

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 221A	10-07133-00-BR	McLEAN	19	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 91455	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

PROJECT BROS-0113(034)
SECTION 10-07133-00-BR
BLUE MOUND ROAD DISTRICT
McLEAN COUNTY
T.R. 221A / 1700N ROAD
PROPOSED STRUCTURE NO. 057-3519
SCHULDT BRIDGE
JOB NO. C-95-316-11

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN & PROFILE
5.-10.	STATION CROSS SECTIONS
11.-17.	BRIDGE PLANS
18.-19.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-01	TRAFFIC CONTROL DEVICES
BLR 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 23-3	TRAFFIC BARRIER TERMINAL, TYPE 1
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

UTILITIES

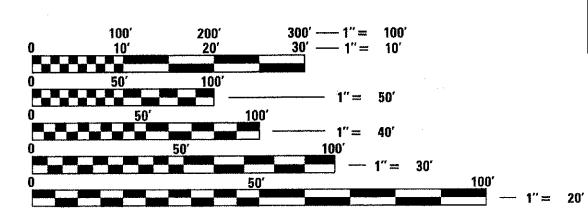
AMEREN IP (NORTH)
501 E. LAFAYETTE
BLOOMINGTON, IL 61701

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

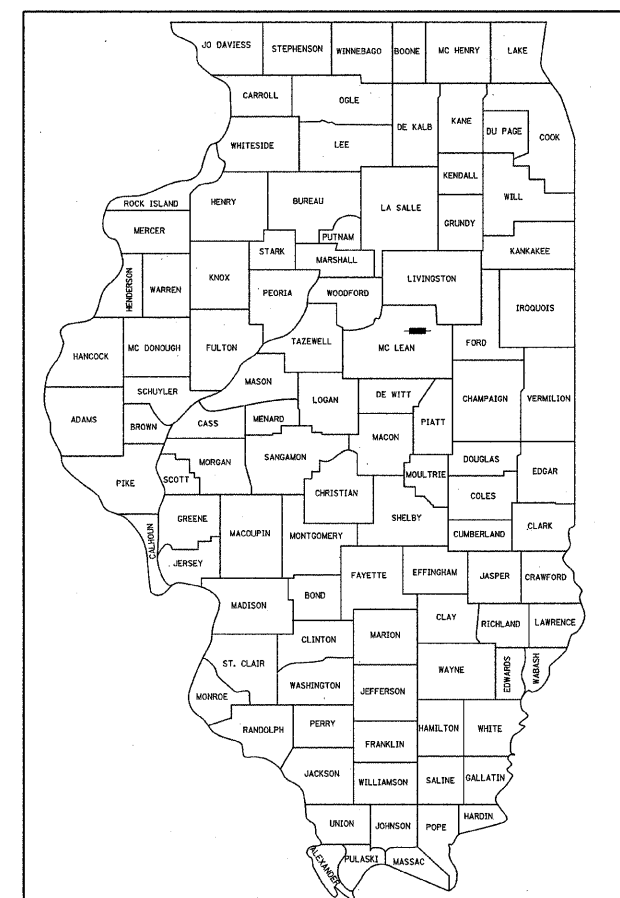
FRONTIER COMMUNICATIONS
104 MULBERRY
NORMAL, IL 61761

NICOR GAS
1305 MARTIN LUTHER KING DRIVE
BLOOMINGTON, IL 61701

VILLAGE OF COOKSVILLE
205 SOUTH WALNUT
COOKSVILLE, IL 61730

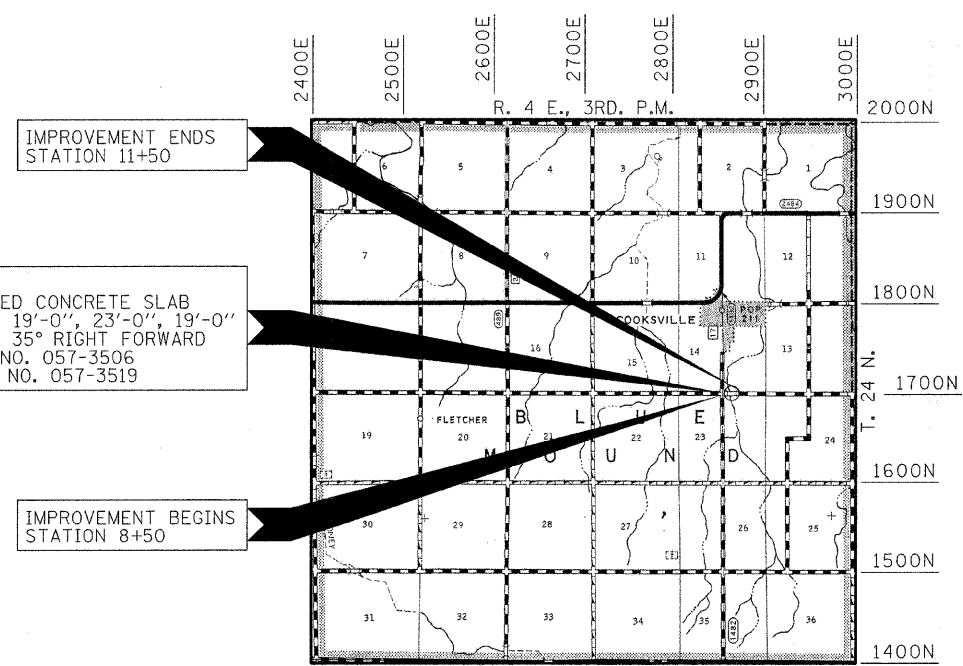


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



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

FUNCTIONAL CLASSIFICATION: LOCAL ROAD (0-250 ADT)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 50 ADT (2005)



STA. 10+01
CONTINUOUS REINFORCED CONCRETE SLAB
BRIDGE, THREE SPANS: 19'-0", 23'-0", 19'-0"
28'-0" RDWY.; SKEW = 35° RIGHT FORWARD
EXISTING STRUCTURE NO. 057-3506
PROPOSED STRUCTURE NO. 057-3519

IMPROVEMENT ENDS
STATION 11+50

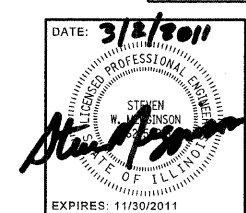
IMPROVEMENT BEGINS
STATION 8+50

LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 300 FEET = 0.057 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	<i>[Signature]</i> 20 11 COUNTY ENGINEER
APPROVED	<i>[Signature]</i> 3-3-20 11 ROAD COMMISSIONER
PASSED	<i>[Signature]</i> March 10 20 11 DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	<i>[Signature]</i> March 10 20 11 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

EXPIRES: 11/30/2011
PROJECT NUMBER: 10.0353.130
DATE: 01/16/11

CONTRACT NO. 91455

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE	
		UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	135
20300100	CHANNEL EXCAVATION	CU YD	250
20400800	FURNISHED EXCAVATION	CU YD	45
20700110	POROUS GRANULAR EMBANKMENT	TON	89
28000400	PERIMETER EROSION BARRIER	FOOT	240
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	330
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	34.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	79.3
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	34,160
* 50900205	STEEL RAILING, TYPE S1	FOOT	137
51200700	FURNISHING PRECAST CONCRETE PILES 14"	FOOT	555
51202305	DRIVING PILES	FOOT	555
51203000	TEST PILES PRECAST CONCRETE	EACH	2
51500100	NAME PLATES	EACH	1
^ 542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	100
^ 542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	190
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	40
^ 60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	90
* 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	0.1
^ X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	240
^ Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	120

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

PERIMETER EROSION BARRIER	
	28000400
	FOOT
TR 221A	
LT. STA. 8+50.00 TO LT. STA. 9+50.00	100
LT. STA. 10+10.00 TO LT. STA. 11+50.00	140
TOTAL	240

SEEDING TABLE	
	CLASS 2 (SPECIAL)
	X2501000
	ACRE
TR 221A	
STA. 8+50.00 TO STA. 9+68.97	0.05
STA. 10+33.03 TO STA. 11+50.00	0.05
TOTAL	0.1
USE	0.1

ROADWAY SCHEDULE	
	AGGREGATE SURFACE COURSE, TYPE B
	40200800
	TON
TR 221A	
STA. 8+50.00 TO STA. 9+68.97	163
STA. 10+33.03 TO STA. 11+50.00	160
TOTAL	323
USE	330

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, 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 LAITANCE 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	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100	20300100			CU.YD.	CU.YD.	CU.YD.
TR 221A							
STA 8+50 TO STA 9+85	85		25.00%	100.00%	64	135	-71
STA 10+15 TO STA 11+50	48		25.00%	100.00%	36	138	-102
CHANNEL EXCAVATION ENTRANCE		250	25.00%	70.00%	131	0	131
TOTAL	133	250			231	273	-42
USE	135						-45

FURNISHED EXCAVATION = 45 CU YDS

GUARDRAIL SCHEDULE			
LOCATION	TRAFFIC BARRIER TERMINAL, TYPE 1	TRAFFIC BARRIER TERMINAL, TYPE 5A	TERMINAL MARKER - DIRECT APPLIED
	LR631020	63100075	78201000
	EACH	EACH	EACH
TR 221A			
LT. STA. 9+20.92 TO LT. STA. 9+59.17	1	1	1
RT. STA. 9+40.53 TO RT. STA. 9+78.78	1	1	1
LT. STA. 10+23.22 TO LT. STA. 10+61.47	1	1	1
LT. STA. 10+42.83 TO LT. STA. 10+81.08	1	1	1
TOTAL	4	4	4

FILE NAME = 100353-ah-summary.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2008 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.T.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 164-000089	PLOT DATE = 3/27/2011	CHECKED - S.W.M.	REVISED -
		DATE - 02/16/11	REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

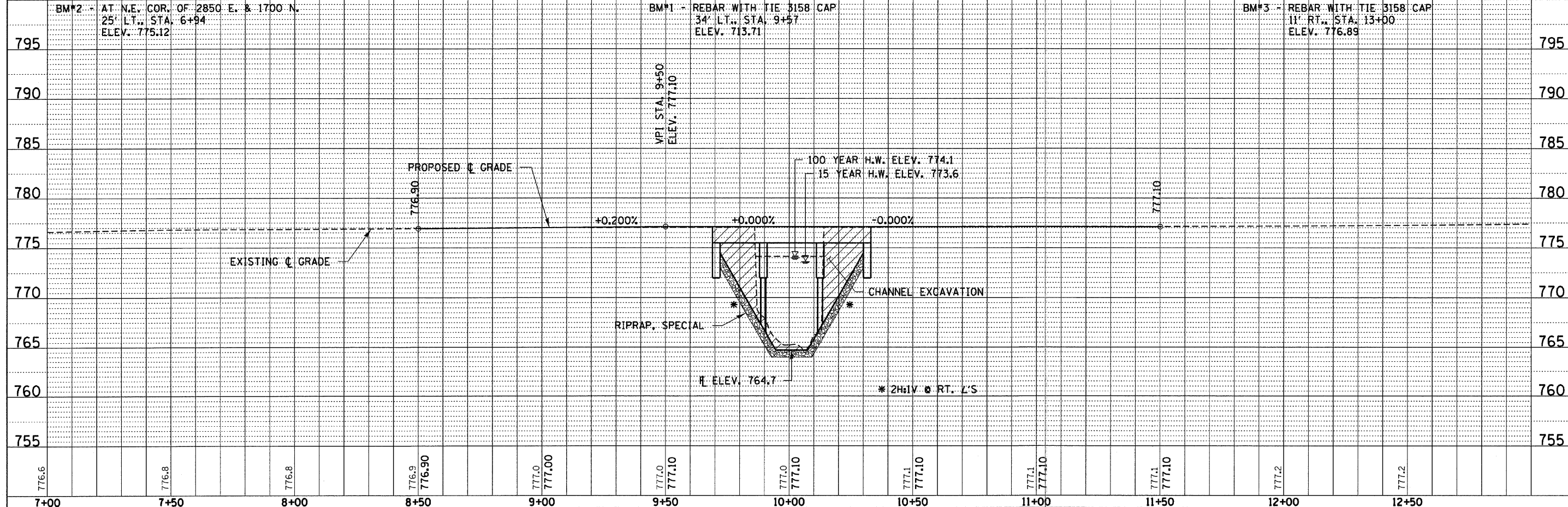
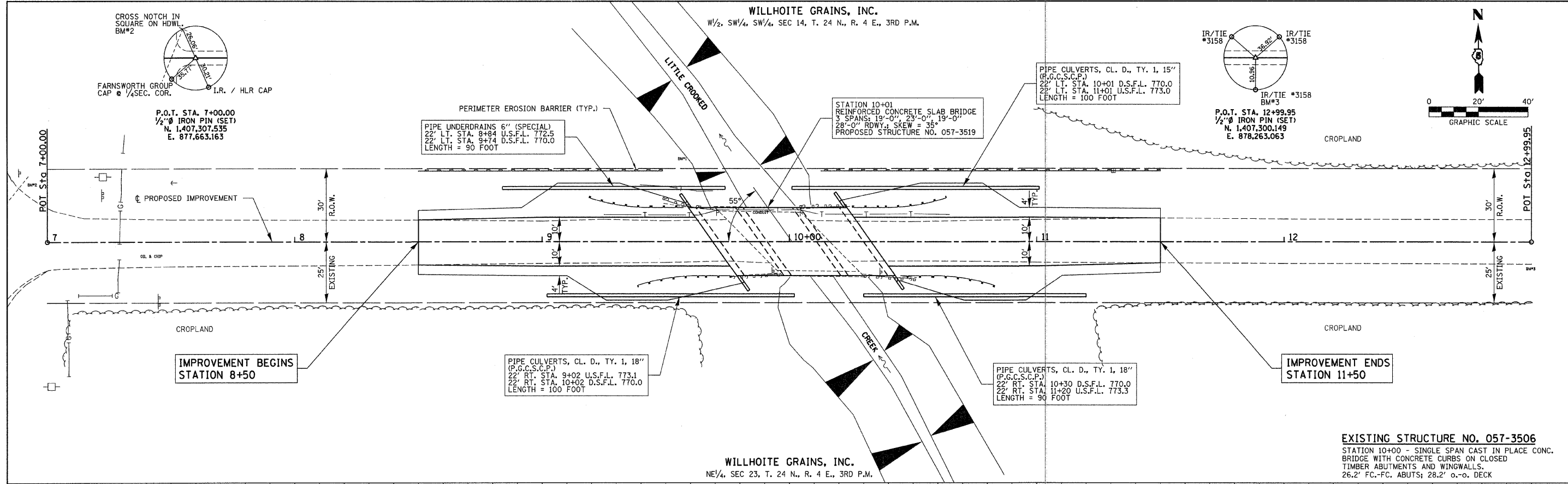
SUMMARY OF QUANTITIES AND GENERAL NOTES
1700N ROAD

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

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	2
BLUE MOUND ROAD DISTRICT			CONTRACT NO. 91455	
ILLINOIS FED. AID PROJECT BR05-01130349				

PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO.	

