

04-27-12 LETTING ITEM 191

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

SECTION 07-00066-00-BR
C.H. 9 / F.A.S. 554
MOULTRIE COUNTY
PROPOSED STRUCTURE NO. 070-3032
PROJECT BRS-0554(325)
C-97-086-10

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 554	07-00066-00-BR	MOULTRIE	14	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 95681		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.-5.	PLAN AND PROFILE
6.-9.	STATION CROSS SECTIONS
10.-13.	BRIDGE PLANS
14.	BORINGS

HIGHWAY STANDARDS:

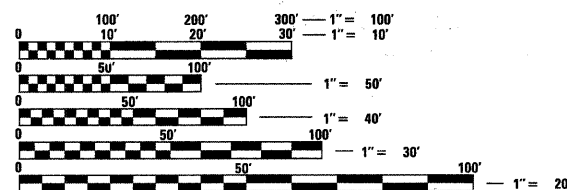
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-02	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

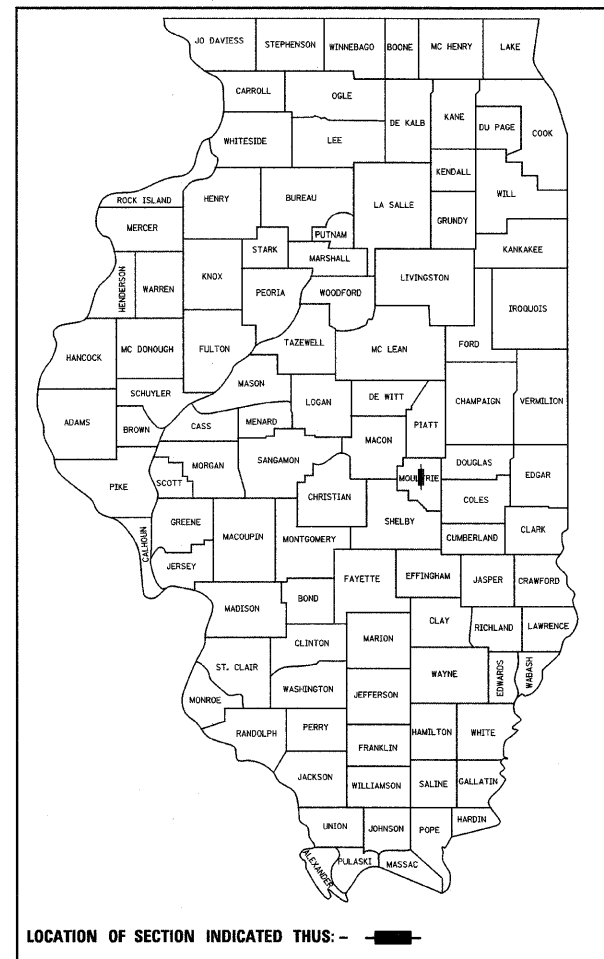
COLES-MOULTRIE ELECTRIC COOP
104 DEWITT AVENUE EAST
P.O. BOX 709
MATTOON, ILLINOIS 61938-0709

LONG CREEK TOWNSHIP WATER
2610 SALEM SCHOOL ROAD
DECATUR, ILLINOIS 62521
ATTN: TOM KITE
217-864-5656

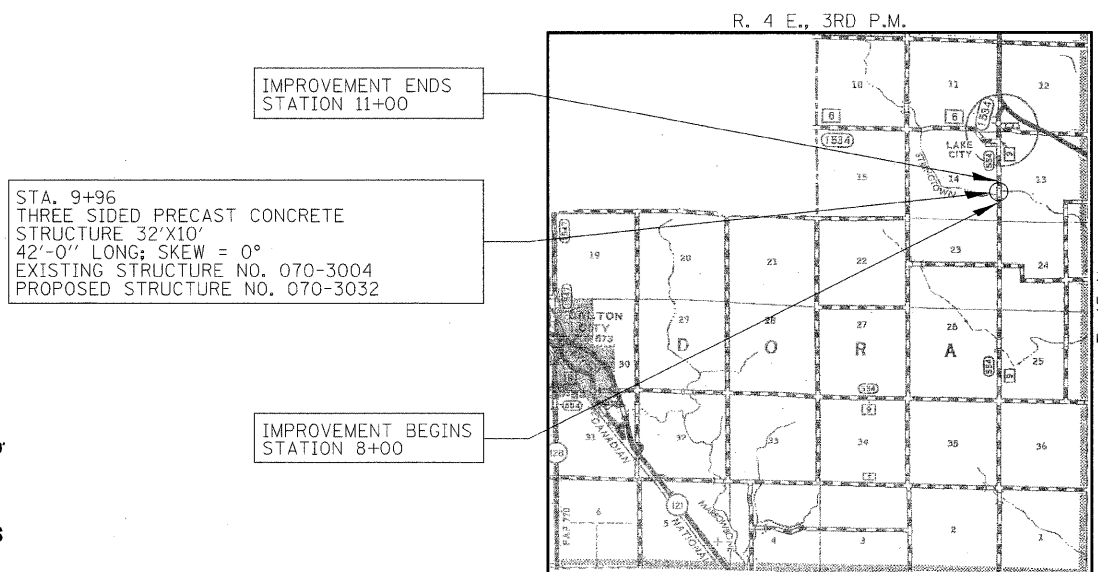
FRONTIER COMMUNICATIONS
104 MULBERRY
NORMAL, IL 61761



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.



FUNCTIONAL CLASSIFICATION: RURAL COLLECTOR
DESIGN SPEED: 40 MPH
DESIGN TRAFFIC: 150 ADT



LOCATION MAP

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

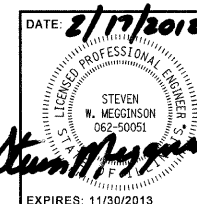


ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED 02/17 20 12
[Signature]
COUNTY ENGINEER

PASSED 02/29 20 12
[Signature]
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 02/29 20 12
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR 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.hirengineering.com

CONTRACT NO. 95681

PROJECT NUMBER: 07.0342.130

DATE: 02/16/12

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY CONSTR CODE
			0011
20200100	EARTH EXCAVATION	CU YD	300
20300100	CHANNEL EXCAVATION	CU YD	120
28000305	TEMPORARY DITCH CHECKS	FOOT	80
^ 28100207	STONE RIPRAP, CLASS A4	TON	225
28200200	FILTER FABRIC	SQ YD	290
35101400	AGGREGATE BASE COURSE, TYPE B	TON	175
^ 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	460
^ 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200300	COFFERDAM EXCAVATION	CU YD	510
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	44.2
50800105	REINFORCEMENT BARS	POUND	4,010
* 50900205	STEEL RAILING, TYPE S1	FOOT	64
^ 542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	66
^ 60100985	PIPE DRAINS 24"	FOOT	70
60218400	MANHOLES, TYPE A 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2
67100100	MOBILIZATION	L SUM	1
^ X2090210	POROUS GRANULAR BACKFILL, SPECIAL	CU YD	270
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4
^ X5015225	PIPE CULVERT REMOVAL (SPECIAL)	FOOT	310
^ X5150110	NAME PLATES (SPECIAL)	EACH	1
^ Z0038140	THREE SIDED PRECAST CONCRETE STRUCTURES 32x10	FOOT	42

^ 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.
- 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 MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE CONTRACTOR SHALL CONSULT THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS AND PIPE DRAINS BEFORE ORDERING THESE ITEMS.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

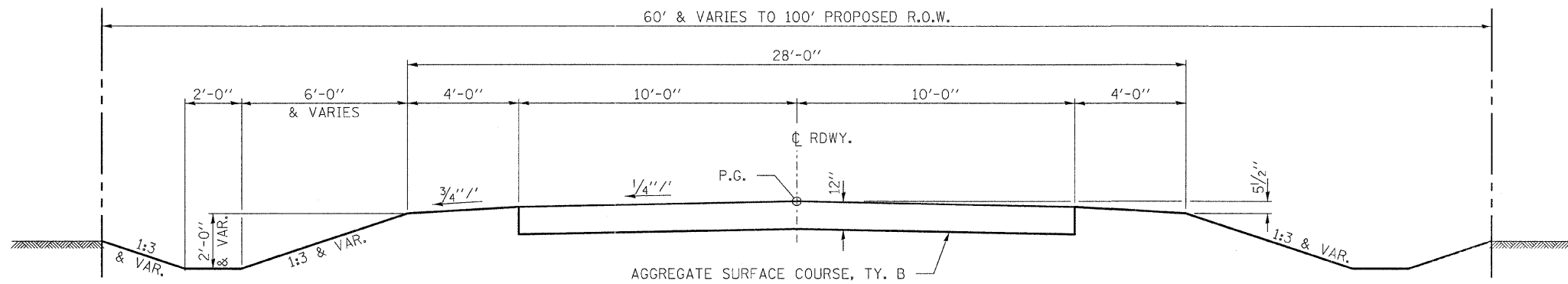
POROUS GRANULAR BACKFILL	1.42 TON/CU YD (105 LB/CU FT)
AGGREGATE SURFACE COURSE	2.05 TON/CU YD
STONE RIPRAP, CLASS A4	1.75 TON/CU YD
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE R.O.W. AS DIRECTED BY THE ENGINEER.
SEEDING, CLASS 2 (SPECIAL) = 0.4 ACRES
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL EXCAVATED MATERIAL NOT USED IN THE FINAL EMBANKMENT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO COMPLY WITH THESE CONDITIONS.
- EXCAVATION NECESSARY FOR PLACEMENT OF RIPRAP SHALL BE INCLUDED IN COST OF STONE RIPRAP UNLESS OTHERWISE NOTED.
- TEMPORARY DITCH CHECKS SHALL BE CONSTRUCTED AT LOCATIONS DETERMINED BY THE ENGINEER.

