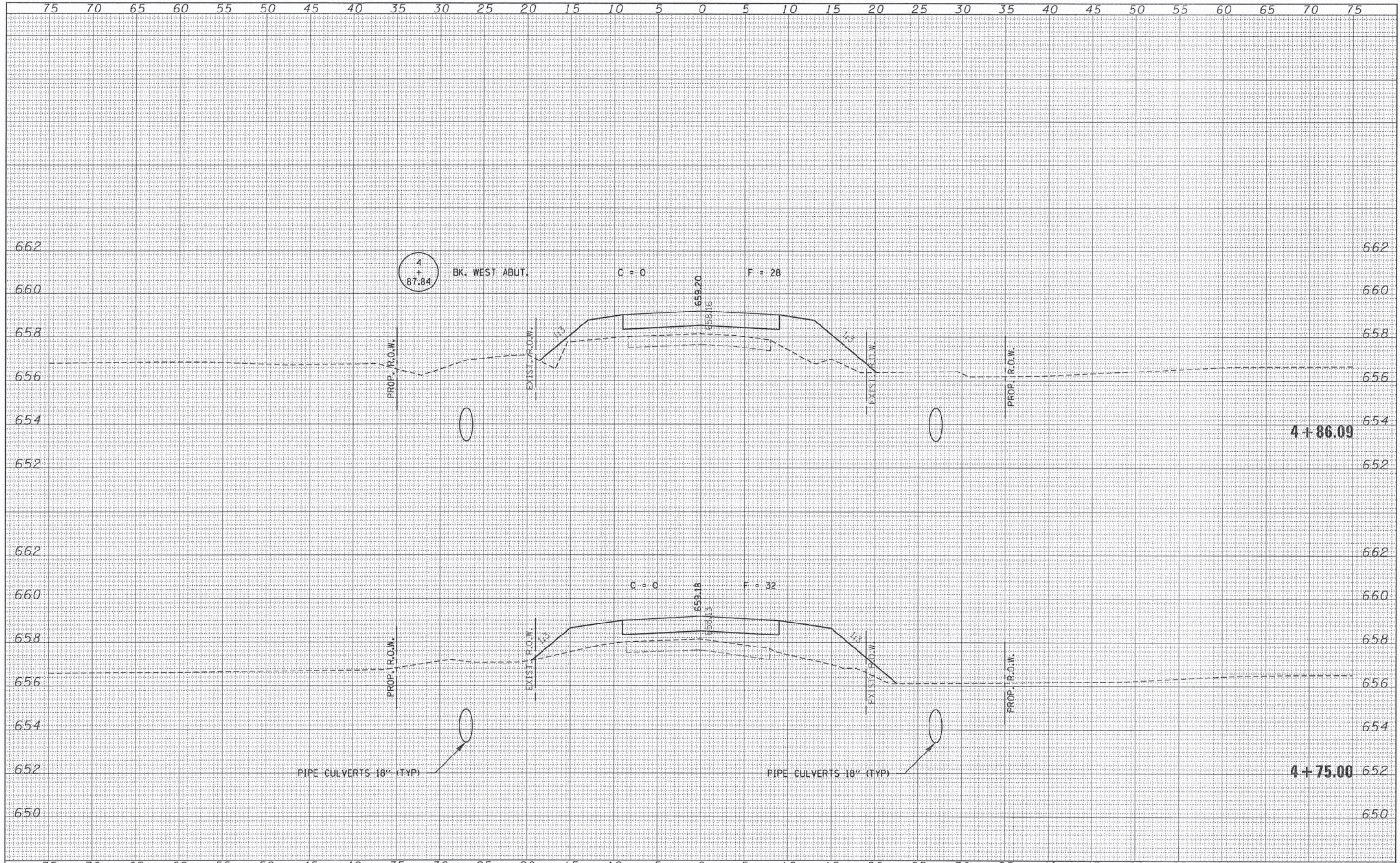
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HAMPTON, LENZINI AND RENWICK, INC. 3805 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62766	PLOT SCALE =	DRAWN - L.G.C.	REVISED -			225	09-14139-00-BR	VERMILION	22	6		
ILR ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-00009	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -	SCALE: 5H:2V	SHEET NO. 2 OF 10 SHEETS	STA. 3+50.00	TO STA. 4+00.00	OAKWOOD ROAD DISTRICT CONTRACT NO. 91493				
		DATE - 09/18/13	REVISED -					[ILLINOIS] FED. AID PROJECT BR05-0183(3181)				



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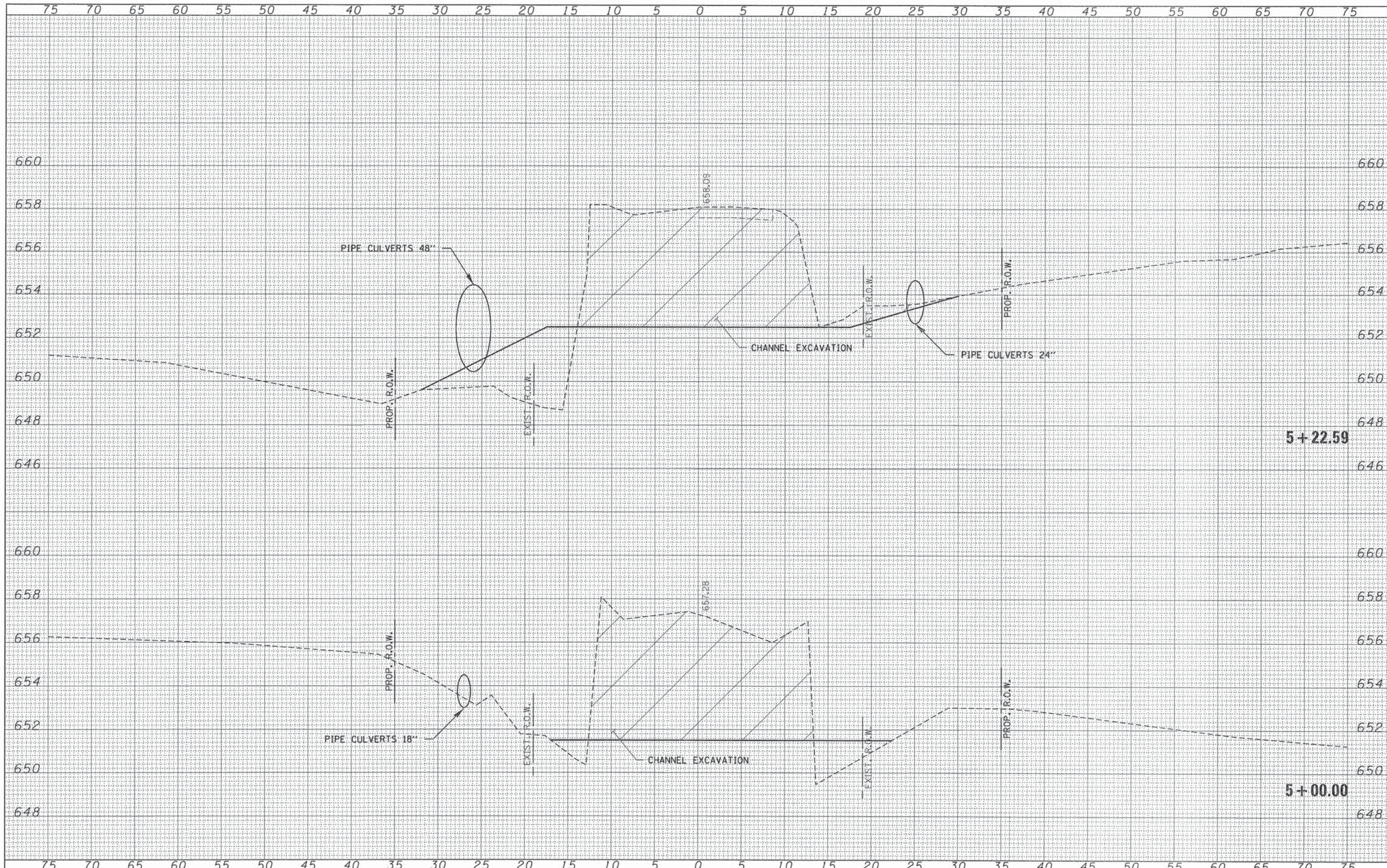
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HAMPTON, LENZINI AND RENWICK, INC. 3888 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		225	09-14139-00-BR	VERMILION	22	7		
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-00999	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -		SCALE: 5H:2V		SHEET NO. 3 OF 10 SHEETS		STA. 4+50.00 TO STA. 4+60.00	CONTRACT NO. 91493	
		DATE - 09/18/13	REVISED -						ILLINOIS FED. AID PROJECT BR03-0183(3)8		



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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	225	09-14139-00-BR	VERMILION	22	8
1005 REVENUE DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -	OAKWOOD ROAD DISTRICT				
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000989	PLOT SCALE =	DATE - 09/18/13	REVISED -	CONTRACT NO. 91493				
	PLOT DATE = 9/18/2013			[ILLINOIS] FED. AID PROJECT BR05-0183(318)				
STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT				STATION CROSS SECTIONS				
SCALE: 5H:2V				SHEET NO. 4 OF 10 SHEETS		STA. 4+75.00 TO STA. 4+86.09		