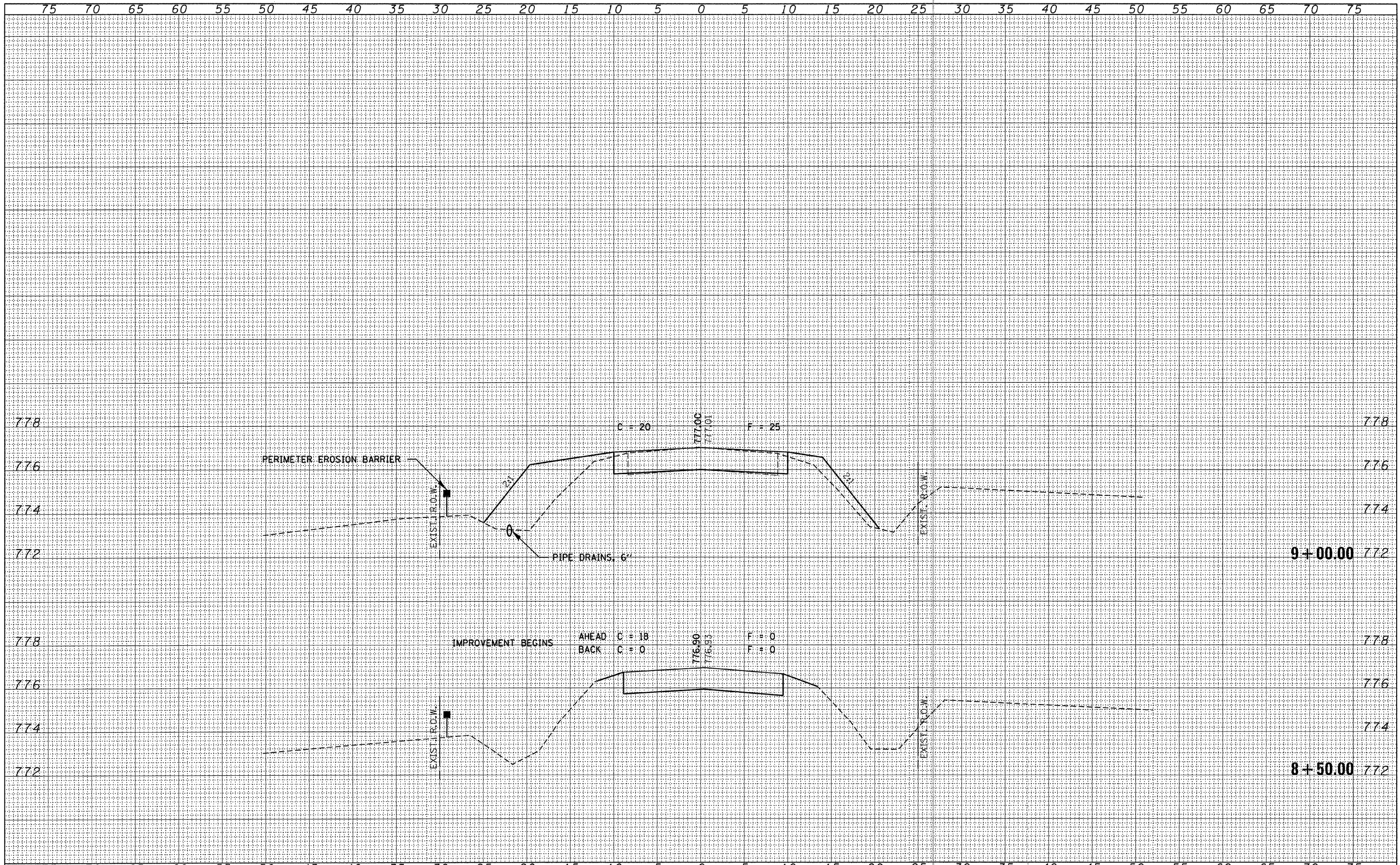
PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO.	



FILE NAME = 100353-eh1-pp1.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS McLEAN COUNTY HIGHWAY DEPARTMENT	PLAN & PROFILE 1700N ROAD	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 309 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761		DRAWN - D.T.M.	REVISED -			221A	10-07133-00-BR	McLEAN	19	4	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			BLUE MOUND ROAD DISTRICT		CONTRACT NO. 91455		ILLINOIS FED. AID PROJECT BR05-01130341	
	PLOT DATE = 3/2/2011	DATE = 12/17/2010	REVISED -			SCALE: H20xV5	SHEET NO. 1 OF 1 SHEETS	STA. 7+00.00 TO STA. 12+99.95			

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

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



FILE NAME = 100353-eh-t-ax.dgn
 HAMPSON, LENZINI AND RENWICK, INC.
 3306 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62709
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.00089

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2011

DESIGNED - A.S.L.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 02/17/11

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 McLEAN COUNTY HIGHWAY DEPARTMENT

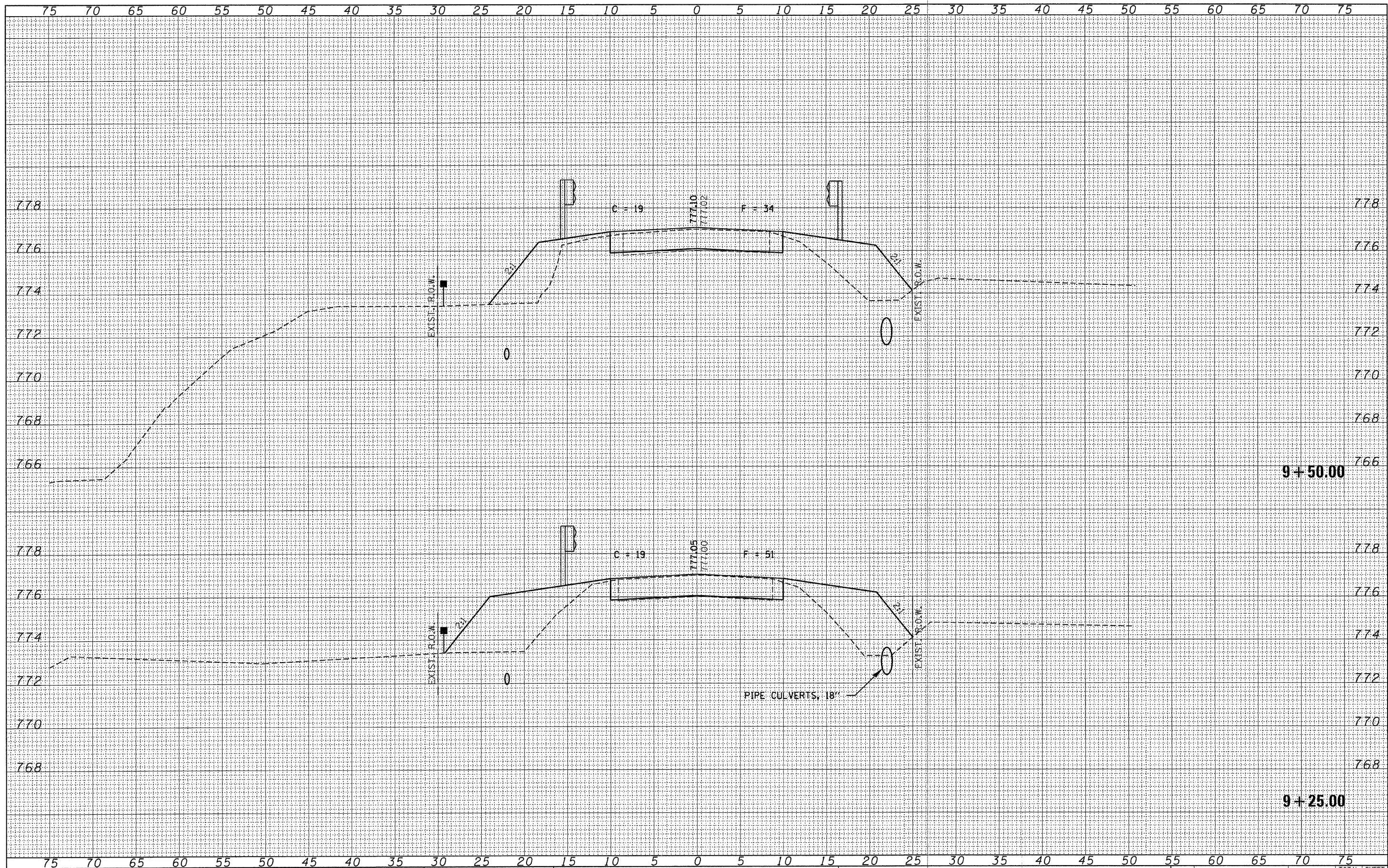
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 SHEET NO. OF SHEETS
 STA. 8+50.00 TO STA. 9+00.00

STATION CROSS SECTIONS
 1700N ROAD

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221A	10-07133-00-BR	McLEAN	19	5
BLUE MOUND ROAD DISTRICT			CONTRACT NO. 91455	
ILLINOIS FED. AID PROJECT BROS-011310341				

BY	DATE
FINAL 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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 HAMPTON, LENZINI AND RENWICK, INC.
 3288 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-000959

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2011

DESIGNED - A.S.L.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 02/17/11	REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

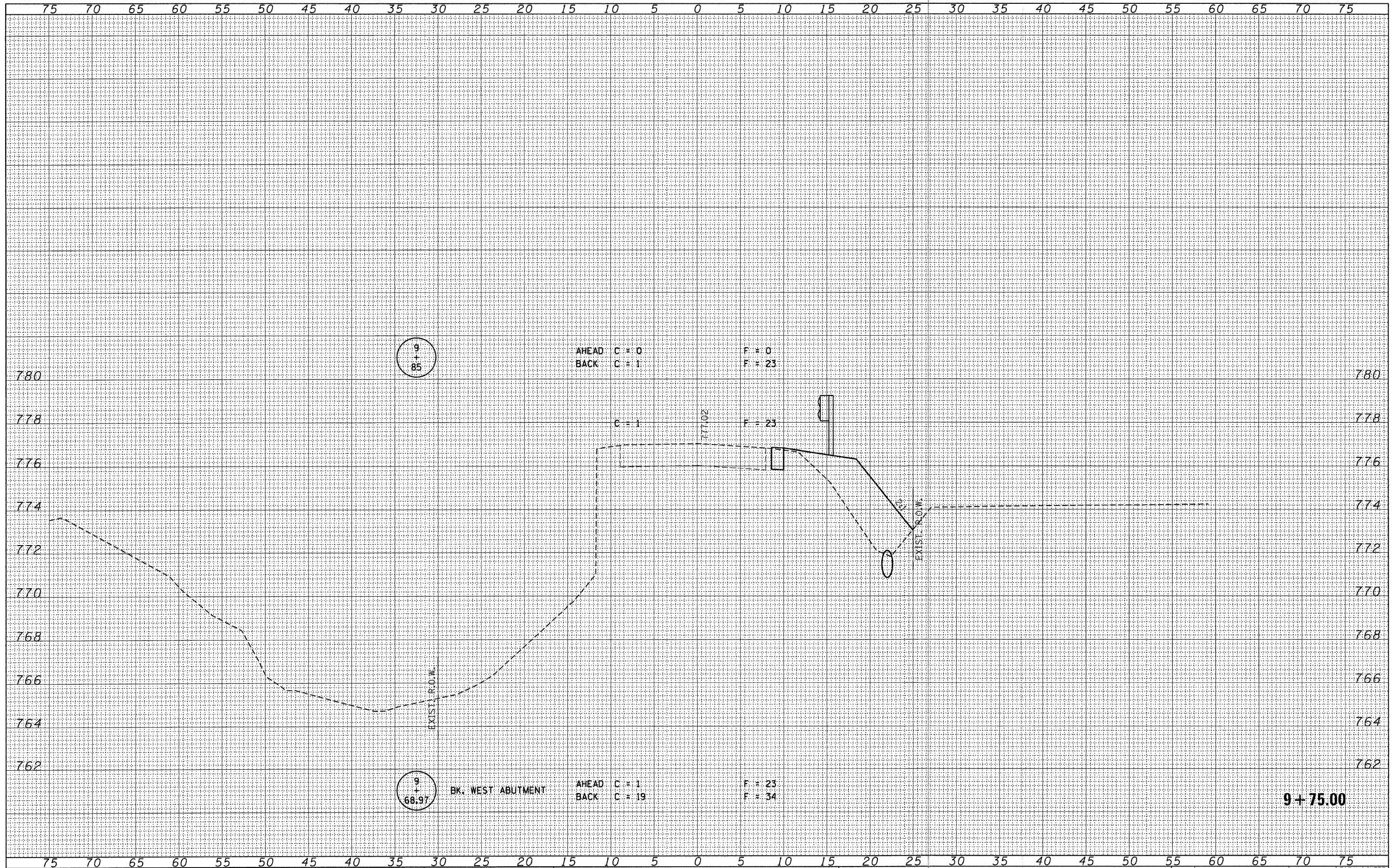
STATION CROSS SECTIONS
1700N ROAD

SCALE: H5:V2 SHEET NO. OF SHEETS STA. 9+25.00 TO STA. 9+50.00

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221A	10-07133-00-BR	McLEAN	19	6
BLUE MOUND ROAD DISTRICT			CONTRACT NO. 91455	
ILLINOIS FED. AID PROJECT BR05-01130341				

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

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



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 HAMPSON, LENZINI AND RENWICK, INC.
 3588 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000889

