

1-20-2012 LETTING ITEM 053

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

PROJECT BROS-0113(033)
SECTION 09-18131-00-BR
GRIDLEY ROAD DISTRICT
McLEAN COUNTY

T.R. 25
PROPOSED STRUCTURE NO. 057-4624
SCHLIPF II BRIDGE
JOB NO. C-95-309-11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 25	09-18131-00-BR	McLEAN	20	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 91450		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES, GENERAL NOTES & QUANTITY SCHEDULES
3.	TYPICAL CROSS SECTIONS
4.	PLAN & PROFILE
5-12.	STATION CROSS SECTIONS
13-19.	BRIDGE PLANS
20.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-02	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 23-4	TRAFFIC BARRIER TERMINAL, TYPE 1
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

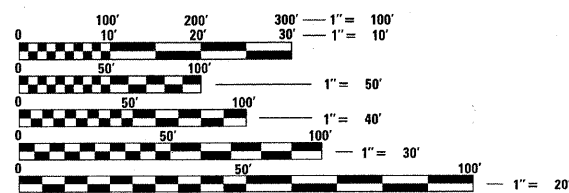
UTILITIES

CORN BELT ENERGY
ONE ENERGY PLACE
P.O. BOX 815
BLOOMINGTON, IL 61702

GRIDLEY TELEPHONE COMPANY
108 EAST THIRD STREET
PO BOX 129
GRIDLEY, IL 61744

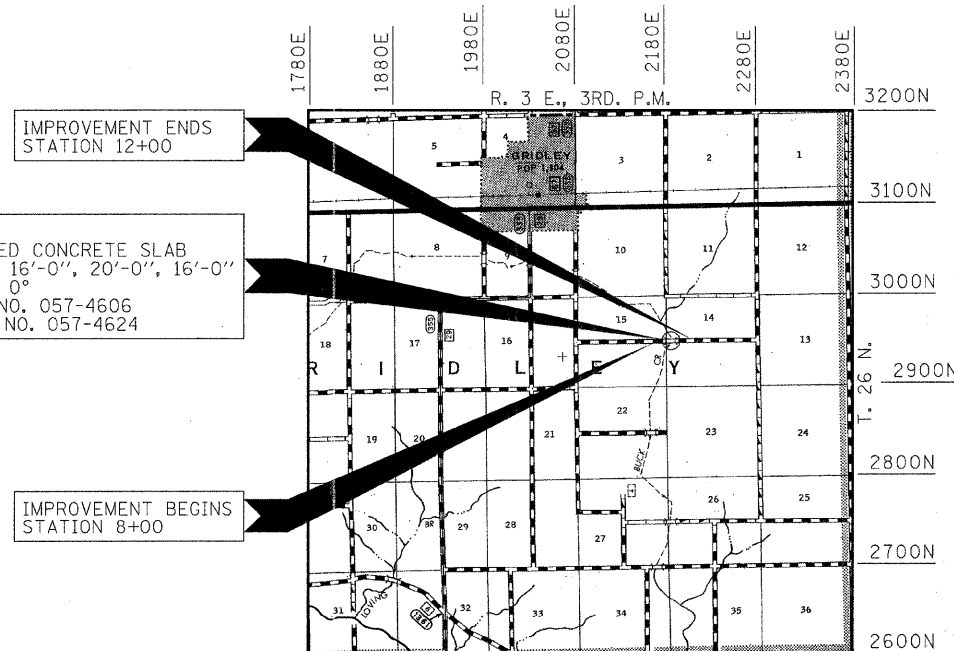


FUNCTIONAL CLASSIFICATION: LOCAL ROAD (0-250 ADT)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 125 ADT (2009)



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. 10+01
CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE, THREE SPANS: 16'-0", 20'-0", 16'-0"
28'-0" RDWY.; SKEW = 0°
EXISTING STRUCTURE NO. 057-4606
PROPOSED STRUCTURE NO. 057-4624



LOCATION MAP

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



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	October 24 2011 County Engineer
APPROVED	10-24-2011 Township Road Commissioner
PASSED	10/27 2011 District Five Engineer of Local Roads & Streets
Releasing For Bid Based on Limited Review	October 31 2011 Deputy Director of Highways Region Three Engineer State of Illinois Department of Transportation



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

CONTRACT NO. 91450

EXPIRES: 11/30/2013

PROJECT NUMBER: 09.0141.130

DATE: 10/11/11

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE 0011	
		UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	85
20300100	CHANNEL EXCAVATION	CU YD	170
20400800	FURNISHED EXCAVATION	CU YD	220
20700110	POROUS GRANULAR EMBANKMENT	TON	90
28000400	PERIMETER EROSION BARRIER	FOOT	250
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	634
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	32.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	67.1
50300280	CONCRETE ENCASEMENT	CU YD	10.2
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	22,840
* 50900205	STEEL RAILING, TYPE S1	FOOT	116
51201400	FURNISHING STEEL PILES HP10X42	FOOT	685
51202305	DRIVING PILES	FOOT	685
51203400	TEST PILE STEEL HP10X42	EACH	2
51500100	NAME PLATES	EACH	1
^ 542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	432
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	32
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
67100100	MOBILIZATION	L SUM	1
^ 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* ^ LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	4
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3
^ X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	200
^ Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	106

^ SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

PERIMETER EROSION BARRIER	
	28000400
	FOOT
TR 25	
LT. STA 9+00 TO STA 9+50	50
RT. STA 9+00 TO STA 9+50	50
LT. STA 10+25 TO STA 11+00	75
RT. STA 10+25 TO STA 11+00	75
TOTAL	250

SEEDING TABLE	
	CLASS 2 (SPECIAL)
	X2501000
	ACRE
TR 25	
STA 8+00 TO STA 9+73.75	0.16
STA 10+28.25 TO STA 12+00	0.15
TOTAL	0.3
USE	0.3

ROADWAY SCHEDULE	
	AGGREGATE SURFACE COURSE, TYPE B
	40200800
	TON
TR 25	
STA 8+00 TO STA 9+73.75	261
STA 10+28.25 TO STA 12+00	259
ENTRANCES	114
TOTAL	634
USE	635

GENERAL NOTES

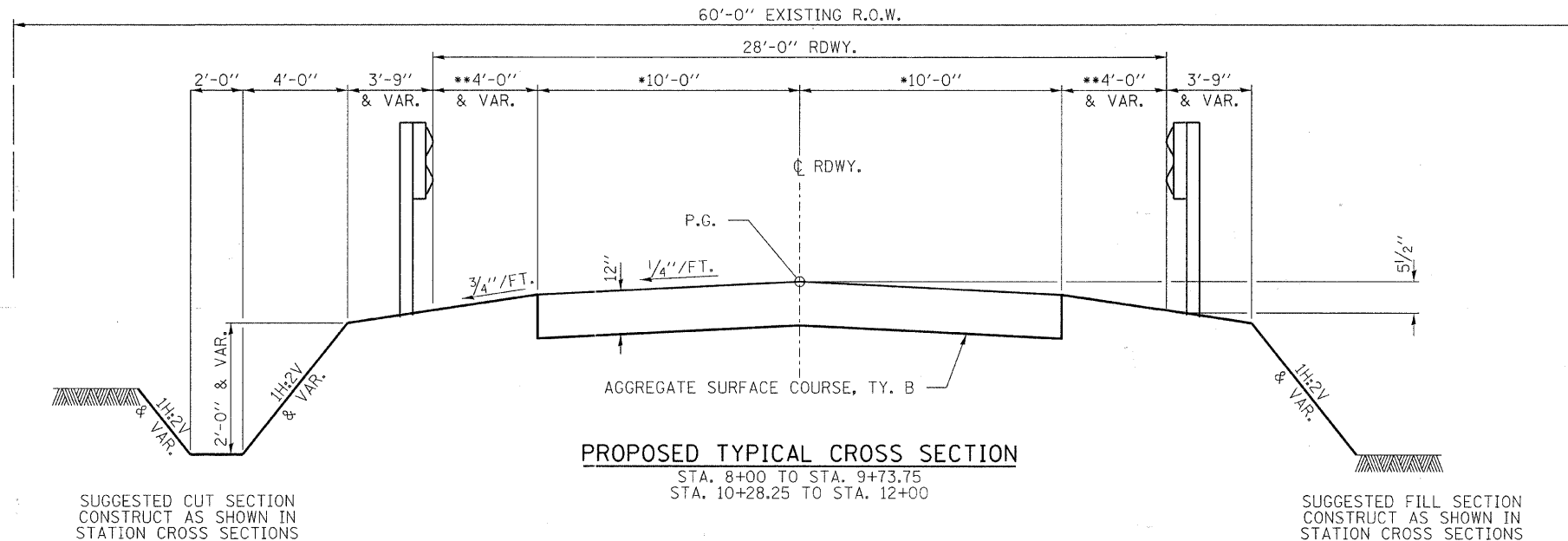
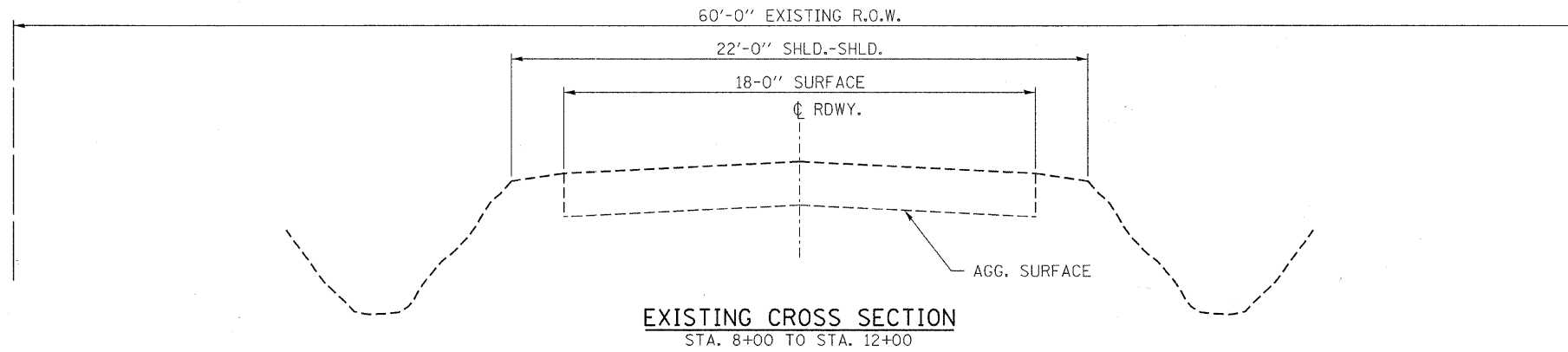
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING BITUMINOUS SURFACE WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPER DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, 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.
- 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 MARKERS 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, TYPE B	2.05 TON/CU YD
POROUS GRANULAR EMBANKMENT	2.00 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE R.O.W. AS DIRECTED BY THE ENGINEER.
- THE TOP SURFACE OF THE DECK SHALL BE SCREEDED WITH A STRAIGHT EDGE AND THEN FINISHED WITH A WOODEN HAND FLOAT. FURTHER FINISHING SHALL BE DELAYED UNTIL THE WATER SHEEN APPEARS, BUT NOT TO THE POINT OF RENDERING FURTHER MANIPULATION INEFFECTIVE. THE SURFACE THEN SHALL BE ROUGHENED WITH A SUITABLE STIFF-BRISTLED BROOM OR WIRE BRUSH DRAWN IN TRANSVERSE DIRECTION REMOVING ANY LANTANCE PRESENT AND BREAKING UP THE WATER SHEEN. THE CORRUGATIONS FORMED SHALL BE UNIFORM IN APPEARANCE AND IN NO CASE MORE THAN 1/4 INCH IN DEPTH.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.