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	MISC. EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
FAS 554								
STA 8+00.00 TO STA 9+79.00	183			25.00%	100.00%	137	104	33
STA 9+79.00 TO STA 10+13.00	0	120		25.00%	70.00%	0	42	-42
STA 10+13.00 TO STA 11+00	117			25.00%	100.00%	88	119	-31
COFFERDAM EXCAVATION			510	25.00%	70.00%	268		268
EXCAVATION FROM P.G.B.			267	25.00%	70.00%	140		140
EXCAVATION FROM RIPRAP			160	25.00%	70.00%	84		84
TOTAL	300	120	937			717	265	452
TOTAL USE	300	120						450

WASTE EXCAVATION 450 CU YDS

FILE NAME = 070342-sht-summary.dgn	USER NAME =	DESIGNED - S.W.M.	REVISED -	STATE OF ILLINOIS MOULTRIE COUNTY HIGHWAY DEPARTMENT	SUMMARY OF QUANTITIES & GENERAL NOTES C.H. 9				F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760	PLOT SCALE =	DRAWN - D.A.B.	REVISED -						554	07-00066-00-BR	MOULTRIE	14	2
ILLINOIS PROFESSIONAL DESIGN FIRM 131 PEI SE CORP. 184.000959	PLOT DATE = 2/16/2012	CHECKED - S.W.M.	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO: 95681				
									ILLINOIS FED. AID PROJECT BR5-0554(325)				



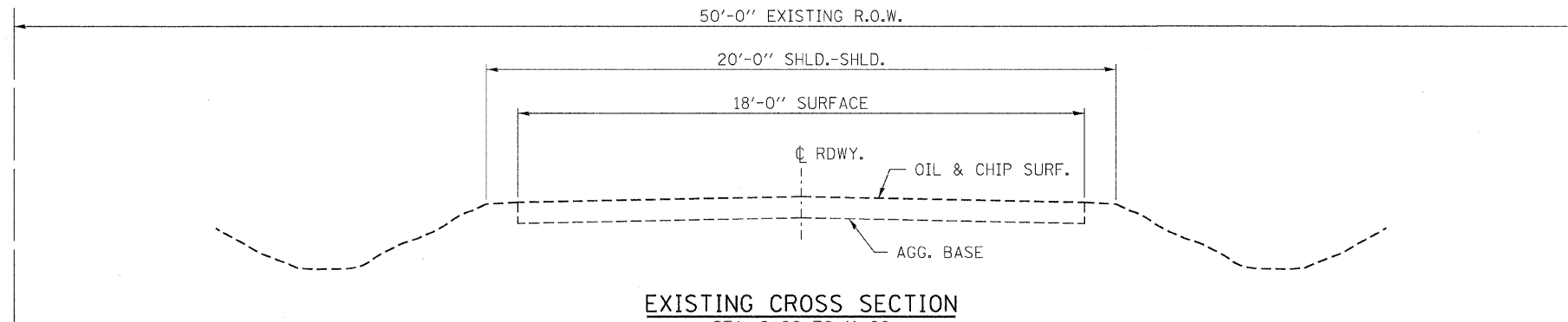
SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TYPICAL CROSS SECTION

STA. 8+00 TO 11+00

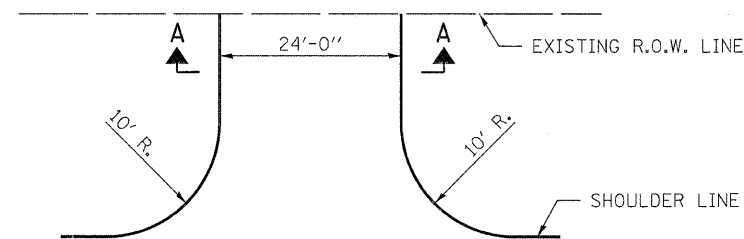
TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING
ROADWAY IS TO BE CONSTRUCTED FROM STA. 8+00 TO 8+50 AND
STA. 10+50 TO 11+00. SEE SHEET 9 FOR TRANSITION AT BRIDGE.

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

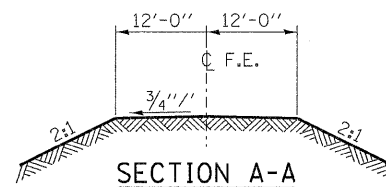


EXISTING CROSS SECTION

STA. 8+00 TO 11+00



FIELD ENTRANCE DETAIL

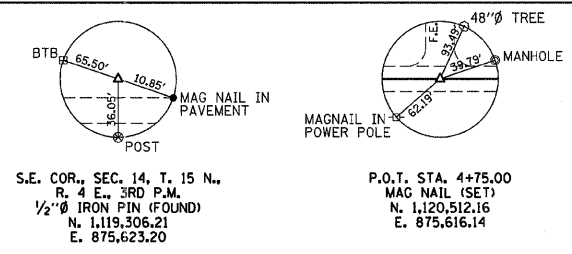


SECTION A-A

FILE NAME = 078342-sht-typsections.dgn	USER NAME =	DESIGNED - S.W.M.	REVISED -	STATE OF ILLINOIS MOULTRIE COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS C.H. 9				F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 334 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	554	07-00066-00-BR	MOULTRIE	14	3
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184.000989	PLOT DATE = 2/9/2012	CHECKED - S.W.M.	REVISED -		CONTRACT NO. 95681									
		DATE - 02/09/12	REVISED -		ILLINOIS FED. AID PROJECT BRS-06543251									

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	BY		
	NO. OF WAY CHECKED		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	BY		
	NO. OF WAY CHECKED		
	FILE NAME		

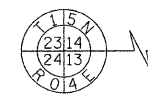
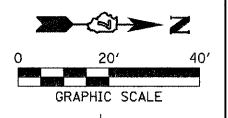


S.E. COR., SEC. 14, T. 15 N.,
R. 4 E., 3RD P.M.
1/2" Ø IRON PIN (FOUND)
N. 1,119,306.21
E. 875,623.20

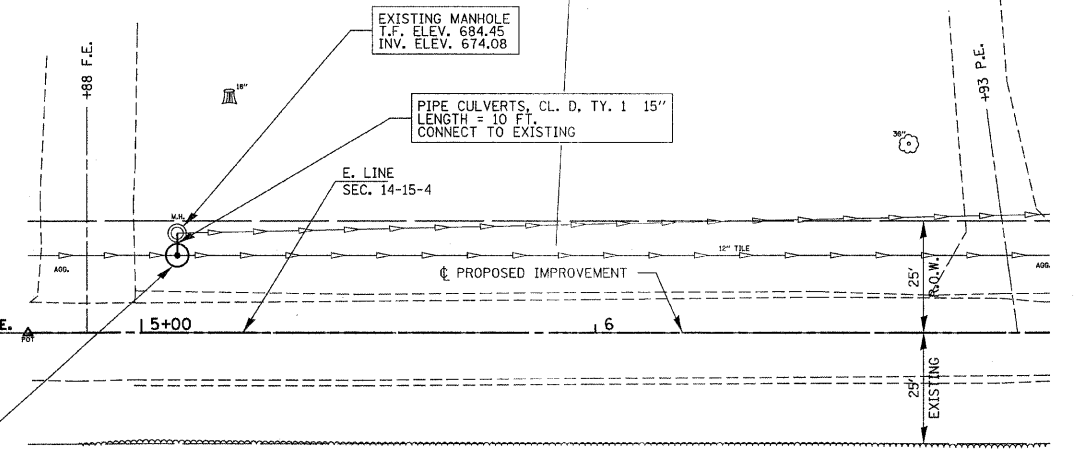
P.O.T. STA. 4+75.00
MAG NAIL (SET)
N. 1,120,512.16
E. 875,616.14

FRANCIS MORRIS
S/2, SE/4, SEC 14, T. 15 N., R. 4 E., 3RD P.M.

