

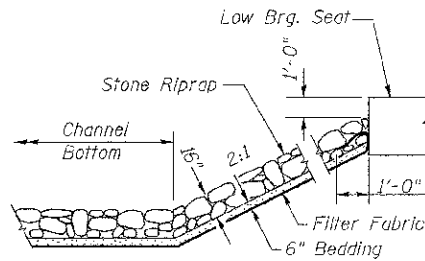
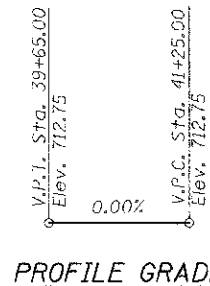
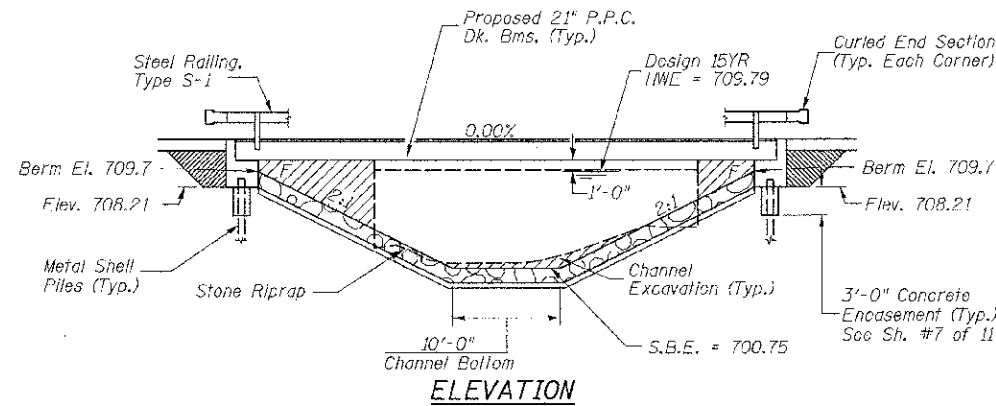
B.M.: RR Spike in Power Pole  
Sta. 35+67, 22' Lt.  
Elev. 712.57

RR Spike in Power Pole  
Sta. 42+61, 27' Lt.  
Elev. 713.59

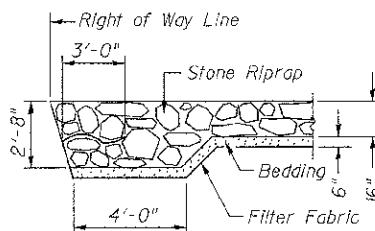
Existing Structure:  
Single span reinforced concrete slab with concrete rail on concrete closed abutments. The structure is ±33' back to back of abutments, ±22' out to out deck, and is not skewed.  
Str. No. 006-4075

Salvage: None

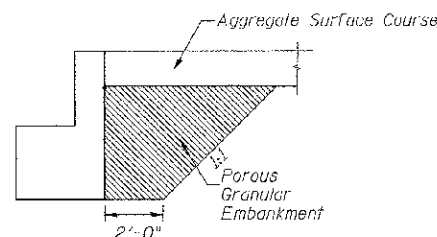
Road to be closed to traffic during construction.