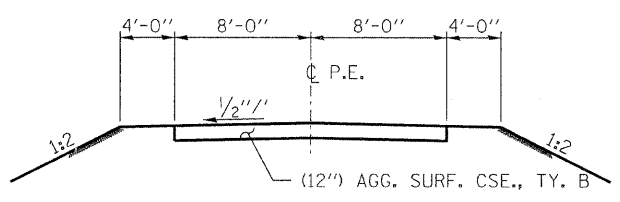
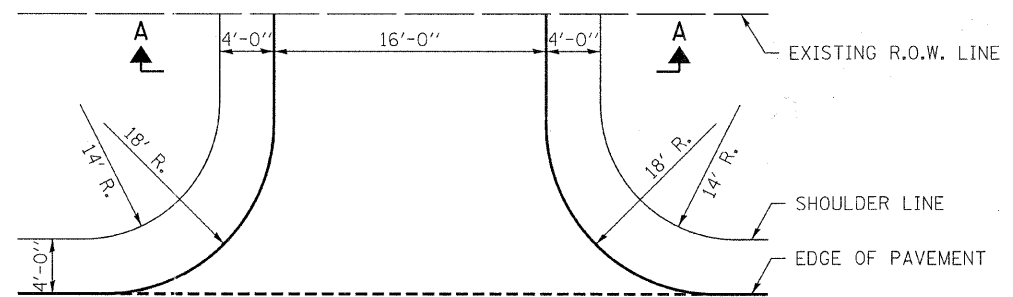
EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION 20200100	CHANNEL EXCAVATION 20300100	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 25							
STA 8+00 TO STA 9+73.75	39		25.00%	100.00%	29	217	-188
STA 10+28.25 TO STA 12+00	46		25.00%	100.00%	35	154	-119
CHANNEL EXCAVATION		170	25.00%	70.00%	89	0	89
TOTAL	85	170			153	371	-218
USE	85	170					-220

FURNISHED EXCAVATION = 220 CU YDS

GUARDRAIL SCHEDULE			
	TRAFFIC BARRIER TERMINAL, TYPE 1	TRAFFIC BARRIER TERMINAL, TYPE 5A	TERMINAL MARKER - DIRECT APPLIED
	LR631020	63100075	78201000
	EACH	EACH	EACH
TR 25			
18' LT. STA 9+33.92 TO 14' LT. STA 9+72.17	1	1	1
18' RT. STA 9+33.92 TO STA 9+72.17	1	1	1
18' LT. STA 10+29.83 TO STA 10+68.08	1	1	1
18' RT. STA 10+29.83 TO 14' RT. STA 10+68.08	1	1	1
TOTAL	4	4	4



*PAVEMENT TRANSITION FROM 18' AT STATION 8+00 TO 20' AT STA. 8+50 AND FROM 20' STA. 11+50 TO 18' AT STA. 12+00.
 **SHOULDER TRANSITION FROM 2' AT STA. 8+00 TO 4' AT STATION 8+50 AND FROM 4' AT STA. 11+50 TO 2' AT STA. 12+00.

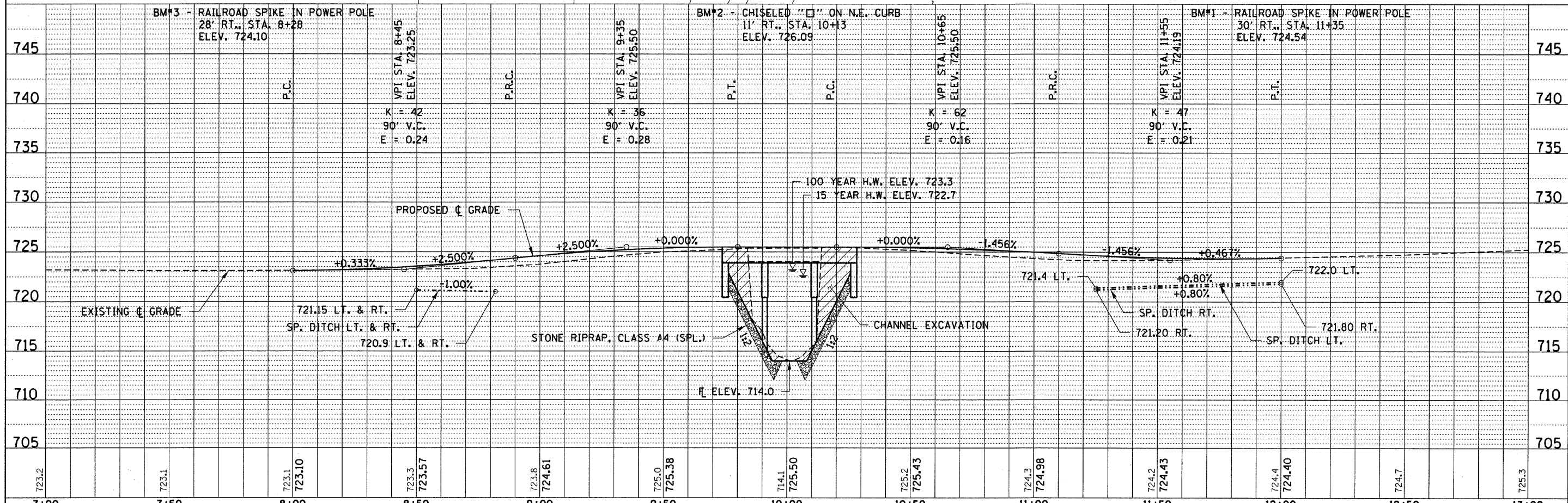
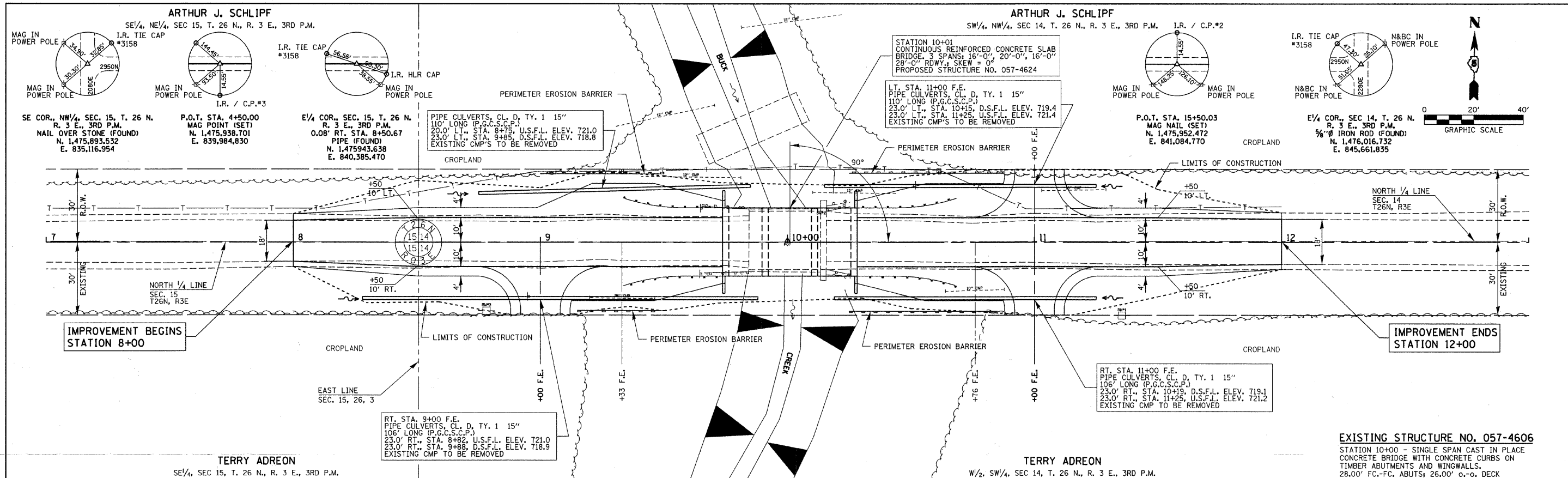


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HAMPTON, LENZINI AND RENWICK, INC. 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - D.T.M.	REVISED -
PLLOT SCALE =		CHECKED - S.W.M.	REVISED -
PLLOT DATE = 10/20/2011		DATE - 10/11/11	REVISED -

STATE OF ILLINOIS
 McLEAN COUNTY HIGHWAY DEPARTMENT

TYPICAL CROSS SECTIONS			
2950N ROAD			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

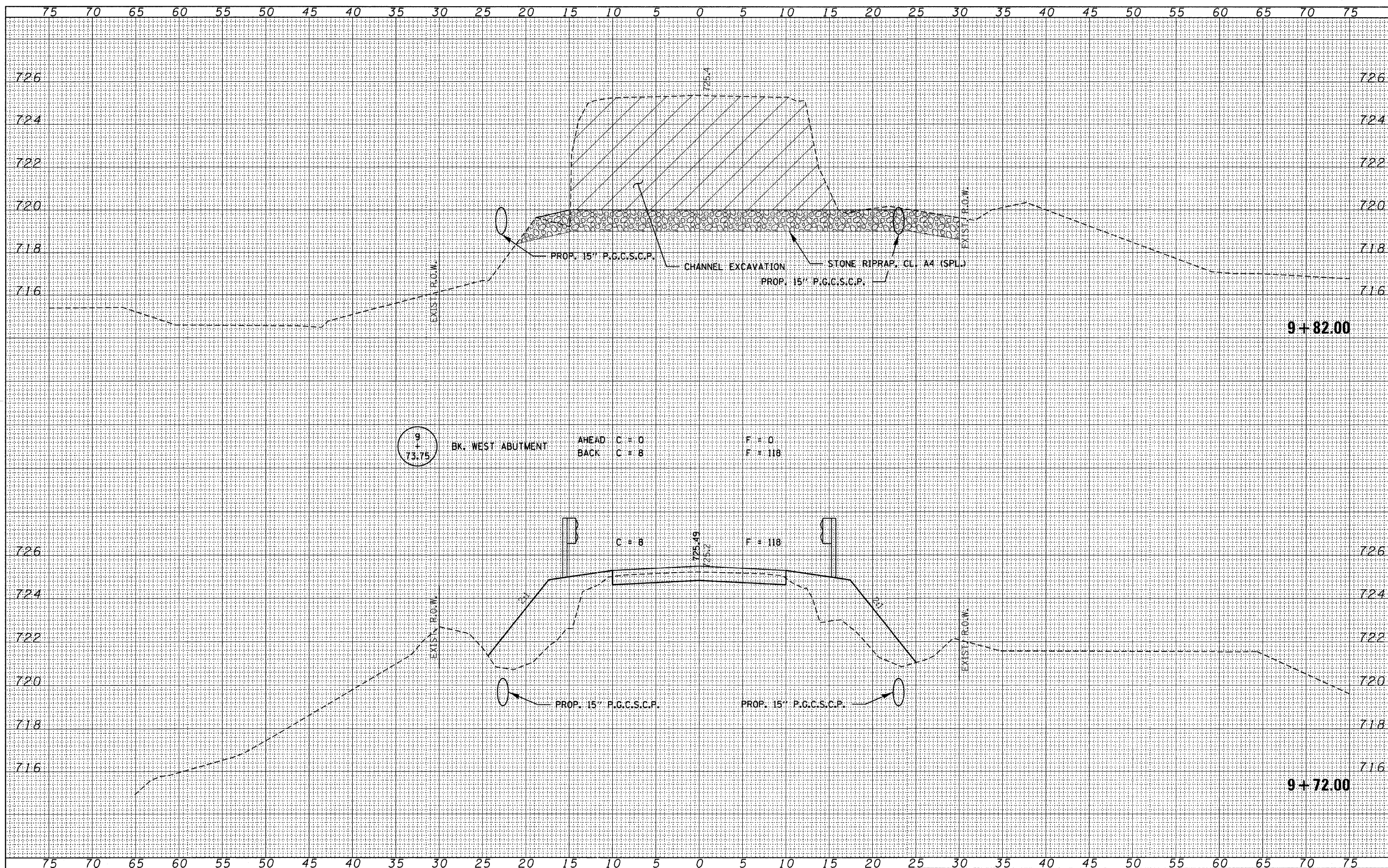
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-18131-00-BR	McLEAN	20	3
GRIDLEY ROAD DISTRICT		CONTRACT NO. 91450		
ILLINOIS FED. AID PROJECT BR05-0113033				



