

Benchmarks: BM #1001 Cut "□" in center South Headwall of box culvert ±200' East of bridge, Station 12+99.23/13.07' RT., Elevation 666.650.
 BM #1003 Cotton Picker Spindle set in South face of power pole, ±150' West of bridge ± Northeast corner of Road 1300N & private entrance, Station 9+02.02/33.40' LT., Elevation 666.196.

Existing Structure: S.N. 053-3309 was originally constructed in 1945. The structure consists of a four span continuous steel beam superstructure with closed concrete abutments and rectangular concrete pier columns. The back to back abutment dimension measures ±59'-0" and the width measures ±26'-0". The span lengths measure ±14'-9", ±14'-9", ±14'-9" and ±14'-9". The structure is to be replaced during road closure.

No Salvage.

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges

LOADING HS20-44

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

DESIGN STRESSES

FIELD UNITS

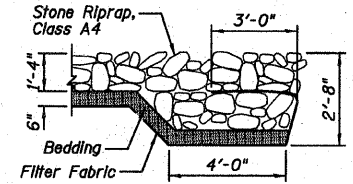
$f'_c = 3,500$ psi (Cast-In-Place Concrete)
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

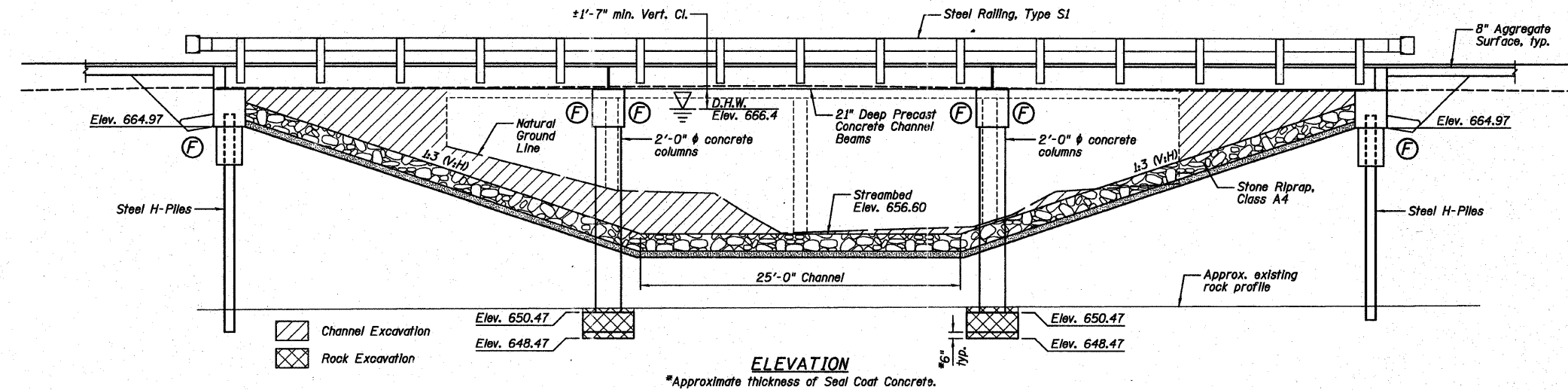
$f'_c = 4,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.043
 Site Coefficient (S) = 1.0



SECTION A-A



ELEVATION

*Approximate thickness of Seal Coat Concrete.

WATERWAY INFORMATION

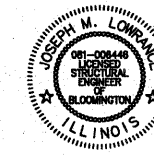
Flood		Q	Opening Sq. Ft.		Head - Ft.		Headwater El.		
Freq. Yr.	C.F.S.	Exst.	Prop.	H.W.E. Exst.	Prop.	Exst.	Prop.		
Design	15	2910	454	626	666.4	0.8	0.6	667.2	666.9
Base	100	4889	454	626	667.1	1.0	0.5	668.1	667.6
Overtopping									
Max. Calc.									

