

**BENCHMARK:**

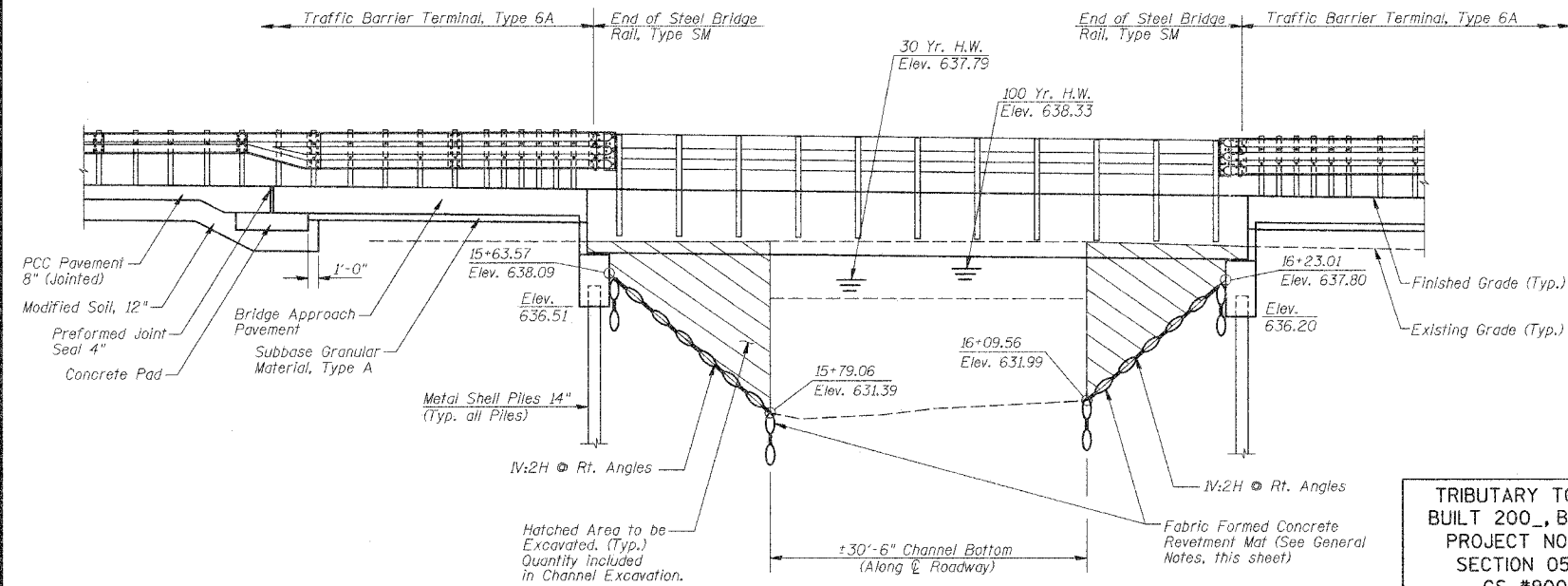
Top of curb on bridge (Southeast corner of North curb)  
Sta. 16+10.45, 10.3' Lt.  
Elevation = 639.79  
NOTE: Relocate B.M. prior to removal of existing structure.

**EXISTING STRUCTURE (SN 058-3153):**

Single Span Concrete Deck on WF Beam Superstructure on Closed Timber Abutments with Timber Wingwalls. 25'-0"± O.-O. Deck. 33'-0"± Bk.-Bk. Abuts. No Salvage.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CS #900	05-00205-00-BR	MACON	23	17
FED. ROAD DIST. NO.	ILLINOIS PROJECT:	BRM-5169(40)		

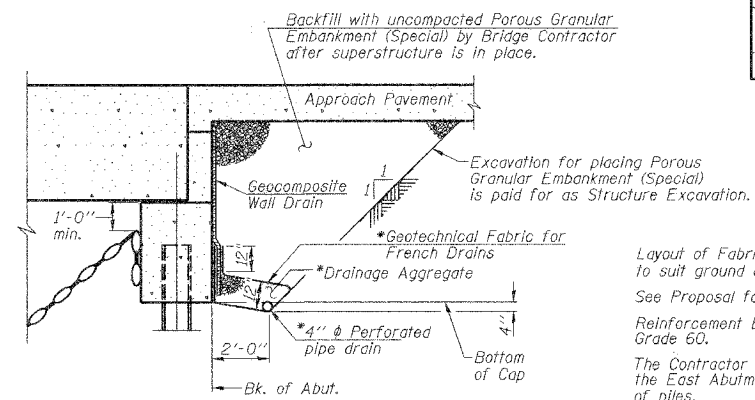
CONTRACT NO. 95542



**ELEVATION LOOKING DOWNSTREAM**

TRIBUTARY TO LAKE DECATUR  
BUILT 200., BY MACON COUNTY  
PROJECT NO. BRM-5169(40)  
SECTION 05-00205-00-BR  
CS #900 STA. 15+93.29  
STR. NO. 058-3386 LOADING HS-20  
HARRY LAND BRIDGE