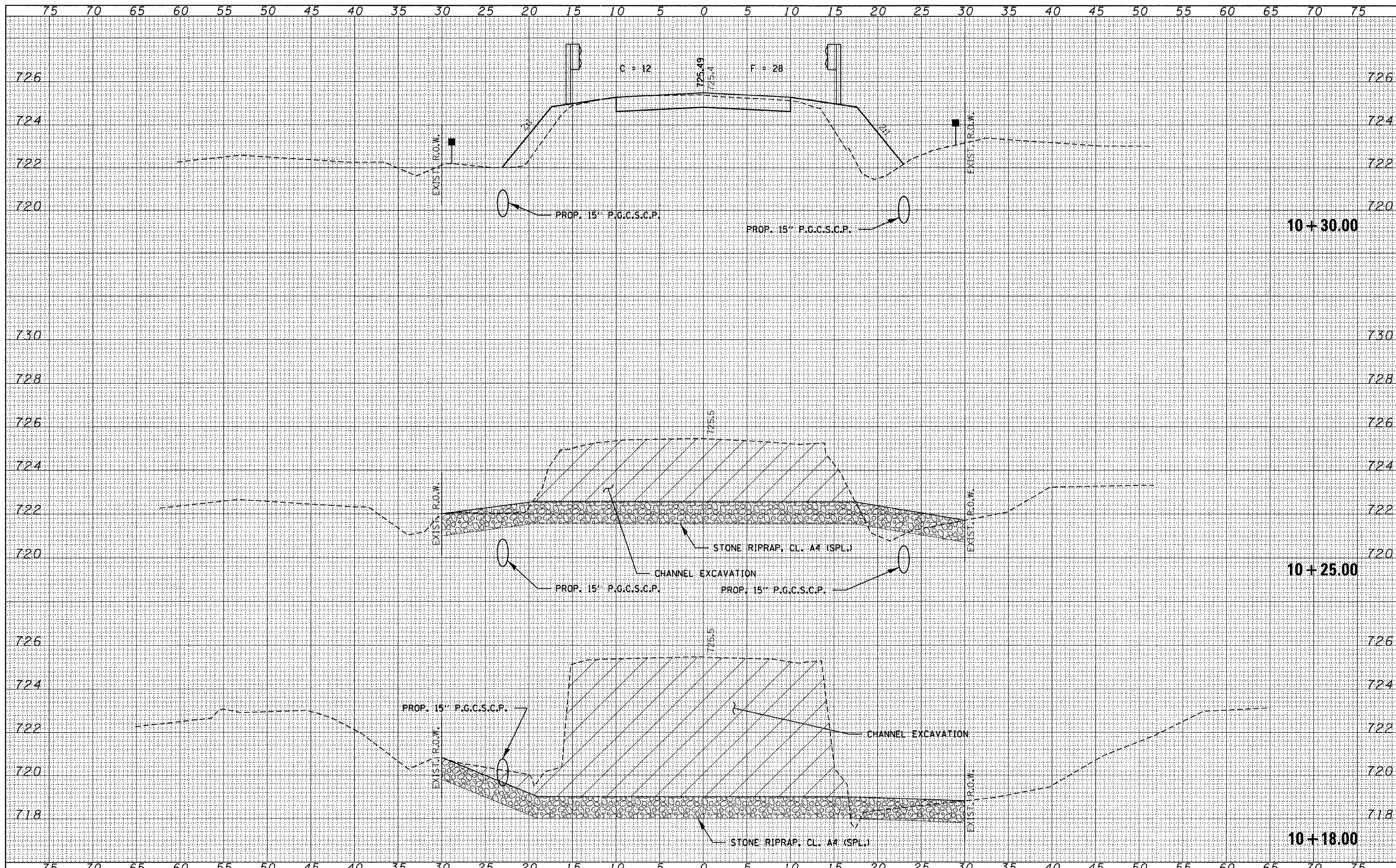
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.T.M.	REVISED -		25	09-18131-00-BR	McLEAN	20	4		
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000000	PLOT DATE = 10/20/2011	CHECKED - S.W.M.	REVISED -		SCALE: H20xV5		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	GRIDLEY ROAD DISTRICT	CONTRACT NO. 91450
		DATE - 10/11/11	REVISED -							[ILLINOIS] FED. AID PROJECT BROS-01130331	

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

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



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PLOT DATE = 10/20/2011	DATE - 10/11/11	REVISED -	GRIDLEY ROAD DISTRICT CONTRACT NO. 91450									
							SCALE: H5:V2 SHEET NO. OF SHEETS STA. 9+72.00 TO STA. 9+82.00		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			



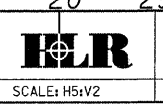
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BY	
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PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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 USER NAME =
 PLOT SCALE =
 PLOT DATE = 10/20/2011

DESIGNED - J.W.F.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 10/11/11	REVISED -

STATE OF ILLINOIS
 McLEAN COUNTY HIGHWAY DEPARTMENT



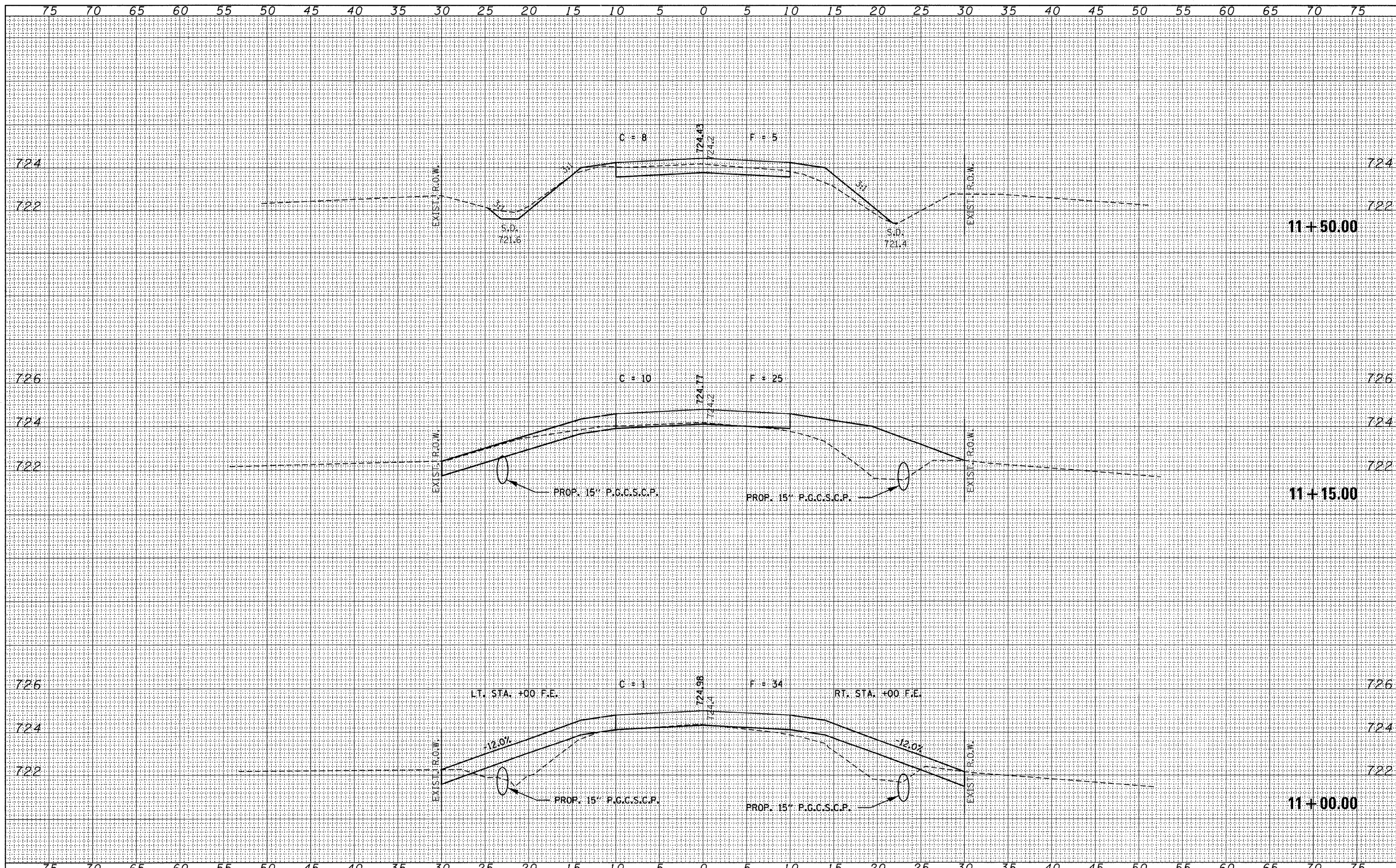
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 SHEET NO. OF SHEETS STA. 10+18.00 TO STA. 10+30.00

STATION CROSS SECTIONS
 2950N ROAD

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-18131-00-BR	McLEAN	20	9
GRIDLEY ROAD DISTRICT		CONTRACT NO. 91450		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DATE	
BY	
FINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
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DATE	
BY	
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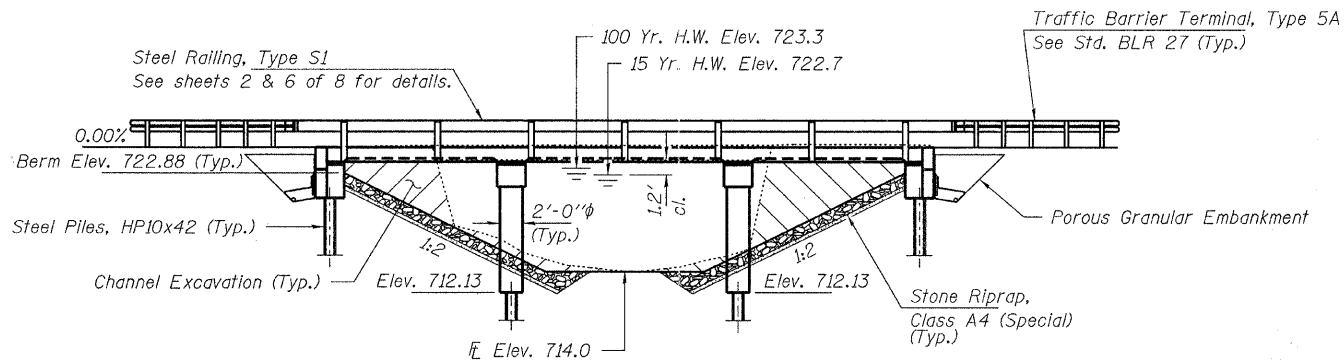


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PLOT SCALE =	CHECKED - S.W.M.	REVISED -	2950N ROAD			25	09-18131-00-BR	McLEAN	20	11		
PLOT DATE = 10/20/2011	DATE - 10/11/11	REVISED -	SCALE: H5:V2			SHEET NO. OF SHEETS		STA. 11+00.00 TO STA. 11+50.00		CONTRACT NO. 91450		
										FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		

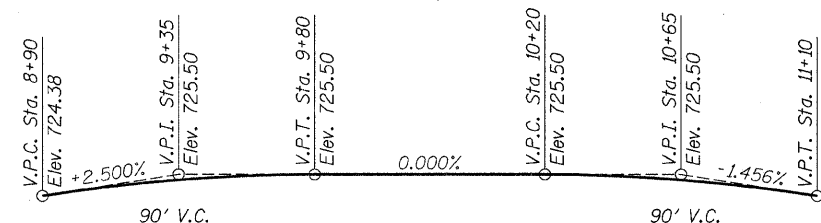
BENCHMARK: Chiseled "□" on N.E. curb. 11.0' Rt., Sta. 10+13, Elev. 726.09

EXISTING STRUCTURE NO. 057-4606: Sta. 10+00 - Single span cast in place concrete bridge with concrete curbs on closed timber abutments and wingwalls. 28.0' fc.-fc. abuts.; 26.0' o.-o. deck.