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2011

DESIGNED - A.S.L.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 02/17/11

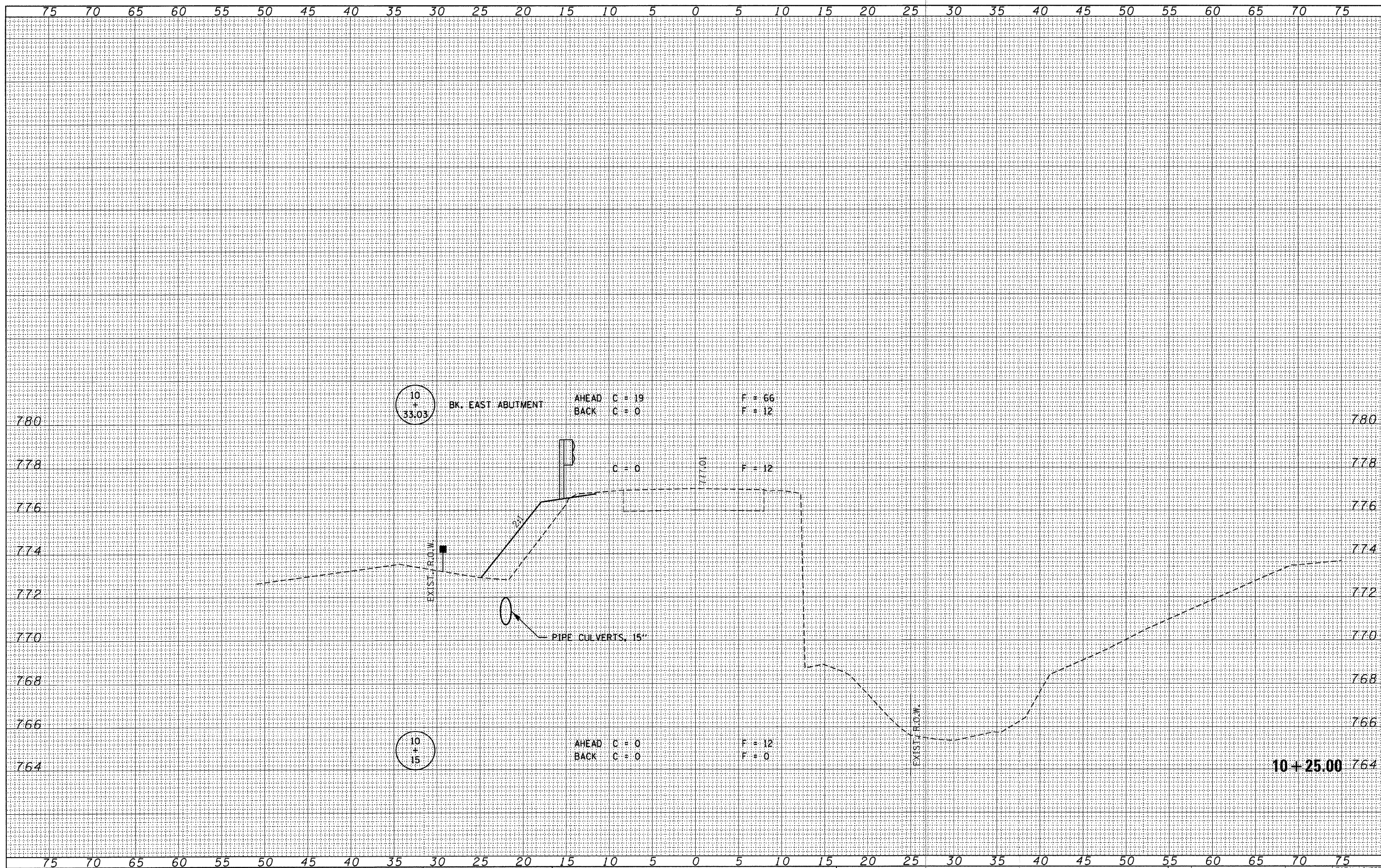
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STATE OF ILLINOIS
 McLEAN COUNTY HIGHWAY DEPARTMENT

SCALE: H5V2
 SHEET NO. OF SHEETS
 STA. 9+75.00 TO STA. 9+75.00

STATION CROSS SECTIONS
 1700N ROAD

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	7
BLUE MOUND ROAD DISTRICT		CONTRACT NO. 91455		
[ILLINOIS] FED. AID PROJECT BROS-01131034				



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

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

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 3366 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62709
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS 1 PE / SE CDRP 184-000889

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2011

DESIGNED - A.S.L.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 02/17/11	REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

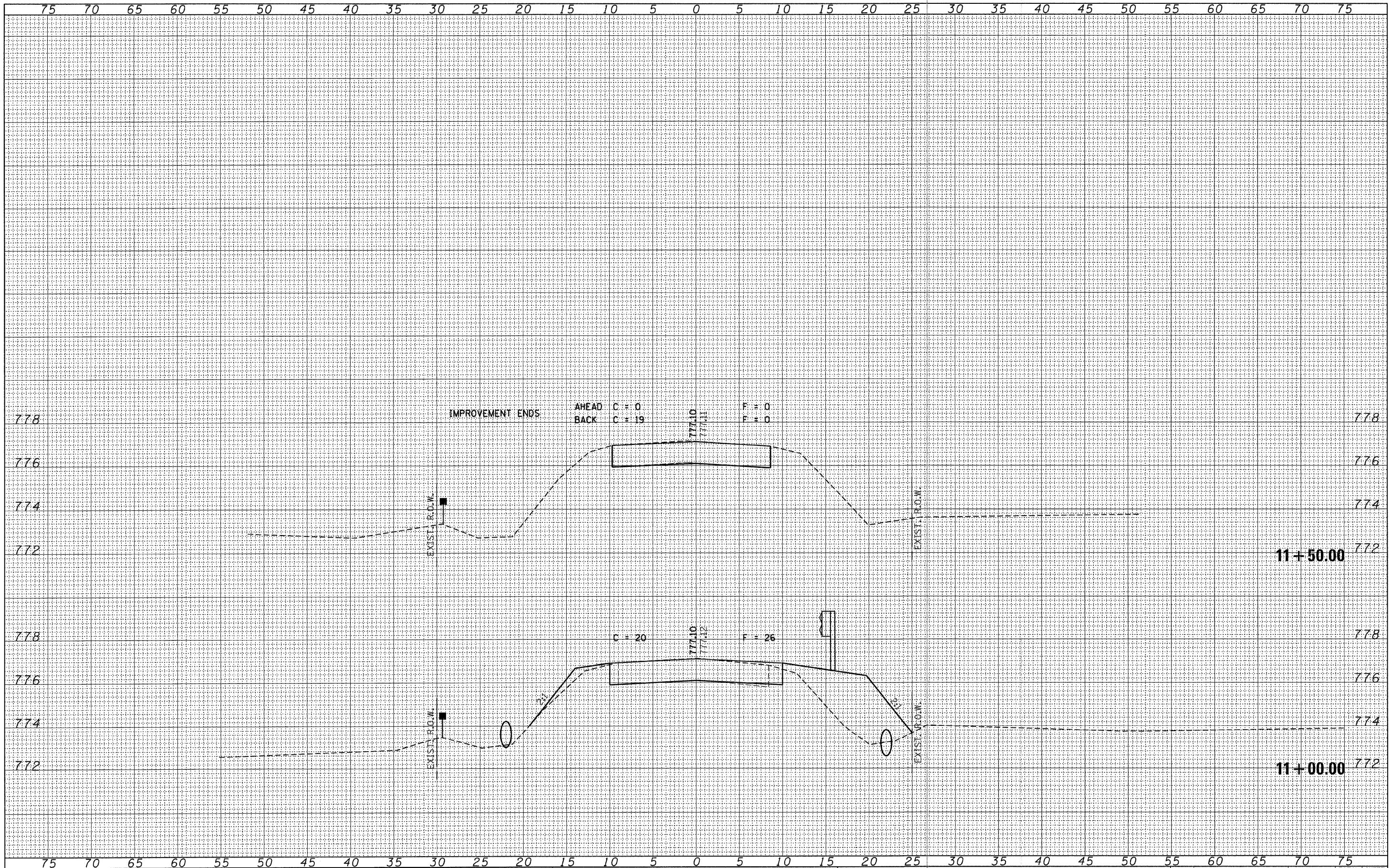
STATION CROSS SECTIONS
1700N ROAD

SCALE: H5:V2 SHEET NO. OF SHEETS STA. 10+25.00 TO STA. 10+25.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	8
BLUE MOUND ROAD DISTRICT			CONTRACT NO. 91455	
ILLINOIS FED. AID PROJECT BR05-0113034				

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

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



FILE NAME = 100353-ah-ss.dgn
HAMPTON, LENZINI AND RENWICK, INC.
 336 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000859

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2011

DESIGNED - A.S.L.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 02/17/11

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

SCALE: H5V2
 SHEET NO. OF SHEETS STA. 11+00.00 TO STA. 11+50.00

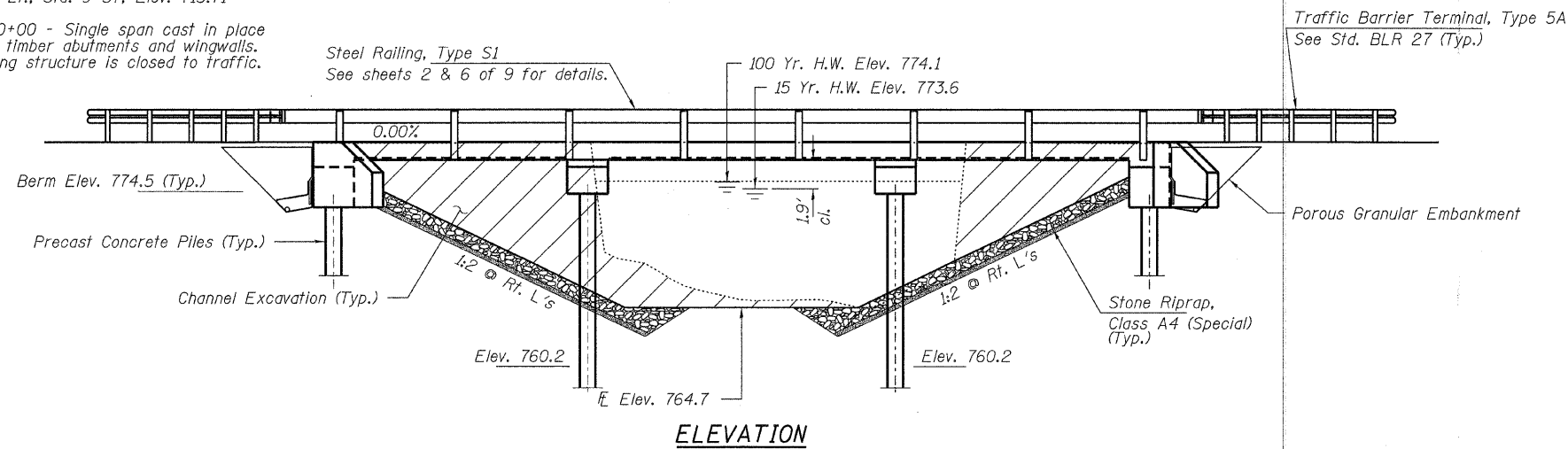
STATION CROSS SECTIONS
1700N ROAD

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	10
BLUE MOUND ROAD DISTRICT			CONTRACT NO. 91455	
[ILLINOIS] FED. AID PROJECT BR05-0113034				

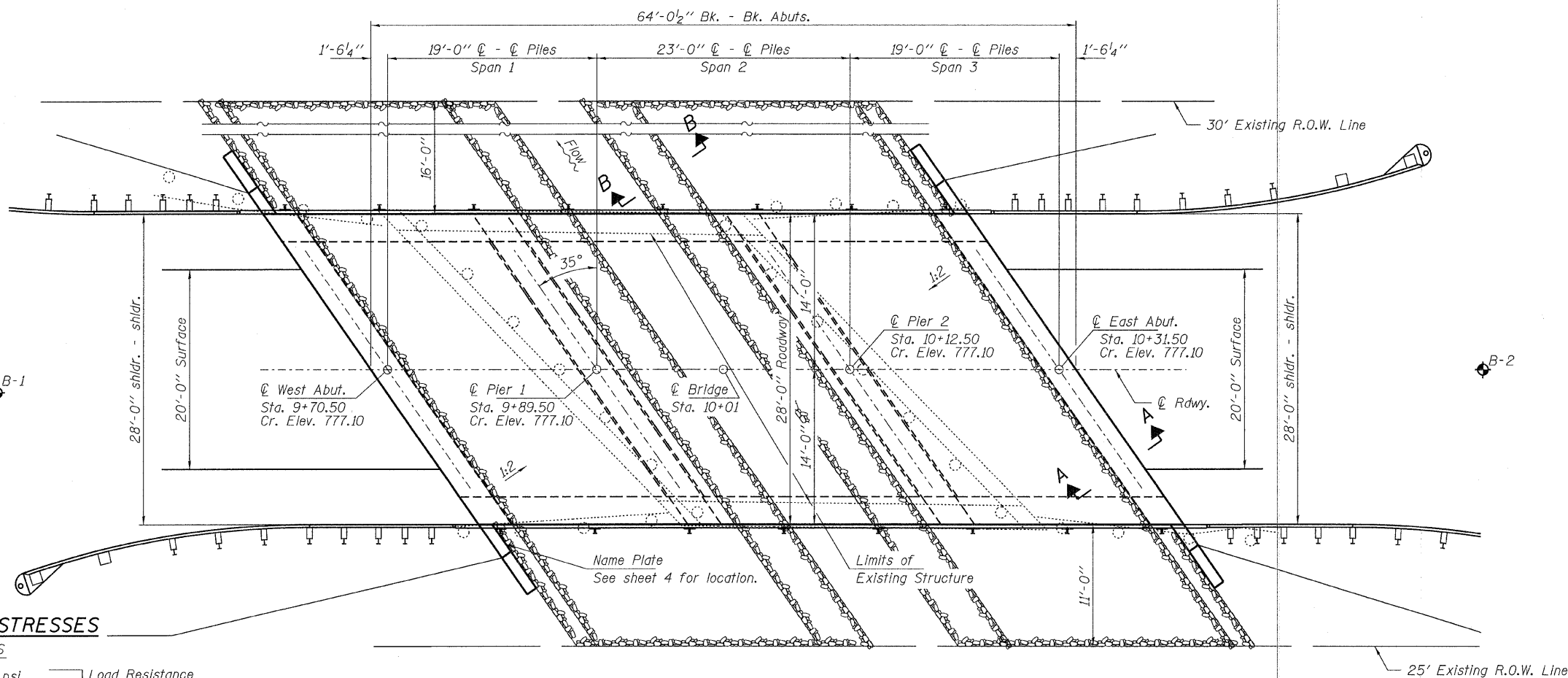
BENCHMARK: Rebar with Tie 3158 Cap; 34.0' Lt., Sta. 9+57; Elev. 713.71

EXISTING STRUCTURE NO. 057-3506; Sta. 10+00 - Single span cast in place concrete bridge with concrete curbs on closed timber abutments and wingwalls. 26.2' fc.-fc. abutts.; 28.2' o.-o. deck. Existing structure is closed to traffic.

