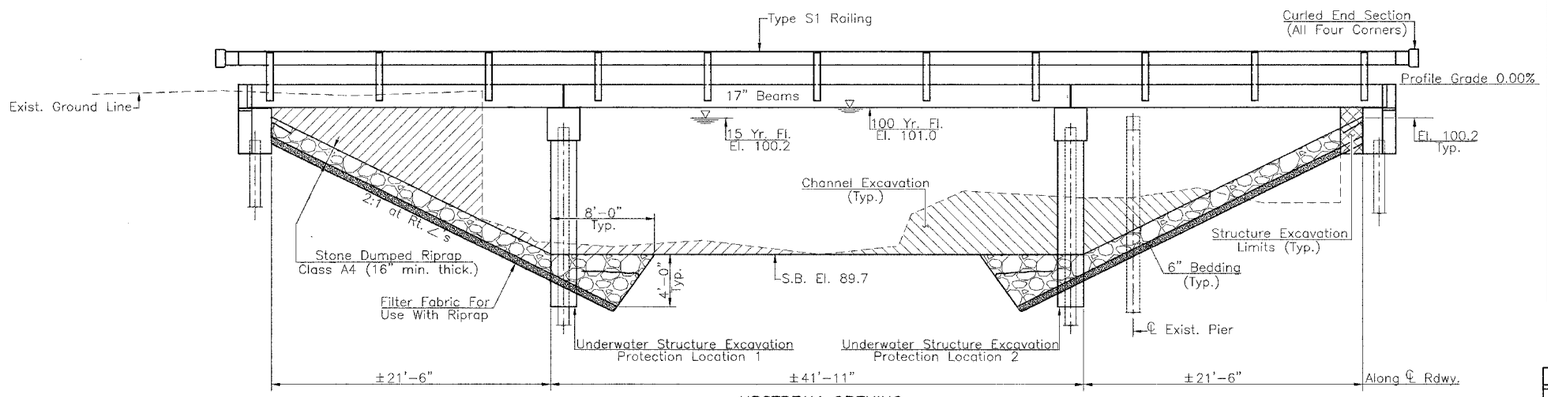
CONTRACT NO. 95467

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 140	*	SHELBY	11	4
PROJECT BROS-173(134)				

* 00-09118-00-BR

Existing Structure: Two Span Timber Deck on Steel Stringers, Closed Timber Abutments and Wingwalls, Timber Pile Bent Piers, ±66'-3" B.-Bk. Abutments, 21'-0" Clear Deck Width. 0° Skew.

Benchmarks: BM#1 – PK Nail & Washer in Corner Fence Post 30' Lt. Sta. 5+69.5 El. 102.30 (Assumed)



UPSTREAM OPENING
(Looking Downstream)

N

MITCHELL CREEK
BUILT 200 BY
SHELBY COUNTY
SECTION 00-09118-00-BR
STA. 4+36.25
PROJECT BROS-173(134)
STR. NO. 087-3525 LOADING HS20-44

NAME PLATE
(Standard 515001)

TOTAL BILL OF MATERIAL

Item		Super	Sub	Total
Channel Excavation	Cu. Yd.			866
Stone Dumped Riprap, Class A4	Ton			391
Filter Fabric For Use With Riprap	Sq. Ft.			610
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.			114
Concrete Structures	Cu. Yd.		75.6	75.6
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2100		2100
Reinforcement Bars	Pound		5755	5755
Steel Railing Type S1	Foot	178		178
Furnishing Metal Pile Shells	Foot		644	644
Driving and Filling Shells	Foot		644	644
Test Pile, Metal Shells	Each		3	3
Name Plates	Each	1		1
Underwater Structure Excavation Protection – Location 1	Each		1	1
Underwater Structure Excavation Protection – Location 2	Each		1	1

WATERWAY INFORMATION

Drainage Area = 17.94 Sq. Miles Low Grade Elev. = 98.75 @ Sta. 7+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	15	1738	510	549	100.2	100.4	100.4	0.2	0.2
Base	100	2684	512	616	101.0	101.8	101.6	0.8	0.6
Exist. Overtop.	8.6	1500							
Prop. Overtop.	9.1	1520							
Max. Calc.	500	3433	512	633	101.4	103.1	102.5	1.7	1.1

DESIGN STRESSES

FIELD UNITS

fc = 1400 psi
vc = 56.2 psi
fs = 24000 psi
n = 9

PRECAST PRESTRESSED UNITS

f'c = 5000 psi
f'ci = 4000 psi
½"φ Strands: f's = 270000 psi; f'si = 189000 psi

GENERAL NOTES

See Proposal for Boring Data.

Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31, M-42, or M-53, Grade 60.

The layout of the riprap slopewall may be varied to suit conditions in the field as determined by the engineer.

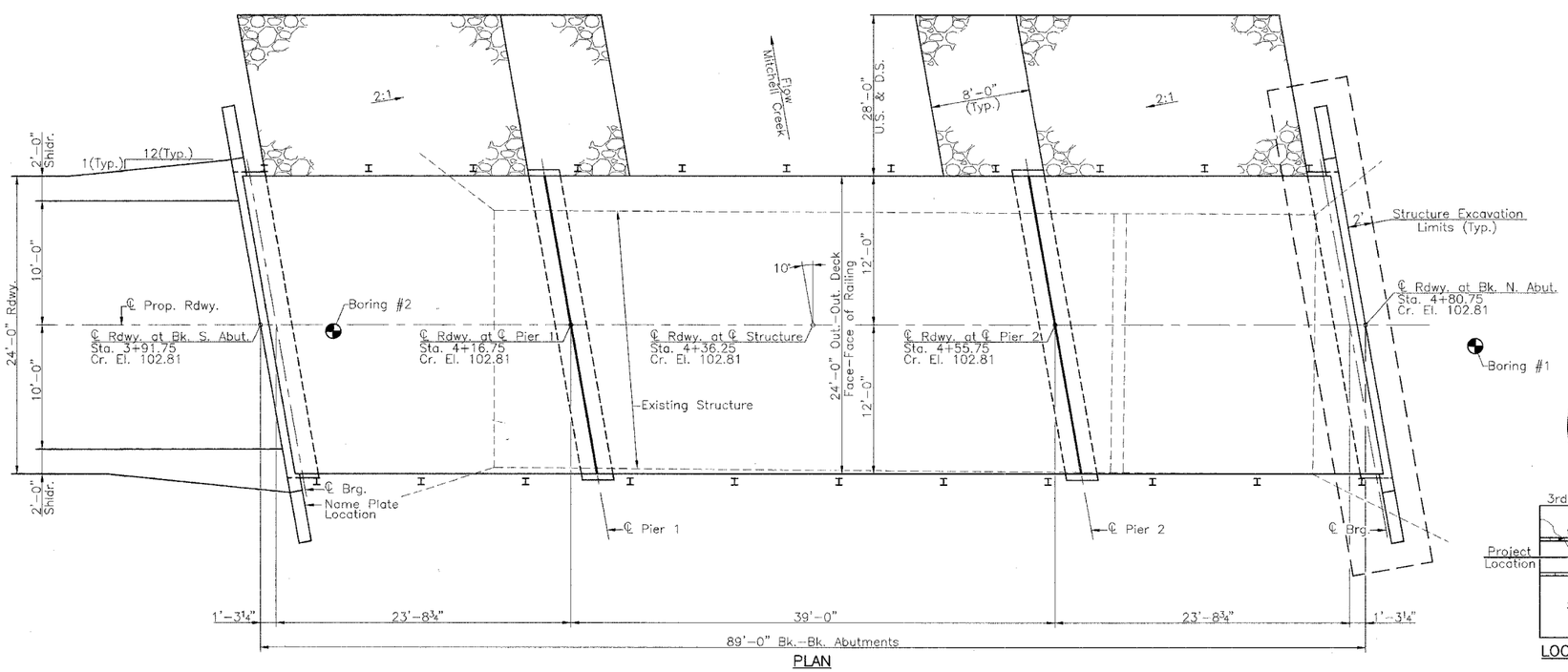
The contractor shall drive one test pile in a permanent location at the North abutment and at Piers 1 & 2 as directed by the Engineer in the field prior to ordering the remainder of piles.

DESIGN SPECIFICATIONS

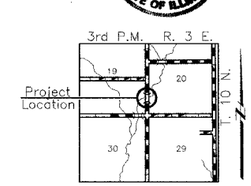
2002 A.A.S.H.T.O. Specifications with 2003 & 2004 Interim Specifications.

LOADING HS 20-44

Allow 50#/sq. ft. for Future Wearing Surface.



PLAN



LOCATION SKETCH

MARK A. HENDERSON 5613 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

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. Standard Specifications For Highway Bridges".

Mark A. Henderson 2/14/06
Expiration Date 11/30/2006

GENERAL PLAN & ELEVATION
T.R. 140 OVER MITCHELL CREEK
SECTION 00-09118-00-BR
SHELBY COUNTY

FILE NAME: BR140PE (REV. 2/13/06)