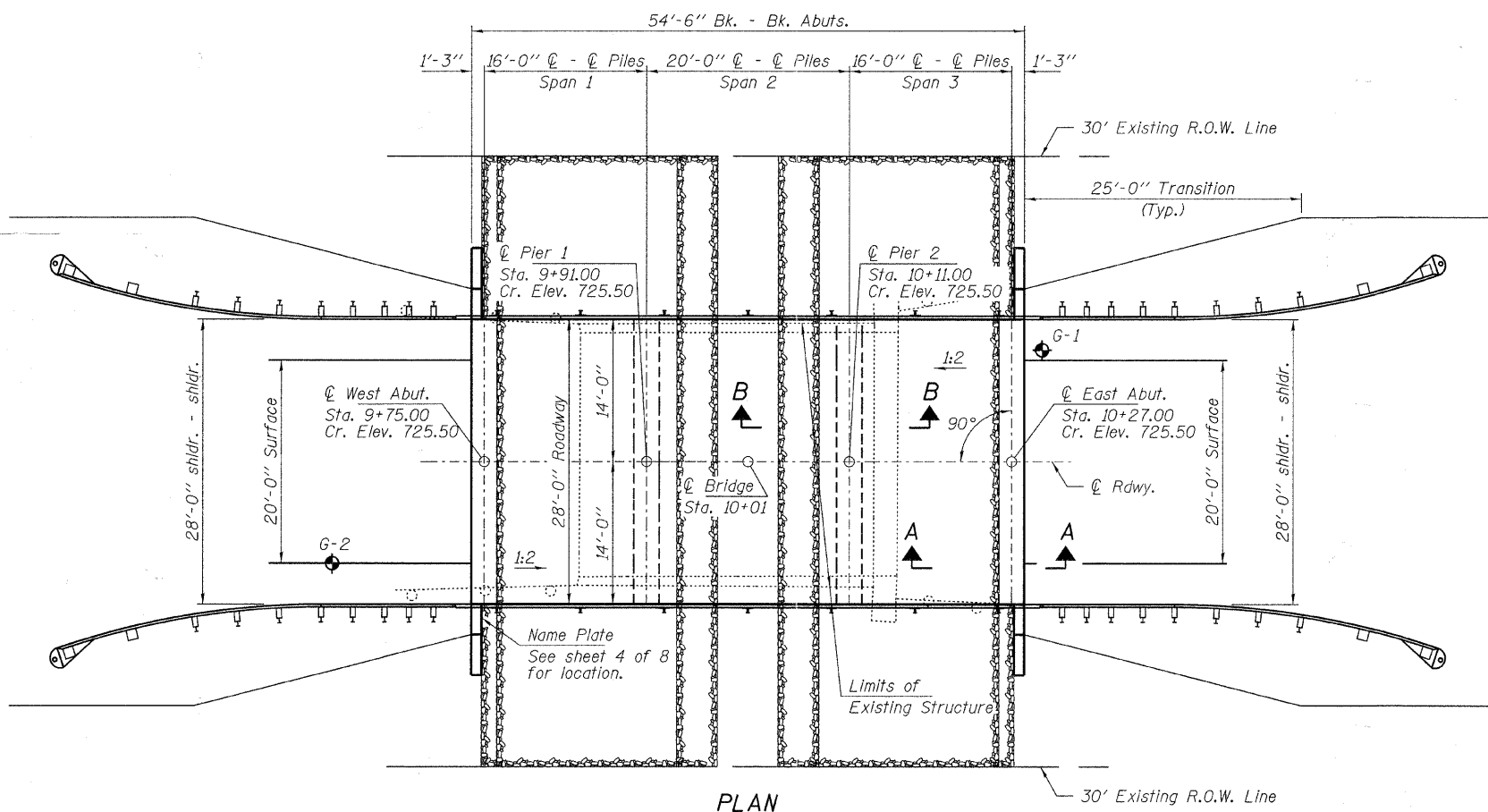
No Salvage



ELEVATION



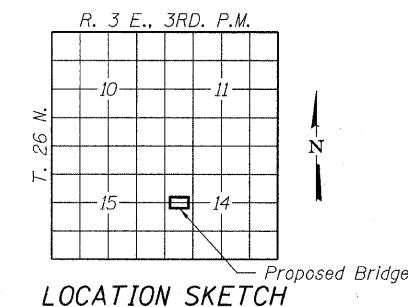
PROFILE GRADE



PLAN

SCHLIPF II BRIDGE
BUILT 201L BY
McLEAN COUNTY
GRIDLEY ROAD DISTRICT
SEC. 09-18131-00-BR
STR. NO. 057-4624
LOADING HL-93

NAME PLATE
See Std. 515001



DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi Load Resistance
fy = 60,000 psi (Reinf.) Factor Design

LOADING HL-93

Design Specifications: 2010 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) = 0.114g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.184g
Soil Site Class = D

WATERWAY INFORMATION

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	10	1080	170	240	722.48	0.43	0.29	722.91	722.77
Base	15	1230	180	250	722.65	0.49	0.35	723.14	723.00
Max. Calc.	100	1960	200	270	723.25	0.63	0.71	723.88	723.96
Overtop	500	2600	210	290	723.67	0.81	0.84	724.48	724.51
	100	1960	200	270	723.25	0.63	0.71	723.88	723.96

Drainage Area = 13.6 Sq. Mi. Existing Low Grade Elev. 723.1 @ Sta. 8+00
Proposed Low Grade Elev. 723.75* @ Sta. 8+00

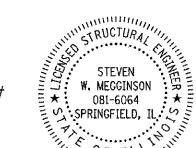
10 Year Velocity through Existing Bridge = 6.4 fps
10 Year Velocity through Proposed Bridge = 4.5 fps
*Proposed Low Grade Elevation accounts for future potential raising of appr. roadway.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	720.63	706.67	706.67	720.62

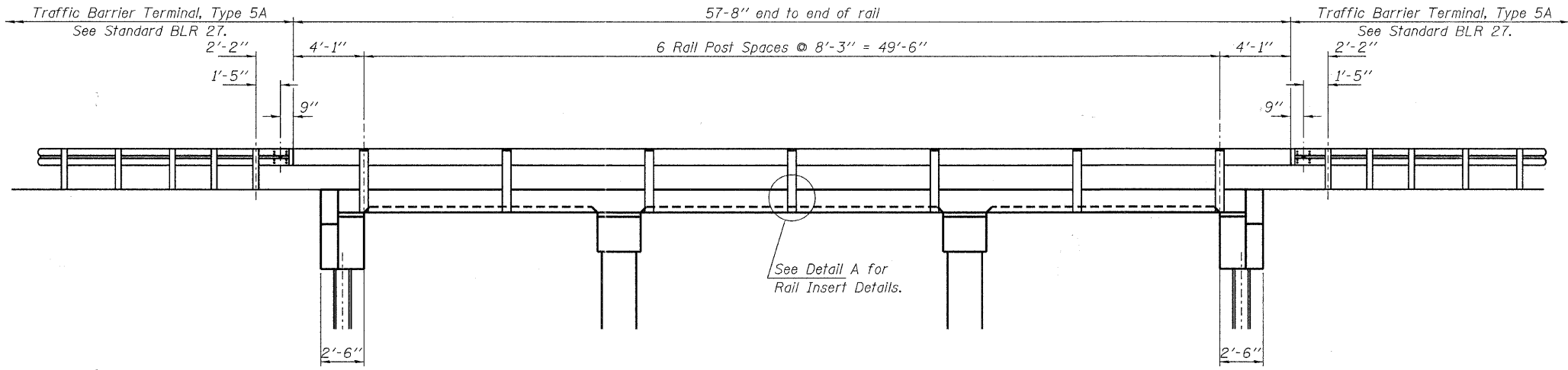
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

STEVEN W. MCGINSON
081-6064
SPRINGFIELD, ILL.
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2012

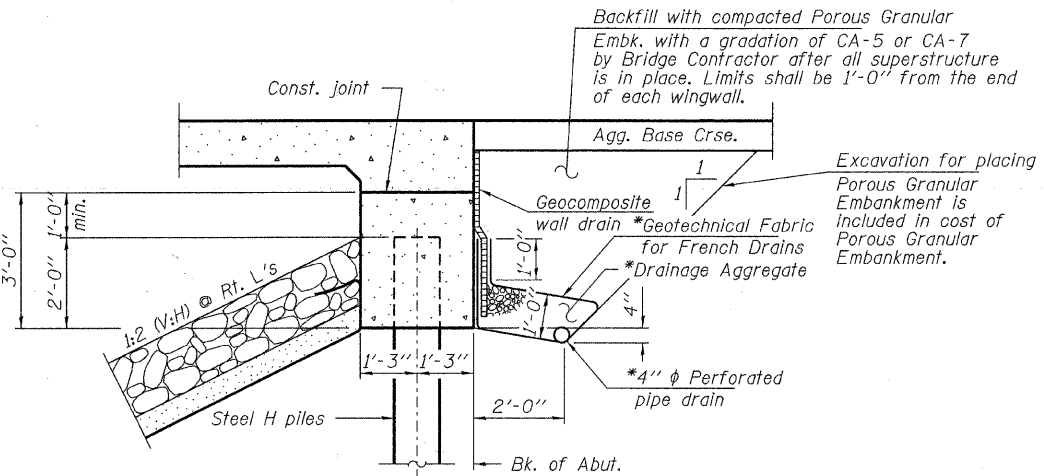
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HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			25	09-18131-00-BR	McLEAN	20	13
ILR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000859	PLOT DATE = 10/19/2011	DRAWN - D.A.B.	REVISED -			GRIDLEY ROAD DISTRICT		CONTRACT NO. 91450		
		CHECKED - S.W.M.	REVISED -			[ILLINOIS] FED. AID PROJECT BROS-01130331				



ELEVATION

Showing Rail Post Spaces

See sheet 6 of 8 for Railing Details.

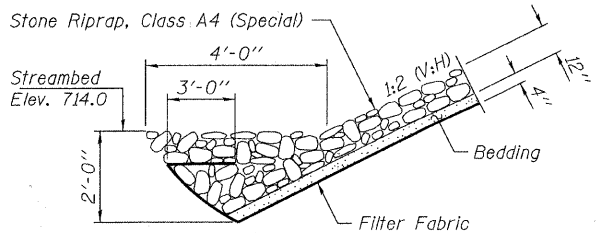


SECTION A-A

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures, 4".

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

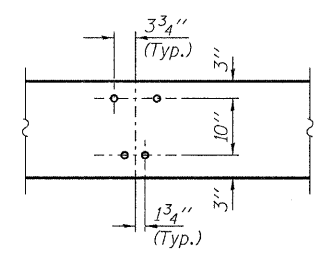


SECTION B-B

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

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment and Pier 2 or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Excavation required to construct the Abutments and Piers 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.
The top surface of the deck shall be screeded with a straight edge and then finished with a wooden hand float. Further finishing shall be delayed until the water sheen appears, but not to the point of rendering further manipulation ineffective. The surface then shall be roughened with a suitable stiff-bristled broom or wire brush drawn in transverse direction removing any laitance present and breaking up the water sheen. The corrugations formed shall be uniform in appearance and in no case more than 1/4" in depth.



DETAIL A

TOTAL BILL OF MATERIAL

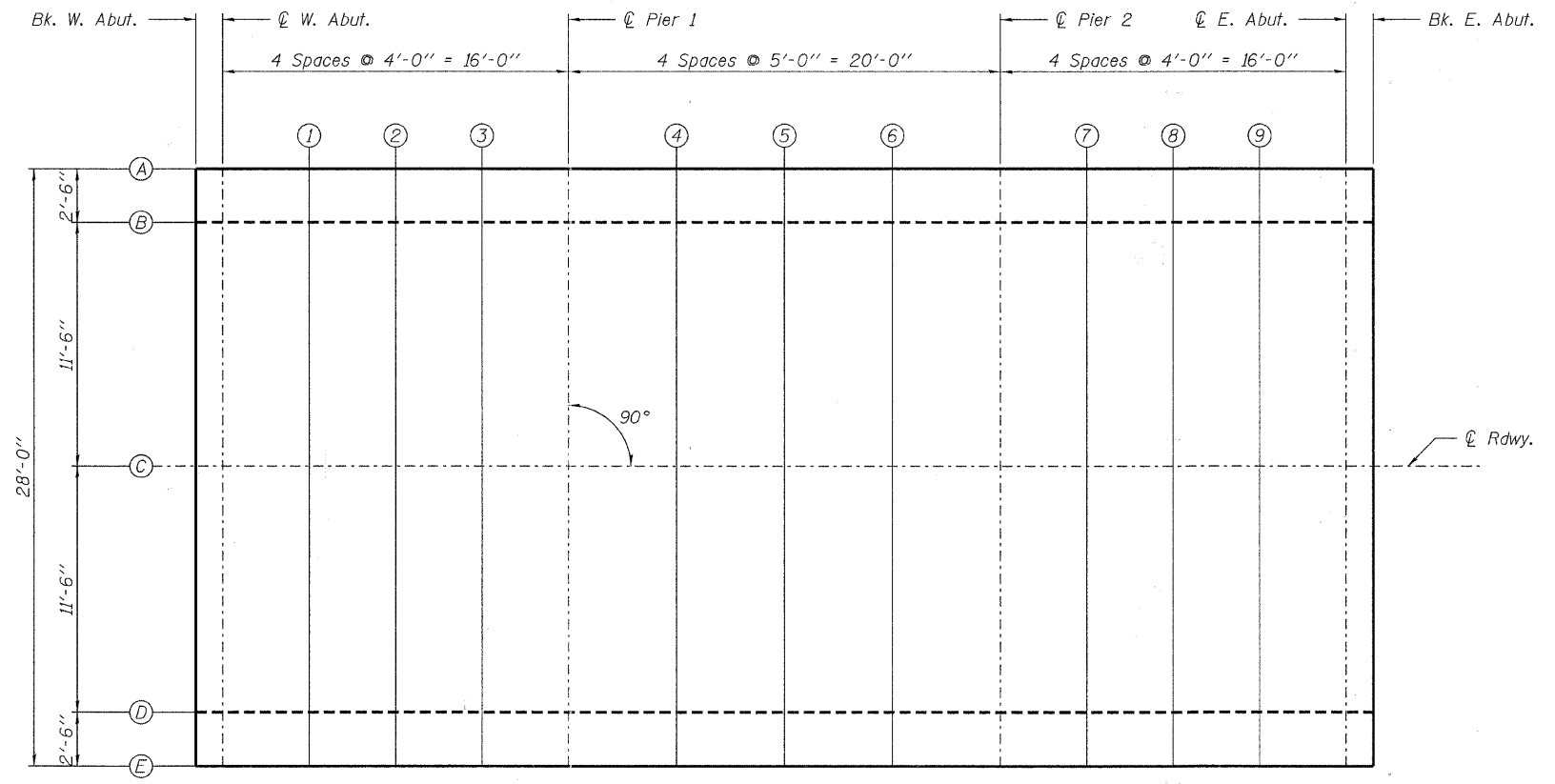
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			170
Porous Granular Embankment	Ton		90	90
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		32.7	32.7
Concrete Superstructure	Cu. Yd.	67.1		67.1
Concrete Encasement	Cu. Yd.		10.2	10.2
Reinforcement Bars, Epoxy Coated	Pound	17,670	5,170	22,840
Steel Railing, Type S1	Foot	116		116
Furnishing Steel Piles HPI0x42	Foot		685	685
Driving Piles	Foot		685	685
Test Pile Steel HPI0x42	Each		2	2
Name Plates	Each		1	1
Geocomposite Wall Drain	Sq. Yd.			32
Stone Riprap, Class A4 (Special)	Ton			200
Pipe Underdrains for Structures, 4"	Foot			106