No Salvage



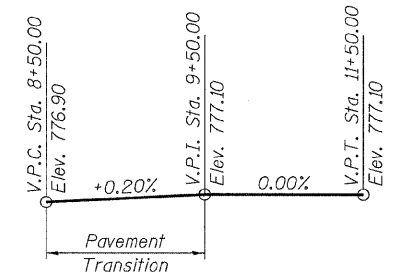
ELEVATION



PLAN

INDEX OF STRUCTURE SHEETS

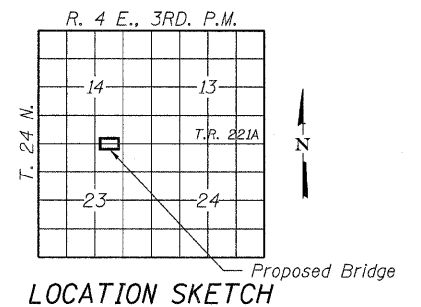
1. General Plan & Elevation
2. General Details
3. Slab Elevations
4. Superstructure
5. Superstructure Details
6. Steel Railing, Type S1
7. Precast Pile Details
- 8.-9. Borings



PROFILE GRADE

SCHULDT BRIDGE
BUILT 2011 BY
LITTLE CROOKED CREEK
McLEAN COUNTY
SEC. 10-07133-00-BR
STR. NO. 057-3519
LOADING HL-93

NAME PLATE
See Std. 515001



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi Load Resistance
 $f_y = 60,000$ 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. (S_{D1}) = 0.120 g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.197 g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 3.4 Sq. Mi.		Existing Low Grade Elev. 776.6 @ Sta. 7+00		Proposed Low Grade Elev. 776.6 @ Sta. 7+00		
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	940	140 210	773.57	0.32 0.16	773.89 773.73
Base	100	1610	150 230	774.07	2.77 0.80	776.84 774.87
Max. Calc.	500	2230	150 270	774.81	2.56 1.80	777.37 776.61

DESIGN SCOUR ELEVATION TABLE

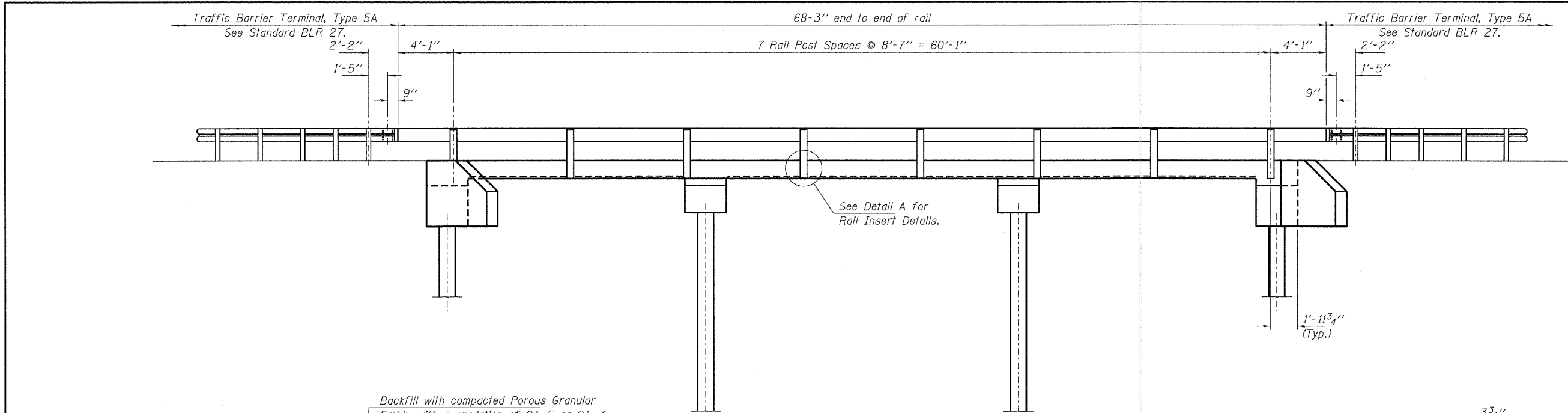
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	774.5	757.7	757.7	774.5

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."

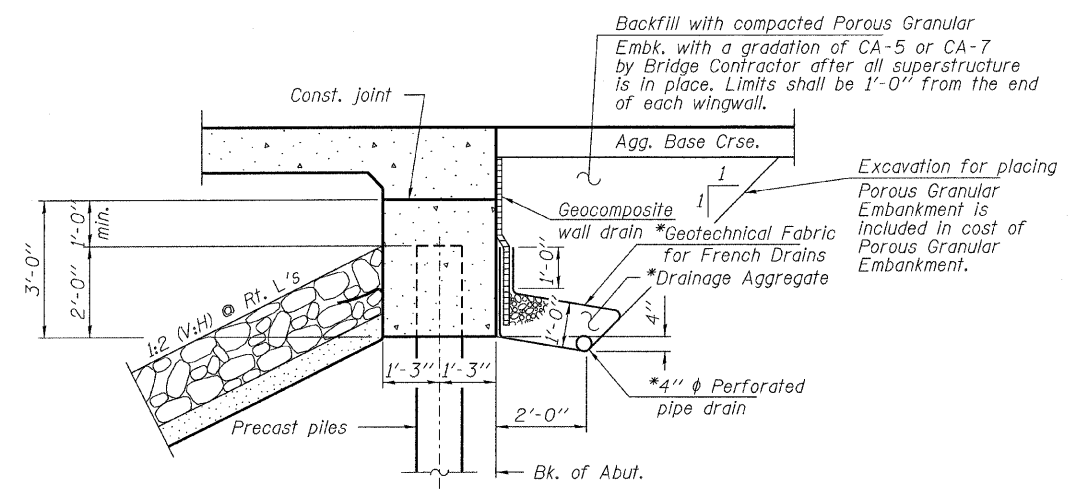
Steven W. Meccinson 3/2/2011
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2012



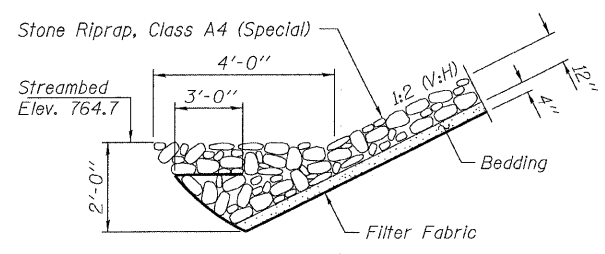
ELEVATION
Showing Rail Post Spaces
See sheet 6 of 9 for Railing Details.



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).

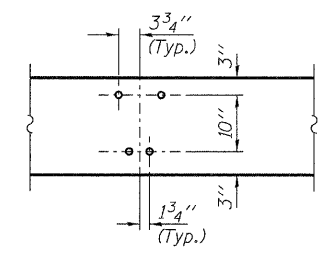


SECTION B-B

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

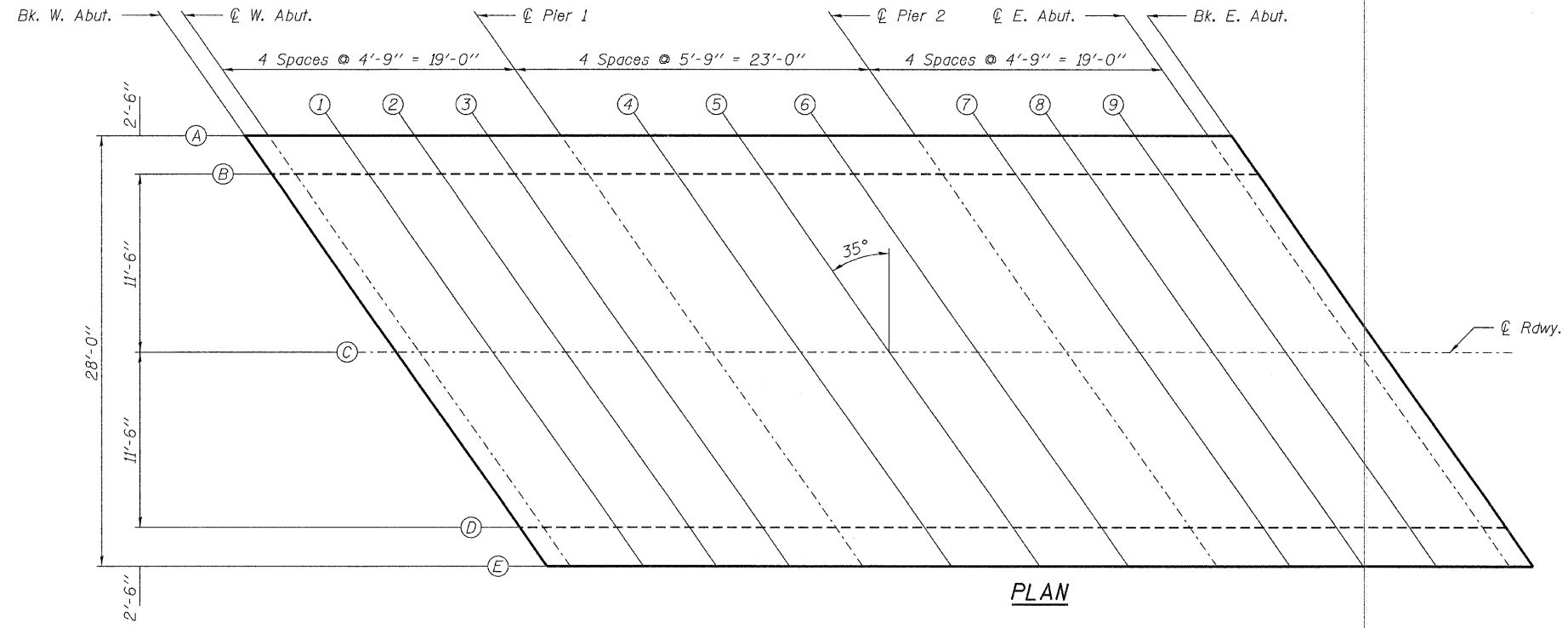
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			250
Porous Granular Embankment	Ton		89	89
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		34.4	34.4
Concrete Superstructure	Cu. Yd.	79.3		79.3
Reinforcement Bars, Epoxy Coated	Pound		34,160	34,160
Steel Railing, Type S1	Foot	137		137
Furnishing Precast Concrete Piles, 14"	Foot		555	555
Driving Piles	Foot		555	555
Test Pile Precast Concrete	Each		2	2
Name Plates	Each		1	1
Geocomposite Wall Drain	Sq. Yd.			40
Stone Riprap, Class A4 (Special)	Ton			240
Pipe Underdrains for Structures, 4"	Foot			120

FILE NAME = 100353-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781	PLOT SCALE =	DRAWN - D.T.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00069	PLOT DATE = 3/2/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

GENERAL DETAILS
STRUCTURE NO. 057-3519

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	12
SCHULTZ BRIDGE		CONTRACT NO. 91455		
SHEET NO. 2 OF 9 SHEETS		ILLINOIS FED. AID PROJECT BR05-0113034		



PLAN

TABLE OF ELEVATIONS

LOCATION	BK. OF W. ABUT	CL OF W. ABUT	SPAN 1			CL OF PIER 1	SPAN 2			CL OF PIER 2	SPAN 3			CL OF E. ABUT	BK OF E. ABUT
LINE	T.	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808
A	ADJ.	776.808	776.808	776.810	776.811	776.809	776.808	776.810	776.811	776.810	776.809	776.811	776.810	776.808	776.808
**	Bott. of Slab	775.475	775.475	775.4767	775.4775	775.4758	775.475	775.4767	775.4775	775.4767	775.475	775.4758	775.4775	775.475	775.475

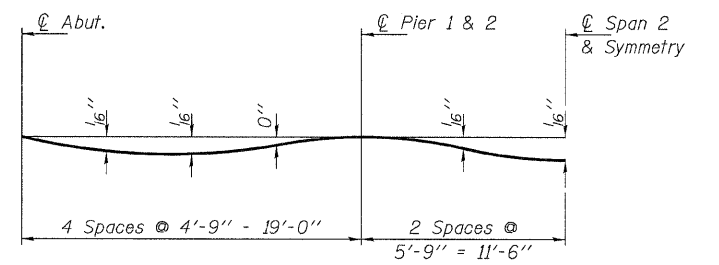
LOCATION	BK. OF W. ABUT	CL OF W. ABUT	SPAN 1			CL OF PIER 1	SPAN 2			CL OF PIER 2	SPAN 3			CL OF E. ABUT	BK OF E. ABUT
LINE	T.	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860
B	ADJ.	776.860	776.860	776.862	776.863	776.861	776.860	776.862	776.863	776.862	776.860	776.861	776.863	776.862	776.860
Bott. of Slab		775.694	775.694	775.695	775.696	775.695	775.694	775.695	775.696	775.695	775.694	775.695	775.696	775.695	775.694

LOCATION	BK. OF W. ABUT	CL OF W. ABUT	SPAN 1			CL OF PIER 1	SPAN 2			CL OF PIER 2	SPAN 3			CL OF E. ABUT	BK OF E. ABUT
LINE	T.	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	777.100	
C	ADJ.	777.100	777.100	777.102	777.103	777.101	777.100	777.102	777.103	777.101	777.100	777.101	777.103	777.102	777.100
Bott. of Slab		775.933	775.933	775.935	775.936	775.934	775.933	775.935	775.936	775.934	775.933	775.934	775.936	775.935	775.933

LOCATION	BK. OF W. ABUT	CL OF W. ABUT	SPAN 1			CL OF PIER 1	SPAN 2			CL OF PIER 2	SPAN 3			CL OF E. ABUT	BK OF E. ABUT
LINE	T.	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860	776.860
D	ADJ.	776.860	776.860	776.862	776.863	776.861	776.860	776.862	776.863	776.862	776.860	776.861	776.863	776.862	776.860
Bott. of Slab		775.694	775.694	775.695	775.696	775.695	775.694	775.695	775.696	775.695	775.694	775.695	775.696	775.695	775.694