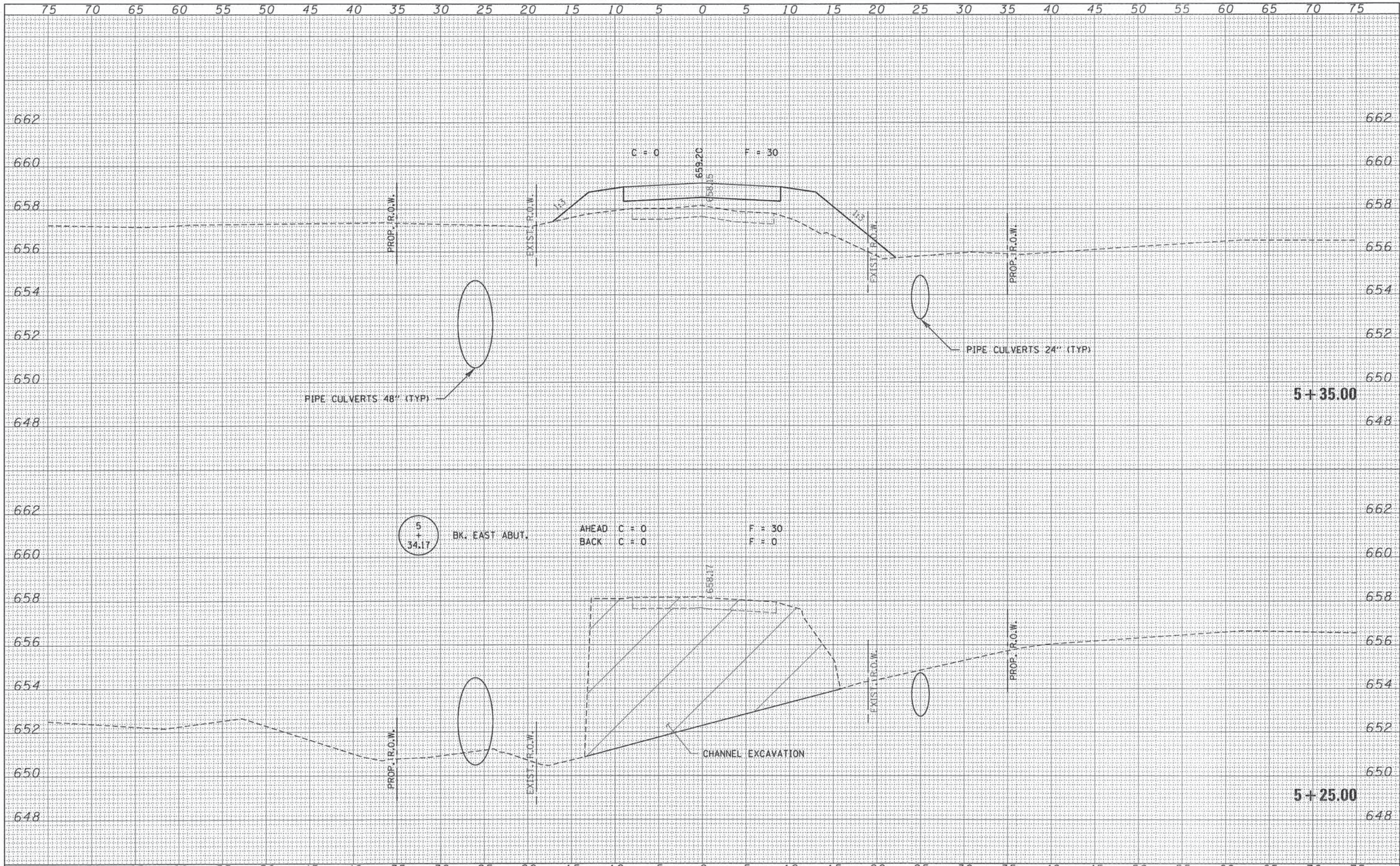
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	225	09-14139-00-BR	VERMILION	22	9
1005 FREDERICK DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62793	PLOT SCALE =	CHECKED - S.W.M.	REVISED -	OAKWOOD ROAD DISTRICT				
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. - 184-000099	PLOT DATE = 9/18/2013	DATE - 09/18/13	REVISED -	CONTRACT NO. 91493				
STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT				STATION CROSS SECTIONS				
SCALE: 5H:2V				SHEET NO. 5 OF 10 SHEETS STA. 5+00.00 TO STA. 5+22.59				
[ILLINOIS] FED. AID PROJECT BROS-0183(318)								

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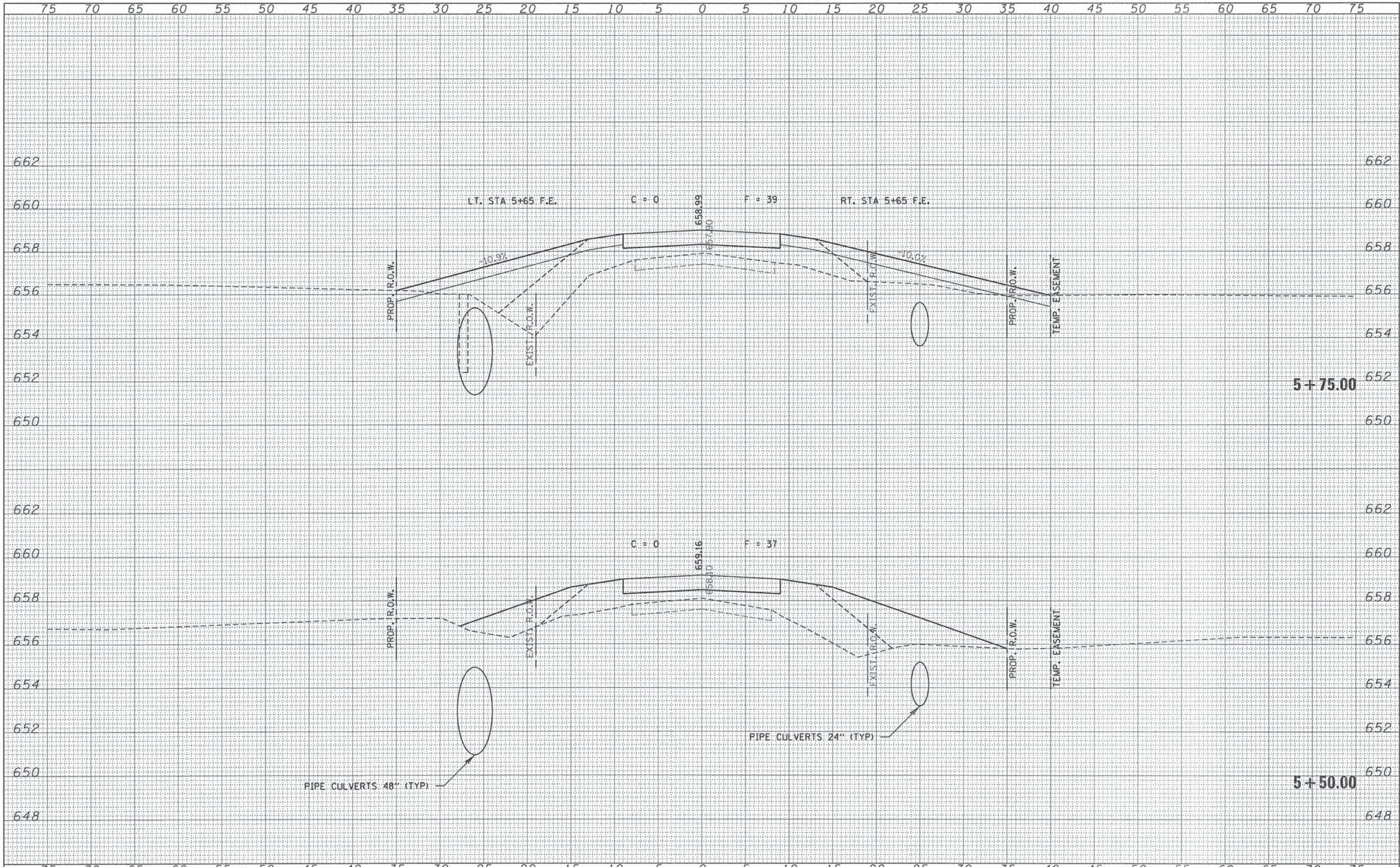
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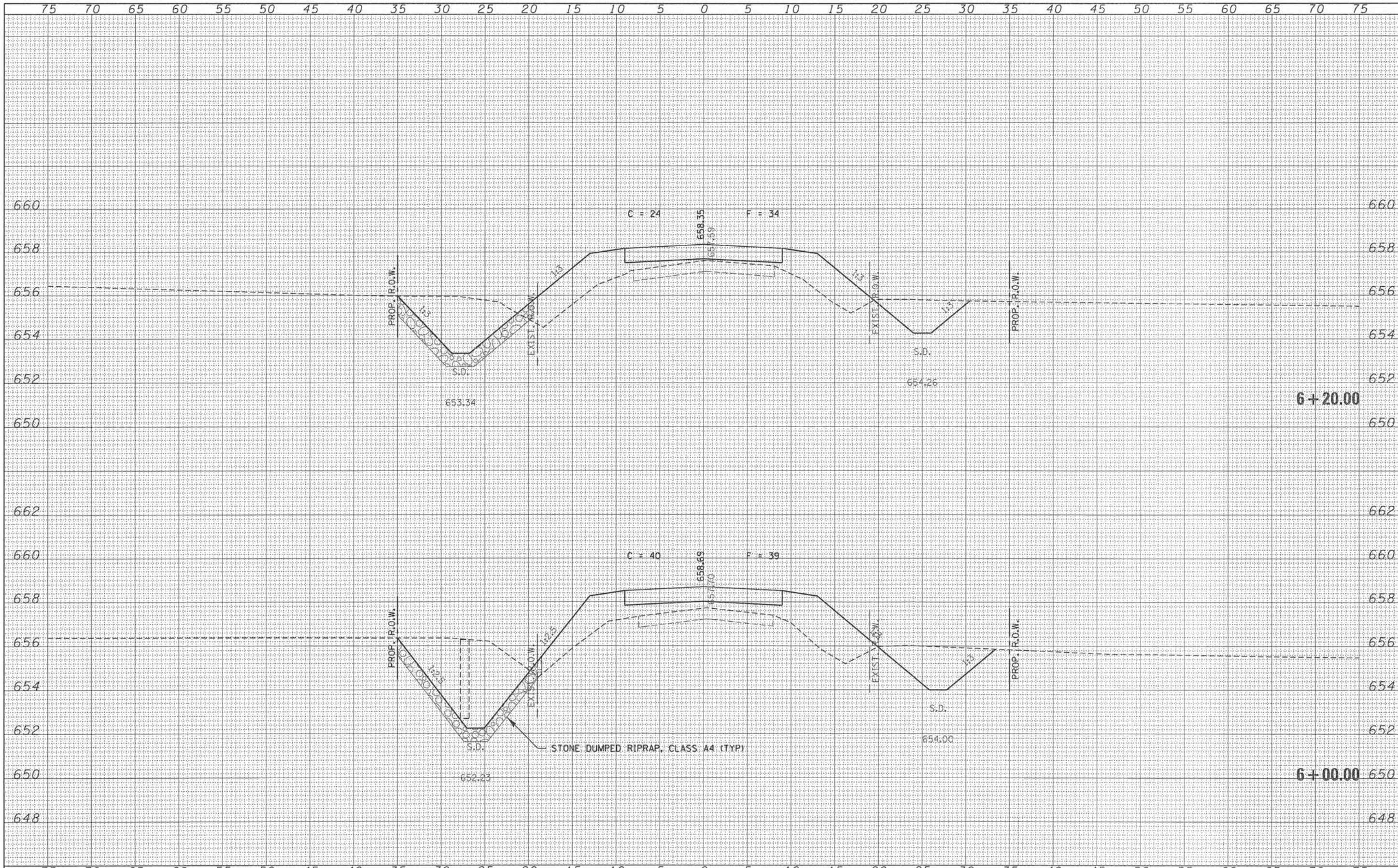
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HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703				VERMILION COUNTY HIGHWAY DEPARTMENT				225	09-14139-00-BR	VERMILION	22	10
PLOT SCALE =	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -	SCALE: 5H:2V				SHEET NO. 6 OF 10 SHEETS		STA. 5+25.00 TO STA. 5+35.00		CONTRACT NO. 91493
		DATE - 09/18/13	REVISED -									ILLINOIS FED. AID PROJECT BR05-0383(310)