FILE NAME = 090141-ah-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3035 REVERSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184-002889		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =		
	PLOT DATE = 10/20/2011		

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

GENERAL DETAILS
STRUCTURE NO. 057-4624
SHEET NO. 2 OF 8 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-18131-00-BR	McLEAN	20	14
GRIDLEY ROAD DISTRICT			CONTRACT NO. 91450	
ILLINOIS			FED. AID PROJECT BROS-01130331	



PLAN

TABLE OF ELEVATIONS

LOCATION		BK. OF	CL OF	SPAN 1			CLOF	SPAN 2			CLOF	SPAN 3			CL OF	BK OF
		W. ABUT	W. ABUT	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	E. ABUT	E. ABUT
LINE	T.	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.204	725.203
	A ADJ.	725.208	725.208	725.209	725.209	725.209	725.208	725.209	725.210	725.209	725.208	725.209	725.209	725.208	725.204	725.203
**	Bott. of Slab	723.875	723.875	723.876	723.876	723.876	723.875	723.876	723.877	723.876	723.875	723.876	723.876	723.875	723.871	723.869

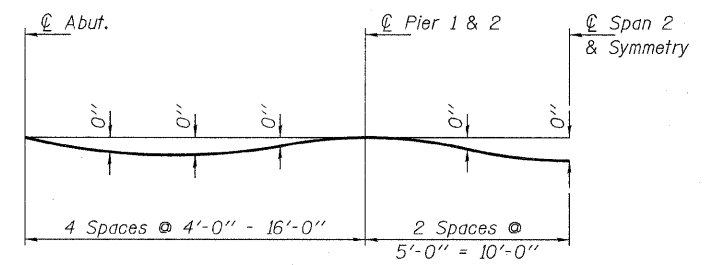
LOCATION		BK. OF	CL OF	SPAN 1			CLOF	SPAN 2			CLOF	SPAN 3			CL OF	BK OF
		W. ABUT	W. ABUT	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	E. ABUT	E. ABUT
LINE	T.	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.256	725.255
	B ADJ.	725.260	725.260	725.261	725.261	725.261	725.260	725.261	725.262	725.261	725.260	725.261	725.261	725.261	725.256	725.255
	Bott. of Slab	724.260	724.260	724.261	724.261	724.261	724.260	724.261	724.262	724.261	724.260	724.261	724.261	724.261	724.256	724.255

LOCATION		BK. OF	CL OF	SPAN 1			CLOF	SPAN 2			CLOF	SPAN 3			CL OF	BK OF
		W. ABUT	W. ABUT	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	E. ABUT	E. ABUT
LINE	T.	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.500	725.499	725.496	725.494
	C ADJ.	725.500	725.500	725.501	725.501	725.501	725.500	725.501	725.502	725.501	725.500	725.501	725.501	725.500	725.496	725.494
	Bott. of Slab	724.500	724.500	724.501	724.501	724.501	724.500	724.501	724.502	724.501	724.500	724.501	724.501	724.500	724.496	724.494

LOCATION		BK. OF	CL OF	SPAN 1			CLOF	SPAN 2			CLOF	SPAN 3			CL OF	BK OF
		W. ABUT	W. ABUT	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	E. ABUT	E. ABUT
LINE	T.	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.260	725.256	725.255
	D ADJ.	725.260	725.260	725.261	725.261	725.261	725.260	725.261	725.262	725.261	725.260	725.261	725.261	725.261	725.256	725.255
	Bott. of Slab	724.260	724.260	724.261	724.261	724.261	724.260	724.261	724.262	724.261	724.260	724.261	724.261	724.261	724.256	724.255

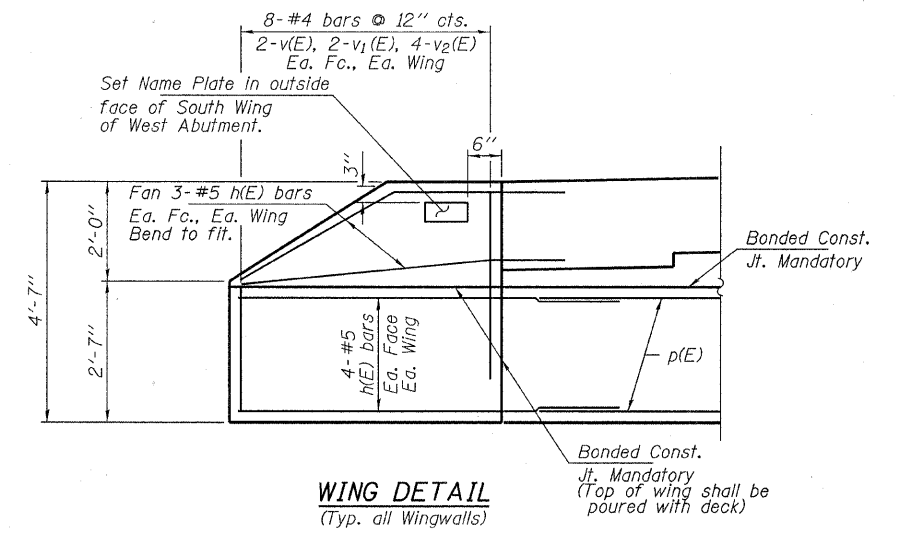
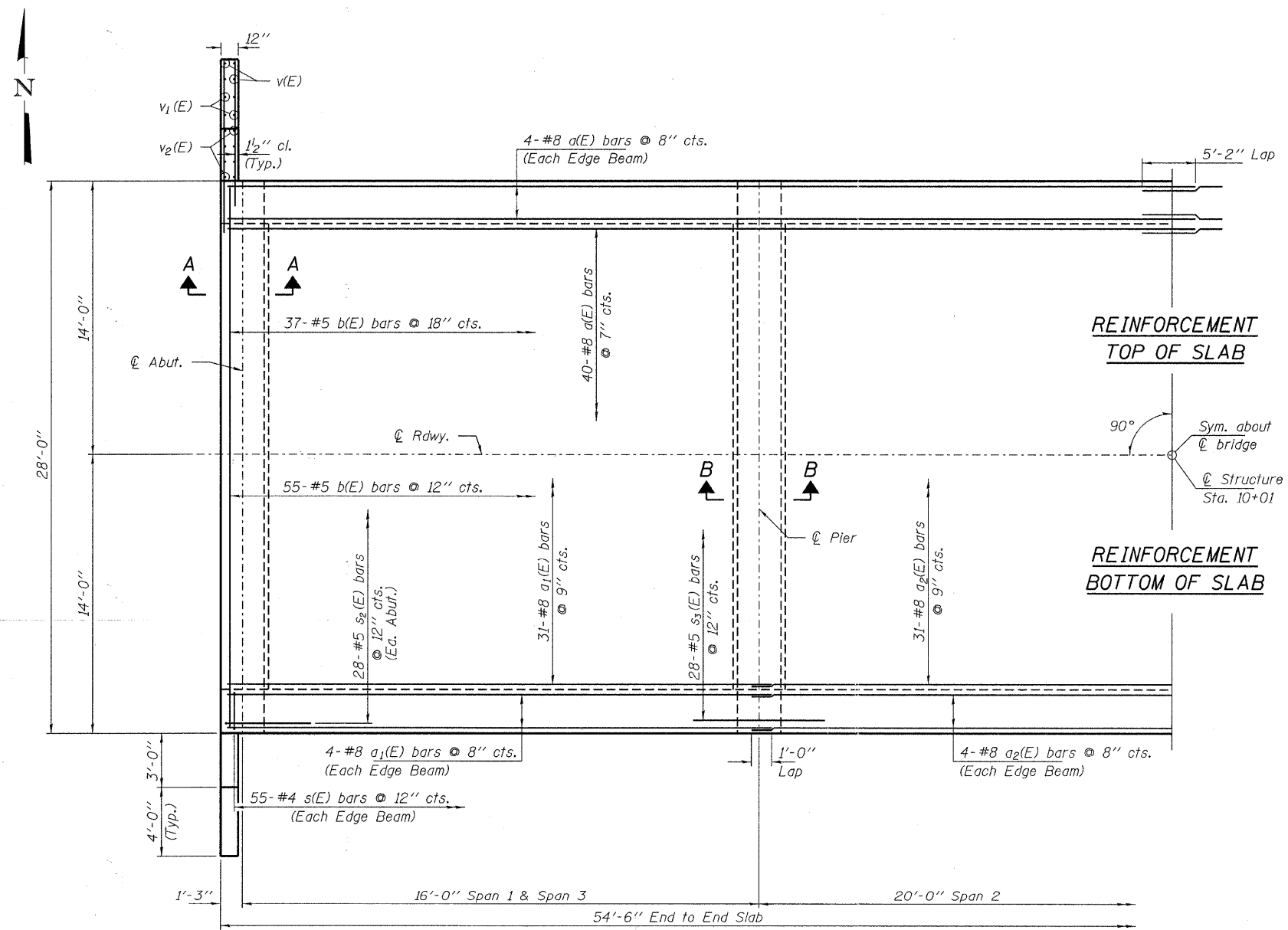
LOCATION		BK. OF	CL OF	SPAN 1			CLOF	SPAN 2			CLOF	SPAN 3			CL OF	BK OF
		W. ABUT	W. ABUT	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	E. ABUT	E. ABUT
LINE	T.	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.208	725.204	725.203
	E ADJ.	725.208	725.208	725.209	725.209	725.209	725.208	725.209	725.210	725.209	725.208	725.209	725.209	725.208	725.204	725.203
**	Bott. of Slab	723.875	723.875	723.876	723.876	723.876	723.875	723.876	723.877	723.876	723.875	723.876	723.876	723.875	723.871	723.869

T. - Theoretical elevation at top of slab
 Adj. - T adjusted for dead load deflection
 ** Bottom of slab elevation equals bottom of edge beam



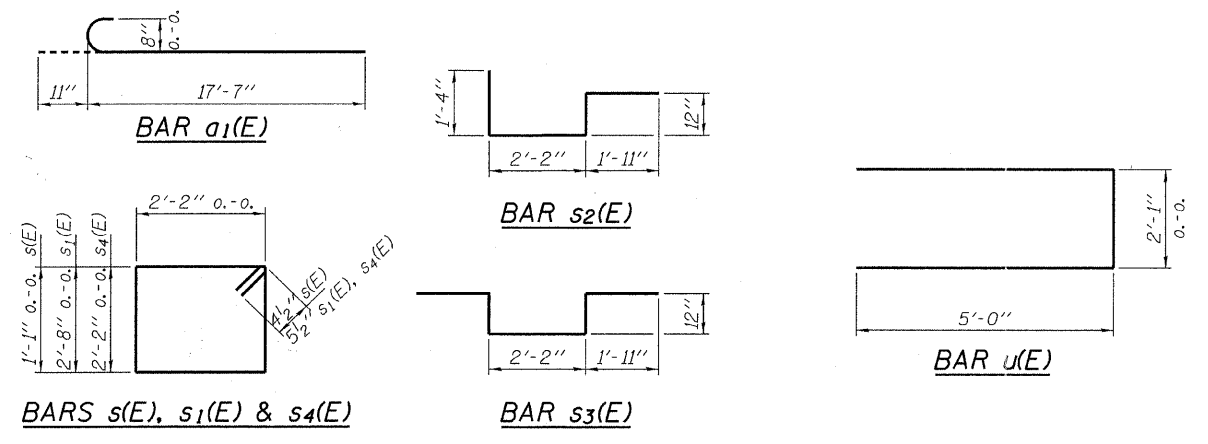
DEAD LOAD DEFLECTION DIAGRAM
 (Includes weight of concrete only.)

Notes:
 The deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.
 The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework in addition to allowance for dead load deflection.



