

BENCHMARK:
 Survey Control Point #2 (Iron Pin)
 Sta. 13+99.29, 15.24' RI.
 Elev. = 604.32

Roadway closed to traffic during construction.
 No Salvage.

EXISTING STRUCTURE:

Three Span Concrete Slab Bridge with Steel Stringers on Closed Concrete Abutments and Concrete Piers. 28'-0" O.-O. Deck, 89'-0" Bk.-Bk. Abutments.

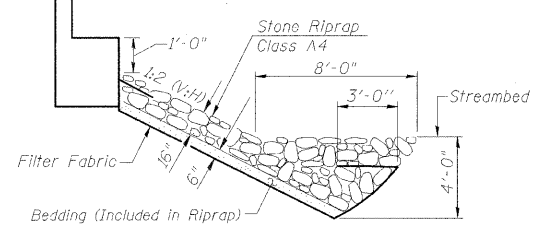
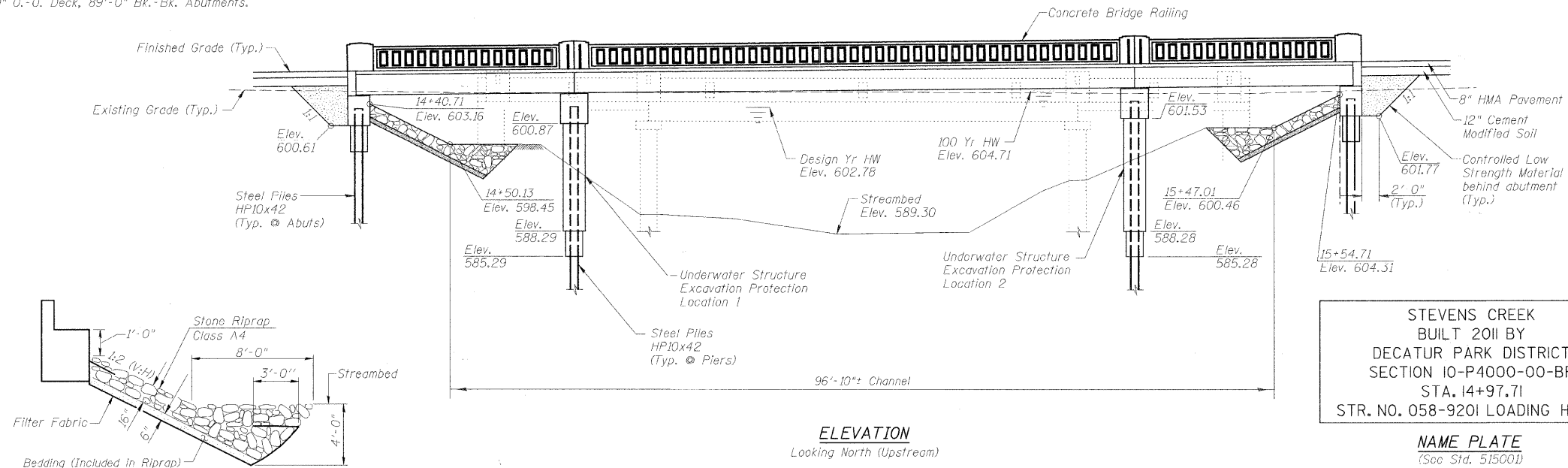
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR-939	10-P4000-00-BR	MACON	21	9
FED. ROAD DIST. NO.		ILLINOIS PROJECT:	CONTRACT NO. 95660	

GENERAL NOTES

Layout of Riprap Slopes 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, Grade 60. See Special Provisions.
 The Contractor shall drive one Steel Test Pile to 110% of the Nominal Required Bearing in a permanent location at Pier 2 and the East Abutment as directed by the Engineer before ordering the remainder of piles.
 Excavation required for abutment construction shall be included in Concrete Structures. No additional compensation will be provided for Structure Excavation.

BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		141	141
Stone Riprap, Class A4	Sq. Yd.		195	195
Filter Fabric	Sq. Yd.		195	195
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		140.1	140.1
Bridge Deck Grooving	Sq. Yd.	360		360
Concrete Encasement	Cu. Yd.		8.4	8.4
Protective Coat	Sq. Yd.	461		461
P.P.C Deck Beams (27" Depth)	Sq. Ft.	3510		3510
Reinforcement Bars, Epoxy Coated	Pound	7290	10380	17670
Furnishing Steel Piles HP10X42	Foot		533	533
Driving Piles	Foot		533	533
Test Pile Steel HP10X42	Each		2	2
Name Plates	Each		1	1
Portland Cement Mortar Faring Course	Foot	1055		1055
Controlled Low-Strength Material	Cu. Yd.		49.4	49.4
Concrete Bridge Railing	Foot	238		238
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1
Concrete Wearing Surface, 5"	Sq. Yd.	391		391



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W.Abut.	Pier 1	Pier 2	E.Abut.
	600.6	589.0	591.9	601.8

**STEVENS CREEK
 BUILT 2011 BY
 DECATUR PARK DISTRICT
 SECTION 10-P4000-00-BR
 STA. 14+97.71
 STR. NO. 058-9201 LOADING HL-93**

NAME PLATE
 (See Std. 515001)

DESIGN SPECIFICATIONS

2010 AASHTO LRFD

LOADING HL-93

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

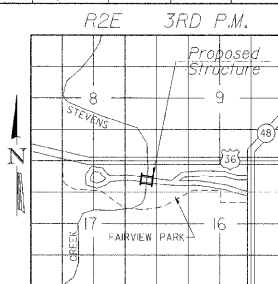
DESIGN STRESSES

FIELD UNITS
 $f'c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.
 $n = 9$

PPC UNITS
 $f'ci = 5,000$ p.s.i.
 $f'c = 6,000$ p.s.i.
 $f's = 270,000$ p.s.i.
 $f'si = 201,960$ p.s.i.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.154g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.278g
 Soil Site Class = D



