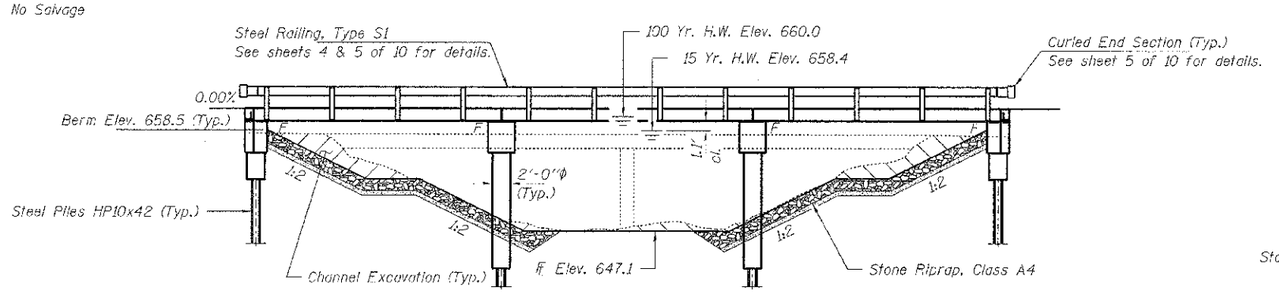
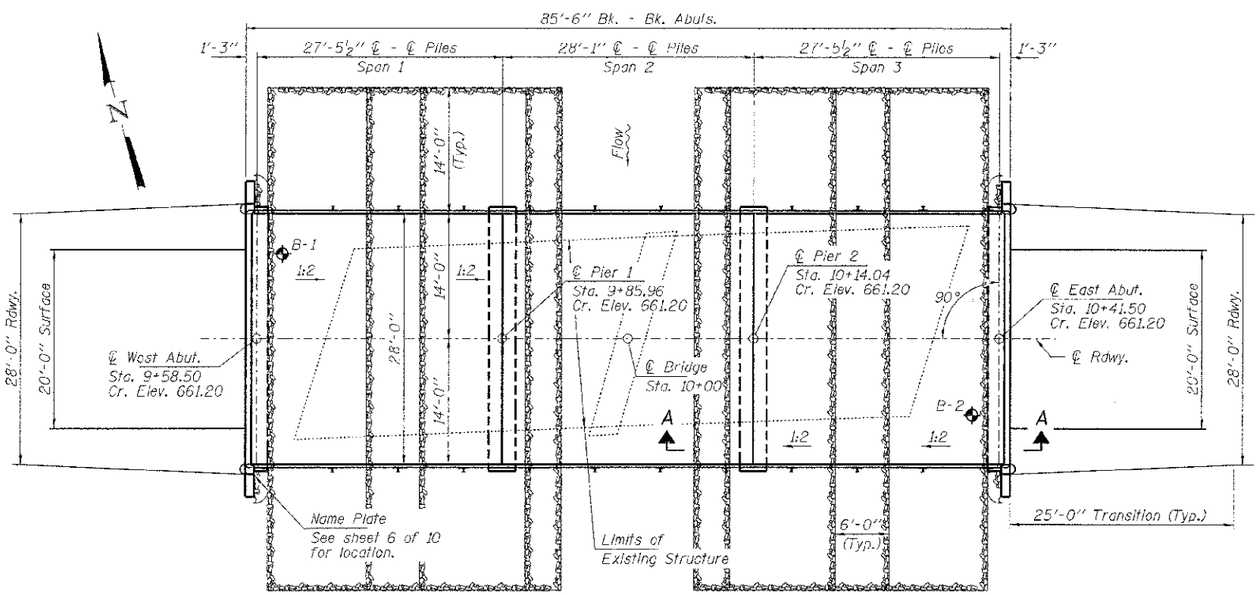
BENCHMARK: Chiseled "□" bridge curb. 10.0' Lt., Sta. 10+03, Elev. 658.72

EXISTING STRUCTURE: Sta. 10+00 - Two span PPCD beam bridge on spill-thru concrete abutment & pier caps on timber piles. 63.85' fc.-fc. abuts.; 21.0' o.-o. deck. Structure closed to traffic during construction.

No Salvage



ELEVATION



PLAN

GENERAL NOTES

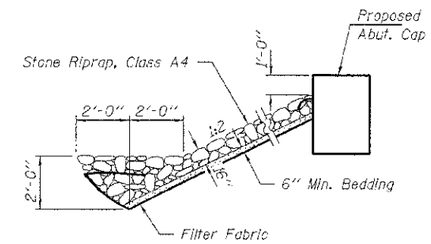
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the 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.

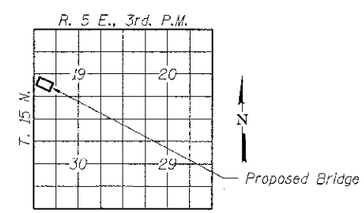


SECTION A-A

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

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 17" x 48" PPC Deck Beam
3. 17" x 48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. Piers
8. HP Pile Details
9-10. Borings



LOCATION SKETCH

STRINGTOWN BRANCH
BUILT 201_ BY
MOULTRIE COUNTY
SEC. 09-04131-00-BR
LOVINGTON ROAD DISTRICT
STR. NO. 070-4443
LOADING HL-93

NAME PLATE

See Std. 515001

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"ϕ low lax. strands)
fpbt = 201,960 psi (½"ϕ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2012 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}) = 0.114g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.230g
Soil Site Class = C

WATERWAY INFORMATION

Drainage Area = 17.8 Sq. Mi. — Existing Low Grade Elev. 657.2 @ Sta. 10+80; Proposed Low Grade Elev. 661.2 @ Sta. 10+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1450	360	490	658.05	0.06	0.61	658.11	658.66
Design	15	1660	360	510	658.42	0.06	0.59	658.48	659.01
Base	100	2750	360	600	660.01	0.00	0.51	660.01	660.52
Overtop									
Max. Calc.	500	3740	360	600	661.21	0.00	0.49	661.21	661.70

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	655.9	640.4	640.4	655.9

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. Megginson 10/30/2012
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064

LICENSED STRUCTURAL ENGINEER — STEVEN N. MEGGINSON 081-6064 SPRINGFIELD, IL — STATE OF ILLINOIS

Expires 11-30-2014

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			70
Stone Riprap, Class A4	Ton			350
Filter Fabric	Sq. Yd.			445
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		48.0	48.0
Concrete Encasement	Cu. Yd.		14.6	14.6
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,352		2,352
Reinforcement Bars	Pound		4,660	4,660
Steel Railing, Type S1	Foot	166		166
Furnishing Steel Piles HP10x42	Foot		630	630
Driving Piles	Foot		630	630
Test Pile Steel HP10x42	Each		2	2
Name Plates	Each		1	1

FILE NAME = 070171-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2556 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. 184 / S.E. CORP. 184.006992	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 10/30/2012	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
MOULTRIE COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 070-4443
SHEET NO. 1 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19	09-04131-00-BR	MOULTRIE	25	16
LOVINGTON ROAD DISTRICT		CONTRACT NO. 95697		
ILLINOIS FED. AID PROJECT				