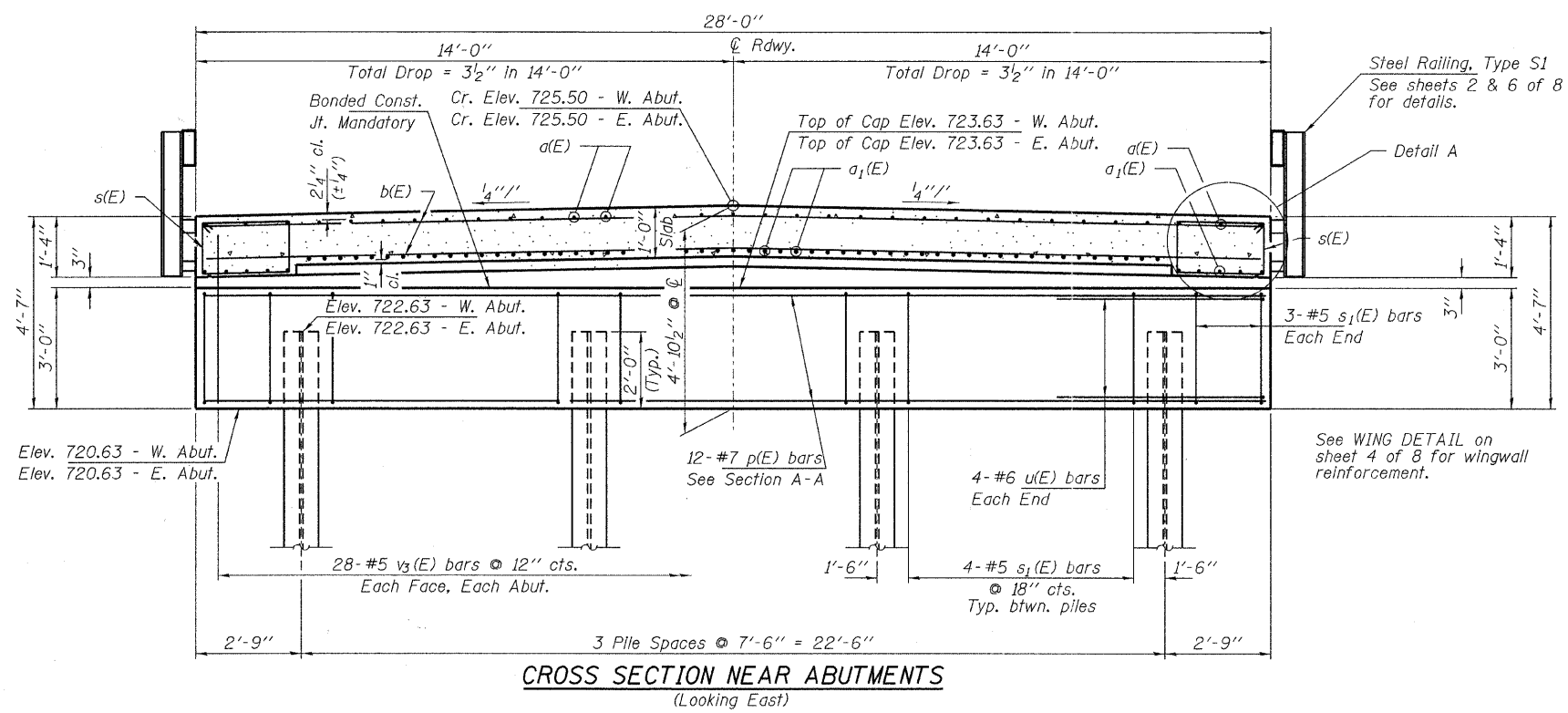
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	96	#8	29'-8"	—
a ₁ (E)	78	#8	18'-6"	—
a ₂ (E)	39	#8	21'-0"	—
b(E)	92	#5	27'-8"	—
h(E)	56	#5	8'-3"	—
p(E)	44	#7	27'-8"	—
s(E)	110	#4	7'-3"	□
s ₁ (E)	36	#5	10'-7"	□
s ₂ (E)	56	#5	6'-5"	□
s ₃ (E)	56	#5	8'-0"	□
s ₄ (E)	40	#5	9'-7"	□
u(E)	28	#6	12'-1"	—
v(E)	16	#4	2'-4"	—
v ₁ (E)	16	#4	3'-4"	—
v ₂ (E)	32	#4	4'-4"	—
v ₃ (E)	224	#5	3'-2"	—
Concrete Structures			Cu. Yd.	32.7
Concrete Superstructure			Cu. Yd.	67.1
Concrete Encasement			Cu. Yd.	10.2
Reinforcement Bars, Epoxy Coated			Pound	22,840
Steel Pile HP10x42			Foot	685
Test Pile Steel HP10x42			Each	2
Name Plates			Each	1

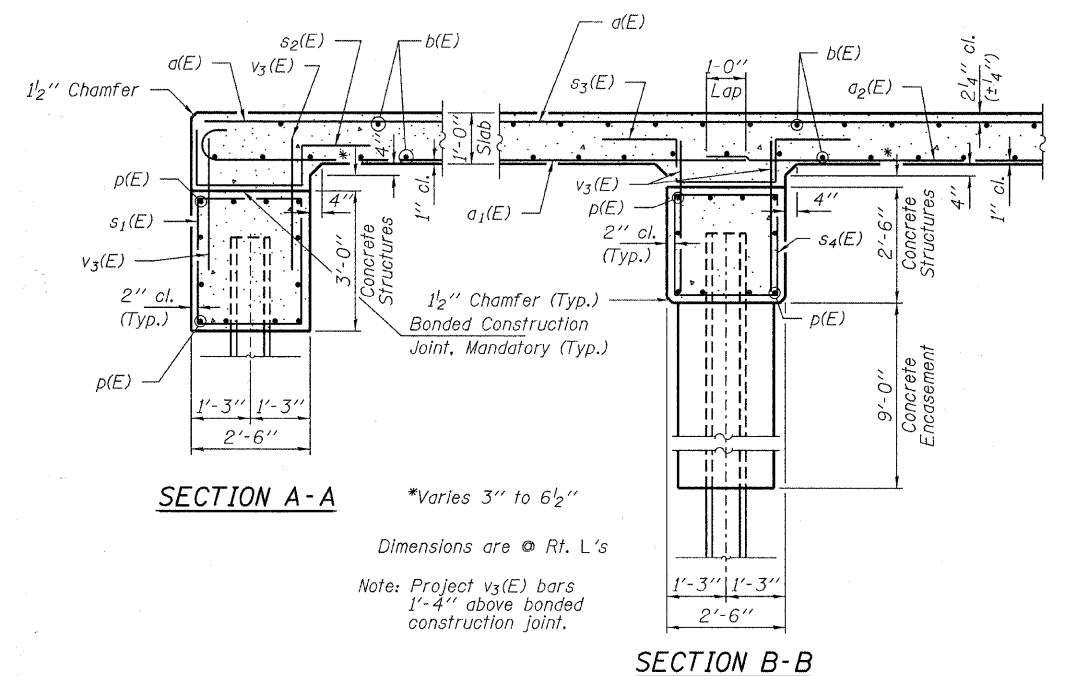


MIN. BAR LAPS
#8 = 5'-2"

Reinforcement bars designated (E) shall be epoxy coated. For Elevations, Sections A-A, and B-B see sheet 5 of 8. For Edge Beam Details see Detail A on sheet 5 of 8.



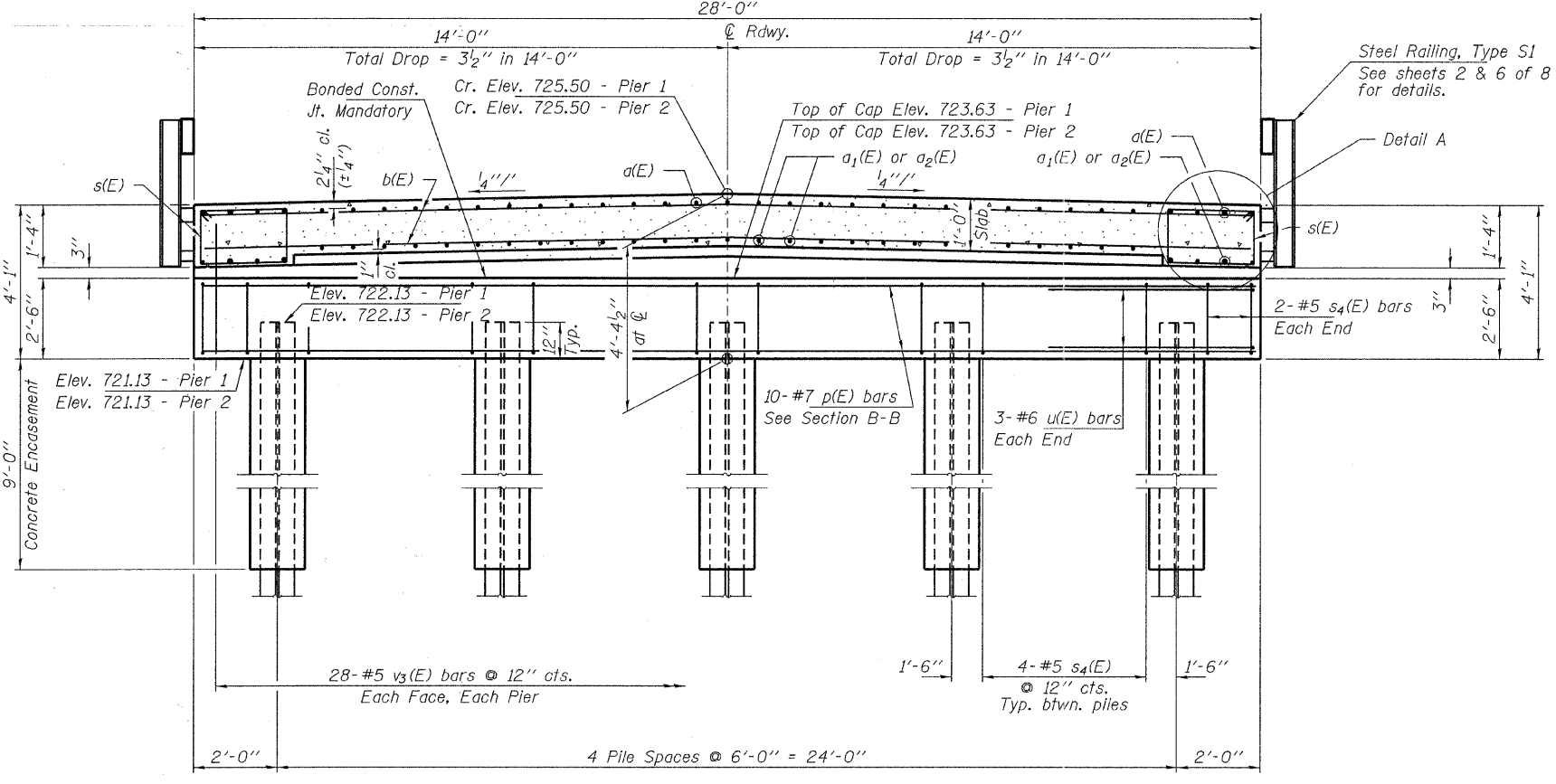
CROSS SECTION NEAR ABUTMENTS
(Looking East)



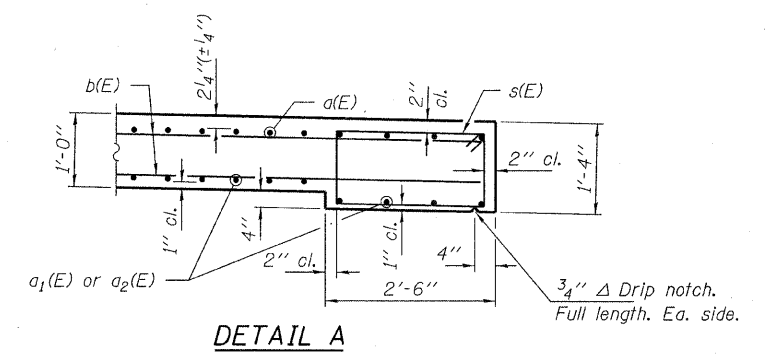
SECTION A-A

SECTION B-B

*Varies 3" to 6 1/2"
Dimensions are @ Rt. L's
Note: Project v3(E) bars 1'-4" above bonded construction joint.