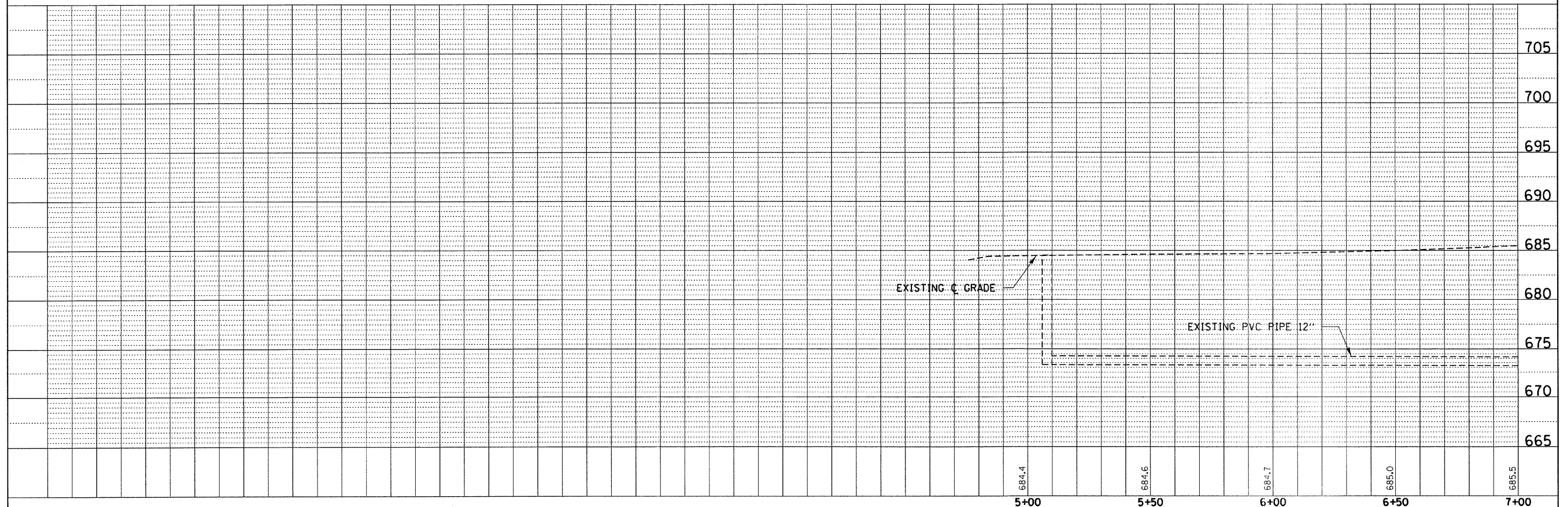
RICHARD R. & DONNA M. STREIBICH
SE/4, NE/4, SE/4, SEC 14, T. 15 N., R. 4 E., 3RD P.M.



LT. STA. 5+08.00
MANHOLE, TY. A, 4'-DIA., TY. 1, CL.
T.F. ELEV. 683.92
INV. ELEV. 674.10



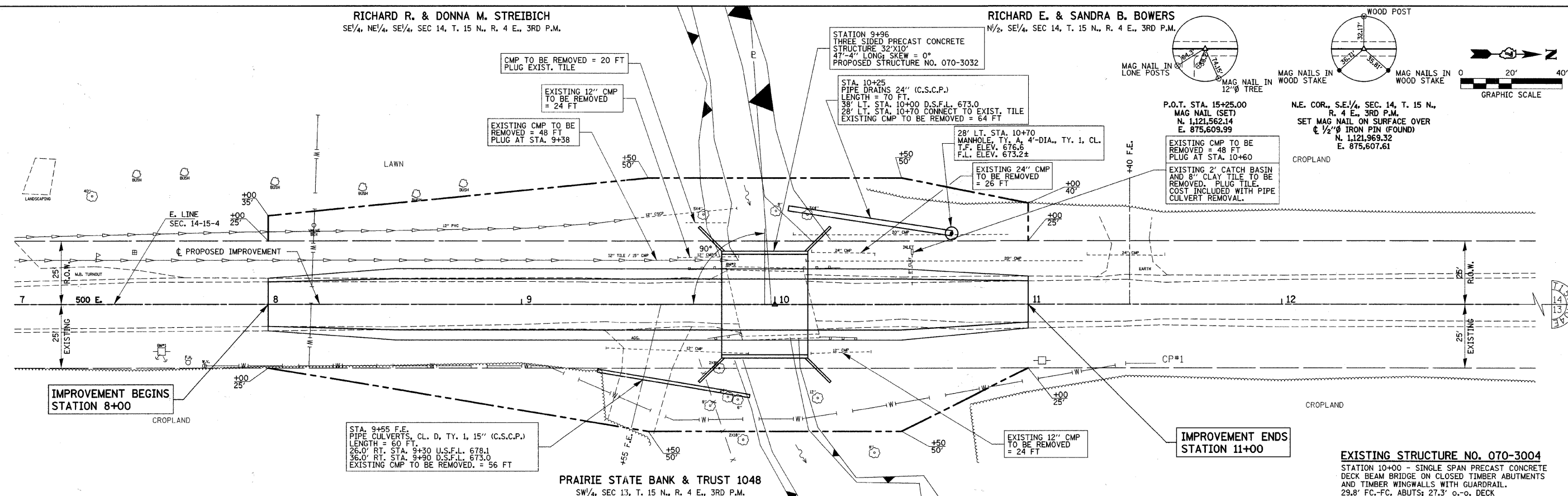
PRAIRIE STATE BANK & TRUST 1048
SW/4, SEC 13, T. 15 N., R. 4 E., 3RD P.M.



FILE NAME = 070342-sht-pl.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS MOULTRIE COUNTY HIGHWAY DEPARTMENT	PLAN & PROFILE C.H. 9			F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3048 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLLOT SCALE =	DRAWN - D.T.M.	REVISED -		SCALE: 20HVS	SHEET NO. 1 OF 2 SHEETS	STA. 4+75 TO STA. 7+00	554	07-00066-00-BR	MOULTRIE	14	4
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.600888	PLLOT DATE = 2/9/2012	CHECKED - L.F.S.	REVISED -					CONTRACT NO. 95681				
		DATE - 02/09/12	REVISED -					ILLINOIS FED. AID PROJECT BRS-05543251				

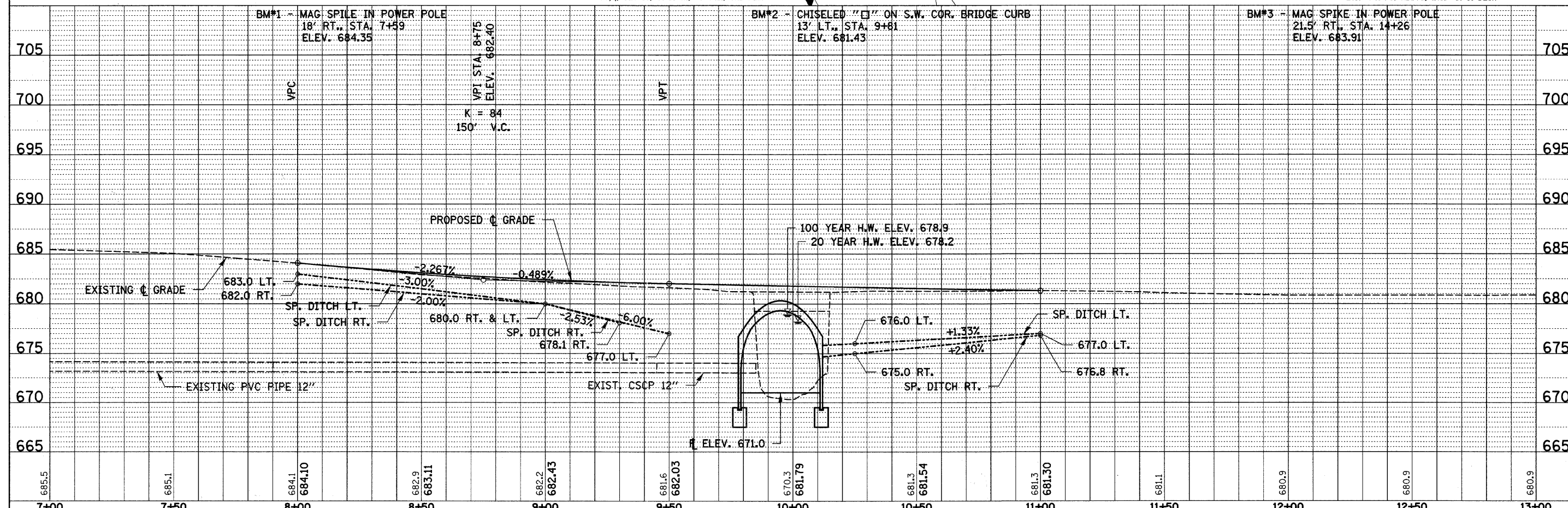
RICHARD R. & DONNA M. STREIBICH
SE 1/4, NE 1/4, SEC 14, T. 15 N., R. 4 E., 3RD P.M.

RICHARD E. & SANDRA B. BOWERS
N 1/2, SE 1/4, SEC 14, T. 15 N., R. 4 E., 3RD P.M.



PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	REVISIONS	
	NO. OF MAY CHECKED	
	CADD FILE NAME	
	NO.	

