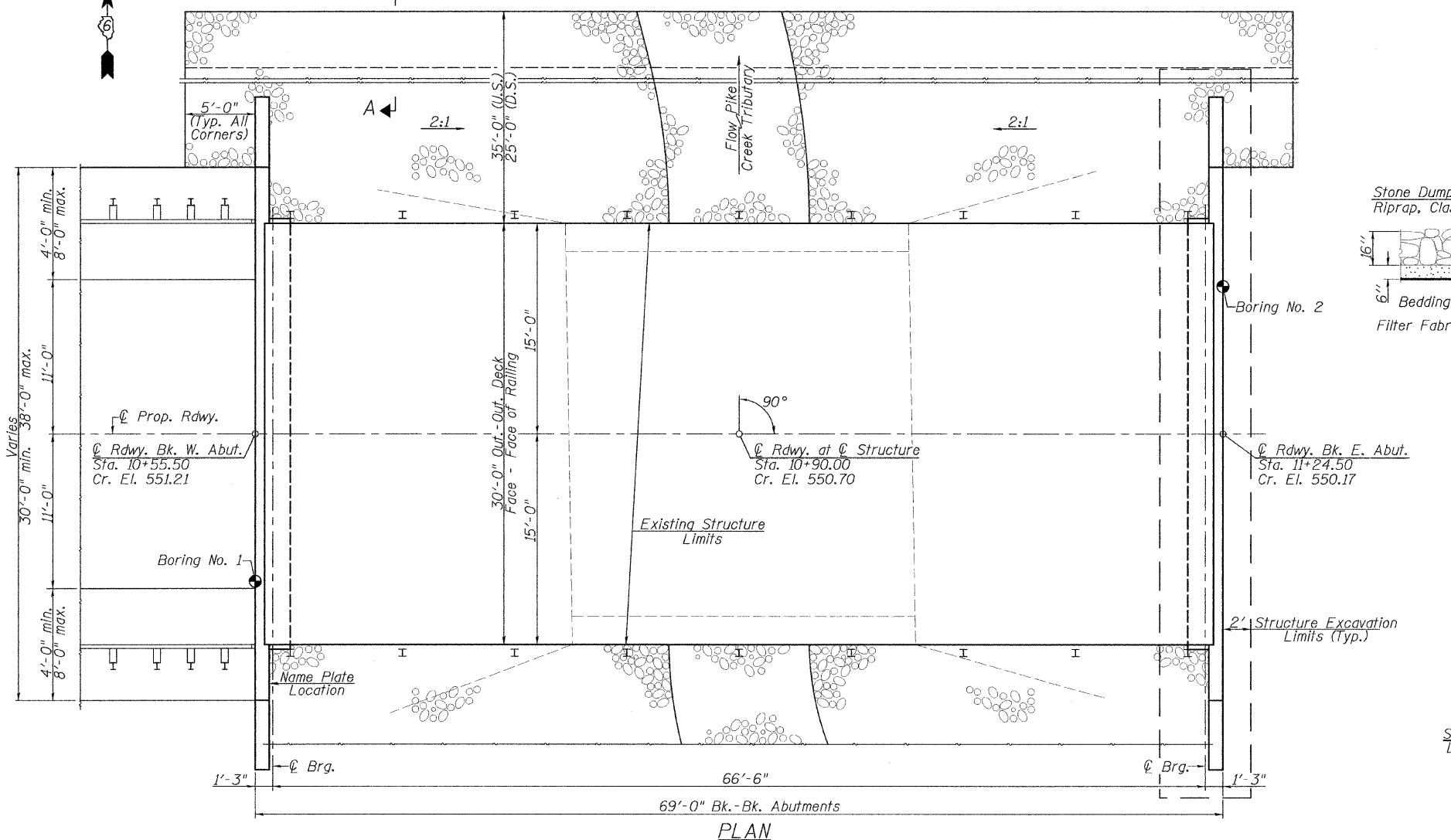
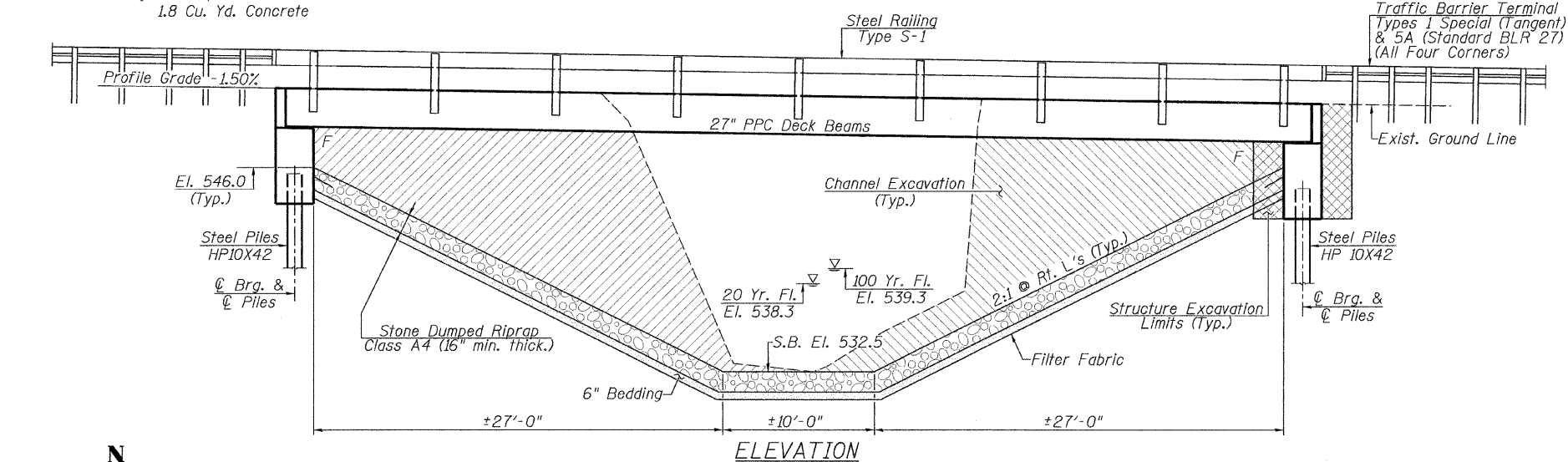