CROSS SECTION AT PIERS
(Looking East)

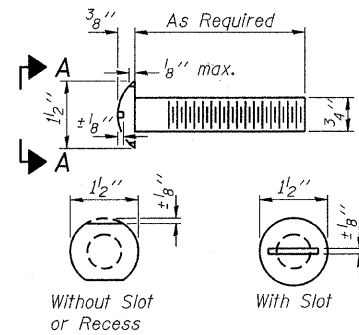


DETAIL A

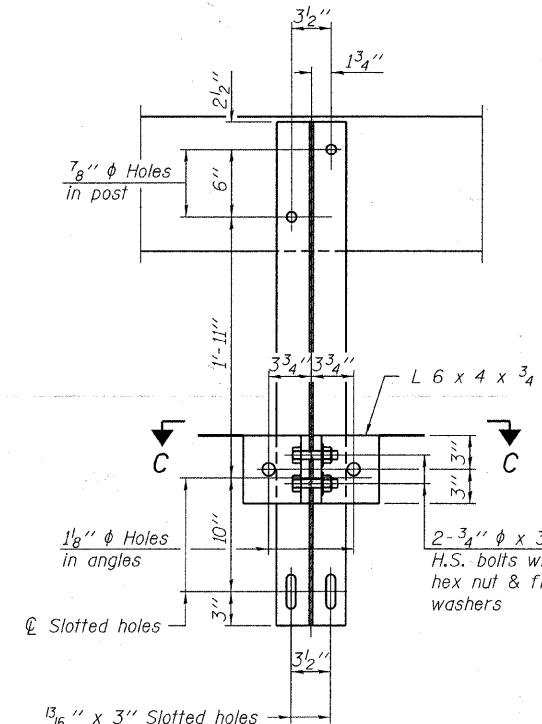
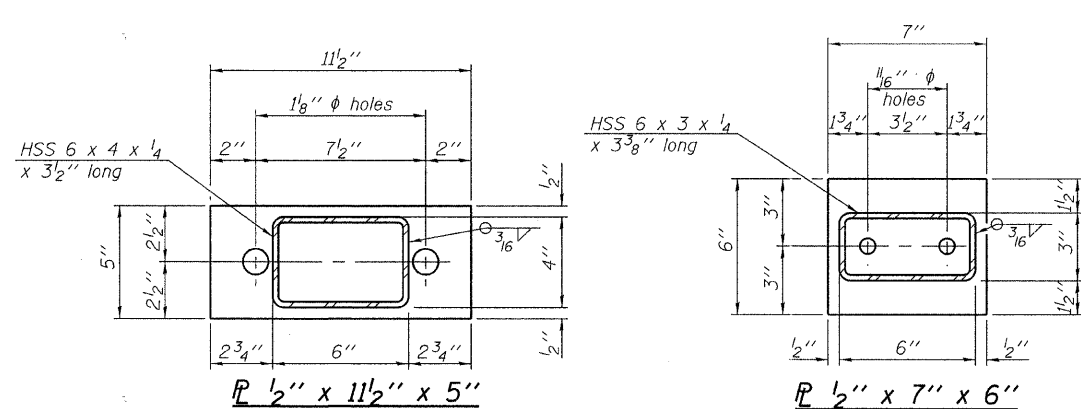
PILE DATA

Type and Size	Steel Piles HP10x42
No. Req'd.	*18
Nominal Req'd Bearing	136 Kips/Pile @ Abuts. 190 Kips/Pile @ Piers
Factored Resistance Available	75 Kips/Pile @ Abuts. 105 Kips/Pile @ Piers
Est. Lengths	40 Ft/Pile @ Abuts. 45 Ft/Pile @ Piers

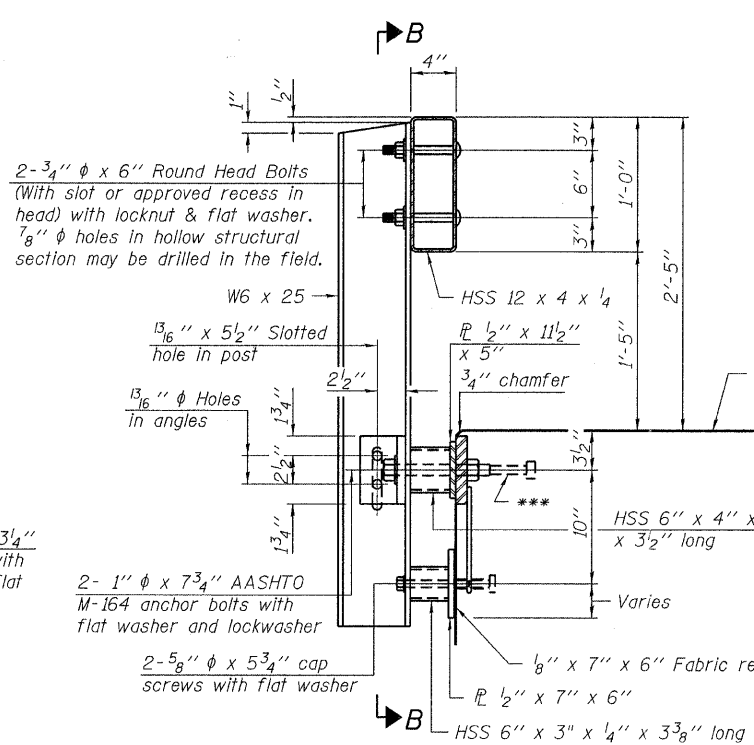
Notes: The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information
All piles shall be driven to a minimum tip elevation of 699.0, 15 feet below the stream flowline.
*Includes two test piles to be driven in permanent locations, one at the West Abutment and one at Pier 2.



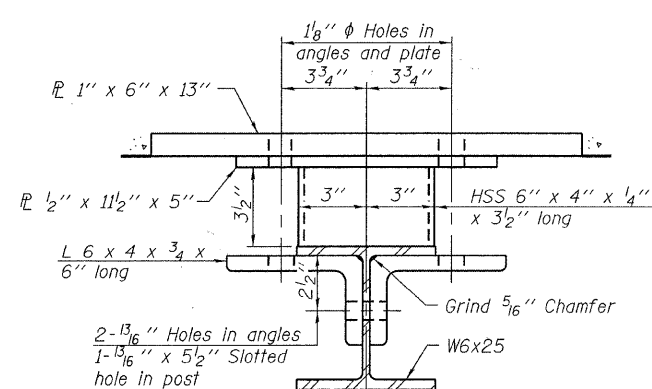
**VIEW A-A
ROUND HEAD BOLT**



SECTION B-B

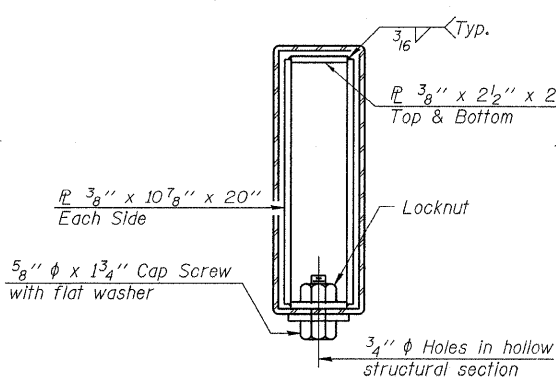


SECTION AT RAILING POST

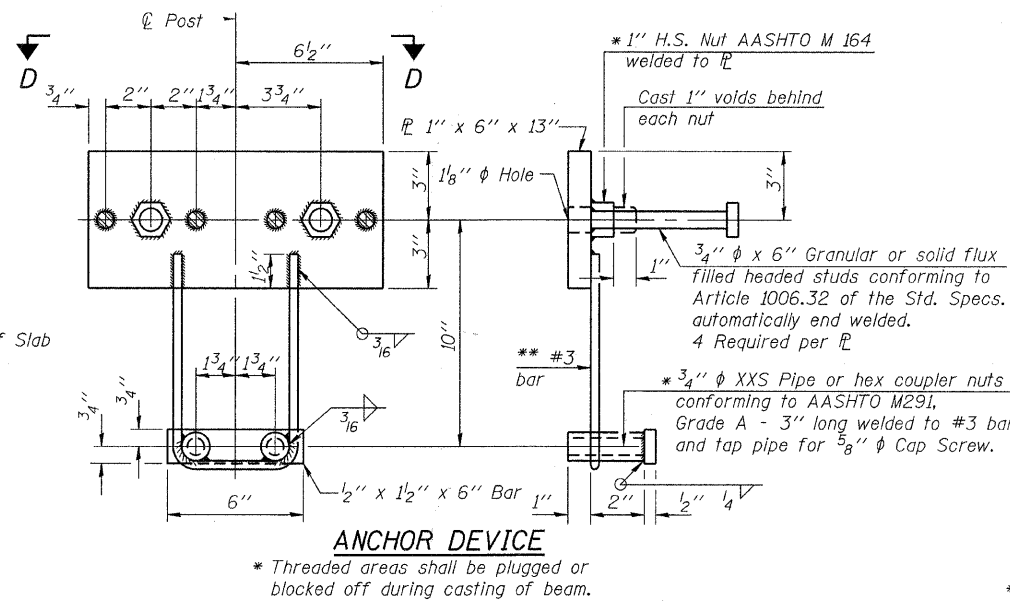


SECTION C-C

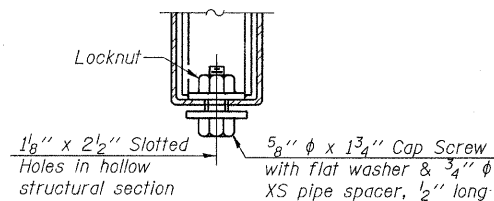
Reinforcement bars in the top of the slab may be placed with a 1/2 inch minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



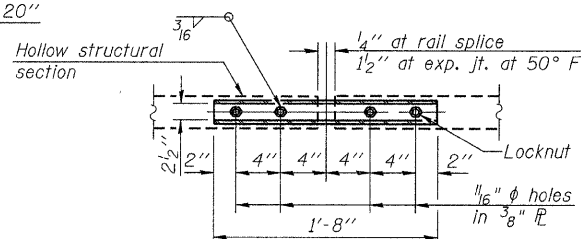
SECTIONS AT RAIL SPLICE



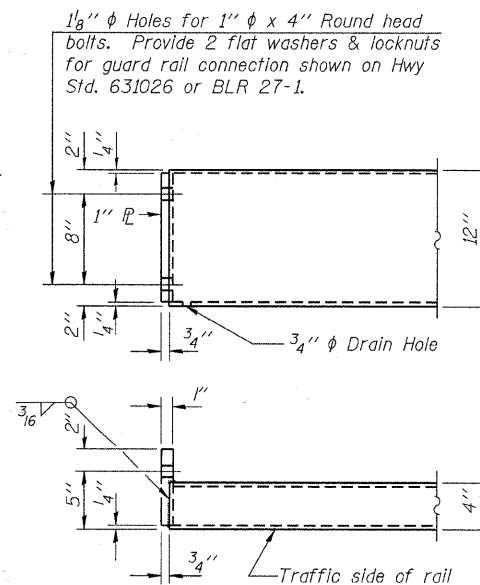
ANCHOR DEVICE



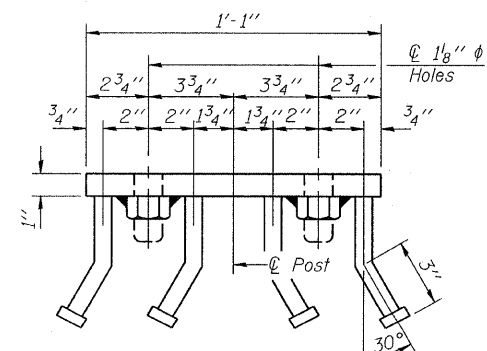
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

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

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

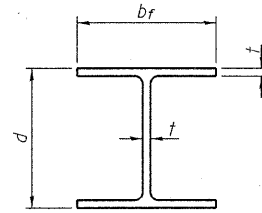
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3005 STEVENSON DRIVE, SUITE 201		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 10/20/2011		
LSI/PE/SR CORP. 184-000059			

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 057-4624

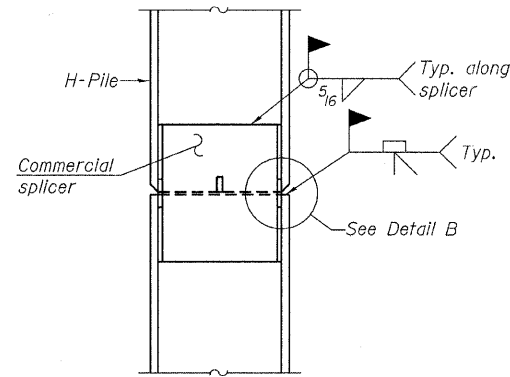
SHEET NO. 6 OF 8 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-18131-00-BR	McLEAN	20	18
GRIDLEY ROAD DISTRICT		CONTRACT NO. 91450		
[ILLINOIS] FED. AID PROJECT BR05-01130331				

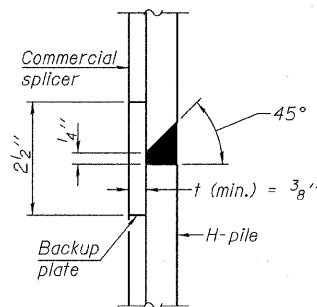


STEEL PILE TABLE

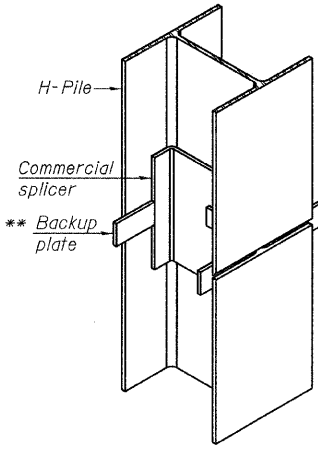
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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

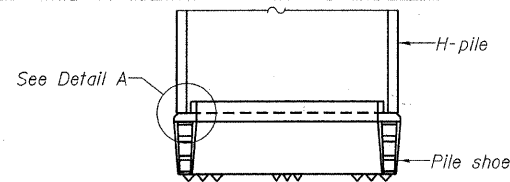


DETAIL "B"