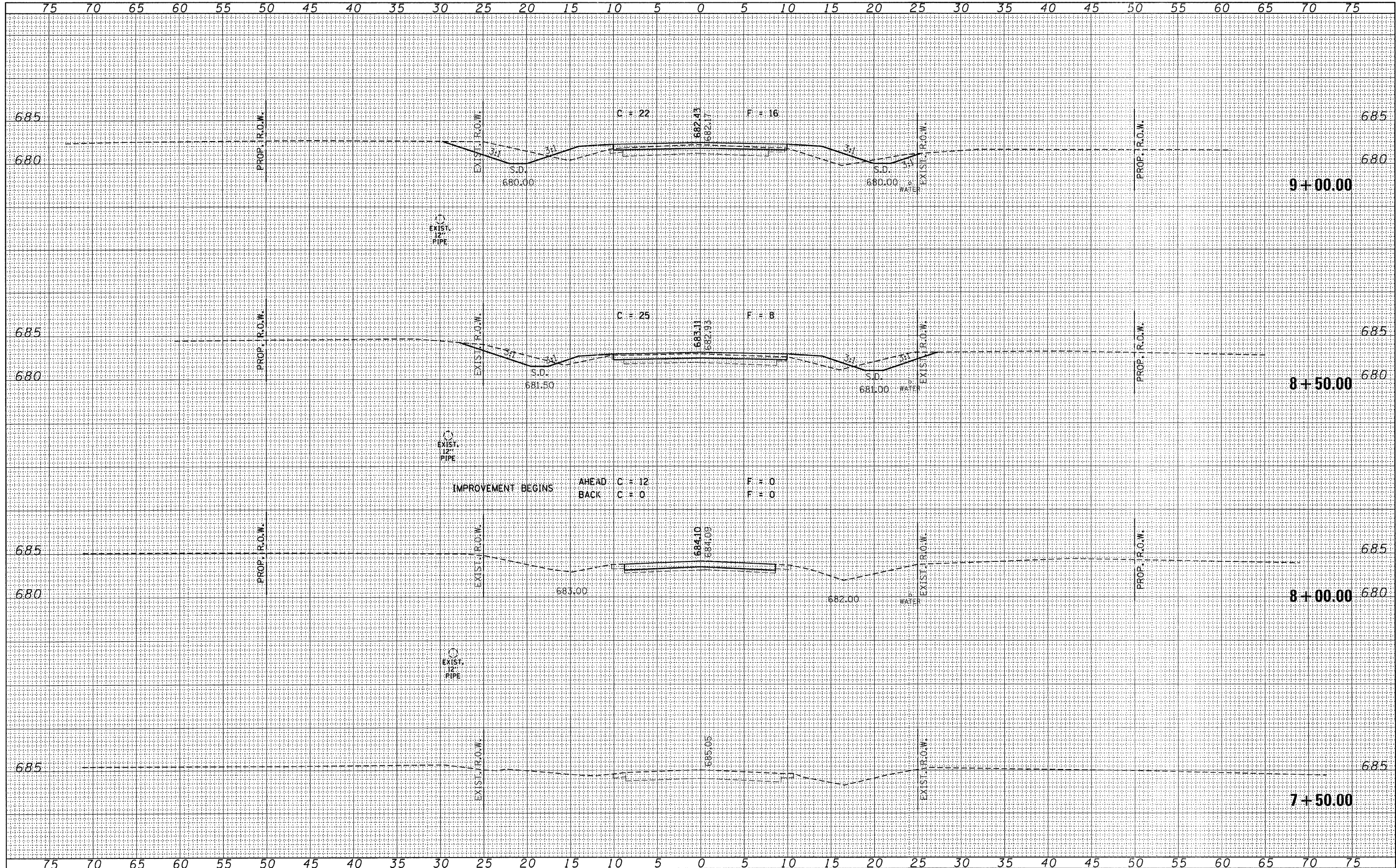
PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	REVISIONS	
	NO. OF MAY CHECKED	
	STRUCTURE NOTATIONS QUID	
	NO.	



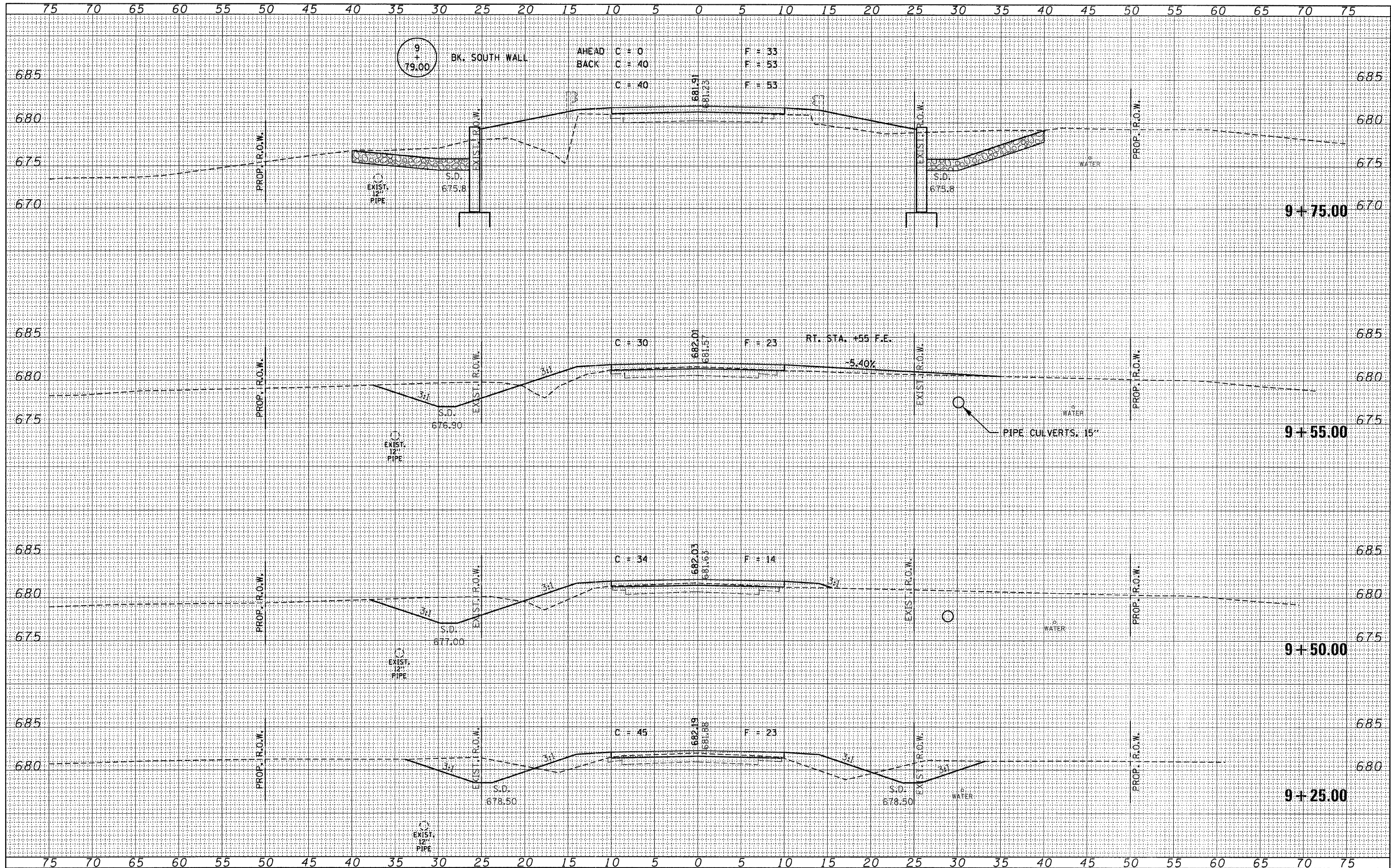
FILE NAME = 078342-aht-pp2.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS MOULTRIE COUNTY HIGHWAY DEPARTMENT	PLAN & PROFILE C.H. 9	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			554	07-00066-00-BR	MOULTRIE	14	5	
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62791	PLOT DATE = 2/16/2012	CHECKED - L.F.S.	REVISED -			SCALE: 20H:V5	SHEET NO. 2 OF 2 SHEETS	STA. 7+00 TO STA. 13+00	CONTRACT NO. 95681		
ILLINOIS PROFESSIONAL DESIGN FIRM L3/P/1/SE CORP. 184.000889		DATE - 02/16/12	REVISED -						ILLINOIS FED. AID PROJECT BR5-0554(325)		

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

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



FILE NAME = 078342-sht-xs.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS MOULTRIE COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 9			F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3000 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761		DRAWN - D.T.M.	REVISED -		554	07-00066-00-BR	MOULTRIE	14	6				
HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE: H5:V5			SHEET NO. OF SHEETS		STA. 7+50.00 TO STA. 9+00.00		CONTRACT NO. 95681	
	PLOT DATE = 2/9/2012	DATE - 02/09/12	REVISED -		ILLINOIS FED. AID PROJECT BR5-05543251								



BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

BY	DATE
ORIGINAL	
SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	

FILE NAME = 070342-sht-xx.dgn
HAMPTON, LENZINI AND RENWICK, INC.
 3585 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000888

USER NAME =
 PLOT SCALE =
 PLOT DATE = 2/9/2012

DESIGNED - J.W.F.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 02/09/12	REVISED -