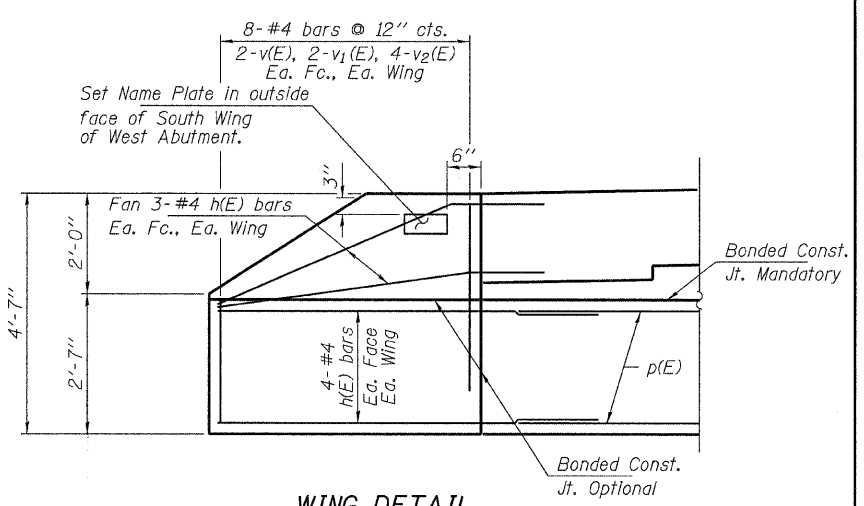
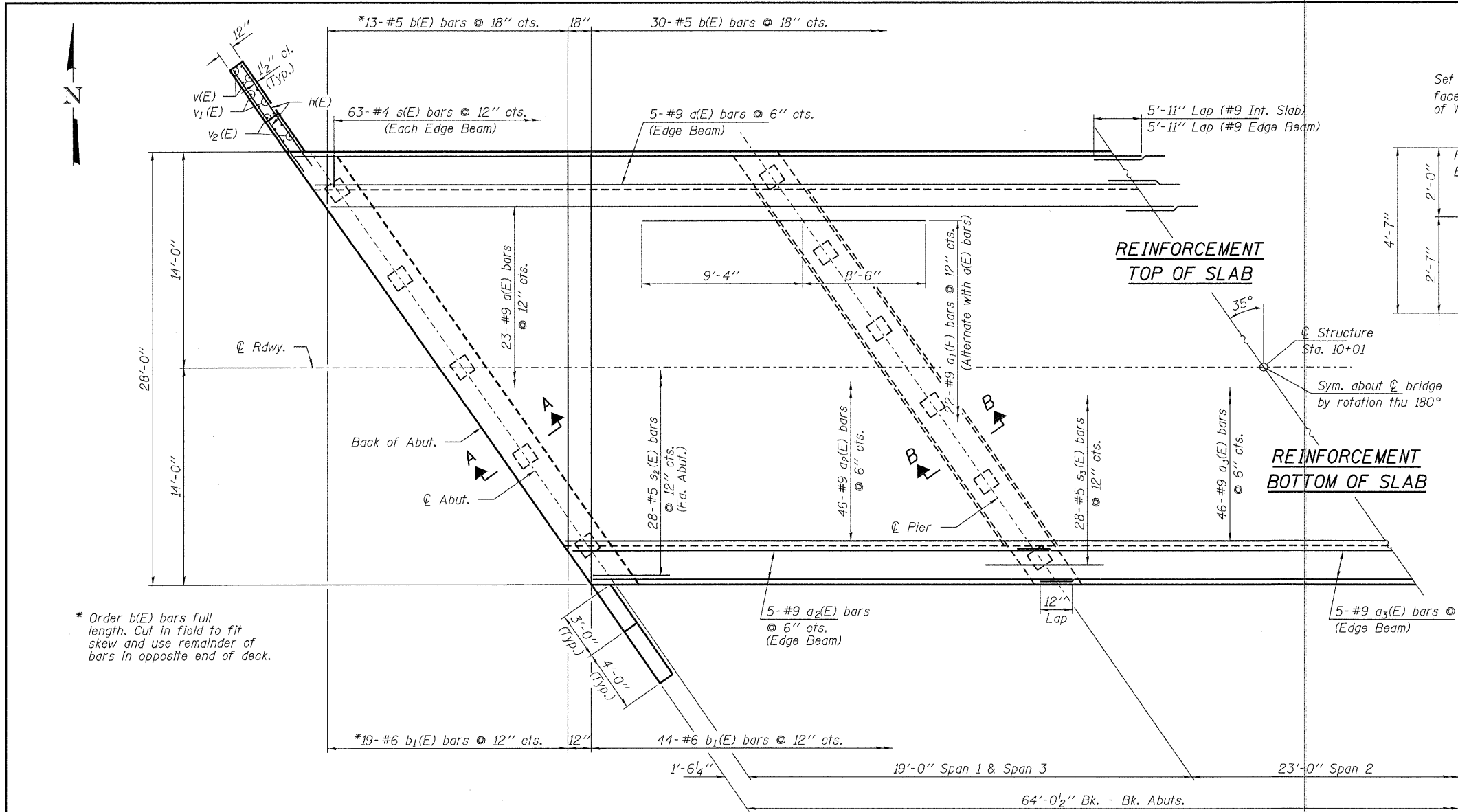
LOCATION	BK. OF W. ABUT	CL OF W. ABUT	SPAN 1			CL OF PIER 1	SPAN 2			CL OF PIER 2	SPAN 3			CL OF E. ABUT	BK OF E. ABUT
LINE	T.	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808	776.808
E	ADJ.	776.808	776.808	776.810	776.811	776.809	776.808	776.810	776.811	776.810	776.809	776.811	776.810	776.808	776.808
**	Bott. of Slab	775.475	775.475	775.477	775.478	775.476	775.475	775.477	775.478	775.477	775.475	775.476	775.478	775.477	775.475

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.

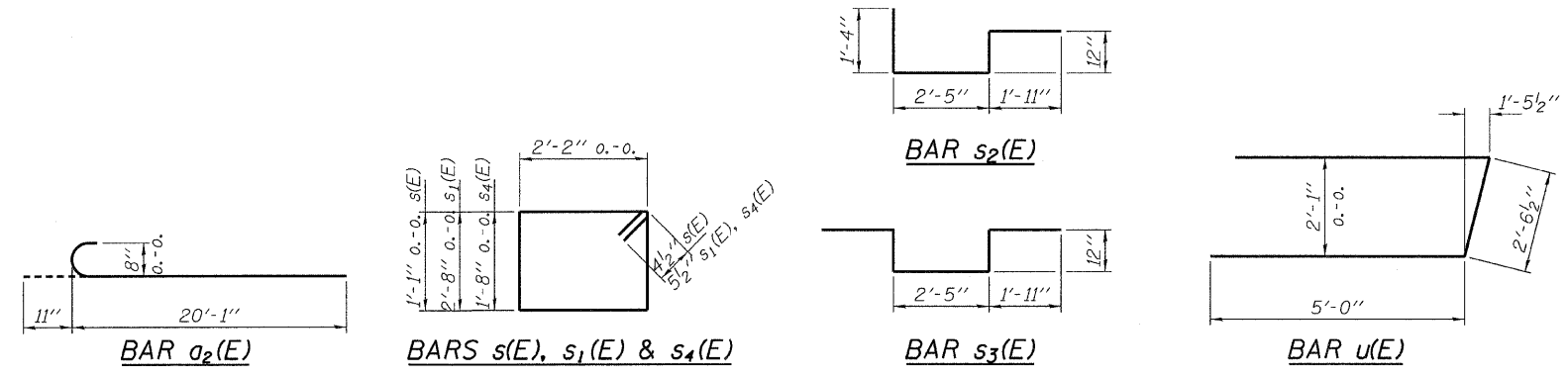


* Order b(E) bars full length. Cut in field to fit skew and use remainder of bars in opposite end of deck.

PLAN

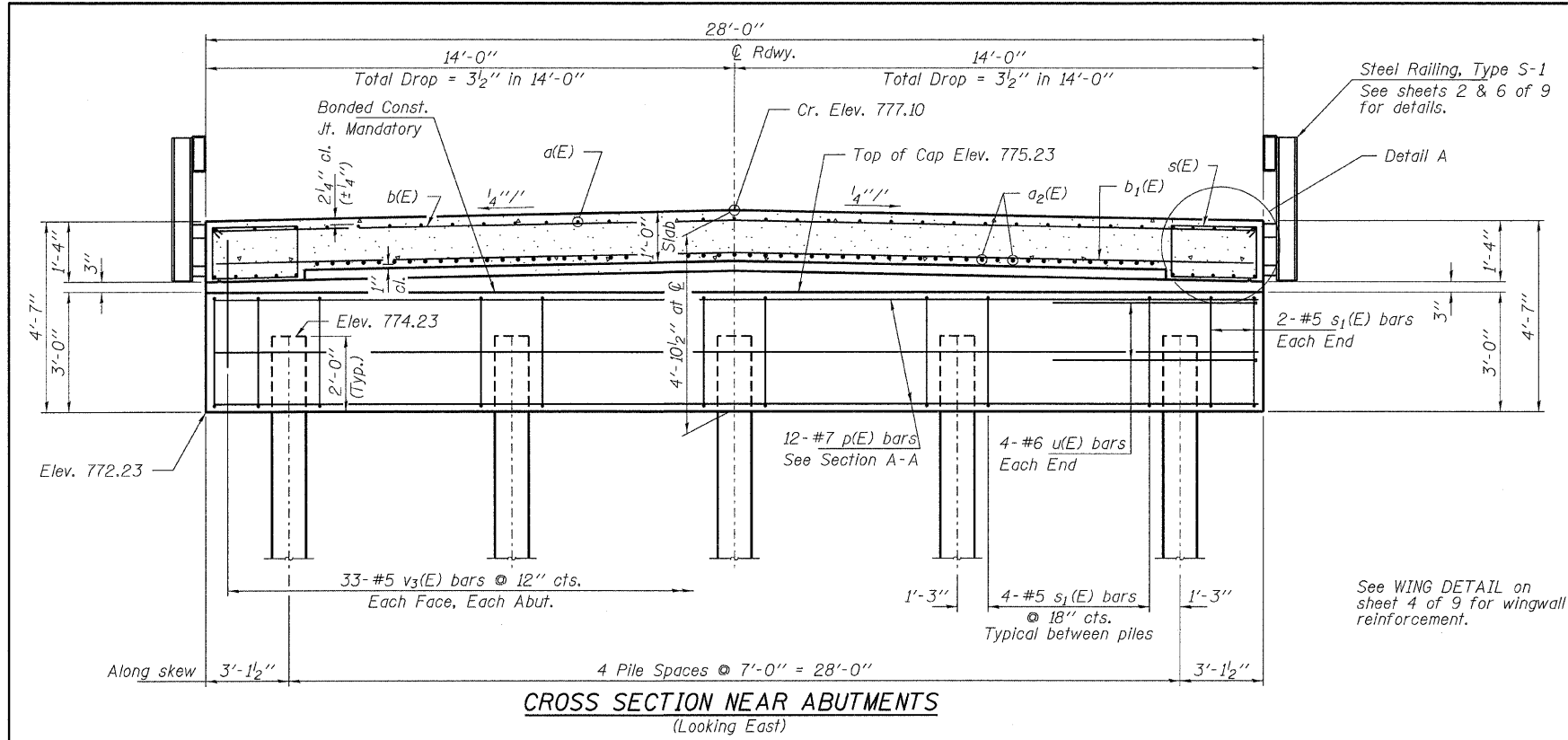
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	66	#9	34'-10"	—
a ₁ (E)	44	#9	17'-10"	—
a ₂ (E)	112	#9	21'-0"	C
a ₃ (E)	56	#9	24'-0"	—
b(E)	43	#5	27'-8"	—
b ₁ (E)	63	#6	27'-8"	—
h(E)	56	#4	8'-3"	—
p(E)	44	#7	33'-9"	—
s(E)	126	#4	7'-3"	□
s ₁ (E)	40	#5	10'-7"	□
s ₂ (E)	56	#5	6'-8"	□
s ₃ (E)	56	#5	8'-3"	□
s ₄ (E)	48	#5	8'-7"	□
u(E)	28	#6	12'-7"	—
v(E)	16	#4	2'-4"	—
v ₁ (E)	16	#4	3'-4"	—
v ₂ (E)	32	#4	4'-4"	—
v ₃ (E)	264	#5	3'-2"	—
Concrete Structures			Cu. Yd.	34.4
Concrete Superstructure			Cu. Yd.	79.3
Reinforcement Bars, Epoxy Coated			Pound	34,160
Precast Concrete Piles, 14"			Foot	555
Test Pile Precast Concrete			Each	2
Name Plates			Each	1

