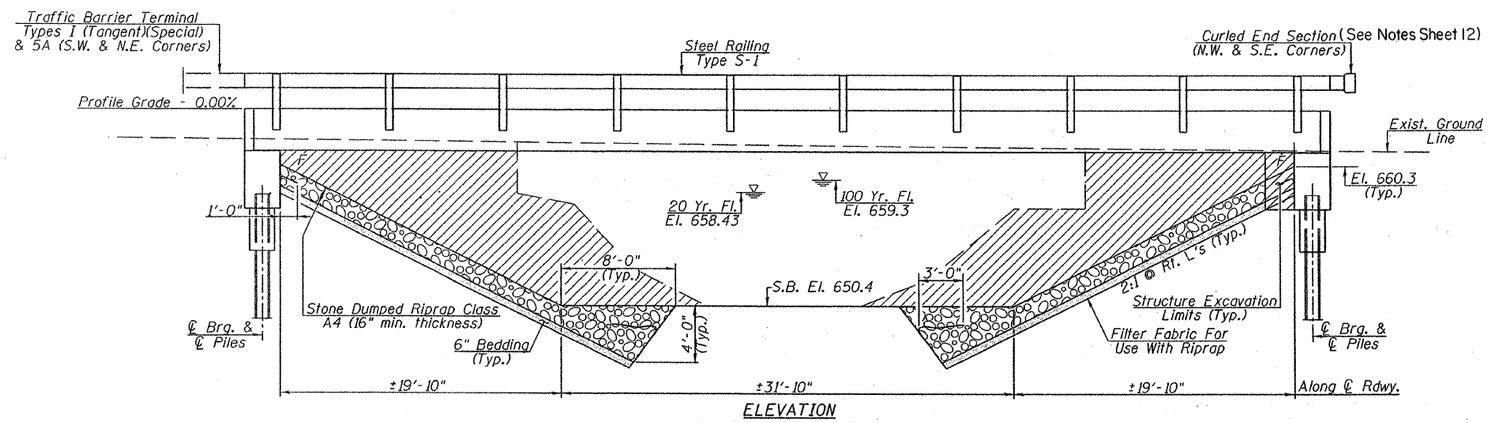
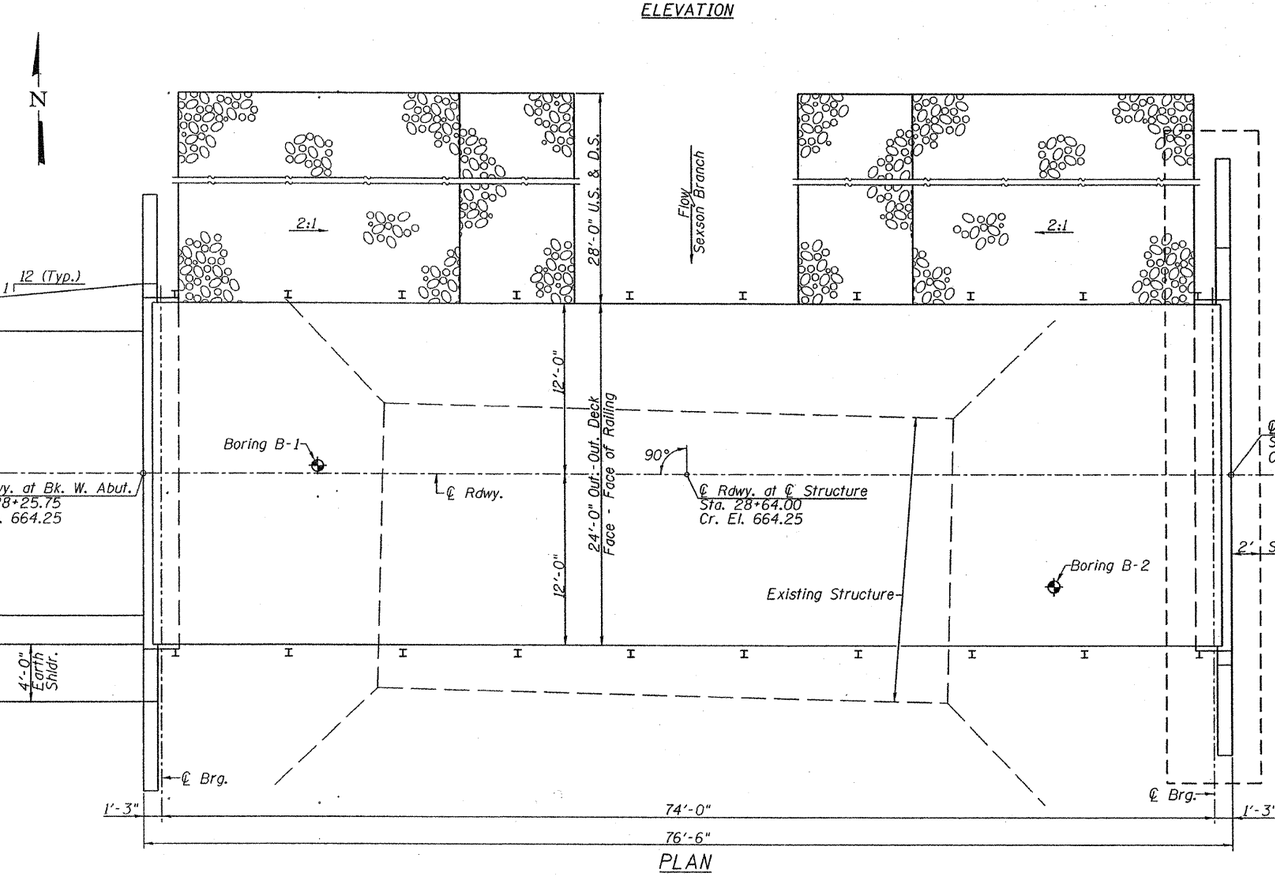
Benchmarks: BM#1 - S.W. Corner of the top flange of North girder of the existing structure Elev. 662.97