**STATE OF ILLINOIS
 MOULTRIE COUNTY HIGHWAY DEPARTMENT**

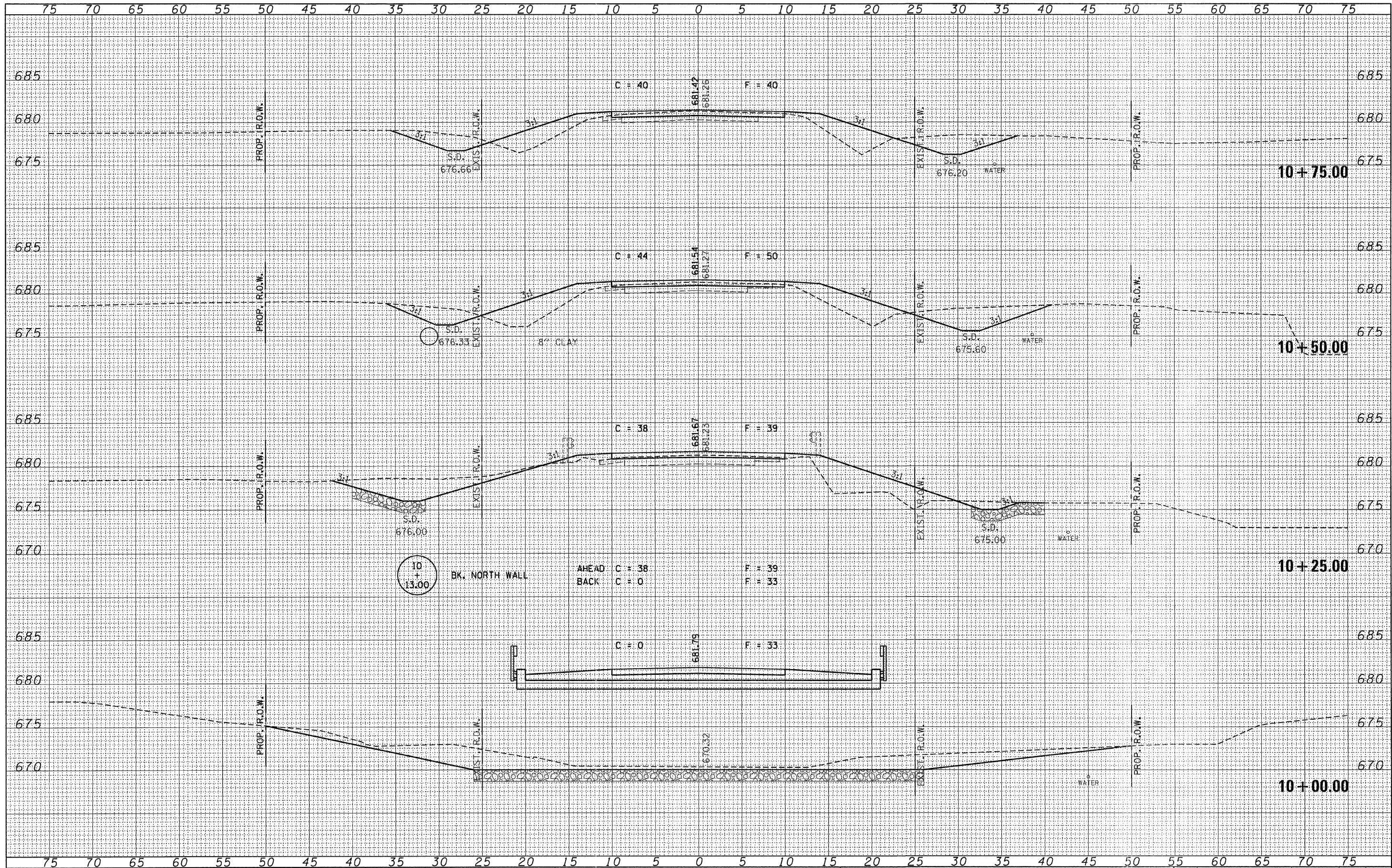
**STATION CROSS SECTIONS
 C.H. 9**

SCALE: H5xV5 SHEET NO. OF SHEETS STA. 9+25.00 TO STA. 9+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
554	07-00066-00-BR	MOULTRIE	14	7
CONTRACT NO. 95681				
ILLINOIS FED. AID PROJECT BR5-05543251				

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

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



FILE NAME = 070342-sh1-x.s.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 336 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.009959

USER NAME =
 PLOT SCALE =
 PLOT DATE = 2/9/2012

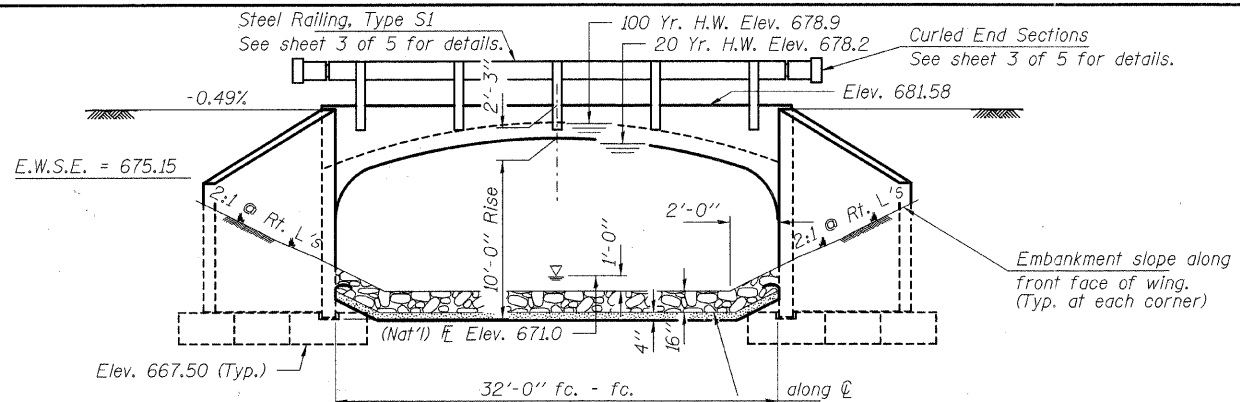
DESIGNED - J.W.F.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 02/09/12	REVISED -

**STATE OF ILLINOIS
 MOULTRIE COUNTY HIGHWAY DEPARTMENT**

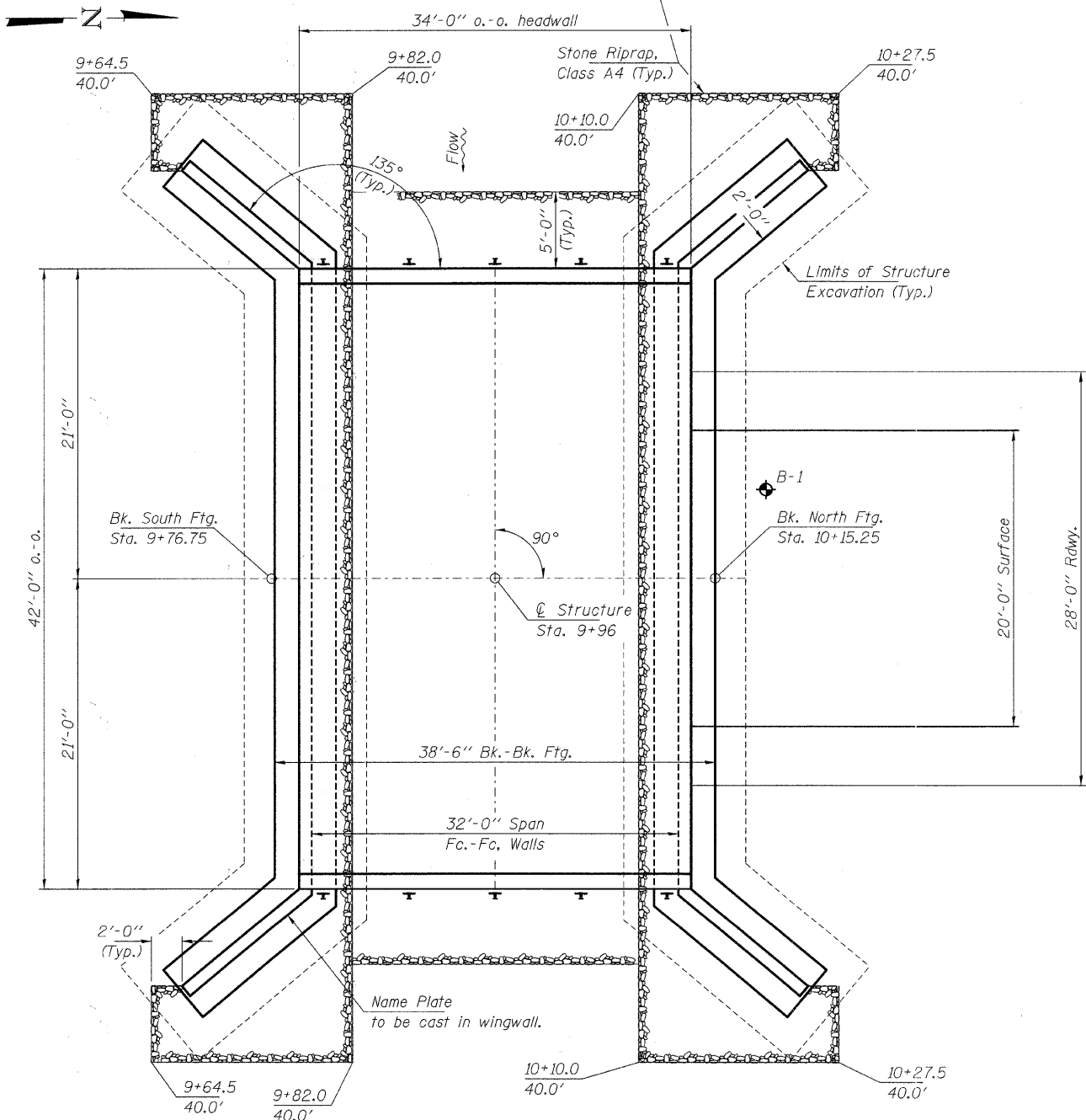
**STATION CROSS SECTIONS
 C.H. 9**

SCALE: H5:V5 SHEET NO. OF SHEETS STA. 10+00.00 TO STA. 10+75.00

F.A.S. 554	SECTION 07-00066-00-BR	COUNTY MOULTRIE	TOTAL SHEETS 14	SHEET NO. 8
CONTRACT NO. 95681			ILLINOIS FED. AID PROJECT BR5-0554(325)	