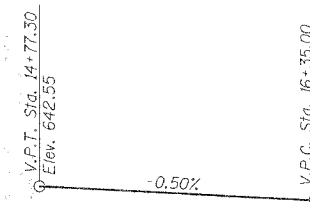
**NAME PLATE**  
(See Std. 515001)



**SECTION THRU ABUTMENT**

(Horiz. dim. @ Rt. L's)  
\* Included in the cost of Pipe Underdrains for Structures.

Note:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



**PROFILE T.R. 211**

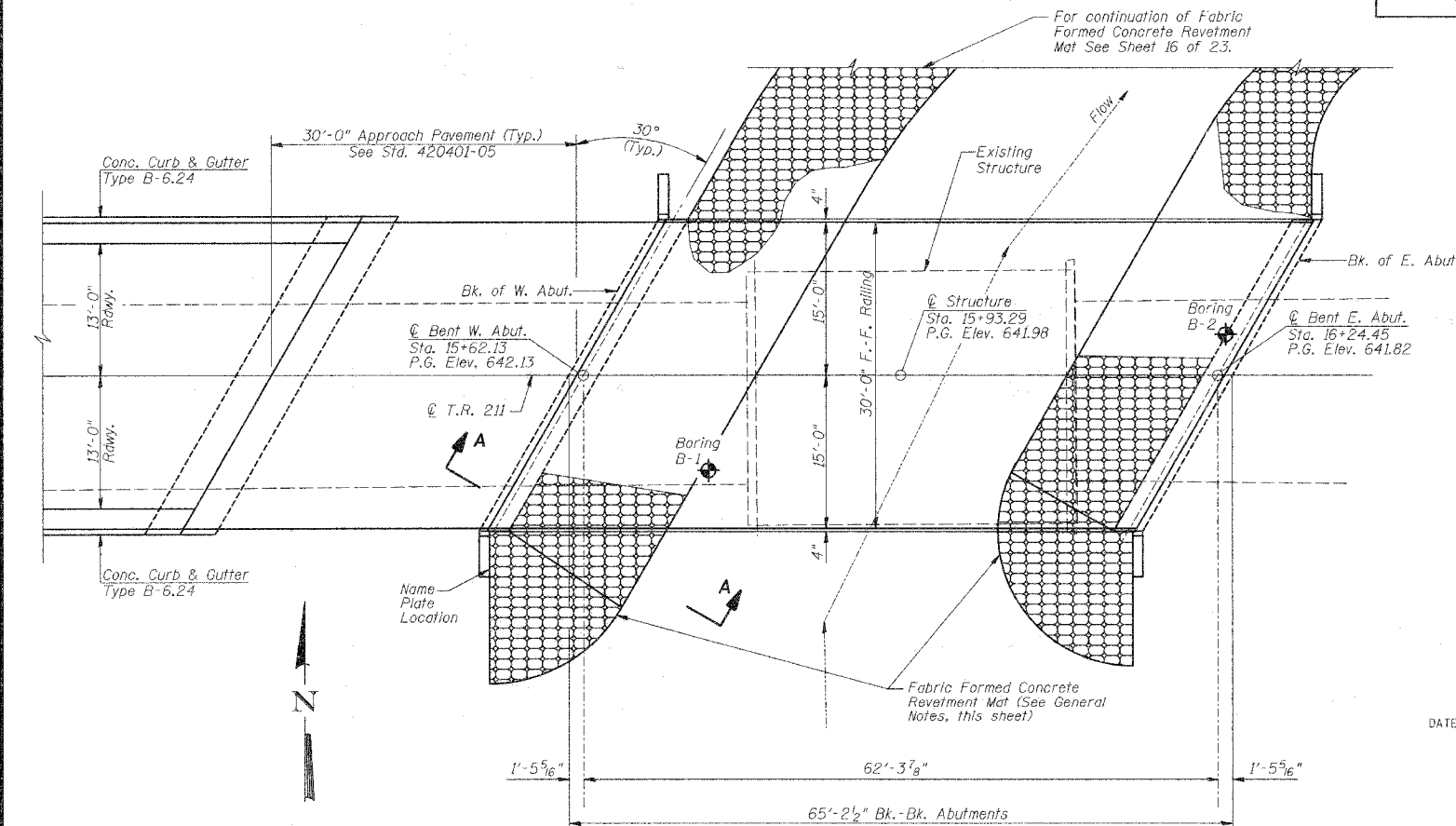
**GENERAL NOTES**

Layout of Fabric Formed Concrete Revetment Mat may be varied in the field to suit ground conditions as directed by the Engineer.  
See Proposal for Boring Data.  
Reinforcement Bars shall conform to the requirements of ASTM A 706 (IL MOD), Grade 60.  
The Contractor shall drive one Metal Shell Test Pile in a permanent location at the East Abutment as directed by the Engineer before ordering the remainder of piles.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.F.C Deck Beams (27" Depth)	Sq. Ft.	1910		1910
Concrete Structures	Cu. Yd.		23.0	23.0
Reinforcement Bars, Epoxy Coated	Pound	2610	3140	5750
Furnishing Metal Shell Piles 14"	Foot		448	448
Driving Piles	Foot		448	448
Test Pile Metal Shells	Each		1	1
Channel Excavation	Cu. Yd.		156	156
Name Plates	Each		1	1
Steel Bridge Rail, Type SM	Foot	128		128
Protective Coat	Sq. Yd.	212		212
Concrete Wearing Surface	Sq. Yd.	212		212
Porous Granular Embankment, Special	Cu. Yd.		66.1	66.1
Structure Excavation	Cu. Yd.		94.8	94.8
Geocomposite Wall Drain	Sq. Yd.		43.5	43.5
Concrete Headwall for Pipe Drains	Each		4	4
Pipe Underdrains for Structures 4"	Foot		89	89
Bridge Deck Grooving	Sq. Yd.	212		212

\* Bridge Quantity only, total quantity listed on sheet 2 of 23.



**PLAN**

**DESIGN SPECIFICATIONS**

2002 AASHTO