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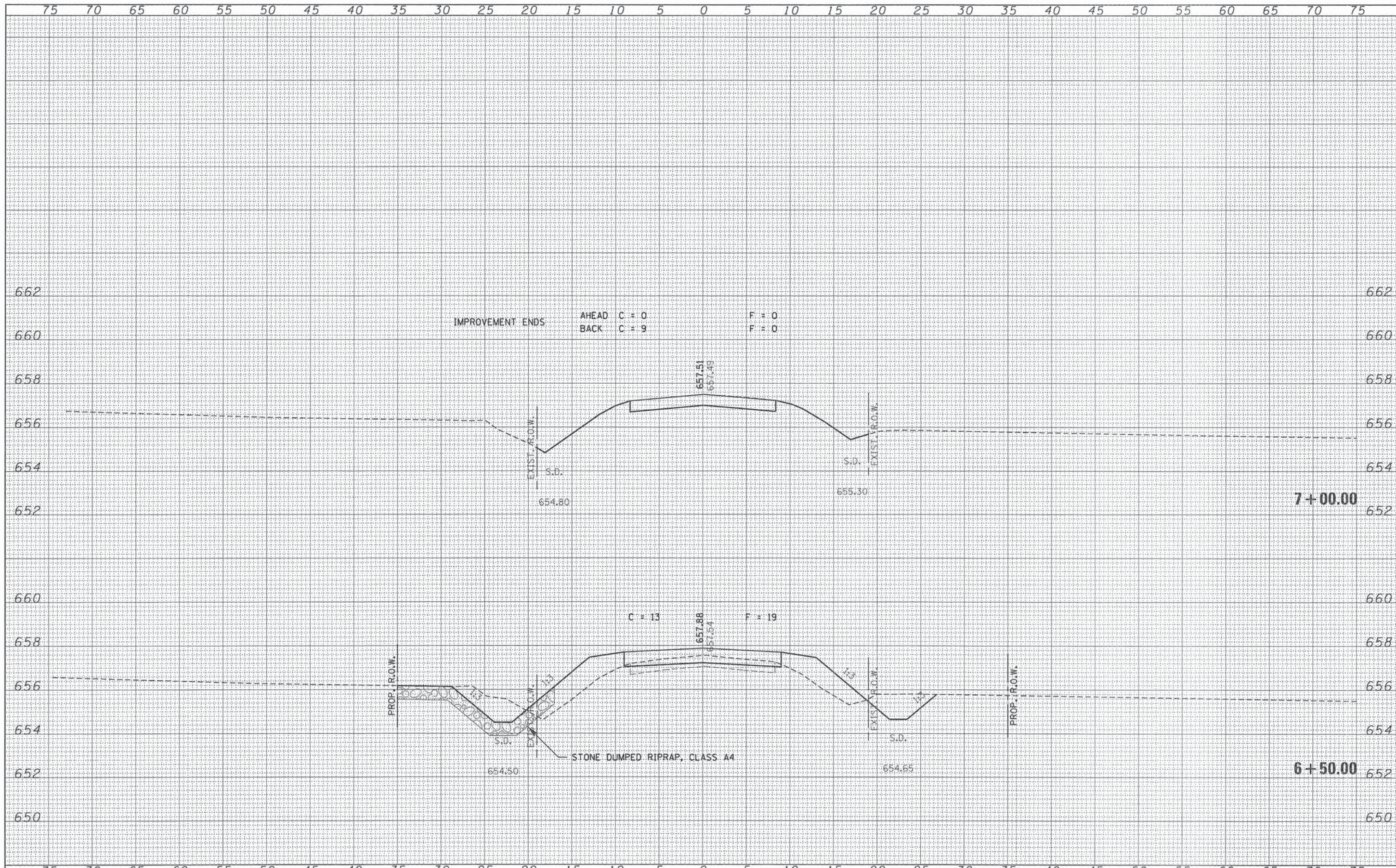
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HAMPTON, LENZINI AND RENWICK, INC. 2005 E. SENNEN DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - L.G.C.	REVISED -	SCALE: 5H:2V		SHEET NO. 7 OF 10 SHEETS		225	09-14139-00-BR	VERMILION	22	11
ILLINOIS PROFESSIONAL DESIGN FIRM LS 1 PE 1 SE CORP. 184-000019	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -	STA. 5+50.00 TO STA. 5+75.00				OAKWOOD ROAD DISTRICT CONTRACT NO. 91493				
		DATE - 09/18/13	REVISED -					[ILLINOIS] FED. AID PROJECT BR05-0183101				



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FILE NAME = 128223-shr.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		SCALE: 5H:2V	SHEET NO. 8 OF 10 SHEETS	STA. 6+00.00 TO STA. 6+20.00	225	09-14139-00-BR	VERMILION	22	12
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-00999	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -				OAKWOOD ROAD DISTRICT		CONTRACT NO. 91493			
	DATE - 09/18/13	REVISED -	REVISED -				ILLINOIS FED. AID PROJECT BR05-0183(318)					



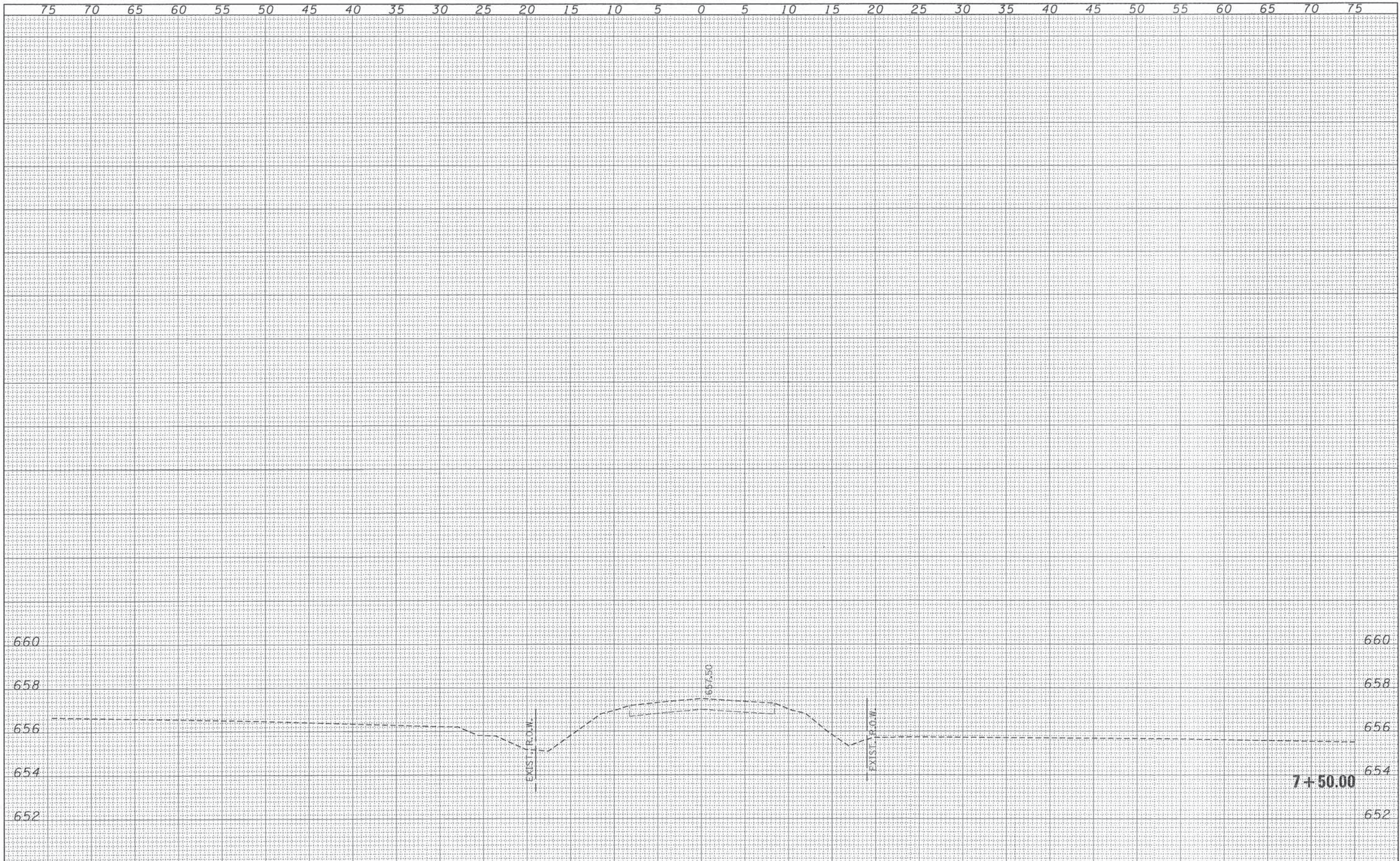
DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

FILE NAME = 128223-ahh-sss.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS					
HAMPTON, LENZINI AND RENWICK, INC. 2001 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000989	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -		225	09-14139-00-BR	VERMILION	22	13	
		DATE - 09/18/13	REVISED -		OAKWOOD ROAD DISTRICT				CONTRACT NO. 91493	
					SCALE: 5H:2V				SHEET NO. 9 OF 10 SHEETS	STA. 6+50.00 TO STA. 7+00.00

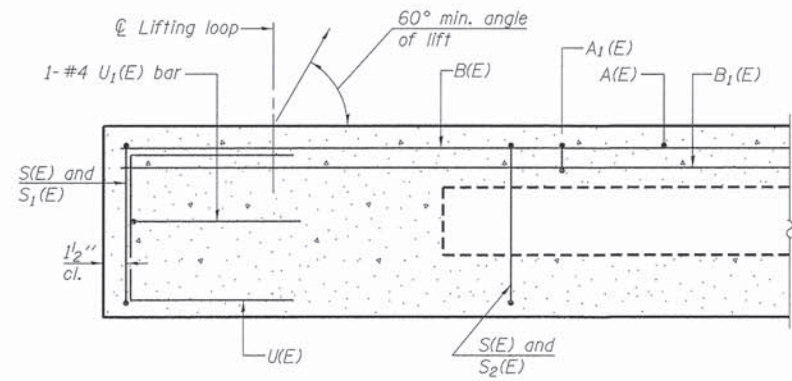
DATE	
BY	
FINAL SURVEY	
REVIEWED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
CHECKED	
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DATE	
BY	
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CHECKED	
NO.	

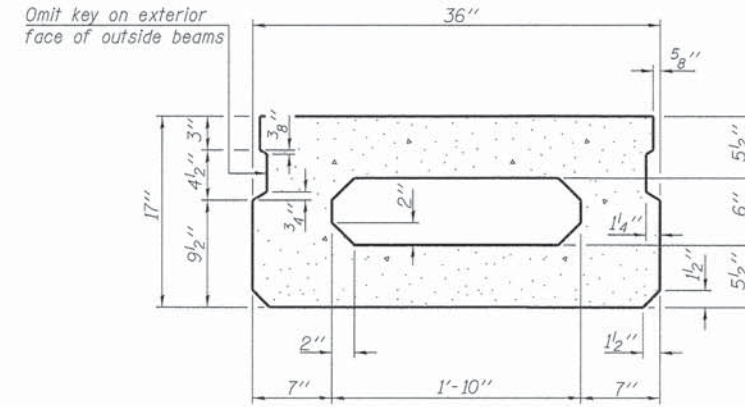


7+50.00

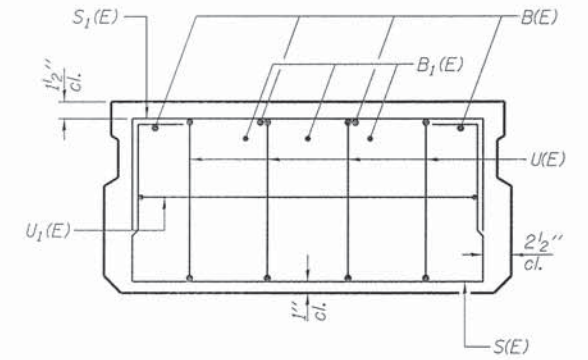
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HAMPSON, LENZINI AND RENWICK, INC.				DRAWN - L.G.C.				REVISED -							
3688 STEVENSON DRIVE, SUITE 201				CHECKED - S.W.M.				REVISED -							
SPRINGFIELD, ILLINOIS 62776				DATE - 09/18/13				REVISED -							
ILLINOIS PROFESSIONAL DESIGN FIRM															