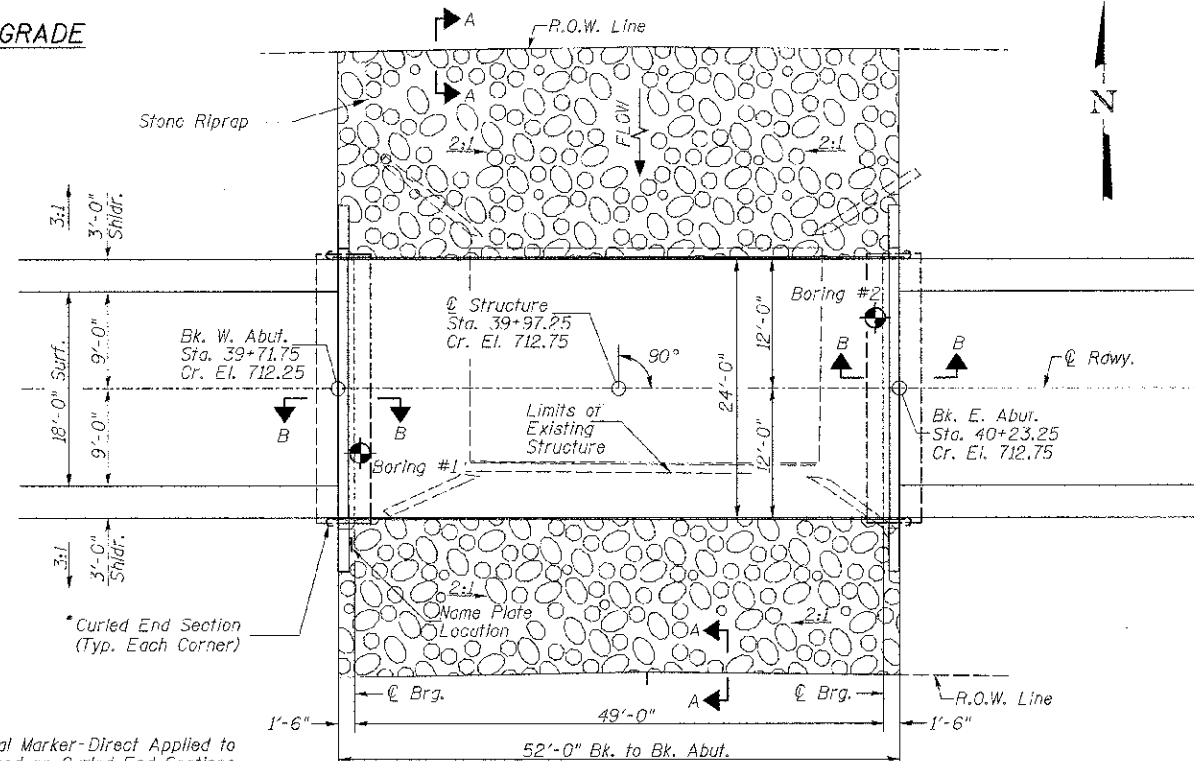
STONE RIPRAP DETAIL



SECTION A-A



SECTION B-B



PLAN

DESIGN SCOUR TABLE

Location	W. Abut.	E. Abut.
Design Scour Elevation	708.21	708.21

WATERWAY INFORMATION

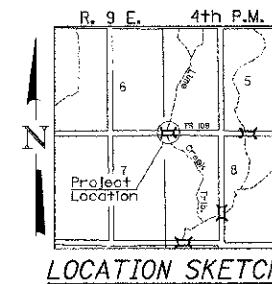
Drainage Area = 4.81 Sq. Mi.		Low Grade Elev. = 712.21 @ Sta. 38+13.04							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Not. H.W.E. Exist.	Prop.	Headwater El. Exist.	Prop.	
Design	15	1,256	217	254	709.79	0.17	0.08	709.96	709.87
Base	100	2,090	219	284	710.44	0.77	0.46	711.21	710.90

(FIELD UNITS)  
f'c = 3,500 p.s.i.  
fy = 60,000 p.s.i. (Rein.)

(PRECAST PRESTRESSED UNITS)  
f'c = 6,000 p.s.i.  
f'cl = 5,000 p.s.i.  
f's = 270,000 p.s.i. (1/2" Strands)  
f'sl = 201,960 p.s.i. (1/2" Strands)

LOADING HL-93

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



LOCATION SKETCH

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.  
For Soil Boring Logs, See Sheets 8-11 of 11.  
A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(12) of the Standard Specifications.  
Reinforcement Bars shall conform to the requirements of ASTM A706 Grade 60. Reinforcement Bars designated (E) shall be epoxy coated.  
Layout of the slope protection system may be varied in the field to suit ground conditions 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 top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

LIME CREEK TRIBUTARY  
BUILT 201. BY  
DOVER ROAD DISTRICT  
BUREAU COUNTY  
SEC. 07-0617-00-BR  
T.R. 109 STATION 39+97.25  
F.A. PROJ. BROS-0011087  
STR. NO. 006-4088 LOADING HL-93

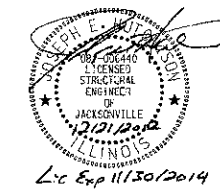
NAME PLATE

Locate Name Plate at S.W. Wingwall  
Corner of Bridge (See Std. 515001)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	120	120
Stone Riprap, Class A4 (Special)	TON	---	275	275
Removal of Existing Structures No. 2	EACH	---	1	1
Concrete Structures	CU YD	---	19.8	19.8
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,204	---	1,204
Reinforcement Bars	POUND	---	2,300	2,300
Steel Railing, Type S1	FOOT	104	---	104
Furnishing Metal Shell Piles 12"x0.250"	FOOT	---	256	256
Driving Piles	FOOT	---	256	256
Test Pile Metal Shells	EACH	---	2	2
Pile Shoes	EACH	---	10	10
Concrete Encasement	CU YD	---	2.6	2.6
Name Plates	EACH	---	1	1
Porous Granular Embankment	CU YD	---	22.6	22.6

① See Special Provisions



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 Specification for Highway Bridges.  
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Jeffrey E. Johnson  
Illinois Structural No. 6440  
Expires 11/30/2014

GENERAL PLAN & ELEVATION  
BUREAU COUNTY  
SECTION 07-03126-00-BR  
T.R. 109 OVER LIME CREEK TRIBUTARY

DESIGNED	C.T.M.
CHECKED	S.T.M./J.E.H.
DRAWN	C.T.M.
CHECKED	S.T.M./J.E.H.

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	25
	S.N. 006-4088		CONTRACT NO. 87528		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-0011087		