ELEVATION



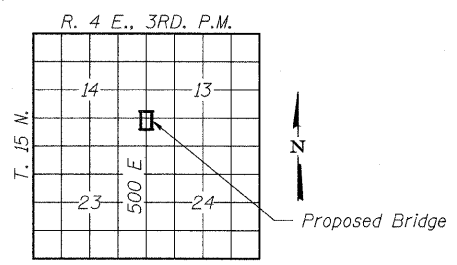
PLAN

GENERAL NOTES

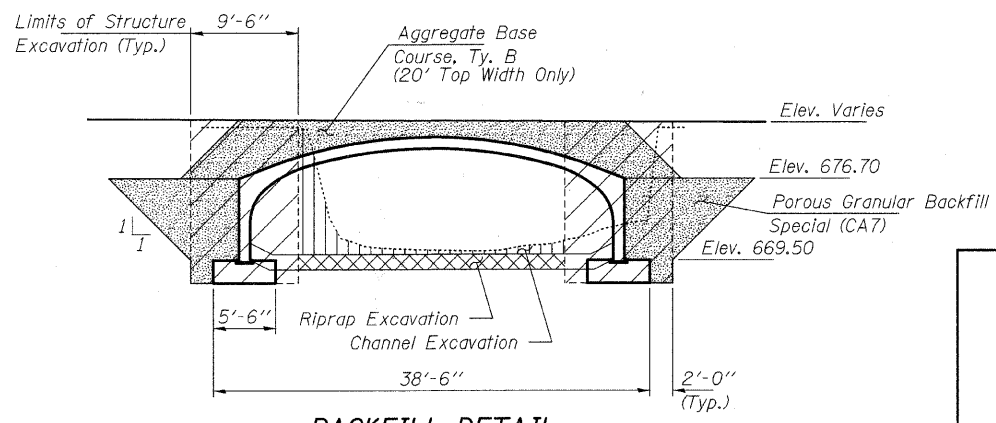
For backfilling procedures see Special Provisions and Backfill Detail. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions. It shall be the responsibility of the Contractor to divert the stream flow during construction in order to keep the construction area free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included in the Three Sided Precast Concrete Structure. The precast concrete bridge system shall match the style, dimensions and hydraulic opening as shown herein or shall receive approval from the Engineer before use. The Contractor shall salvage the existing steel beams and stockpile onsite for County use. The foundation design is based on the following maximum reactions applied at the top of the footing/pedestal wall: $V_{ult} = 25.4$ k/ft; $H_{ult} = 7.6$ k/ft. The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete foundation design with calculations, details, and the required seals shall be submitted for review and approval.

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. Superstructure
3. Steel Railing, Type S-1
4. Footing Details
5. Borings



LOCATION SKETCH



BACKFILL DETAIL

Backfill Detail showing limits of pay quantity. Porous Granular Backfill, Special shall extend the full width of the structure to wingwalls. The Contractor shall place cohesive clay material at each end of the Wings to act as a barrier to erosion of the backfill material.

STRINGTOWN BRANCH
BUILT 200_ BY
MOULTRIE COUNTY
SEC. 07-00066-00-BR
C.H. 9 / F.A.S. 554
STR. NO. 070-3032
LOADING HL-93

NAME PLATE
See Std. 515001

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Ftg.	N. Ftg.
	667.5	667.5

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural		Head - Ft.		Headwater El.	
				Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	20	999	190	205	678.2	0.2	0.1	678.4	678.3
Base	100	1521	210	215	678.9	0.7	0.7	679.6	679.6
Max. Calc.	500	2077	230	215	679.4	1.2	1.6	680.6	681.0

Drainage Area = 4.6 Sq. Mi. Existing Low Grade Elev. 679.5 @ Sta. 10+00 Proposed Low Grade Elev. 679.0 @ Sta. 9+95
10 Year Velocity through Existing Bridge = 4.5 fps 10 Year Velocity through Proposed Bridge = 4.1 fps

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.2

DESIGN STRESSES

$f'_c = 3,500$ psi (Footings)
 $f_y = 60,000$ psi (Reinf.)

DESIGN STRESSES

2010 AASHTO LRFD Bridge Design Specifications

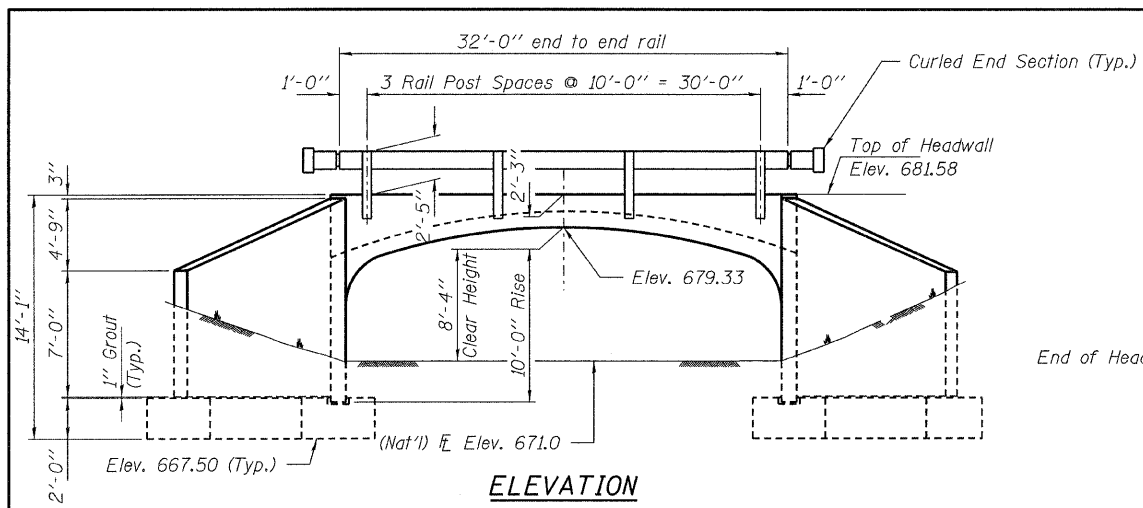
I certify that to the best of my knowledge, information and belief, this footing design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

Steven Meggison 2/17/2012
ILLINOIS STRUCTURAL NO. 081-6064 Expires 11-30-2012

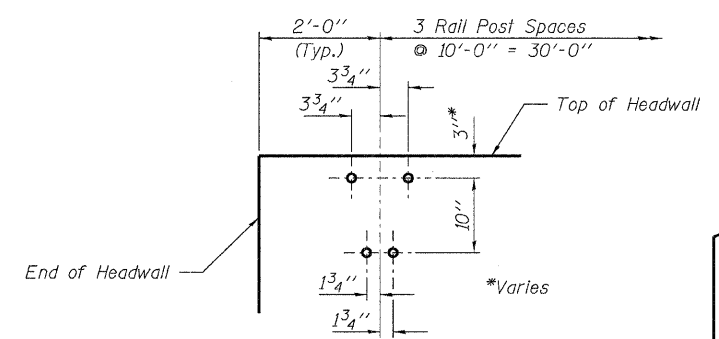


TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Channel Excavation	Cu. Yd.	120
Porous Granular Backfill, Special	Cu. Yd.	270
Concrete Structures	Cu. Yd.	44.2
Reinforcement Bars	Pound	4,010
Steel Railing, Type S1	Foot	64
Name Plates, Special	Each	1
Stone Riprap, Class A4	Ton	225
Three Sided Precast Structure (32'x10')	Foot	42
Cofferdam Excavation	Cu. Yd.	510
Aggregate Base Course, Type B	Ton	175
Removal of Existing Structures	Each	1
Filter Fabric	Sq. Yd.	290
Cofferdam (Type 2) (Location-1)	Each	1
Cofferdam (Type 2) (Location-2)	Each	1