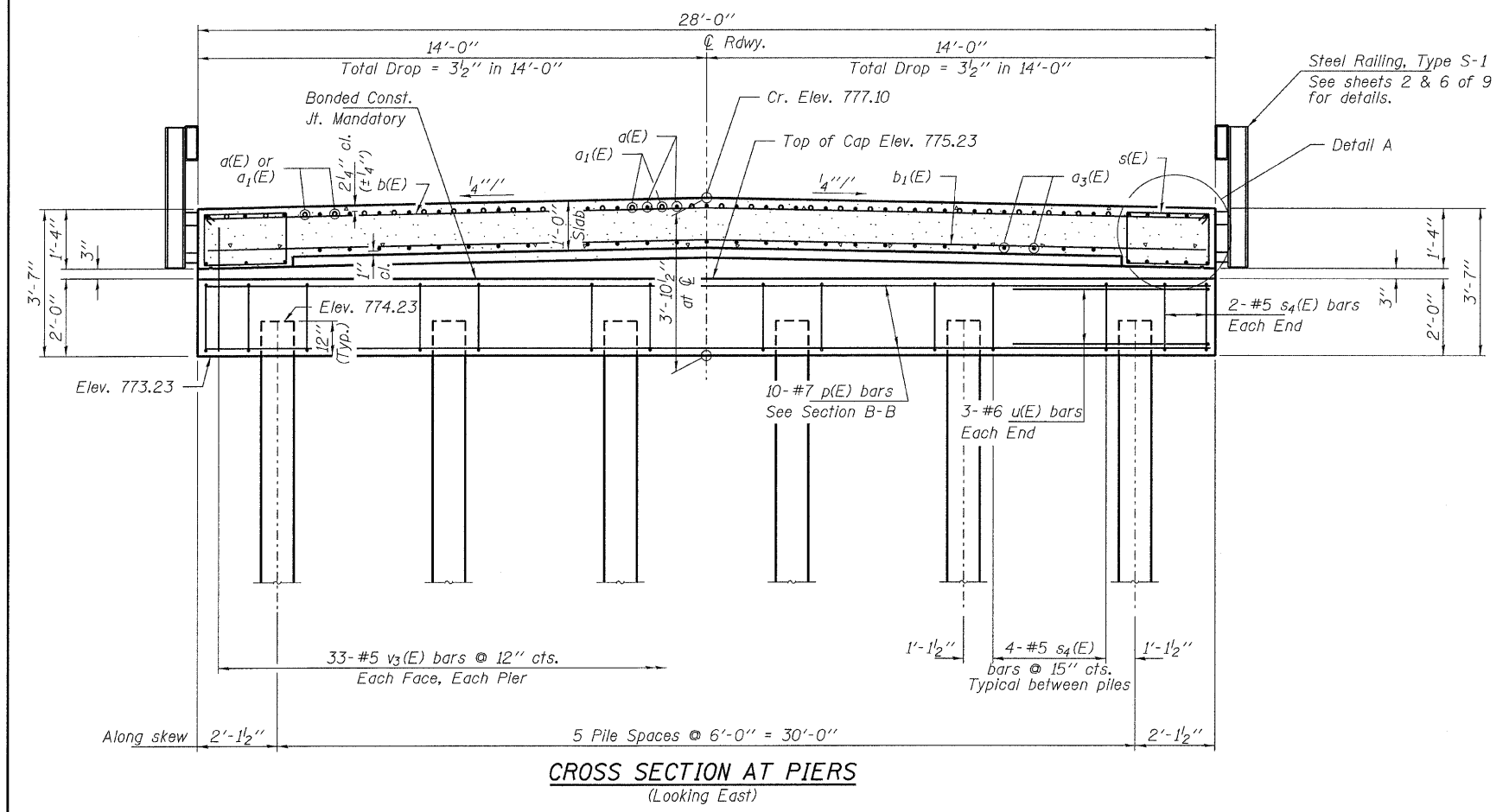


MIN. BAR LAPS
 #7 - 3'-7"
 #8 - 4'-8"
 #9 - 5'-11"

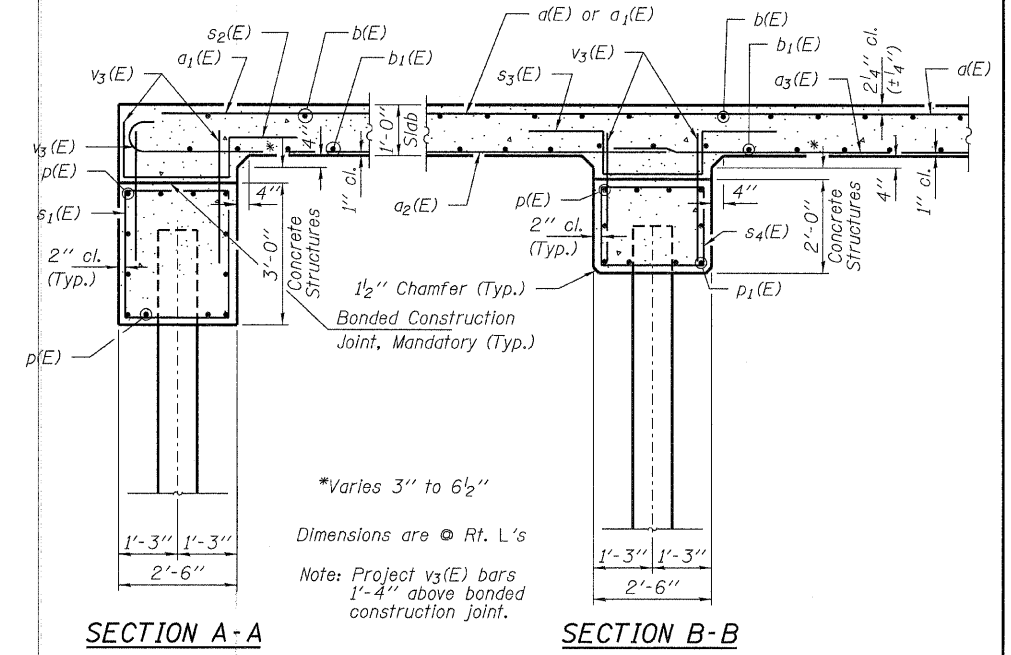
Reinforcement bars designated (E) shall be epoxy coated. For Elevations, Sections A-A, and B-B see sheet 5 of 9. For Edge Beam Details see Detail A on sheet 5 of 9. See sheet 5 of 9 for pile cap reinforcement.



CROSS SECTION NEAR ABUTMENTS
(Looking East)

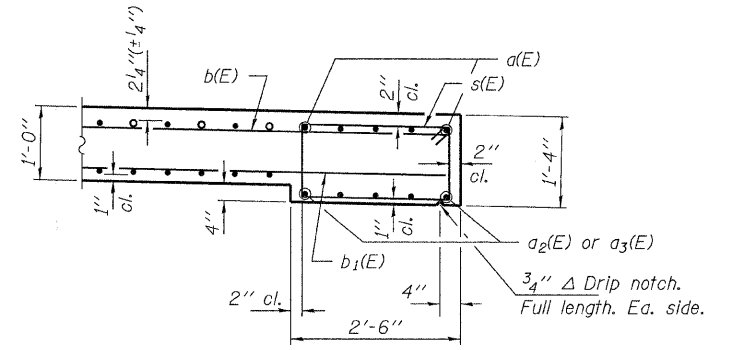


CROSS SECTION AT PIERS
(Looking East)



SECTION A-A

SECTION B-B



DETAIL A

PILE DATA

Type and Size	Precast Concrete Piles 14"
No. Req'd	*22
Nominal Req'd Bearing	265 Kips/Pile
Factored Resistance Available	146 Kips/Pile
Est. Lengths	25 Ft/Pile (Abuts.) 30 Ft/Pile (Piers)

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

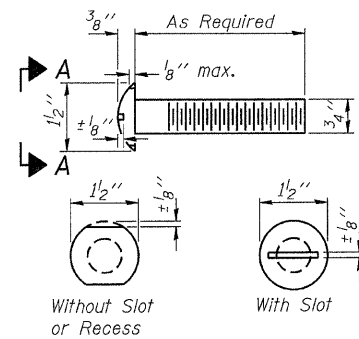
* Includes two test piles to be driven in permanent locations, one at the West Abutment and one at Pier 2.

FILE NAME = 108353-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3045 STEVENSON DRIVE, SUITE 201		DRAWN - D.T.M.	REVISED -
SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 3/2/2011		
LS/PE/SE CORP. 184.00099			

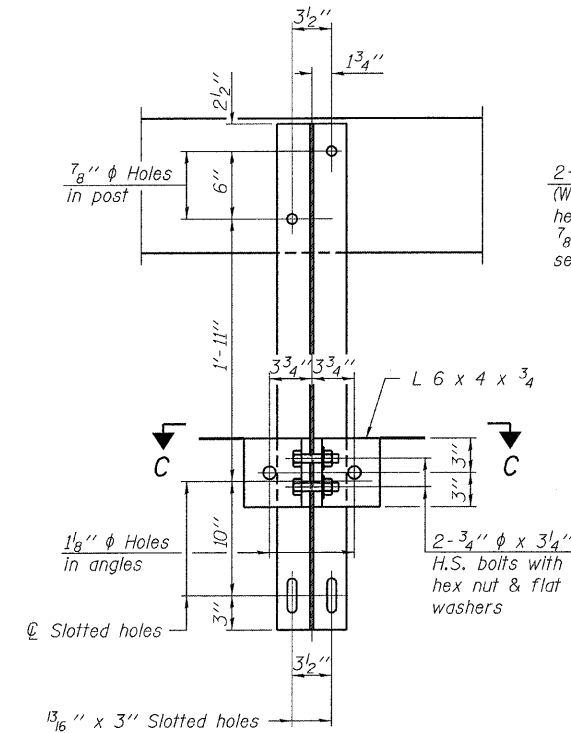
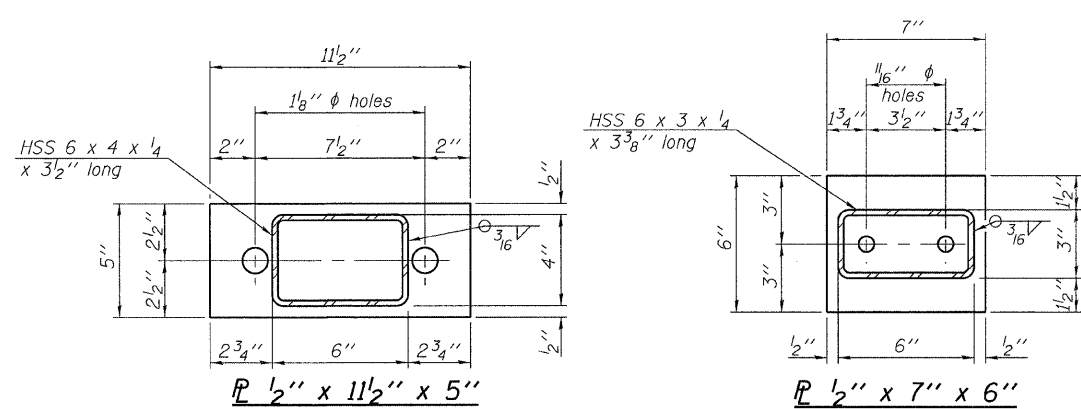
STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 057-3519
SHEET NO. 5 OF 9 SHEETS

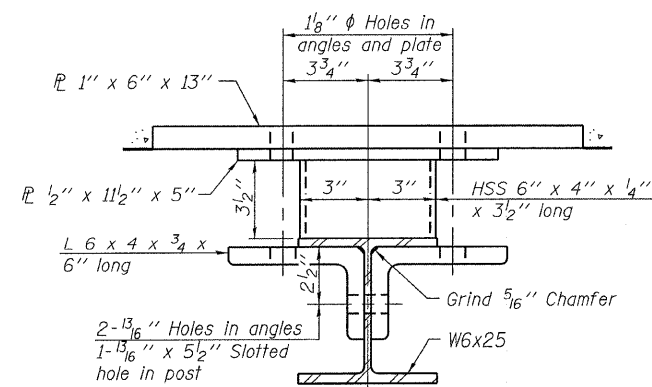
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	15
SCHULTZ BRIDGE		CONTRACT NO. 91455		
		ILLINOIS FED. AID PROJECT BR05-0113034		



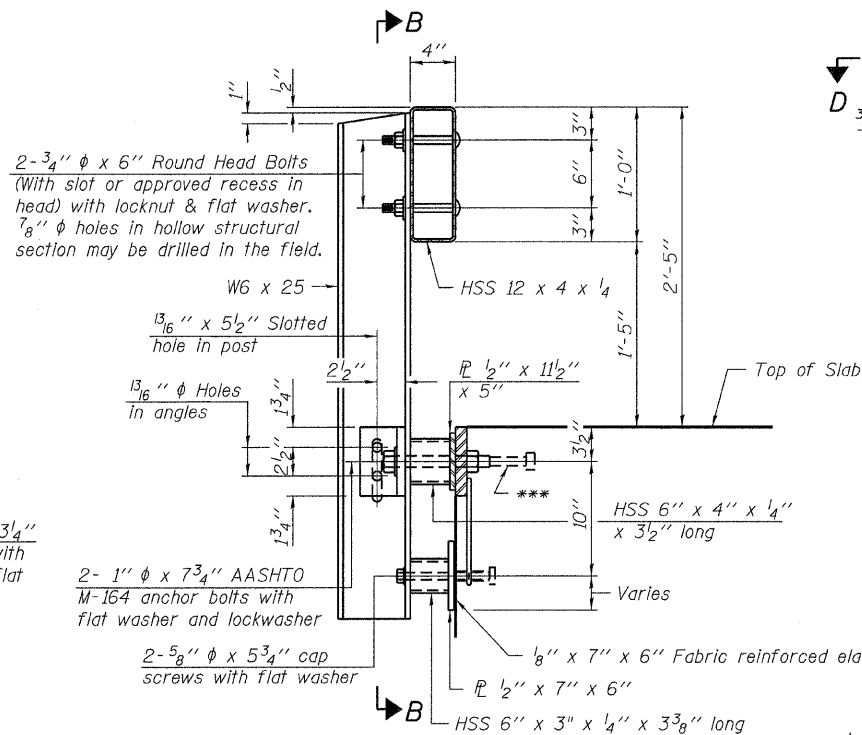
**VIEW A-A
ROUND HEAD BOLT**



SECTION B-B

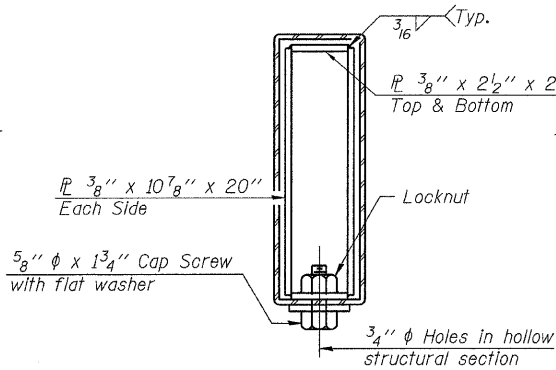


SECTION C-C

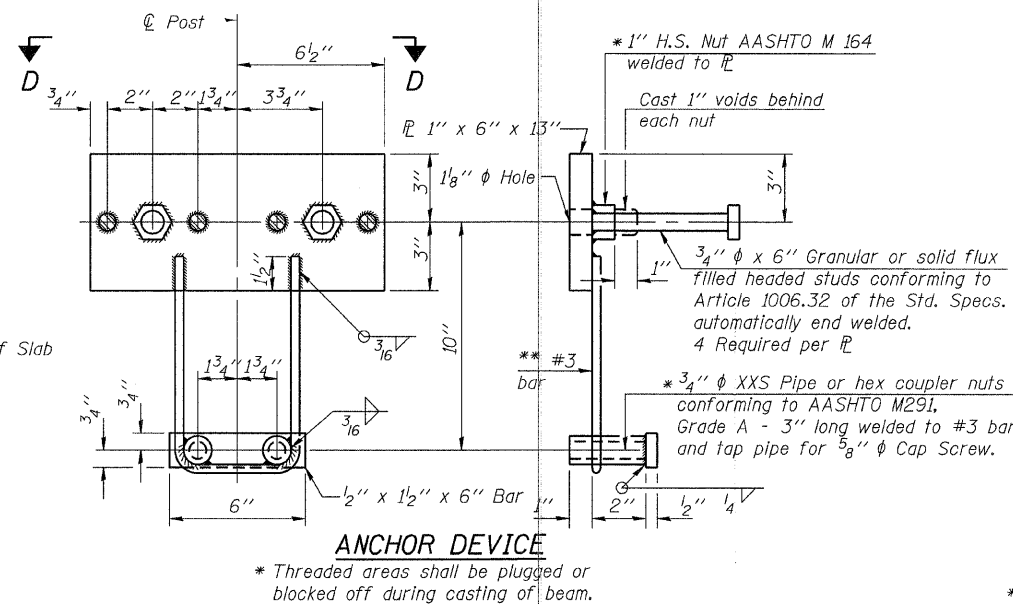


SECTION AT RAILING POST

Reinforcement bars in the top of the slab may be placed with a 1/2" 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.

