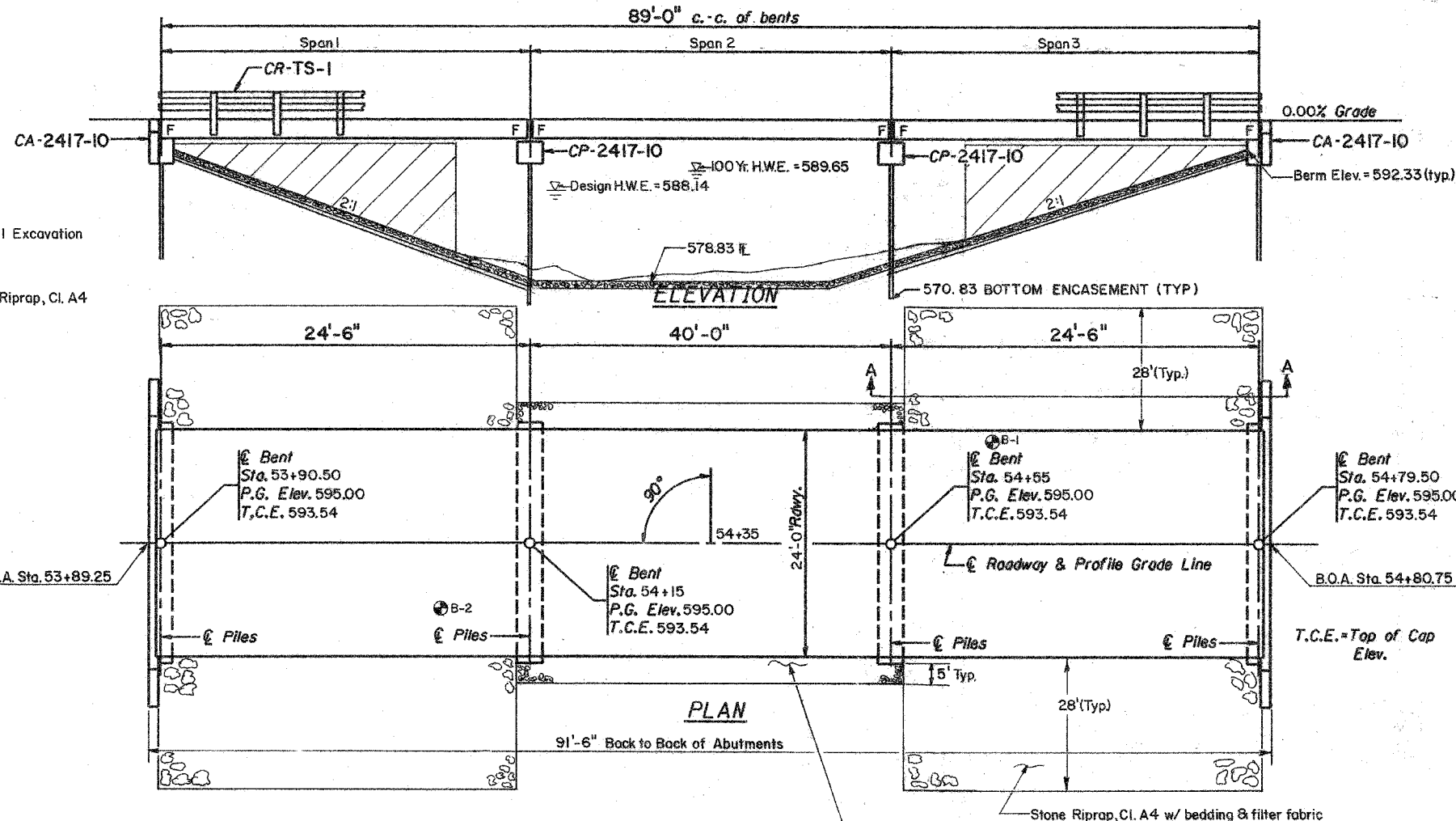


B.M. -N.E. Corner of East Deck Girder,  
Sta. 54+60, 10' Rt. Elev. = 593.80  
Existing Structure-2 Span Deck Girder,  
Steel Deck Pan w/Asphalt on Closed Concrete  
Abutments and Timber Pile Bent Pier  
Structure No. 087-3170

Salvage- None

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL
TR. 234	*	SHELBY	24	8
FED. ROAD DIST. NO. 7	ILL. PROJ. NO.	FED. ROAD PROJECT		
		* 04-20118-00-BR		
CONTRACT NO. 95557				



**GENERAL NOTES**

- The Contractor shall drive 4 test piles, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
- The test pile shall be driven to 110 percent of the nominal required bearing indicated in the pile data information.
- The steel H-Piles shall be according to A.A.S.H.T.O. M270, Grade 50.
- The Bituminous Concrete Surface Course and the Waterproofing Membrane System shown on the plans shall not be provided for this project.