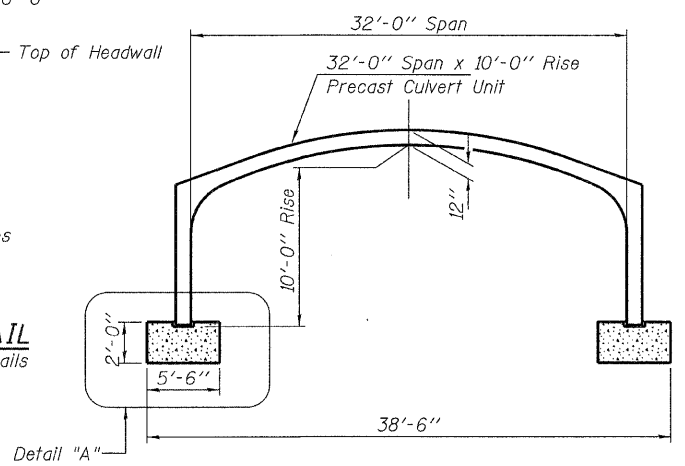


ELEVATION

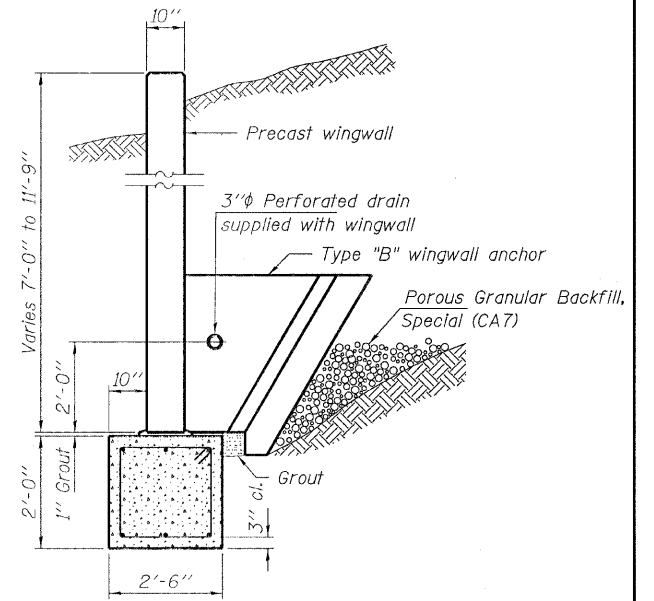


RAIL POST ANCHOR DETAIL
See sheet 3 of 5 for Post Insert details

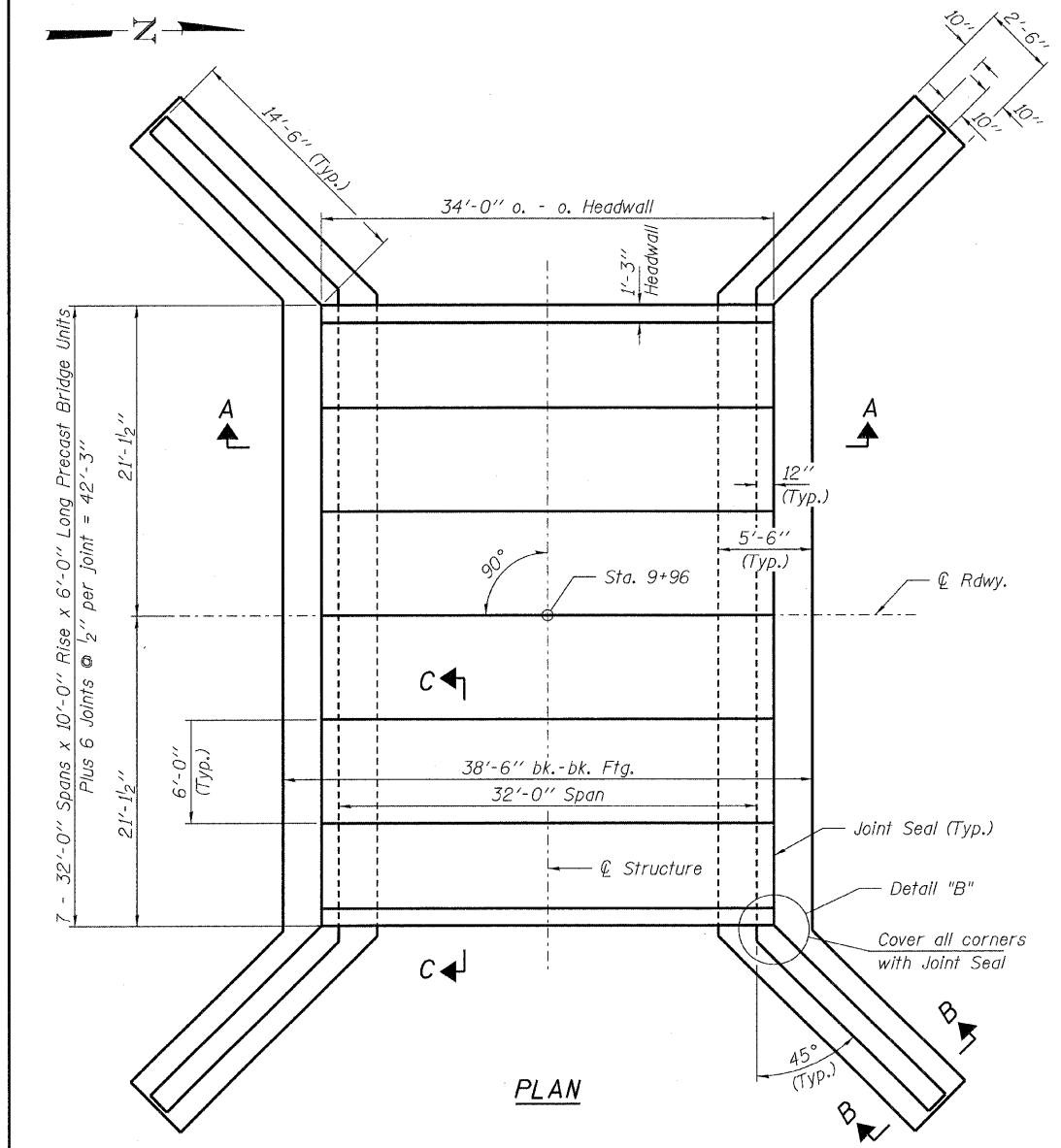
Insert to be included by Headwall Fabricator.



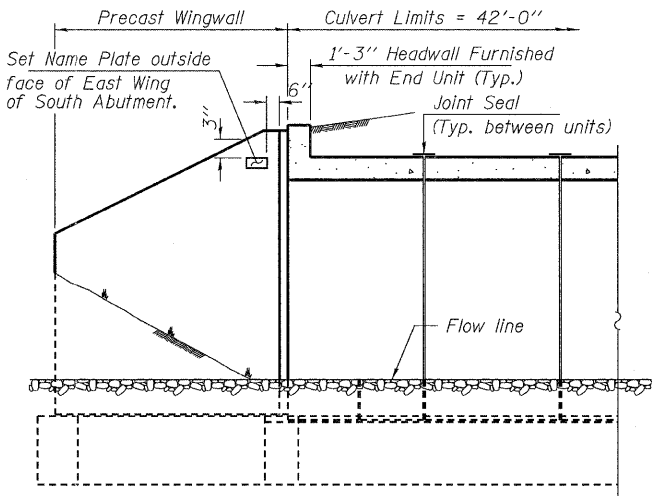
SECTION A-A



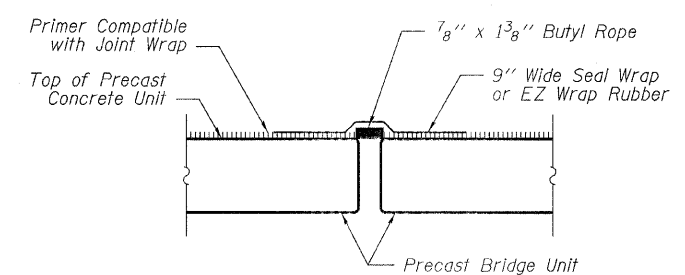
SECTION B-B



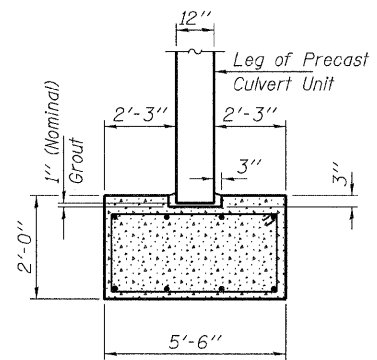
PLAN



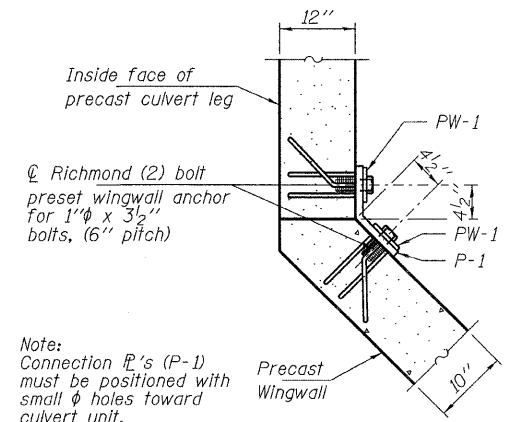
SECTION C-C



JOINT SEAL DETAIL



DETAIL 'A'



DETAIL 'B'

Note: Connection P's (P-1) must be positioned with small φ holes toward culvert unit.

NOTES

DESIGN DATA

Design Loading: HL 93
Design Method: Load Resistance Factor Design per AASHTO Specification.

All footings shall bear on solid undisturbed soil having a bearing capacity of not less than 3.8 ton/sf.

If bearing is not obtained at indicated plan elevations, material shall be removed in accordance with 502.07 of the Standard Specifications.

A qualified geotechnical inspector will determine if the footing insitu unconfined compressive strength meets or exceeds the design allowable soil bearing. Any remedial treatment must be approved by the Field Inspector Resident Engineer with concurrence of the Local Agency Engineer. Cost included in that of Three Sided Precast Concrete Structures.

MATERIALS

Concrete for Footings and Wingwalls shall have a minimum compressive strength of 3,500 psi.