LOCATION SKETCH

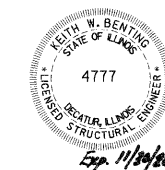
WATERWAY INFORMATION

Drainage Area = 86.7 Sq. Mi. Existing Low Grade Elev. 604.46 @ Sta. 14+50.00
 Proposed Low Grade Elev. 606.82 @ Sta. 13+50.00

Flood	Freq. Yr.	Q	Opening Sq. Ft.	Nat.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	8,500	648	865	602.78	3.71	1.54	606.49
Base	100	10,870	648	937	604.71	4.54	1.41	609.25
Overtopping								
Max. Calc.	500	14,430	648	943	608.36	1.85	2.95	610.21

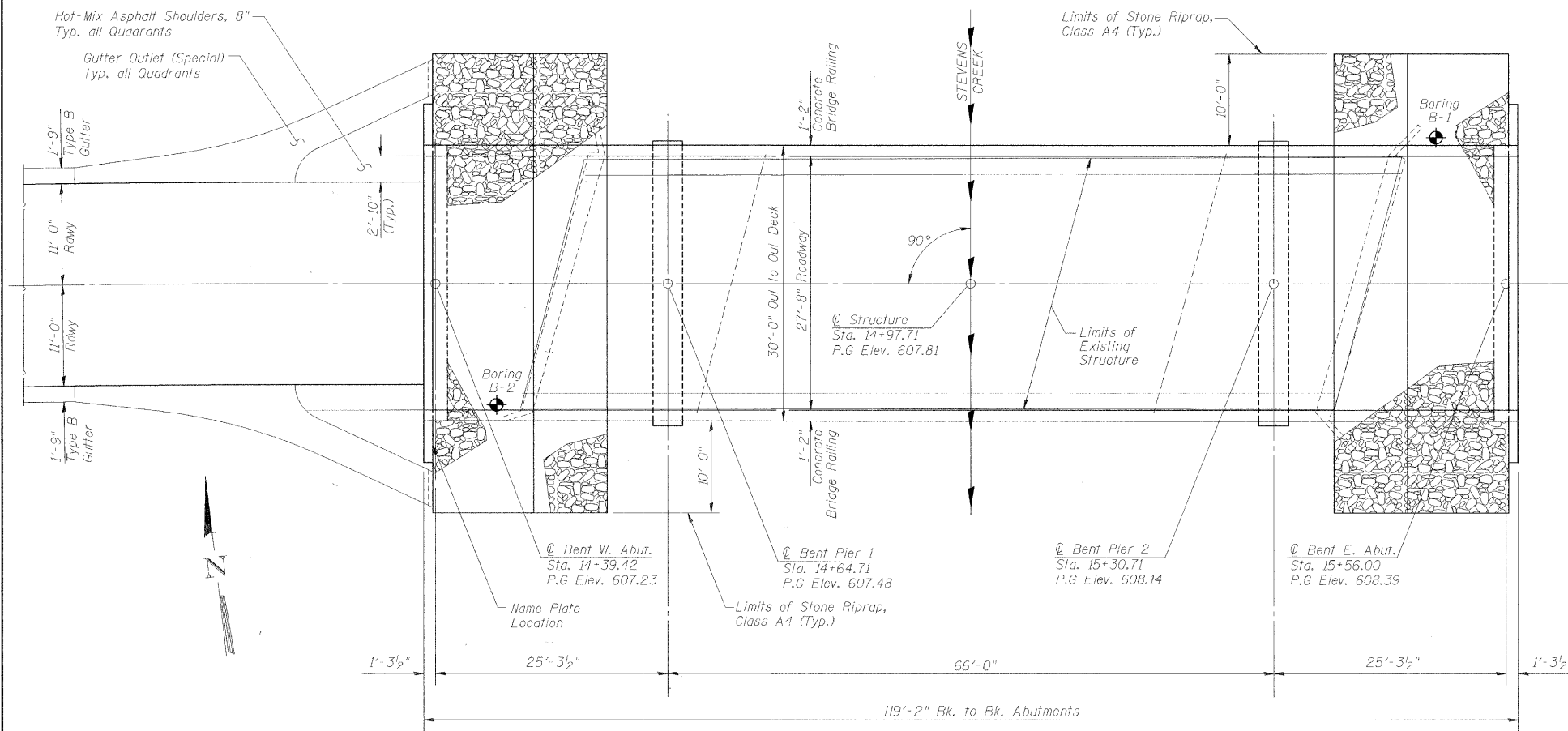
Low Beam Elev. (Prop.) = 604.24

* Over-the-Road Flow Occurs
 EXISTING
 30 Yr.: 387 Sq. Ft. over roadway
 100 Yr.: 2,711 Sq. Ft. over roadway
 500 Yr.: 2,337 Sq. Ft. over roadway
 PROPOSED
 500 Yr.: 1 Sq. Ft. over roadway



DATE: April 21, 2011
 Keith W. Beating
 KEITH W. BEATING
 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."



PLAN

GENERAL PLAN AND ELEVATION

Date	Designed DCS	TR-939 (PARK DRIVE) OVER STEVENS CREEK SECTION 10-P4000-00-BR DECATUR PARK DISTRICT STA. 14+97.71 PROP. STR. NO. 058-9201	Sheet No.
Revisions	Drawn BKN		1
	Checked KWD		
	Approved KWB		
			of 13
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526	URS Job No. 36432943	