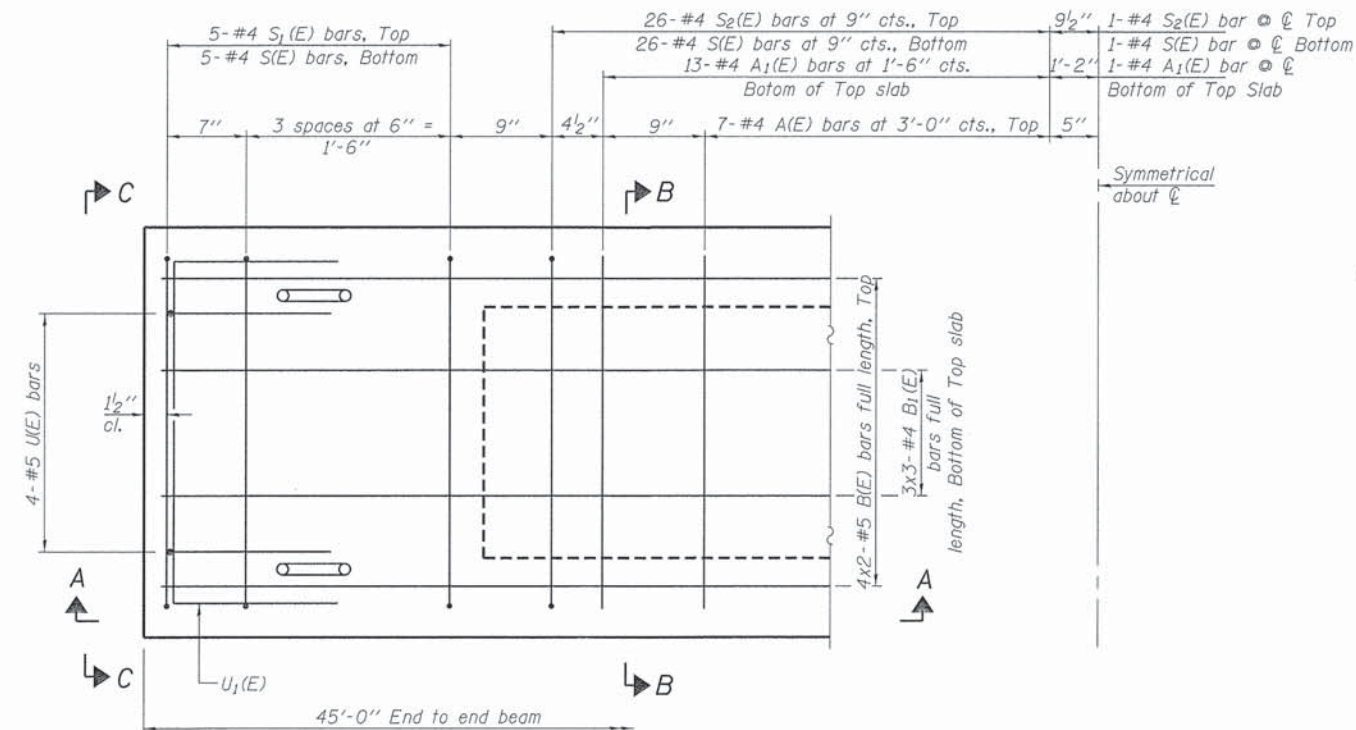
SECTION A-A



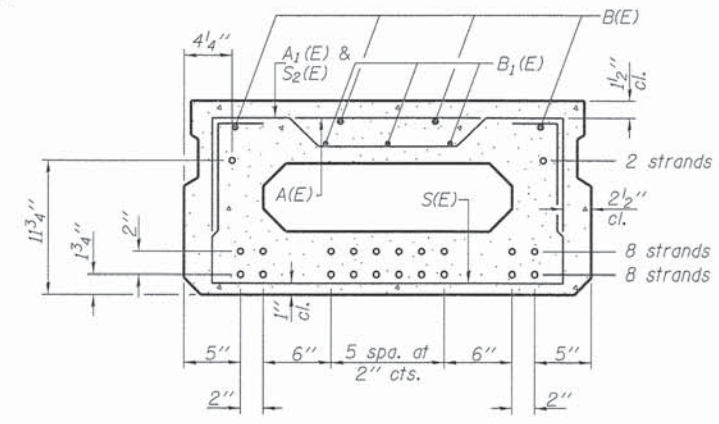
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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.

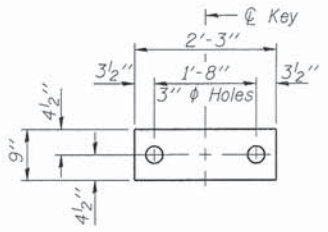
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	27	#4	2'-10"	—
B(E)	8	#5	23'-8"	—
B1(E)	9	#4	16'-3"	—
S(E)	63	#4	5'-9"	□
S1(E)	10	#4	4'-3"	□
S2(E)	53	#4	4'-6"	□
U(E)	8	#5	3'-8"	□
U1(E)	2	#4	5'-0"	□

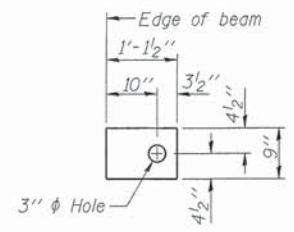
Note: See sheets 3 & 4 of 8 for additional details and Bill of Material.

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

Notes:
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.
Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.



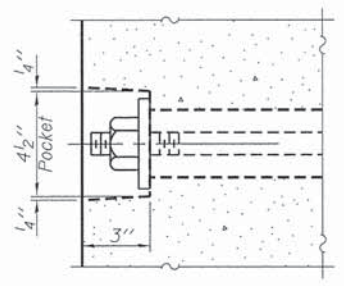
FABRIC BEARING PAD
(Interior - 16 Req'd.)



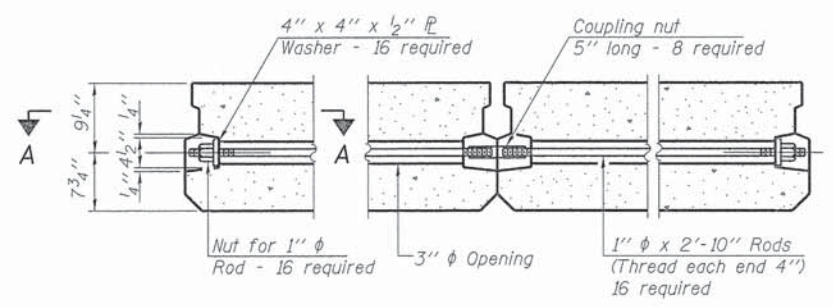
FABRIC BEARING PAD
(Exterior - 4 Req'd.)

FIXED

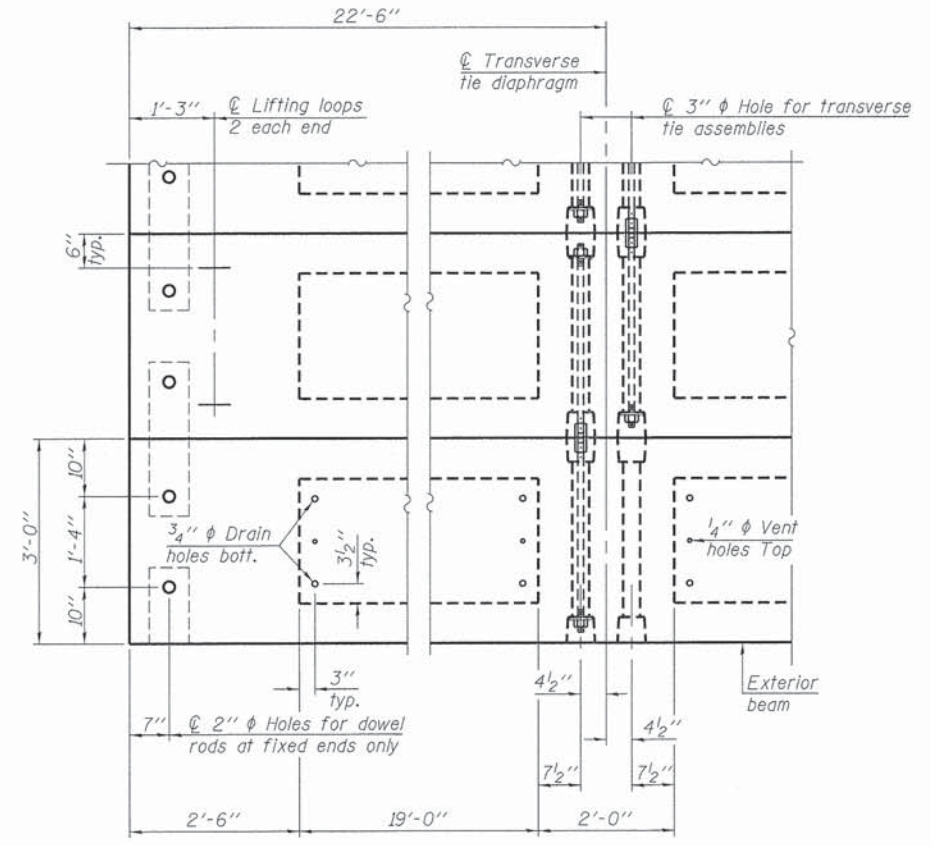
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

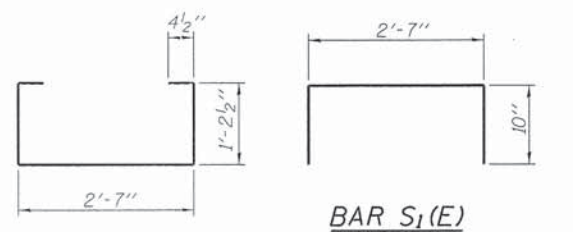


TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

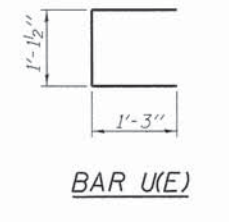
Note: Connect beams in pairs with the transverse tie configuration shown.