Reinforcing steel for Footings and Wingwalls shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

BILL OF MATERIAL

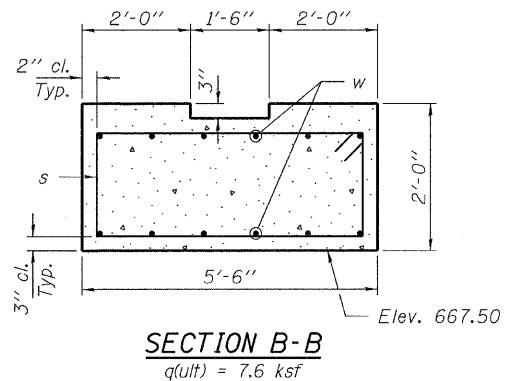
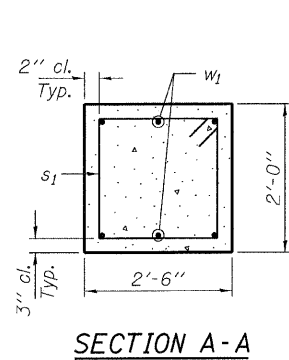
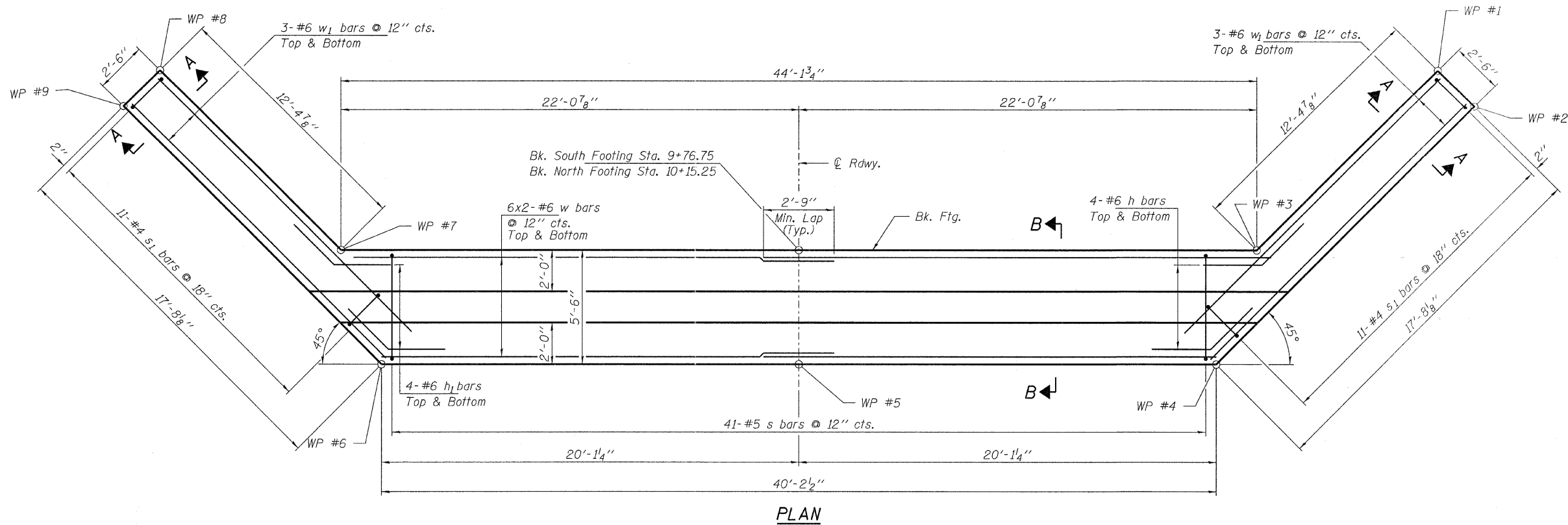
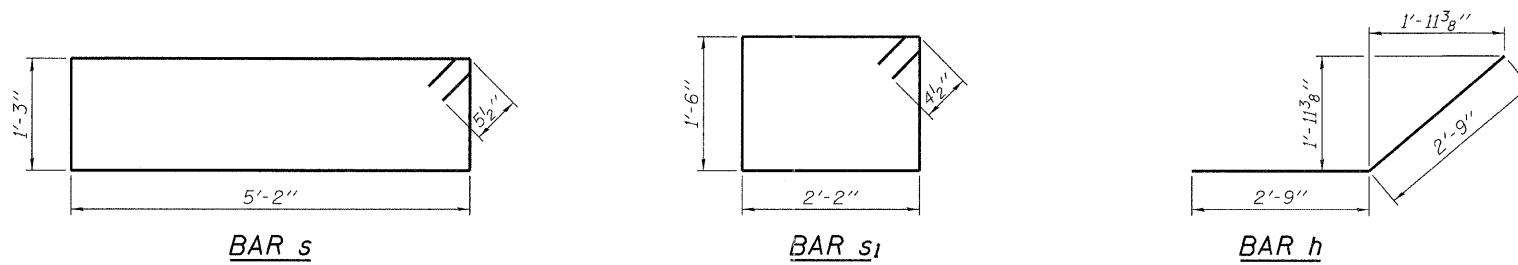
ITEM	UNIT	QUANTITY
Three Sided Precast Concrete Structure 32'x10'	Foot	42

FILE NAME = 070342-shr-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000999	PLOT DATE = 2/9/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
MOULTRIE COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE
STRUCTURE NO. 070-3032
SHEET NO. 2 OF 5 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
554	07-00066-00-BR	MOULTRIE	14	11
CONTRACT NO. 95681				
ILLINOIS FED. AID PROJECT BRS-0554(325)				



WORKING POINTS

WP #	South Abutment		North Abutment	
	Station	Offset	Station	Offset
1	9+67.98	30.84' Lt.	10+24.02	30.84' Rt.
2	9+69.75	32.61' Lt.	10+22.25	32.61' Rt.
3	9+76.75	22.07' Lt.	10+15.25	22.07' Rt.
4	9+82.25	20.11' Lt.	10+09.75	20.11' Rt.
5	9+82.25	0'	10+09.75	0'
6	9+82.25	20.11' Rt.	10+09.75	20.11' Lt.
7	9+76.75	22.07' Rt.	10+15.25	22.07' Lt.
8	9+67.98	30.84' Rt.	10+24.02	30.84' Lt.
9	9+69.75	32.61' Rt.	10+22.25	32.61' Lt.

MIN. BAR LAPS
#6 Bar = 2'-9"

BILL OF MATERIAL - 2 FOOTINGS

BAR	NO.	SIZE	LENGTH	SHAPE
h	32	#6	5'-6"	
s	82	#5	13'-9"	
s1	44	#4	8'-1"	
w	48	#6	23'-7"	
w1	24	#6	17'-6"	
Concrete Structures			Cu. Yd.	44.2
Reinforcement Bars			Pound	4,010

Bars indicated thus 11x3-#7 etc. indicates 11 lines of bars with 3 lengths per line.



Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

SOIL BORING LOG

Page 1 of 2

Date 4/30/08

ROUTE CR 5.00 E DESCRIPTION Soils Boring for Bridge Replacement LOGGED BY CE Jolly

SECTION 07-00066-00-BR LOCATION Dora, SEC. 13, TWP. 15N, RNG. 4E, 3rd PM

COUNTY Moultrie DRILLING METHOD Hollow Stem Auger HAMMER TYPE Hydraulic

STRUCT. NO. _____
Station _____
BORING NO. B-1
Station 10+19.5
Offset 6.00ft Left
Ground Surface Elev. 682.20 ft

DEPTH (ft)	BLU (ft)	UCS (tsf)	M (%)	DEPTH (ft)	BLU (ft)	UCS (tsf)	M (%)
Surface Water Elev. _____ ft				7	5.3	11.7	
Stream Bed Elev. 670.30 ft				10	B		
Groundwater Elev.:							
First Encounter 637.7 ft							
Upon Completion 673.7 ft							
After _____ Hrs.							
Oil & chip road & subgrade. 681.70							
Gray, moist SILTY CLAY LOAM, trace sand. (A-7-6)			10.7				
	2			4			
	3	1.5	29.1	7	2.2	12.9	
	2	P		10	B		
	2			4			
	2	0.5	15.2	7	4.1	12.8	
	2	P		8	B		
	2			5			
	2	0.7	26.0	6	3.5	12.0	
	3	B		10	B		
Gray, moist SILTY CLAY, trace sand, trace fine gravel. (A-6)							
	2			4			
	3	1.6	16.5	6	1.7	14.2	
	4	B		8	B		
	2						
	4	4.6	12.8				
	6	B					
Bottom of Footing = 667.5				8			
	5			13	1.9	13.1	
	8	10.7	10.9	13	B		
	11	B					
	4						
	8	7.3	11.6				
	9	B					
	5			9			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

SOIL BORING LOG

Page 2 of 2

Date 4/30/08

ROUTE CR 5.00 E DESCRIPTION Soils Boring for Bridge Replacement LOGGED BY CE Jolly

SECTION 07-00066-00-BR LOCATION Dora, SEC. 13, TWP. 15N, RNG. 4E, 3rd PM

COUNTY Moultrie DRILLING METHOD Hollow Stem Auger HAMMER TYPE Hydraulic

STRUCT. NO. _____
Station _____
BORING NO. B-1
Station 10+19.5
Offset 6.00ft Left
Ground Surface Elev. 682.20 ft

DEPTH (ft)	BLU (ft)	UCS (tsf)	M (%)	DEPTH (ft)	BLU (ft)	UCS (tsf)	M (%)
Surface Water Elev. _____ ft				7	5.3	11.7	
Stream Bed Elev. 670.30 ft				10	B		
Groundwater Elev.:							
First Encounter 637.7 ft							
Upon Completion 673.7 ft							
After _____ Hrs.							
Oil & chip road & subgrade. 681.70							
Gray, moist SILTY CLAY, trace sand, trace fine gravel. (A-6)			10.7				
	2			4			
	3	1.5	29.1	7	2.2	12.9	
	2	P		10	B		
	2			4			
	2	0.5	15.2	7	4.1	12.8	
	2	P		8	B		
	2			5			
	2	0.7	26.0	6	3.5	12.0	
	3	B		10	B		
Gray, moist SILTY CLAY, trace sand, trace fine gravel. (A-6)							
	2			4			
	3	1.6	16.5	6	1.7	14.2	
	4	B		8	B		
	2						
	4	4.6	12.8				
	6	B					
Bottom of Footing = 667.5				8			
	5			13	1.9	13.1	
	8	10.7	10.9	13	B		
	11	B					
	4						
	8	7.3	11.6				
	9	B					
	5			9			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

BORING 1