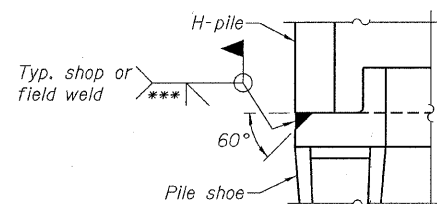


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

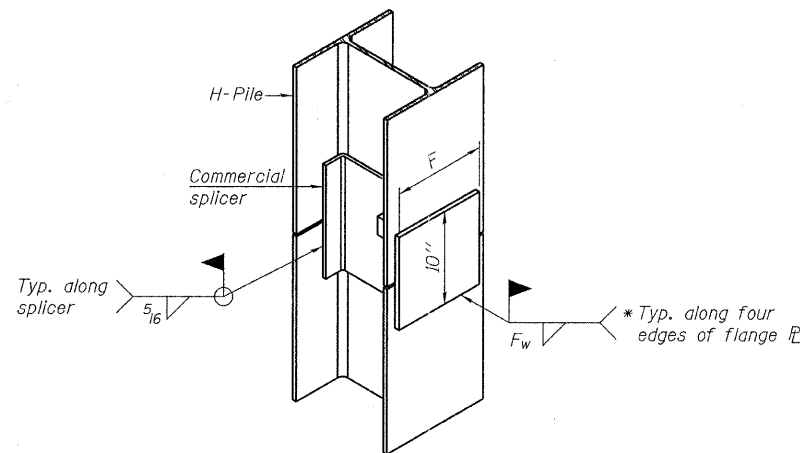


ELEVATION



DETAIL A

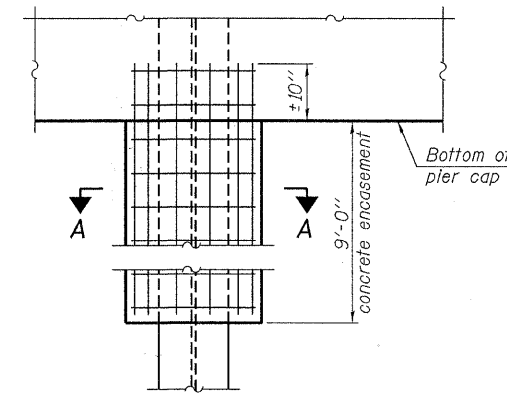
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

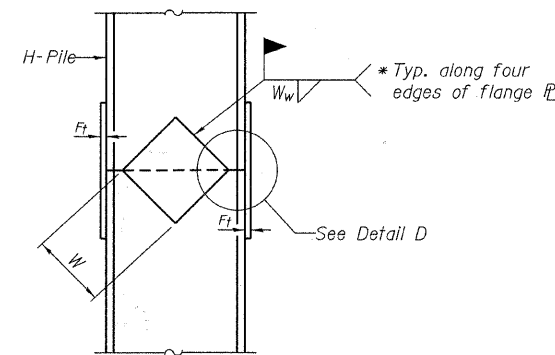
WELDED COMMERCIAL SPLICE ALTERNATE

- * 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.).

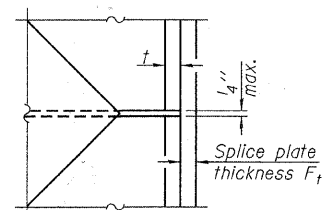


ELEVATION

PILE ENCASEMENT

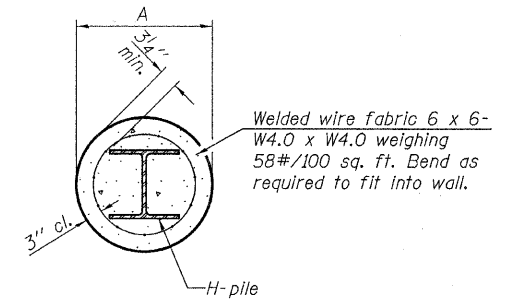


ELEVATION



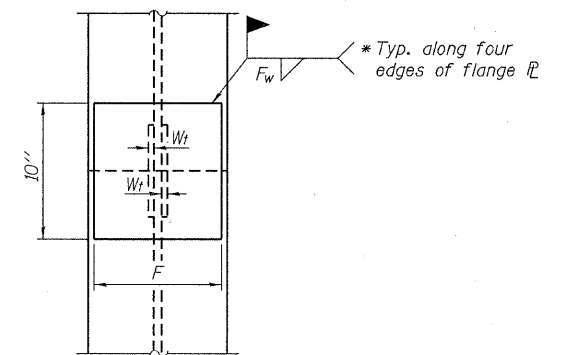
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

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



END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
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 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 1/16"	6 1/2"	5 1/8"	1/2"
x74	10"	7/8"	1 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"

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

F-HP

7-1-10

FILE NAME = 090141-sht-br1.dgn	USER NAME =
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. / CORP. / 184-000090	PLOT SCALE =
	PLOT DATE = 10/20/2011

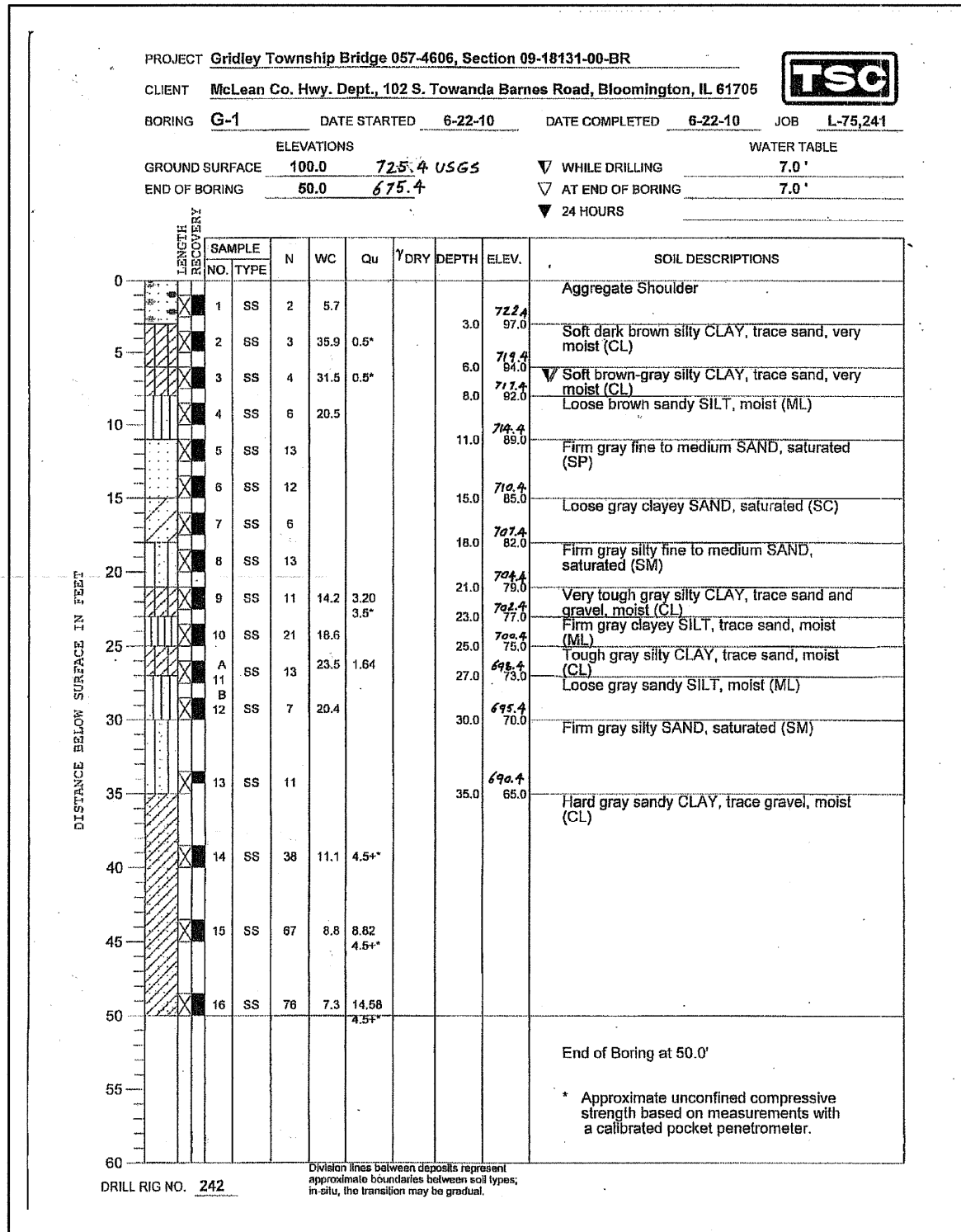
DESIGNED - D.W.T.	REVISD -
CHECKED - S.W.M.	REVISD -
DRAWN - D.A.B.	REVISD -
CHECKED - S.W.M.	REVISD -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

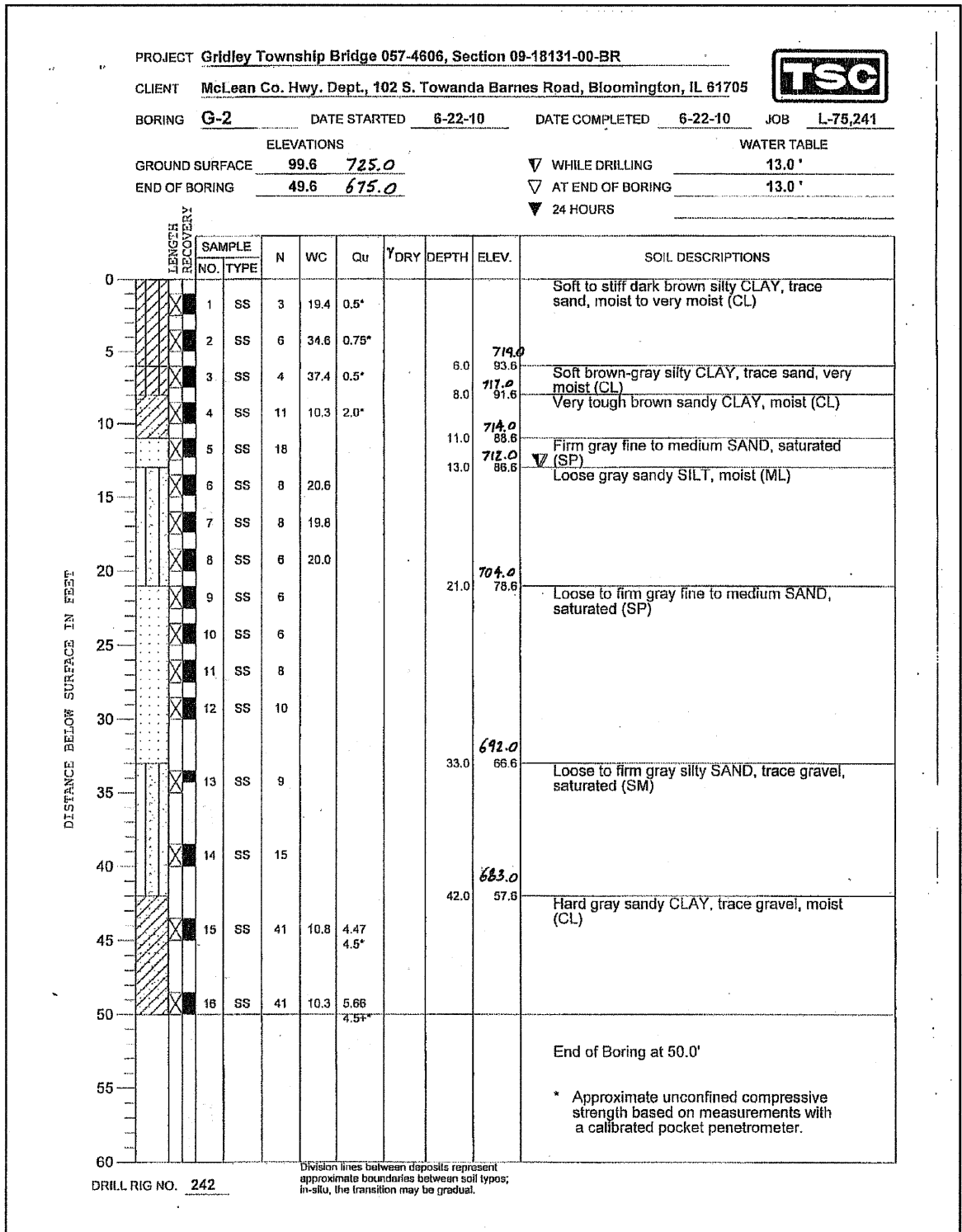
HP PILE DETAILS
STRUCTURE NO. 057-4624

SHEET NO. 7 OF 8 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-18131-00-BR	McLEAN	20	19
GRIDLEY ROAD DISTRICT			CONTRACT NO. 91450	
[ILLINOIS] FED. AID PROJECT BR05-011310331				



BORING G-1



BORING G-2