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			549
Stone Dumped Riprap, Class A4	Ton			498
Filter Fabric	Sq. Yd.			571
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		96	96
Concrete Structures	Cu. Yd.		29.3	29.3
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1804		1804
Reinforcement Bars	Pound		3810	3810
Steel Railing, Type S-1	Foot	153		153
Furnishing Steel Piles HP 12x53	Foot		336	336
Driving Piles	Foot		336	336
Test Pile Steel HP 12x53	Each		2	2
Name Plates	Each		1	1

WATERWAY INFORMATION

Drainage Area = 3.79 Sq. Mi. Low Grade Elev. = 660.5 @ Sta. 32+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1607	158.2	327.1	658.4				
Base	100	2550	209.6	372.2	659.3				
Exist. Overtop.	>500								
Prop. Overtop.	>500								
Max. Calc.	500								

Note: Waterway Information provided by Shelby County Highway Department

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications, with 2008 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3500 psi
fy = 60000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6000 psi
f'ci = 5000 psi
fpu = 270000 psi (½"ϕ low lax strands)
fpbt = 201960 psi (½"ϕ low lax strands)

SEXSON BRANCH
BUILT 200_ BY
SHELBY COUNTY
SECTION 06-01124-00-BR
STA. 28+64.00
STR. NO. 087-3562 LOADING HL-93

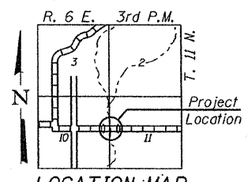
NAME PLATE
(Standard 515001)

GENERAL NOTES

See Proposal for Boring Data.
Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60. See Special Provisions.
The layout of the riprap slopewall may be varied to suit ground conditions in the field as determined by the Engineer.
The contractor shall drive one test pile in a permanent location at both abutments as directed by the Engineer in the field prior to ordering the remainder of piles.

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 "A.A.S.H.T.O. LRFD Bridge Design Specifications."

Mark A Henderson 2/18/09
Expiration Date 11/30/2010



LOCATION MAP

MARK A. HENDERSON
5513
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - J.R.P.	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

Allen Henderson & Associates, Inc.
Civil and Structural Engineers Springfield, IL.
62703 Phone: (217)544-8033 IL. Design Firm No. 184-001907

GENERAL PLAN & ELEVATION

SCALE: 1" = 5' | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
183	06-01124-00-BR	SHELBY	14	9
		CONTRACT NO. 95583		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		