10 Yr. Velocity = 5.61 ft./sec. (Proposed)
 10 Yr. Velocity = 6.65 ft./sec. (Existing)

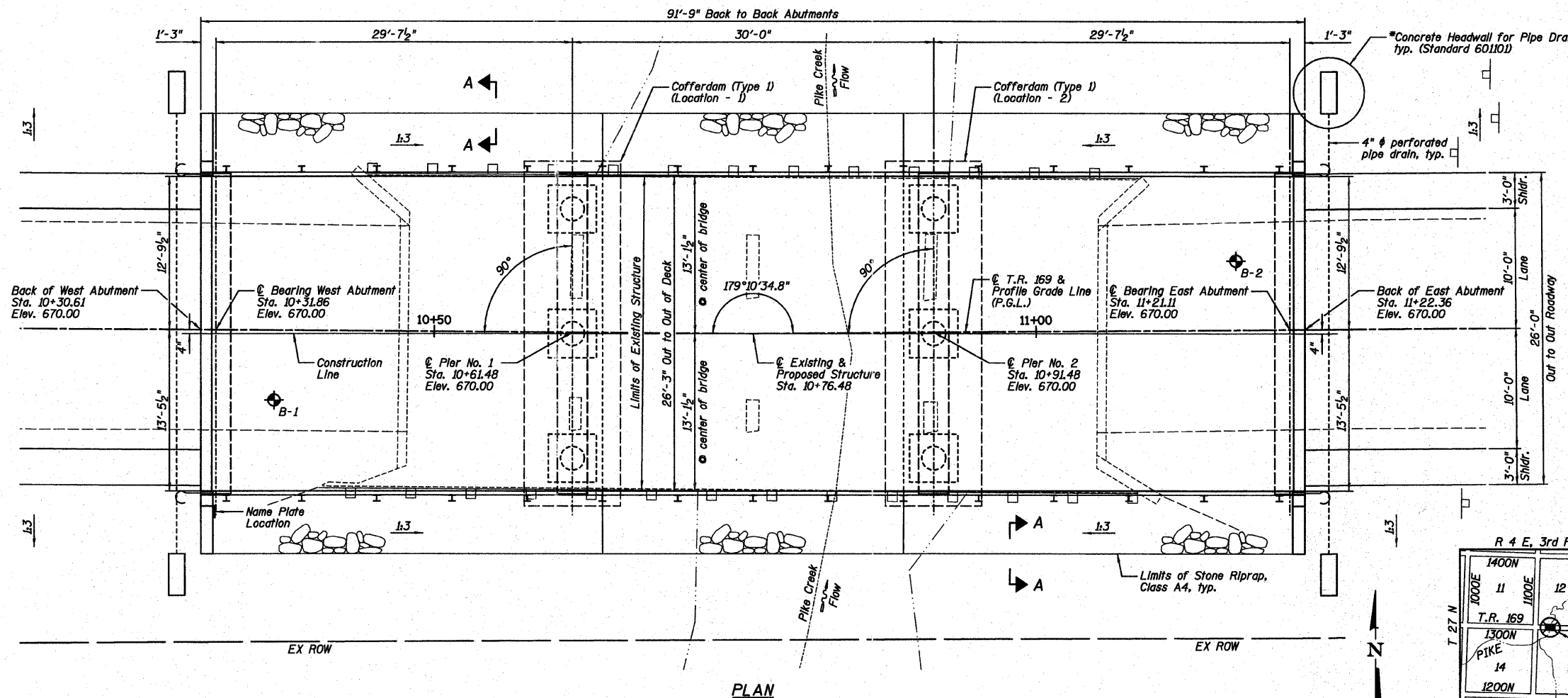
INDEX OF SHEETS

SHEET NO.	TITLE
B1	GENERAL PLAN AND ELEVATION
B2	GENERAL DATA
B3	PRECAST CONCRETE BRIDGE SLAB
B4	STEEL RAILING, TYPE S1
B5	ABUTMENTS
B6	PIERS
B7	HP PILE DETAILS
B8-B9	SOIL BORING LOGS

I certify that to the best of my knowledge, 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".

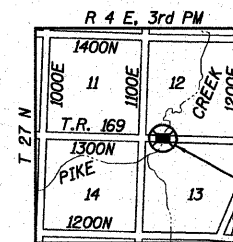


Joseph M. Lowrance
 Date 02-06-12
 JOSEPH M. LOWRANCE
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-006446
 Exp. Date 11/30/12



PLAN

* Included in cost of Pipe Underdrains for Structures.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
T.R. 169 OVER PIKE CREEK
SECTION 09-20110-02-BR
LIVINGSTON COUNTY
STA. 10+76.48
STRUCTURE NO. 053-4201

Farnsworth
 GROUP, INC.
 2709 McGraw Drive
 Bloomington, Illinois 61704
 309/863-8495, 309/863-1571 fax

DESIGNED - CEE	REVISOR
CHECKED - JML	REVISOR
DRAWN - DJM	REVISOR
CHECKED - MSW	REVISOR
DATE - 02/06/12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. B1 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
169	09-20110-02-BR	LIVINGSTON	17	6
			CONTRACT NO. 87496	
ILLINOIS FED. AID PROJECT				