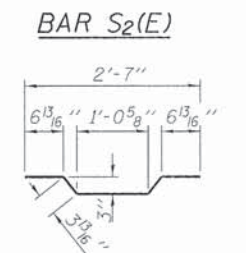
BAR S₁(E)



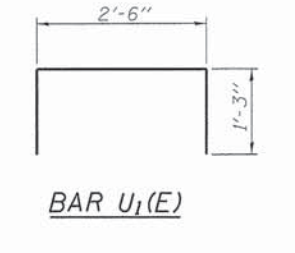
BAR S(E)



BAR U(E)

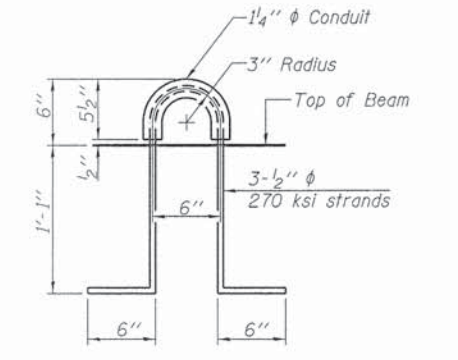


BAR S₂(E)



BAR U₁(E)

BAR A₁(E)



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 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'ci, shall be 5000 psi.
All reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,215
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PD-1736-0D 7-1-10

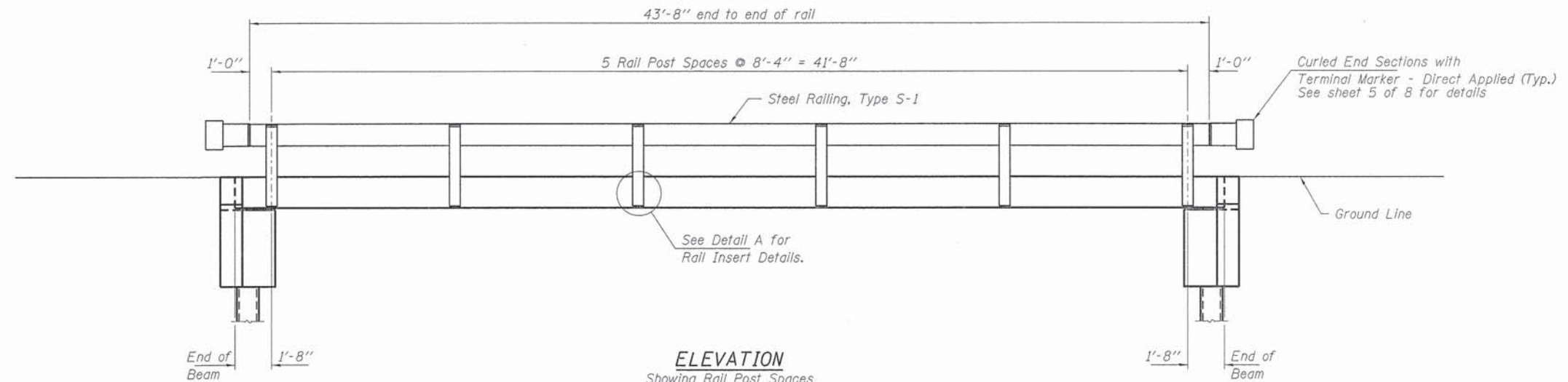
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3501 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 134.000959	PLOT SCALE *	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 9/18/2013		

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

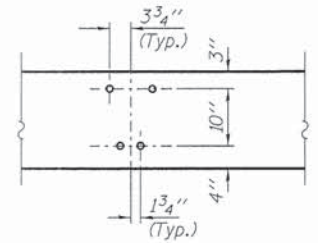
17" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 092-3522

SHEET NO. 3 OF 8 SHEETS

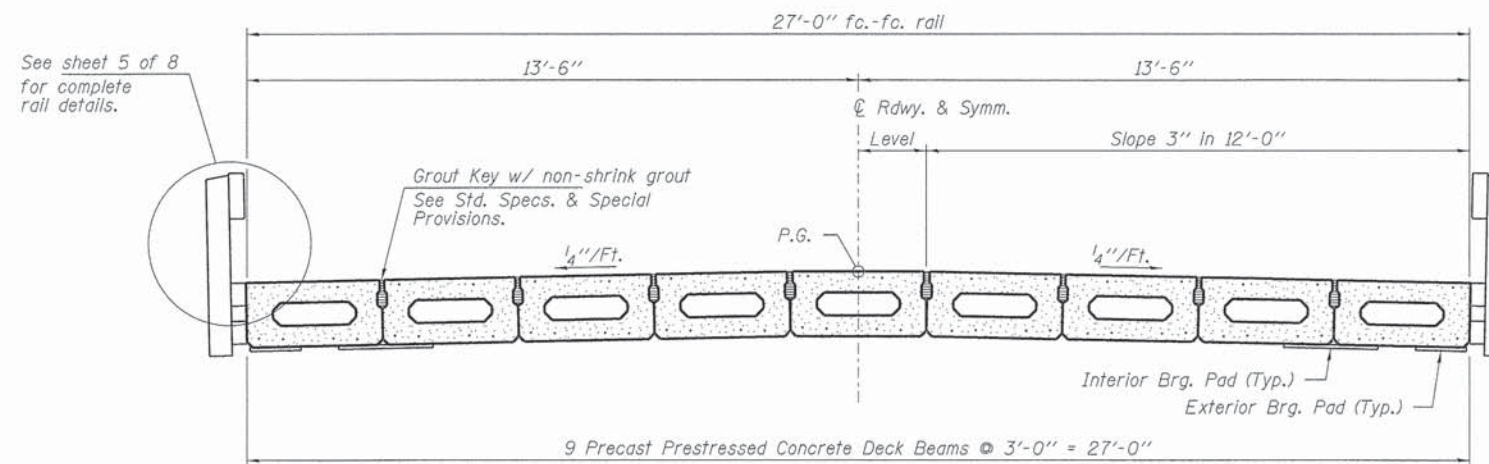
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
225	09-14139-00-BR	VERMILION	22	17
OAKWOOD ROAD DISTRICT		CONTRACT NO. 91493		
ILLINOIS FED. AID PROJECT BR05-0183(318)				



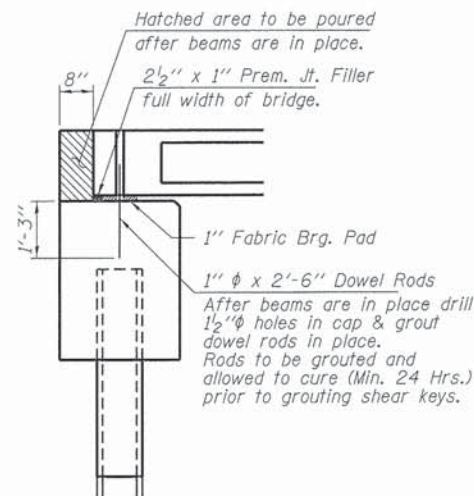
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 8 for Railing Details.



DETAIL A

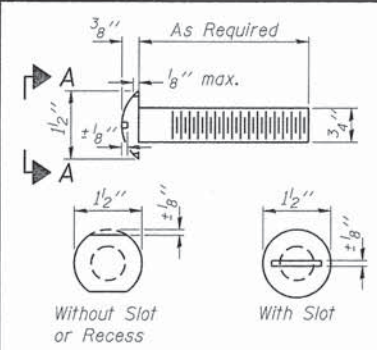


CROSS SECTION
See sheets 2 & 3 of 8 for Superstructure.

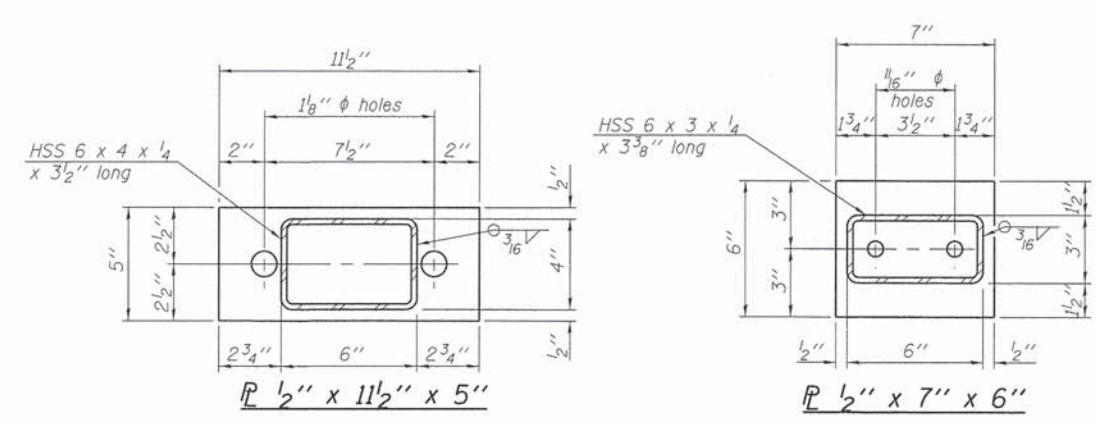


SECTION AT ABUTMENTS
© Rt. L's

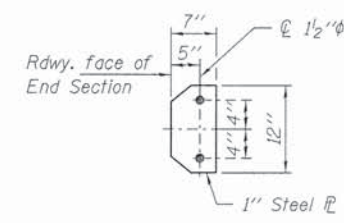
FILE NAME = 120223-sht-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 092-3522	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3051 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SEC. COMP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			225	09-14139-00-BR	VERMILION	22	18	
	PLOT DATE = 9/18/2013	DRAWN - R.D.H.	REVISED -			OAKWOOD ROAD DISTRICT		CONTRACT NO. 91493			
		CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 8 SHEETS					
						[ILLINOIS] FED. AID PROJECT BR05-0183(318)					



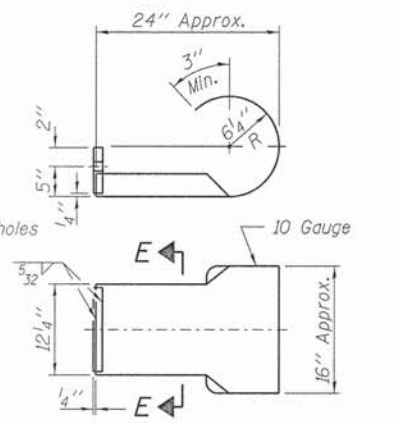
**VIEW A-A
ROUND HEAD BOLT**



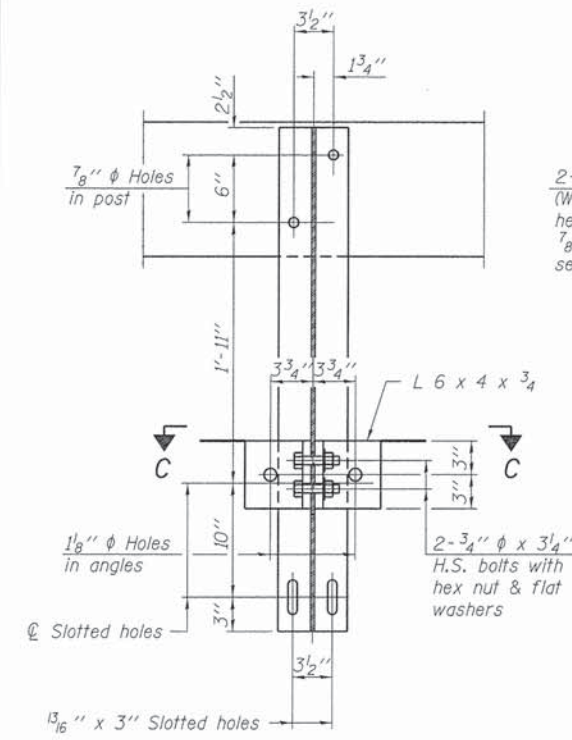
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