Existing Structure: Single span precast prestressed concrete deck beams supported by closed timber abutments with timber wingwalls. ±24'-6" Bk.-Bk. Abutments, ±30'-0" Out.-Out. Deck. Concrete Curbs and Steel Railing. ±0° Skew. Existing Structure No. 065-3003

BM#1 - 60d Nail & Washer In Power Pole
39' Lt. Sta. 9+46 El. 554.89 (Assumed)
BM#2 - 60d Nail & Washer In Power Pole
39' Lt. Sta. 15+83 El. 545.90

Est. Quantity: 735 Sq. Ft. Deck Beams
1.8 Cu. Yd. Concrete



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			1012
Stone Dumped Riprap, Class A4	Ton		565	565
Filter Fabric	Sq. Yd.		801	801
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		200	200
Concrete Structures	Cu. Yd.		41.9	41.9
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2030		2030
Reinforcement Bars	Pound		5385	5385
Steel Railing, Type S-1	Foot	138		138
Furnishing Steel Piles HP10X42	Foot		500	500
Driving Piles	Foot		500	500
Test Pile Steel HP10X42	Each		2	2
Name Plates	Each		1	1

WATERWAY INFORMATION

Drainage Area = 0.74 Sq. Mi. Pr. Low Grade Elev. 546.9 Sta. 17+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	405	66	125	538.3	2.3	0.0	540.6	538.3
Base	100	630	84	160	539.3	2.5	0.0	541.8	539.3

Exist. Overtop. Greater than 500 years
Prop. Overtop. Greater than 500 years

Max. Calc.	500	860	99	192	540.1	2.6	0.0	542.7	540.1
------------	-----	-----	----	-----	-------	-----	-----	-------	-------

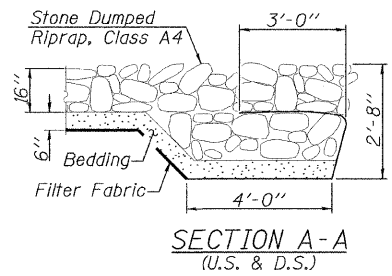
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Ft.)	W. Abut.	E. Abut.
	543.53	542.53

DESIGN STRESSES

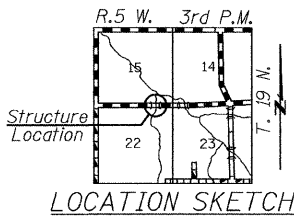
FIELD UNITS
 $f'_c = 3500$ psi
 $f_y = 60000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS
 $f'_c = 6000$ psi
 $f'_ci = 5000$ psi
 $f_{pu} = 270000$ psi ($\frac{1}{2}$ " low lax strands)
 $f_{pbt} = 201960$ psi ($\frac{1}{2}$ " low lax strands)



PIKE CREEK TRIBUTARY
BUILT 20 BY
MENARD COUNTY
SECTION 11-00063-00-BR
F.A.S. RT. 573 STA. 10+90.00
STR. NO. 065-3127 LOADING HL-93

NAME PLATE
(Standard 515001)

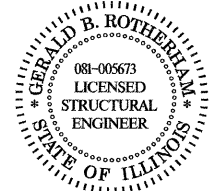


GENERAL NOTES

See Proposal for Boring Data.
Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at each abutment location specified by the Engineer before ordering the remainder of piles.

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications
5th Edition with 2010 Interims.

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.



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".

Gerald B. Rotherham 3/16/12
Expiration Date 11/30/2012