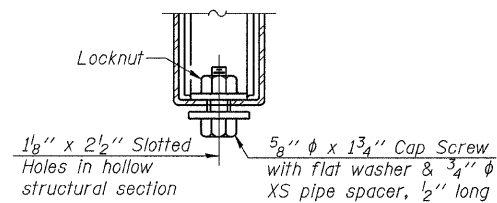


SECTIONS AT RAIL SPLICE

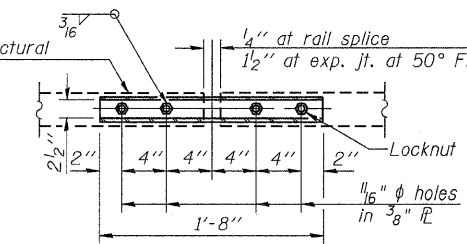


ANCHOR DEVICE

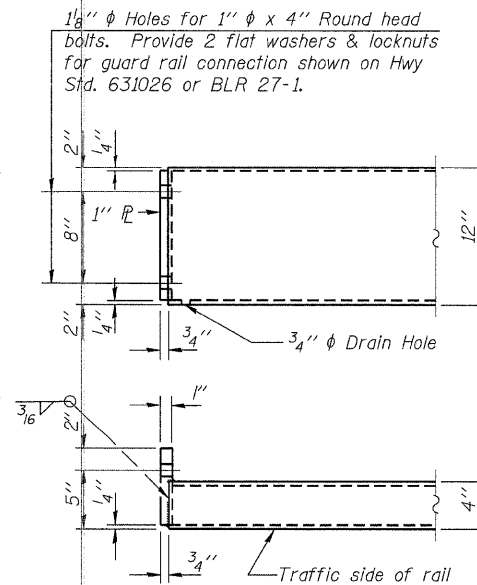
* Threaded areas shall be plugged or blocked off during casting of beam.



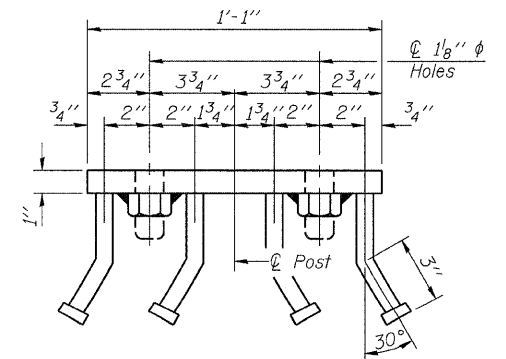
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	137

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

FILE NAME = 100353-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
1345 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT DATE = 3/2/2011	DRAWN - D.T.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184-000588		CHECKED - S.W.M.	REVISED -

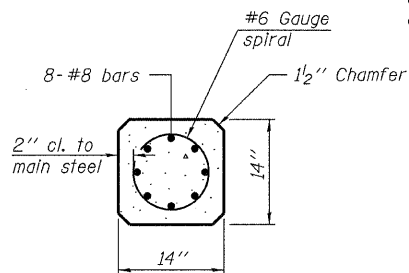
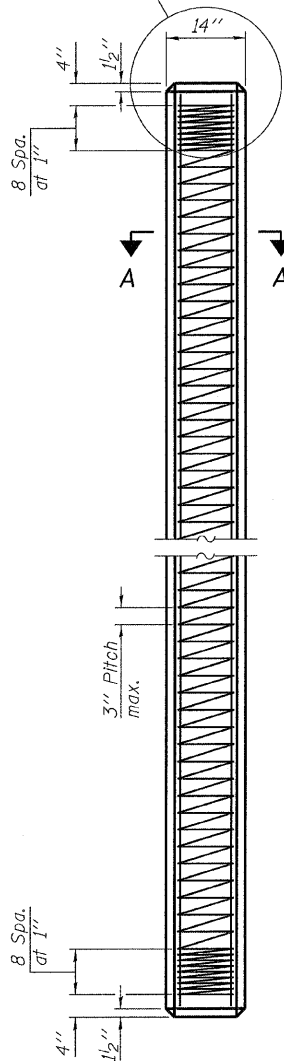
**STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 057-3519**

SHEET NO. 6 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	16
SCHULTZ BRIDGE		CONTRACT NO. 91455		
ILLINOIS FED. AID PROJECT BR05-01130349				

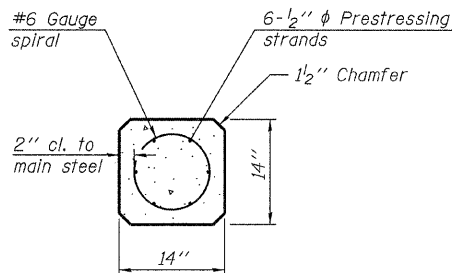
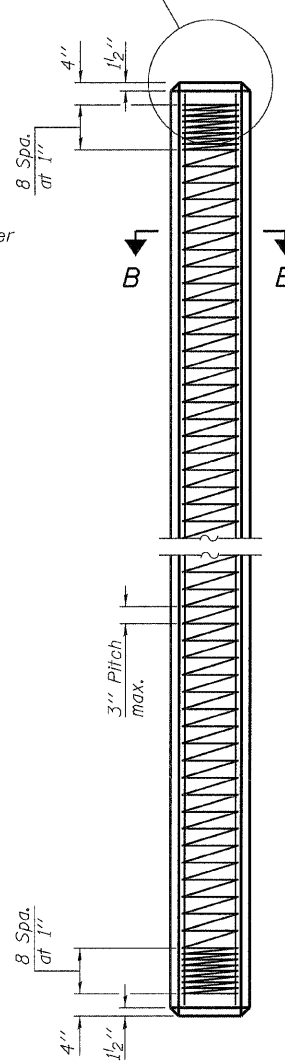
See End Plan and End Elevation for end reinforcement, typ.



SECTION A-A

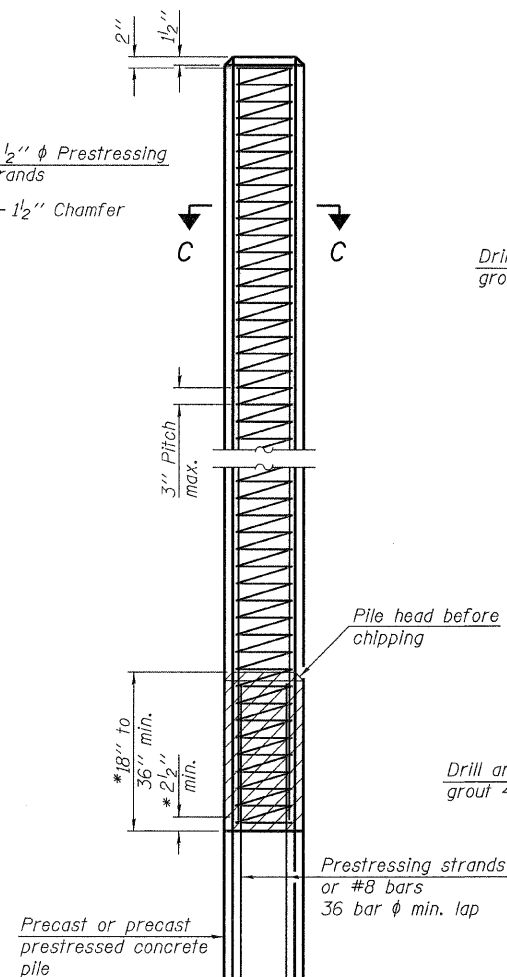
PRECAST CONCRETE PILE

See End Plan and End Elevation for end reinforcement, typ.

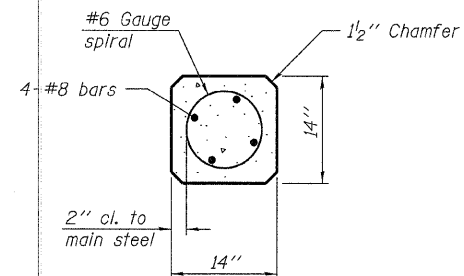


SECTION B-B

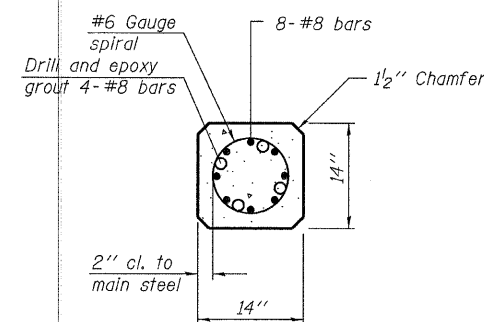
PRECAST PRESTRESSED CONCRETE PILE



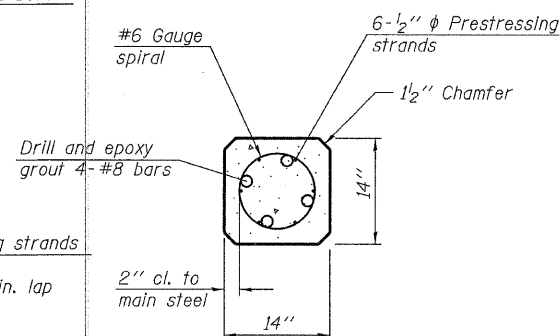
STANDARD PILE EXTENSION



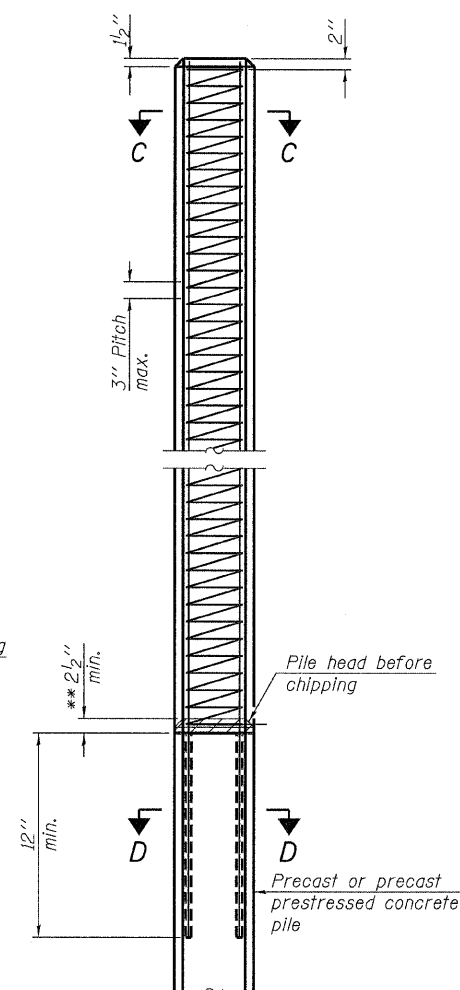
SECTION C-C



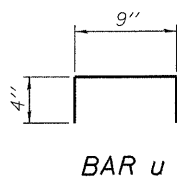
SECTION D-D
(Precast)



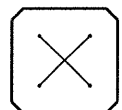
SECTION D-D
(Precast prestressed)



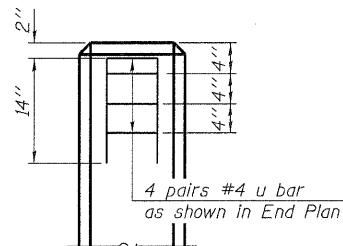
ALTERNATE PILE EXTENSION



BAR U



END PLAN
(End reinforcement only)



END ELEVATION
(End reinforcement only)

NOTES

Prestressing steel shall be uncoated high strength, low-relaxation 7-wire strand. The nominal diameter shall be 1/2" with a cross-sectional area of 0.153 in².
 For Pile lengths up to 65', use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L* from each end and at midpoint of pile. *L= Overall length of pile to be handled.
 For handling pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For handling piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at midpoint of pile.

- * To construct pile extension, chip top of pile back 36 bar ϕ min. to expose vertical bars and lap vertical buildup bars. Remove spiral to 2 1/2" min. above chipping and provide full strength lap weld exterior face (4" min. length).
- ** To construct pile extension, chip top of pile back 2 1/2" to expose wire spiral and provide full strength lap weld exterior face (4" min. length).