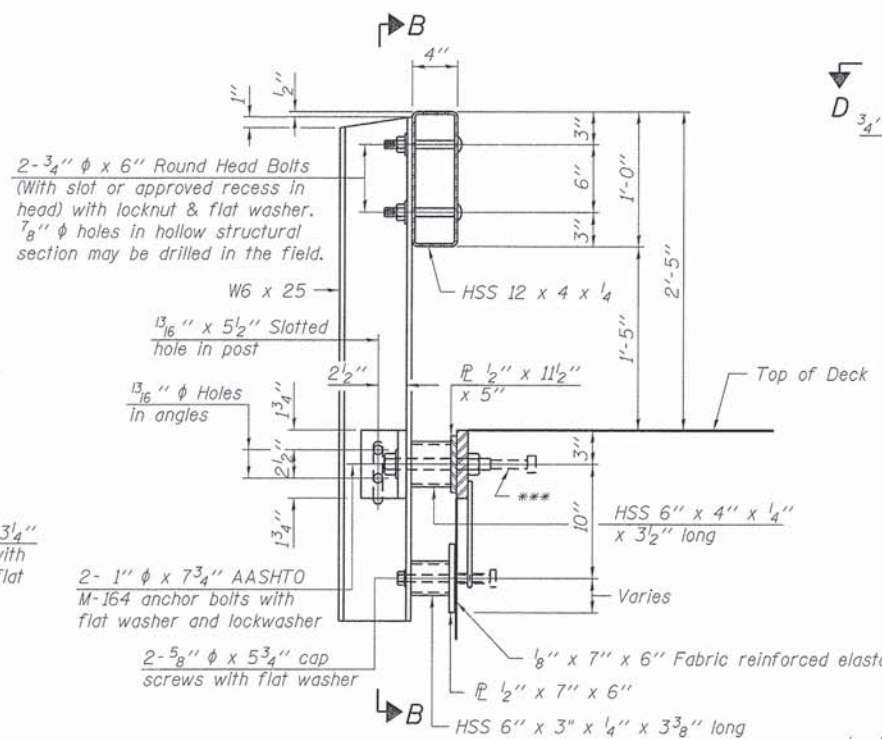
SECTION E-E



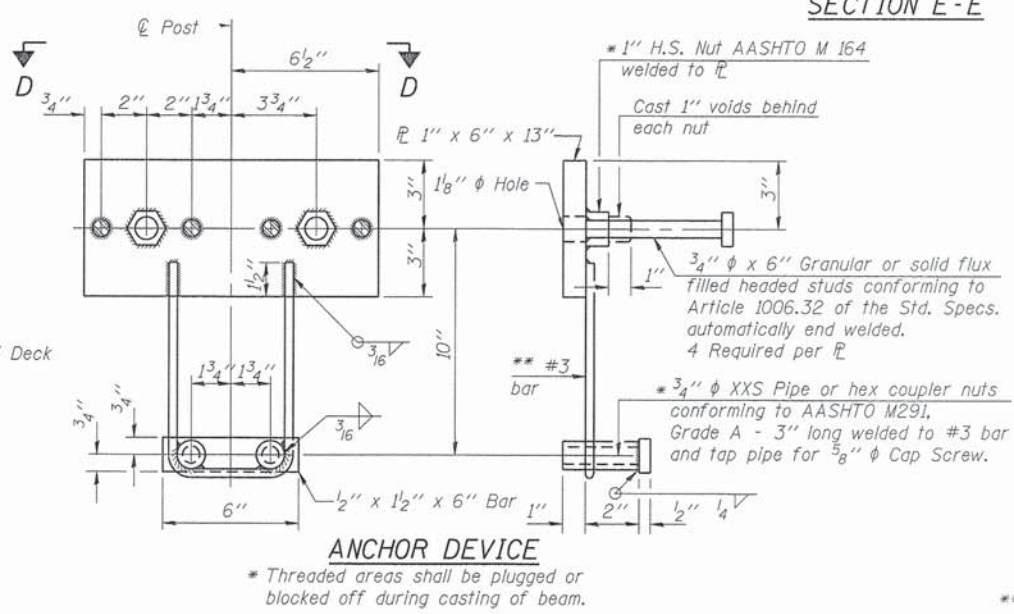
CURLED END SECTION DETAILS



SECTION B-B

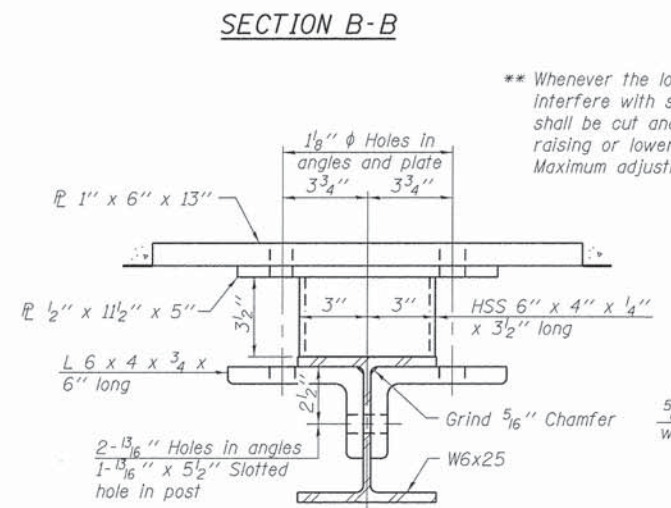


SECTION AT RAILING POST



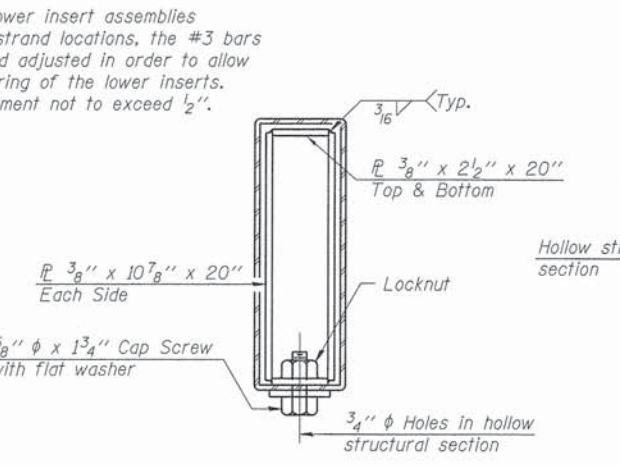
ANCHOR DEVICE

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.

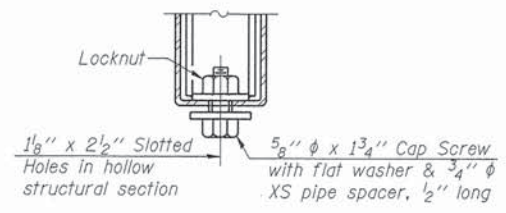


SECTION C-C

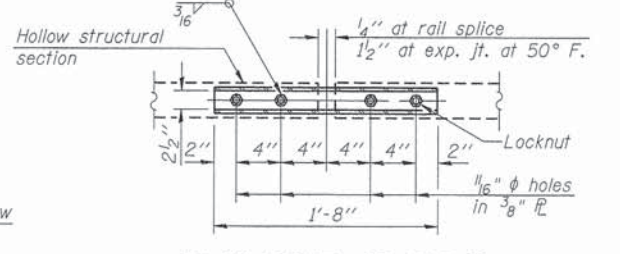
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



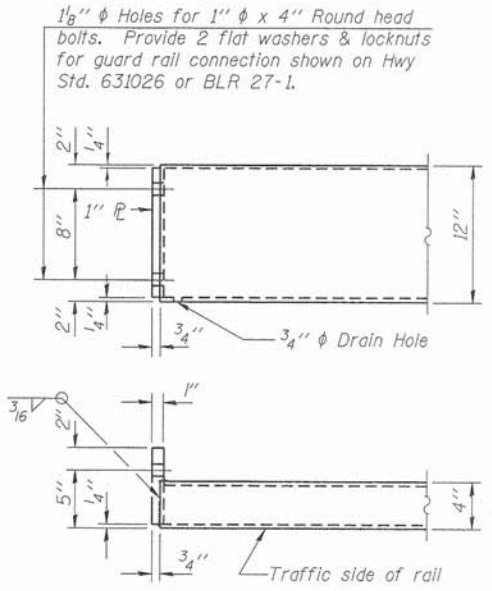
SECTIONS AT RAIL SPLICE



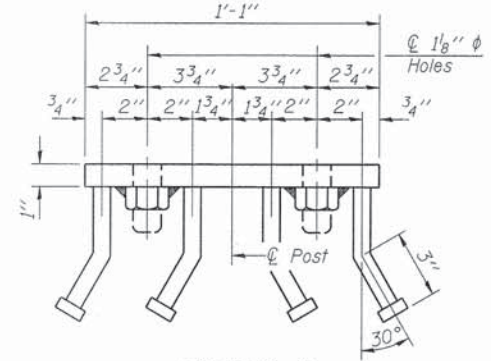
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	88

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

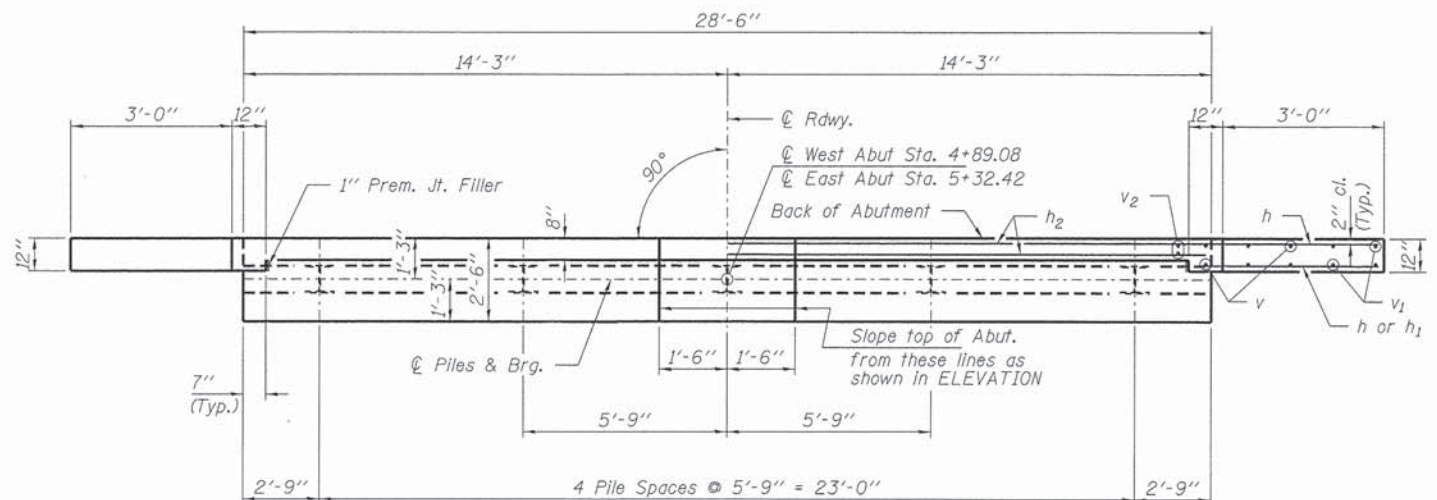
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184.00099	PLOT DATE = 9/18/2013	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

