

**GENERAL NOTES**

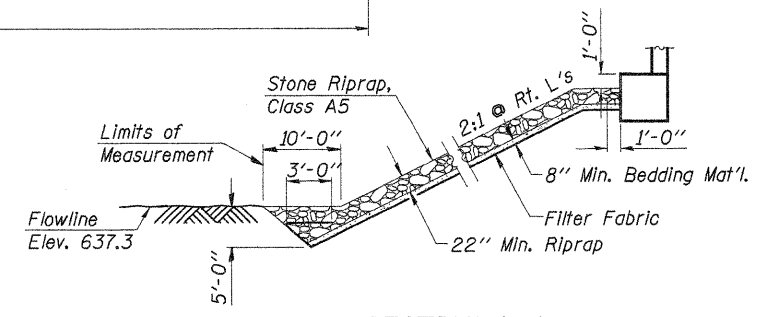
See Proposal & sheets 12 & 13 for Boring data.  
 Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.  
 The Contractor shall drive one steel HP12x53 test pile in a permanent location at the south abutment and at Pier #1 as directed by the Engineer, before ordering the remainder of piles.  
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Reinforcement bars designated (E) shall be epoxy coated.

Structure Excavation will not be measured for payment but shall be included in the unit price bid for Concrete Structures or Concrete Encasement.

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elev. (Ft.)	E. Abut.	Pier 1	Pier 2	W. Abut.
	647.1	633.1	633.1	647.1



**SECTION A-A**

Note: Excavation and aggregate bedding will not be paid for as separate items and shall be considered as included in Stone Riprap, Class A5.

**FOUNTAIN CREEK**  
 BUILT 20\_\_ BY  
 ASH GROVE/MILFORD ROAD DIST.  
 IROQUOIS COUNTY  
 SEC. 06-02148-00-BR  
 SEC. 06-18148-00-BR  
 STR. NO. 038-4751 LOADING HL-93

**LETTERING FOR NAME PLATE**

See Std. 515001

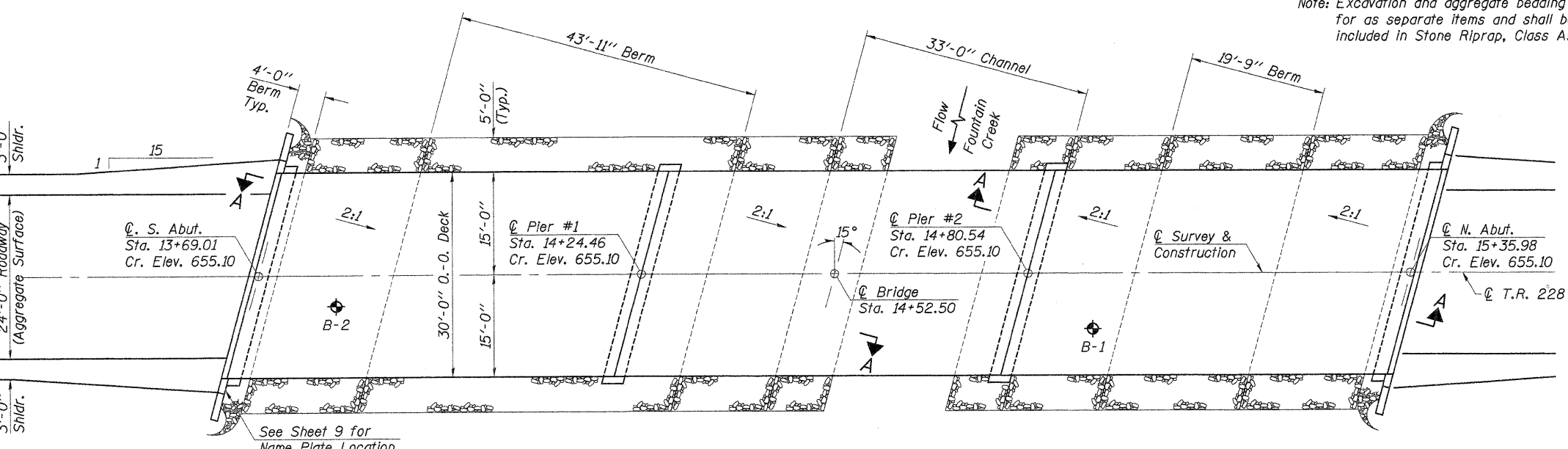
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	5,040		5,040
Concrete Structures	Cu. Yd.		52.4	52.4
Reinforcement Bars	Pound		6,870	6,870
Steel Railing, Type S1	Foot	337		337
Name Plates	Each		1	1
Furnishing Steel Piles HP12x53	Foot		1,274	1,274
Driving Piles	Foot		1,274	1,274
Test Pile, Steel HP12x53	Each		2	2
Stone Riprap, Class A5	Ton		759	759
Filter Fabric	Sq. Yd.		728	728
Concrete Encasement	Cu. Yd.		42.6	42.6
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1

**GENERAL PLAN & ELEVATION**  
**T.R. 228 OVER FOUNTAIN CREEK**  
**SECTIONS 06-02148-00-BR/06-18148-00-BR**

**IROQUOIS COUNTY**  
**STATION 14+52.50**

**S.N. 038-4751 \*\*\*\*\*06-02148-00-BR**  
**06-18148-00-BR**



**PLAN**

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.115 g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.186 g  
 Soil Site Class = D

**WATERWAY INFORMATION**

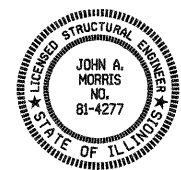
Drainage Area	86.54 Sq. Mi.
Existing Opening (Bridge) (15 Yr.)	572 Sq. Ft.
Existing Opening (Roadway) (15 Yr.)	1,340 Sq. Ft.
Required Opening (15 Yr.)	1,298 Sq. Ft.
Proposed Opening (Bridge) (15 Yr.)	1,298 Sq. Ft.
Proposed Opening (Roadway) (15 Yr.)	0 Sq. Ft.
Design Discharge (15 Yr.)	5,554 C.F.S.
Created Head (15 Yr.)	0.3 Ft.
100 Year Discharge	9,140 C.F.S.
100 Yr. Created Head	0.5 Ft.

**DESIGN STRESSES**

$f'_c = 6,000$  p.s.i. (Prestressed Beams)  
 $f_{cb} = 5,000$  p.s.i. (Prestressed Beams)  
 $f'_s = 270,000$  p.s.i. (Prestressed Strands)  
 $f_{sb} = 201,960$  p.s.i. (Prestressed Strands)  
 $f'_c = 3,500$  p.s.i. (Concrete - Field Units)  
 $f_y = 60,000$  p.s.i. (Reinforcement Bars)  
 LOADING HL-93  
 Design Specifications: 2007 AASHTO LRFD & Interims  
 50#/Sq. Ft. Included in dead load 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 "AASHTO LRFD Bridge Design Specifications".

*John A. Morris* 5-14-10  
 ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/10)



DESIGNED	-	A.L.S.
CHECKED	-	A.R.K.
DRAWN	-	S.A.P.
CHECKED	-	A.R.K. & A.L.S.

**FEHR-GRAHAM & ASSOCIATES, LLC**  
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TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
228	****	IROQUOIS	19	4
BROS-075 (137)		CONTRACT NO. 87446		
ROAD DISTRICT		ILLINOIS	ASH GROVE/MILFORD	