**LOADING HS20-44**

Allowed 25 lbs./sq. ft. for future wearing surface

**DESIGN STRESSES**

FIELD UNITS  
f'c = 3,500 p.s.i.  
f'ci = 4,000 p.s.i.  
fy = 60,000 p.s.i.  
n = 9

PPC UNITS  
f'c = 4,000 p.s.i.  
f'ci = 5,000 p.s.i.  
f's = 270,000 p.s.i.  
f'si = 201,960 p.s.i.

**CONCRETE WEARING SURFACE**

f'c = 5,000 p.s.i.

**WATERWAY INFORMATION**

Drainage Area = 2.0 Sq. Mi. Existing Low Grade Elev. 638.37 @ Sta. 20+00.00  
Proposed Low Grade Elev. 638.35 @ Sta. 20+50.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Nat. Prop.	H.W.E. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	786	170	241	637.79	0.20	0.01	637.99/637.80
Base	100	1088	170	271	638.33	0.43*	0.07	638.76/638.40
Overtopping								
Max. Calc.	500	1508	170	299	638.90	0.24*	0.12*	639.15/639.02

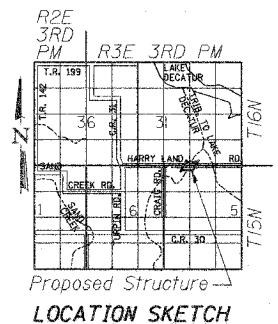
Low Beam Elev. (Prop.) = 638.80  
IDNR/OWR Permit No. DS2007133

\* Over-the-Road Flow Occurs

EXISTING  
100 Yr.: 195.6 Sq. Ft. over roadway  
500 Yr.: 239.0 Sq. Ft. over roadway

PROPOSED

500 Yr.: 71.6 Sq. Ft. over roadway



**LOCATION SKETCH**

DATE: January 24, 2008  
Keith W. Benting  
KEITH W. BENTING  
ILL. STRUCTURAL NO. 4777



"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' STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

**GENERAL PLAN AND ELEVATION**

Date	Designed MJP	CS #900 (HARRY LAND ROAD) OVER TRIB. TO LAKE DECATUR SECTION 05-00205-00-BR MACON COUNTY STA. 15+93.29 PROP. STR. NO. 058-3386	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		
	Approved KWB		
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		
			URS Job No. 36431928