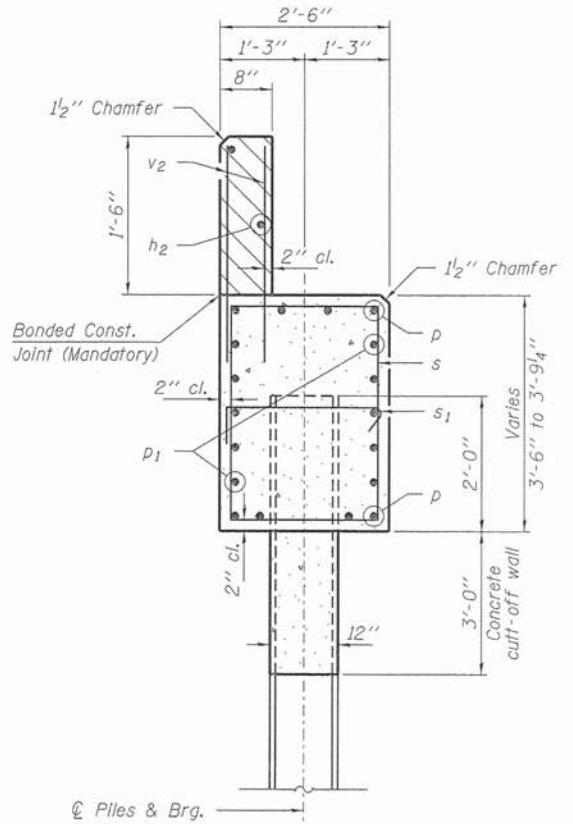
STEEL RAILING, TYPE S-1
STRUCTURE NO. 092-3522

SHEET NO. 5 OF 8 SHEETS

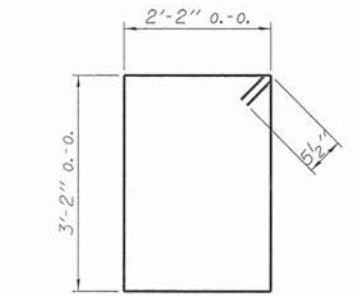
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
225	09-14139-00-BR	VERMILION	22	19
OAKWOOD ROAD DISTRICT			CONTRACT NO. 91493	
[ILLINOIS] FED. AID PROJECT BROS-0183(318)				



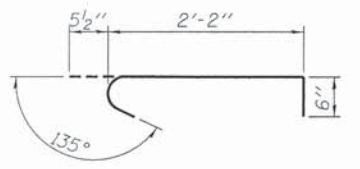
PLAN



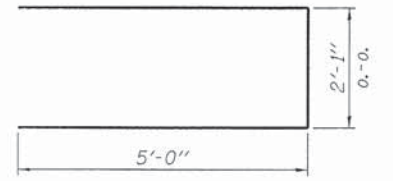
SECTION A-A



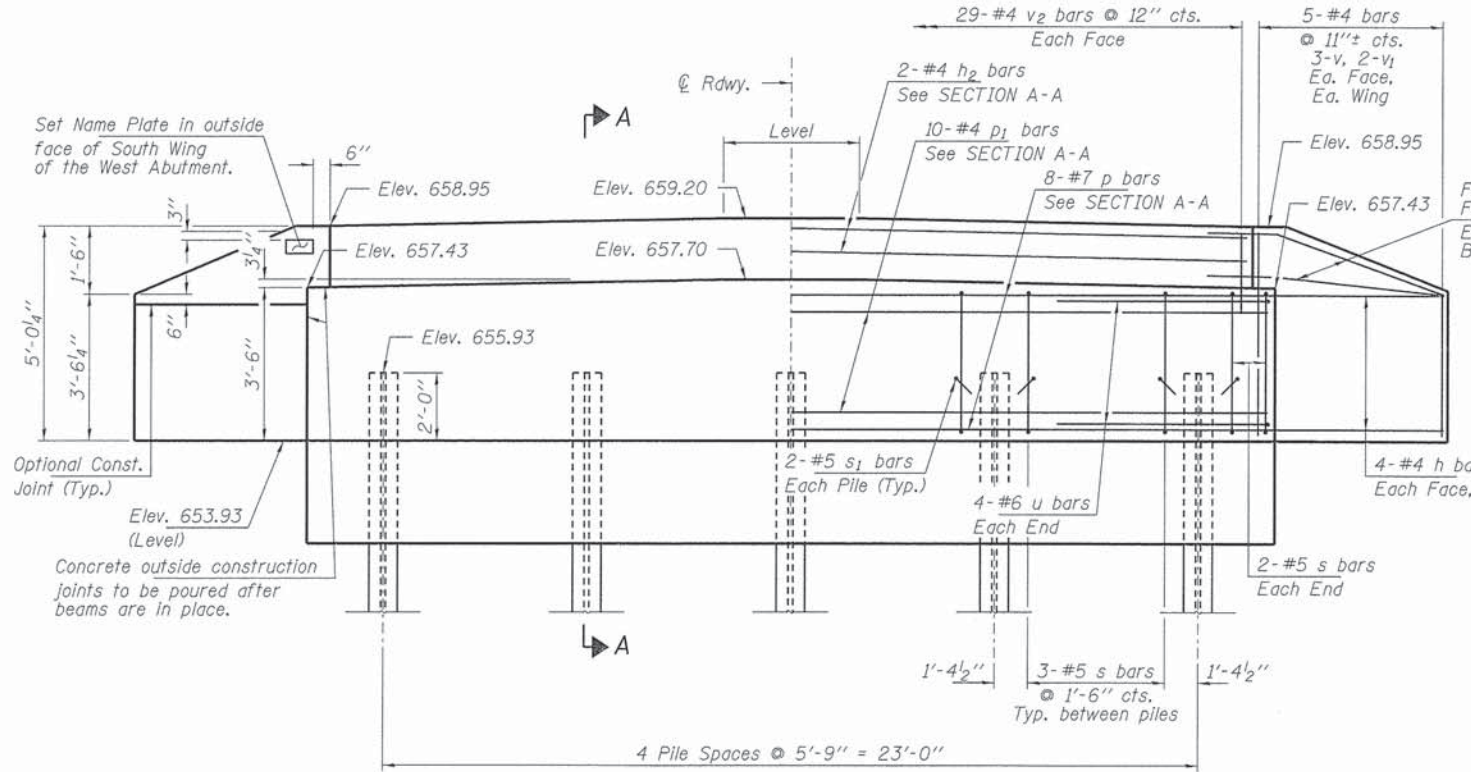
BAR s



BAR s1



BAR u



ELEVATION

Note: Extend h bars into abutment cap.

Fan 2-#4 h bars (B.F.)
Fan 2-#4 h1 bars (F.F.)
Each Wing
Bend in field.

PILE DATA

Type.....Steel Piles HP10x42 w/Pile Shoes
No. Req'd. (2 Abuts.).....10
Factored Resistance Available (Rf).....118 Kips/Pile
Nominal Required Bearing (Rn).....215 Kips/Pile
Est. Length.....55 Ft/Pile

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

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	5'-3"	—
h1	8	#4	3'-9"	—
h2	4	#4	28'-2"	—
p	16	#7	28'-2"	—
p1	20	#4	28'-2"	—
s	32	#5	11'-7"	□
s1	20	#5	3'-2"	U
u	16	#6	12'-1"	U
v	24	#4	4'-2"	—
v1	16	#4	3'-3"	—
v2	116	#4	2'-4"	—
Concrete Structures			Cu. Yd.	23.6
Concrete Cut-Off Wall			Cu. Yd.	6.4
Reinforcement Bars			Pound	2,560
Steel Piles HP10x42			Foot	440
Pile Shoes			Each	10
Test Pile Steel HP10x42			Each	2
Name Plates			Each	1

FILE NAME = 120223-ah-bridge.dgn
 USER NAME =
 DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 HAMPTON, LENZINI AND RENWICK, INC.
 3435 STEVENSON DRIVE, SUITE 101
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-00999

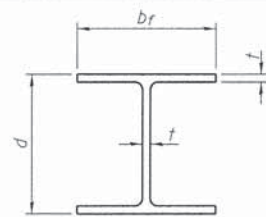
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 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 VERMILION COUNTY HIGHWAY DEPARTMENT

ABUTMENTS
 STRUCTURE NO. 092-3522

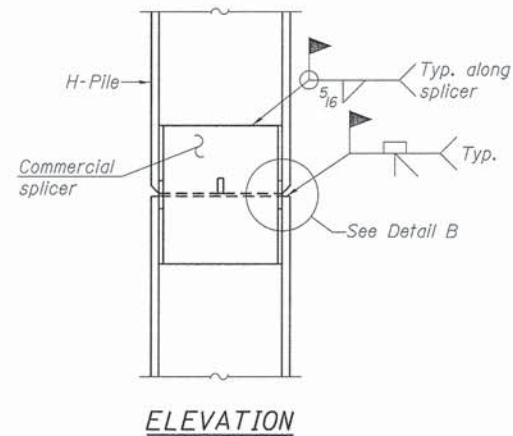
SHEET NO. 6 OF 8 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
225	09-14139-00-BR	VERMILION	22	20
OAKWOOD ROAD DISTRICT			CONTRACT NO. 91493	
[ILLINOIS] FED. AID PROJECT BR05-0183(318)				

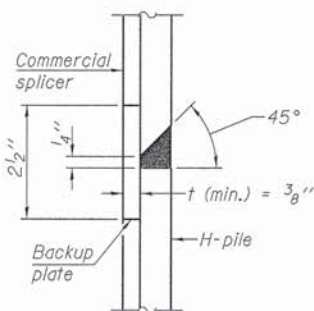


STEEL PILE TABLE

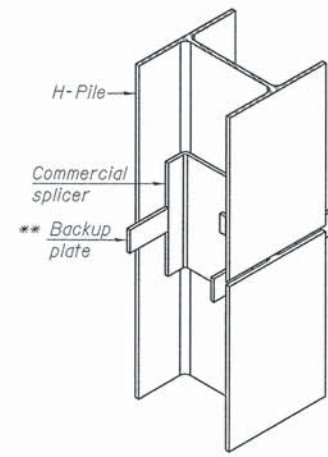
Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/4"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/4"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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

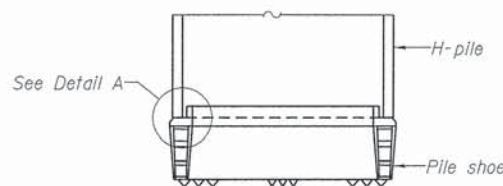


DETAIL "B"