**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each				1
Concrete Structures	Cu. Yd.		14.8	16.6	31.4
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,154			2,154
Steel Railing, Type S-1	Foot	180			180
Reinforcement Bars	Pound		1,860	2,220	4,080
Furnishing Steel Pile, HP 10x42	Foot		450	270	720
Driving Piles	Foot		450	270	720
Test Piles	Each		2	2	4
Name Plates	Each			1	1
Concrete Encasement	Cu. Yd.		13.8	2.1	15.9
Underwater Struct. Ex. Prof. - Loc. 1 (Pier 1)	Each		1		1
Underwater Struct. Ex. Prof. - Loc. 2 (Pier 2)	Each		1		1

**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications - 17th ed.

**LOADING HS20-44**

Allow 25#/sq. ft. for future wearing surface.

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.061g  
Site Coefficient (S) = 1.0

**PILE DATA (2-PIERS)**

Type: Steel HP 10x42  
Nominal Required Bearing: 335 Kips  
Allowable Resistance Available: 111 Kips  
Estimated Pile Length: 75 ft./pile  
Number of Production Pile: 6  
Number of Test Pile: 2

**PILE DATA (2-ABUTS.)**

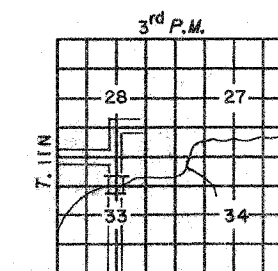
Type: Steel HP 10x42  
Nominal Required Bearing: 234 Kips  
Allowable Resistance Available: 78 Kips  
Estimated Pile Length: 45 ft./pile  
Number of Production Pile: 6  
Number of Test Pile: 2

Stone Riprap, Cl. A4, 24" thick,  
No Bedding or Filter Fabric between piers.

STATION 54+35  
JORDAN CREEK  
SEC. 04-20118-00-BR BUILT 20\_\_\_\_  
SHELBYVILLE ROAD DIST.  
SHELBY COUNTY  
LOADING HS20-44  
STR. NO. 087-3547

**LETTERING FOR NAME PLATE**

Locate Name Plate at Southeast  
Corner of Bridge (See Std. CN)



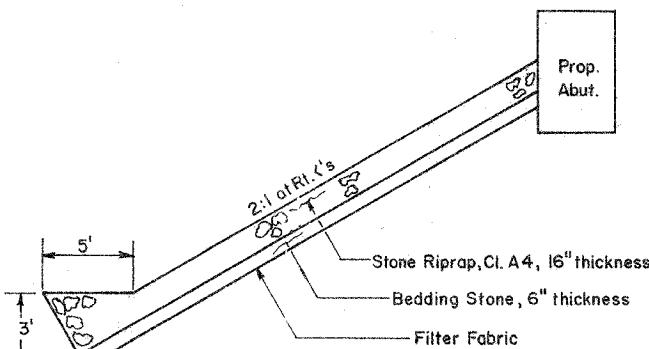
PROPOSED R. 4 E  
BRIDGE  
**LOCATION SKETCH**

**INDEX OF STANDARDS**

- Standard CA-2417-10
- Standard CP-2417-10
- Standard CN
- Standard CR-TS-1
- Standard CX-1

"I certify that to the best of my knowledge, information and belief, this bridge box culvert 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 Standard Specifications for Highway Bridges. The capacity of the pile foundation, hydraulics and quantities were determined by Others and are not covered by this certification."

HEREBY CERTIFY THAT THE OPENING WAS SIZED IN ACCORDANCE WITH THE POLICIES AND PROCEDURES OF THE DRAINAGE MANUAL AND THE QUANTITIES WERE DETERMINED BY ME OR BY A FULL TIME MEMBER OF MY STAFF WORKING UNDER MY PERSONAL SUPERVISION.  
S. ALAN SPESARD P.E. DATE 5/16/08  
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS NUMBER 062-062965  
DATE OF LICENSE EXPIRATION 11-30-2008



**RIPRAP DETAIL**

Section A-A

**WATERWAY INFORMATION**

Drainage Area = 7.85 Sq. Mi		Low Grade Elev. = 593.54 @ Sta. 54+35								
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater EL.	Exist.	Prop.	Exist.	Prop.
Design	15	1760	319	588.14	0.03	0.12				
Base	100	2850	389	589.65	0.35	0.37				
Overlapping										
Max. Calc.	500	3525								

**GENERAL PLAN & ELEVATION**  
TR ROUTE 234A  
OVER JORDAN CREEK  
SECTION 04-20118-00-BR  
SHELBY COUNTY  
STATION 54+35