DESIGN STRESSES

f'_c = 5,000 p.s.i. (prestressed)
 f'_c = 4,500 p.s.i. (precast)
 f'_{cl} = 4,000 p.s.i.
 f'_s = 270,000 p.s.i. (41,300 lbs.-1/2" ϕ)
 f_{sl} = 189,000 p.s.i. (28,900 lbs.-1/2" ϕ)

F-PC

7-1-10

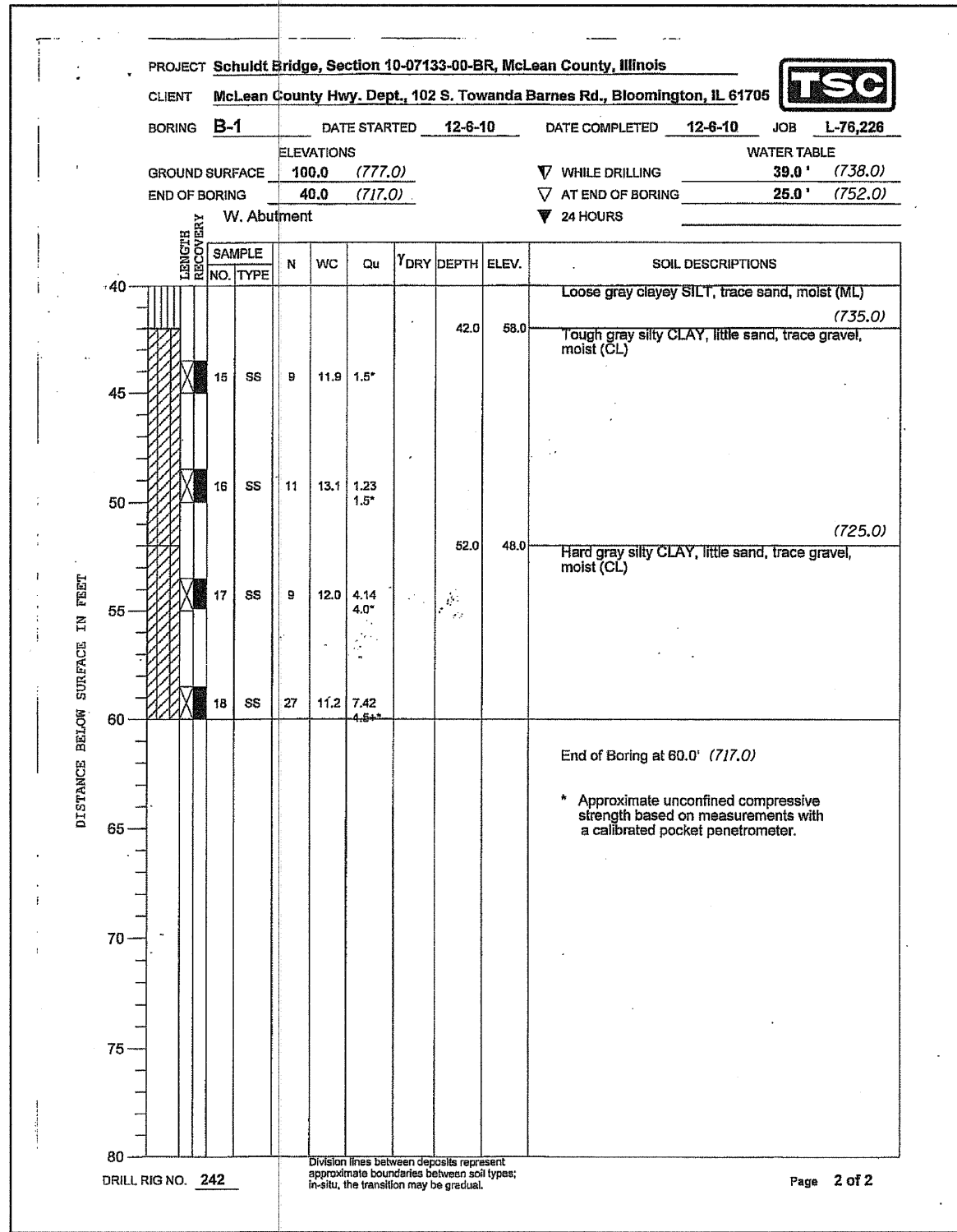
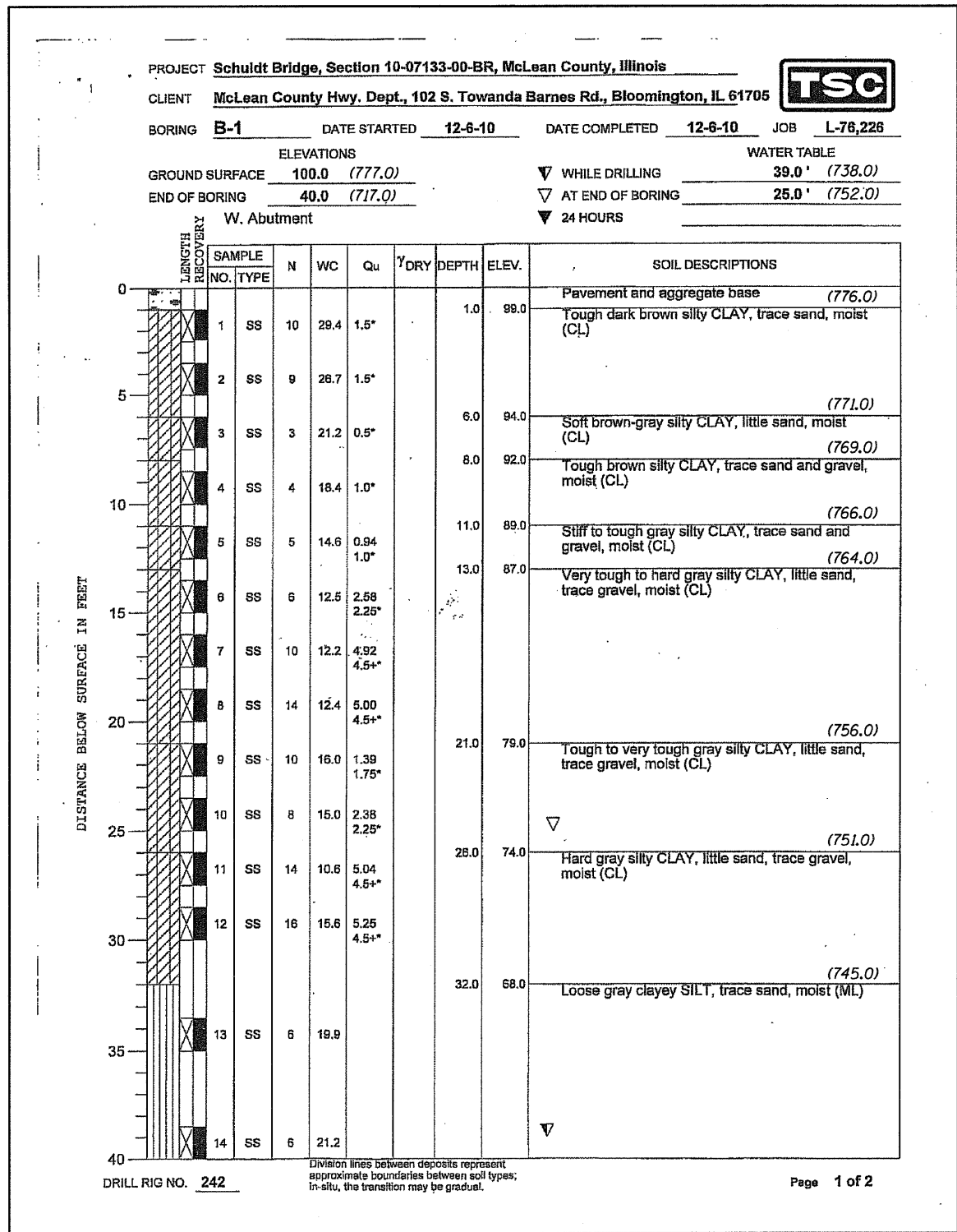
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HAMPTON, LENZINI AND RENWICK, INC. 3345 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000559	PLOT SCALE =	DRAWN - D.T.M.	REVISED -
	PLOT DATE = 3/2/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
McLEAN COUNTY HIGHWAY DEPARTMENT

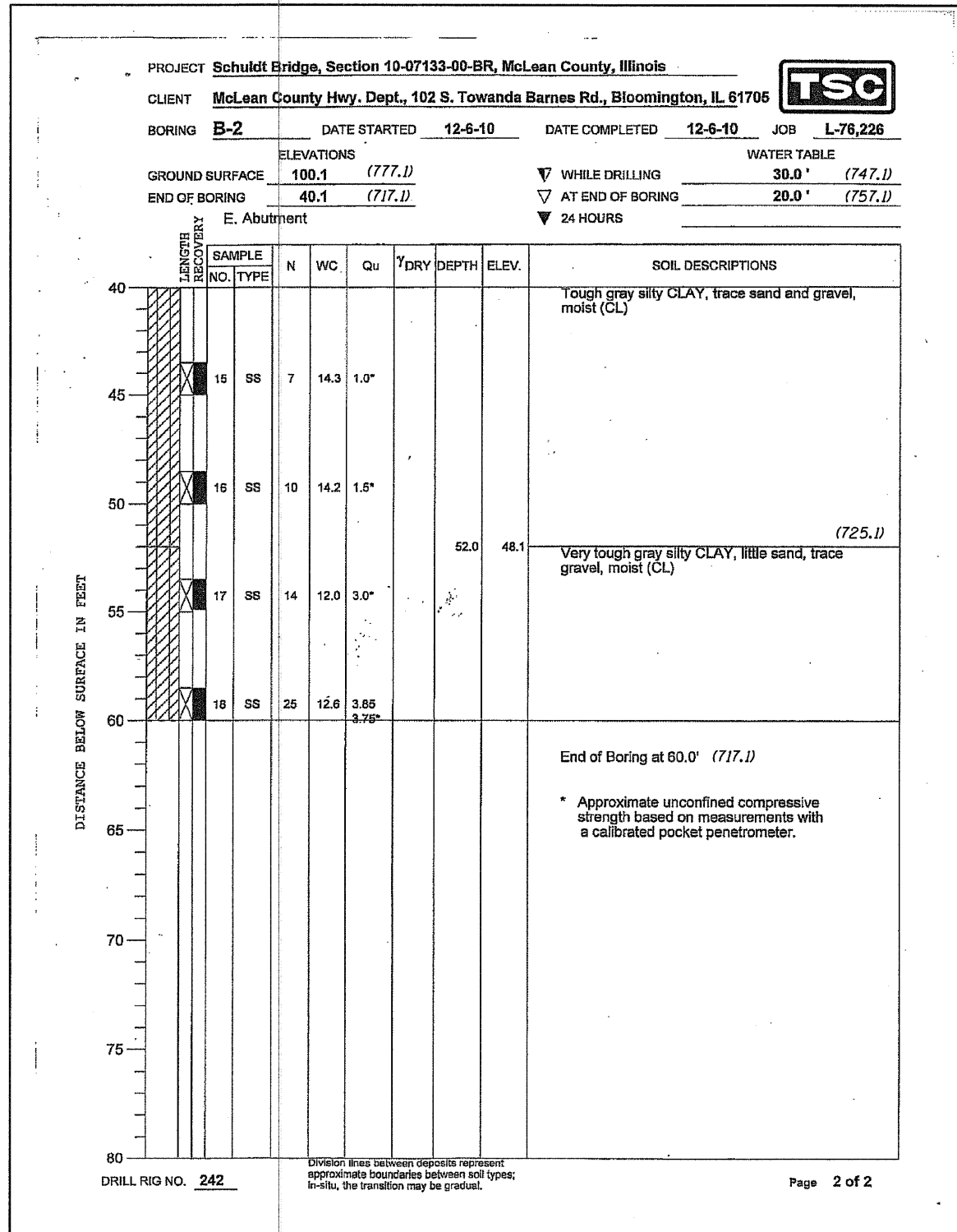
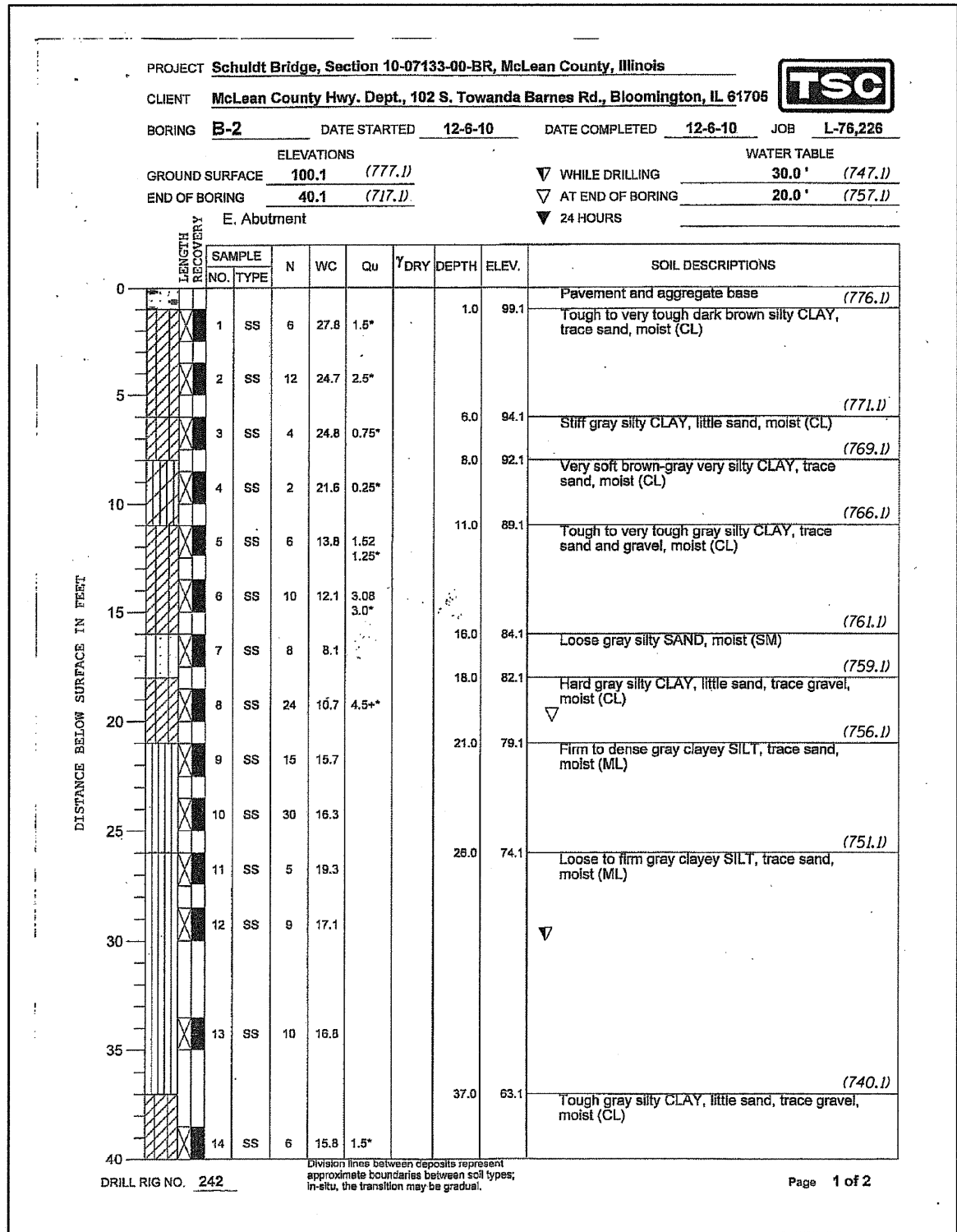
PRECAST PILE DETAILS
STRUCTURE NO. 057-3519

SHEET NO. 7 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
221A	10-07133-00-BR	McLEAN	19	17
SCHULTZ BRIDGE		CONTRACT NO. 91455		
		ILLINOIS FED. AID PROJECT BR05-0113034		



BORING 1



BORING 2