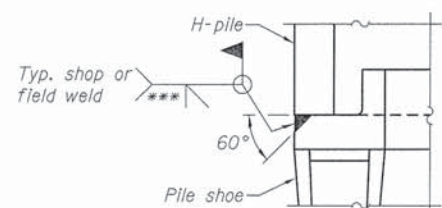


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

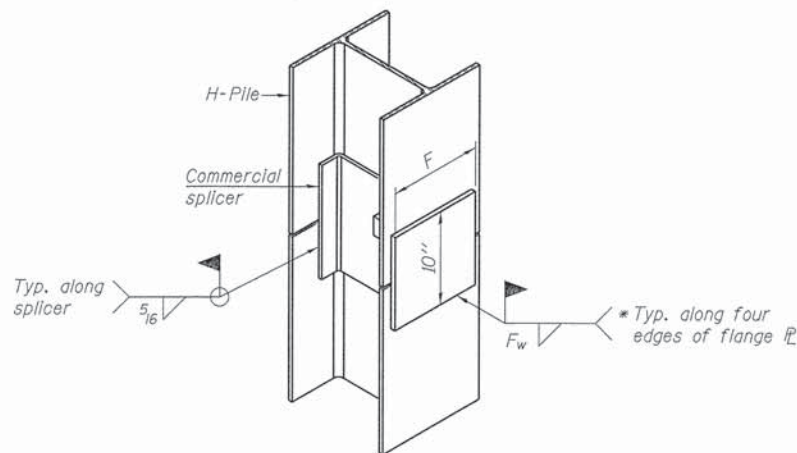


ELEVATION



DETAIL A

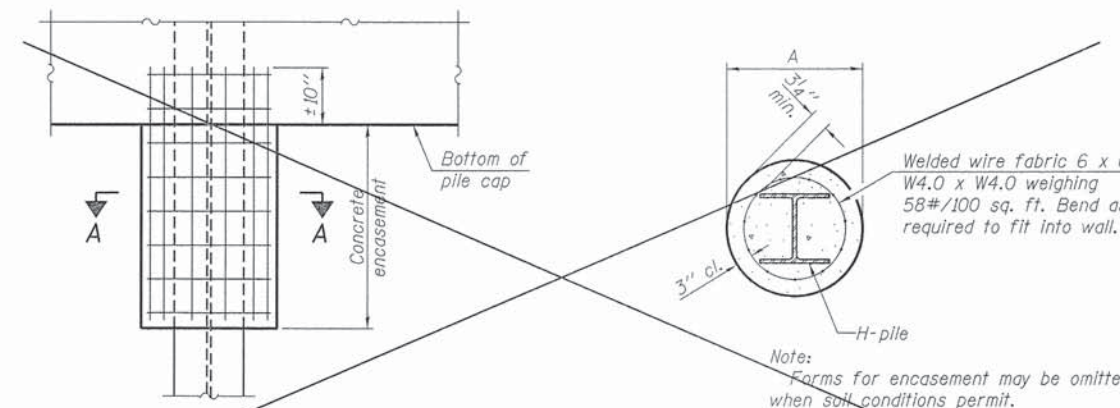
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

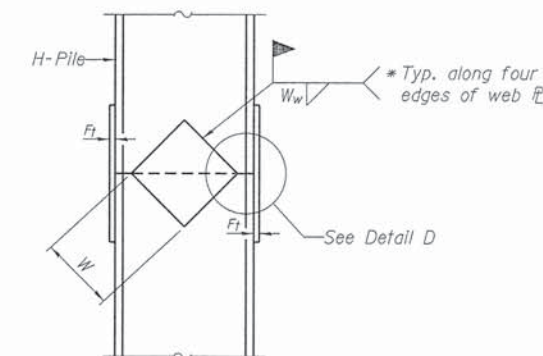
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



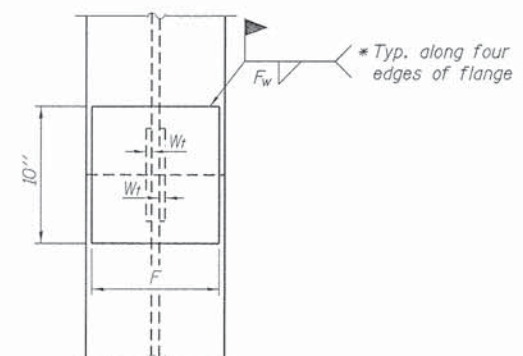
ELEVATION

SECTION A-A

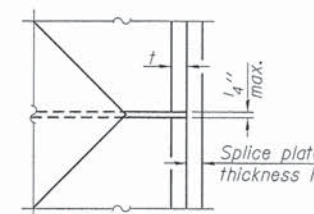
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

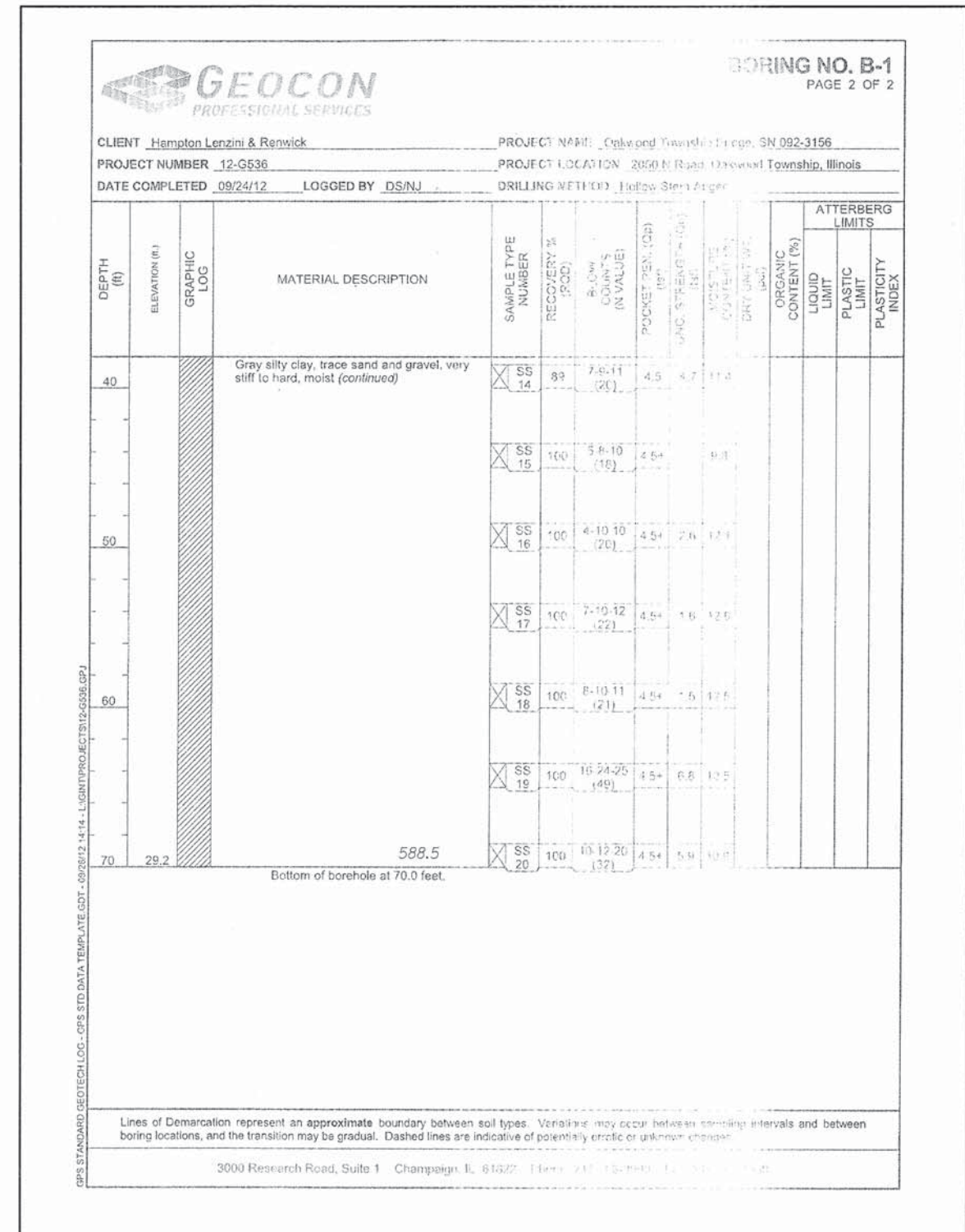
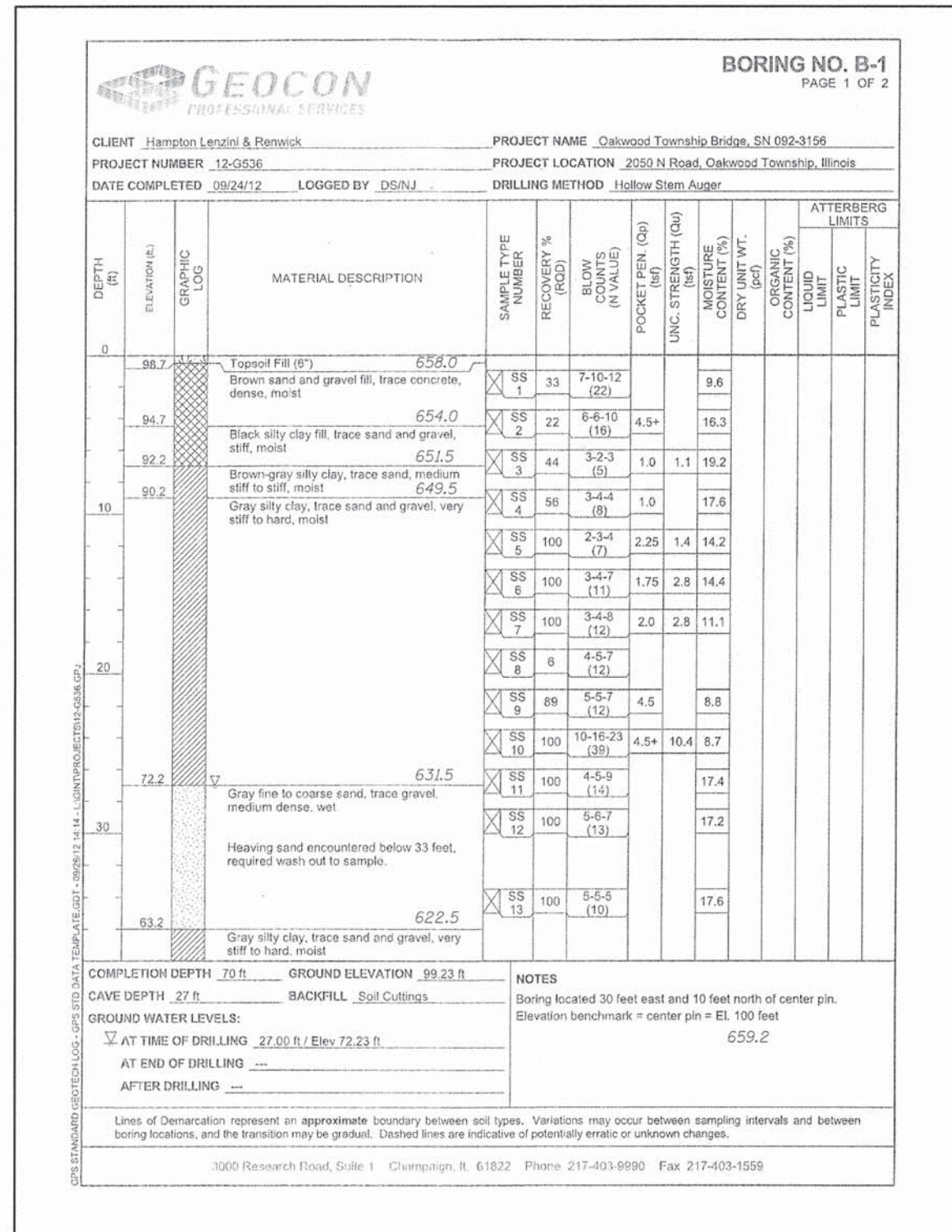
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

1-27-12

FILE NAME = 128223-sht-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 092-3522	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62709 ILLINOIS PROFESSIONAL DESIGN FIRM L5 / P8 / SE CORP. 184.000058	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			225	09-14139-00-BR	VERMILION	22	21
	PLOT DATE = 9/18/2013	DRAWN - R.D.H.	REVISED -			OAKWOOD ROAD DISTRICT				CONTRACT NO. 91493
		CHECKED - S.W.M.	REVISED -			[ILLINOIS] FED. AID PROJECT BROS-0183(318)				

SHEET NO. 7 OF 8 SHEETS



BORING B-1