

Bench Mark:

Existing Structure: S.N. 050-0063 was originally constructed in 1947. The existing structure is a 40'-6" wide cast-in-place reinforced concrete slab bridge on closed concrete abutments. The structure measures 26'-1" back to back of abutments.

Staging shall be used during construction of the proposed double box culvert.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.P. 311	*	LaSalle	66	35	7 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

\*(3)BR-1,2,3 & (4)BR Contract #66741

GENERAL NOTES

1. Precast Concrete Box Culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M. 259.
2. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	6,260
Reinforcement Bars (Epoxy Coated)	Pound	230
Furnishing & Erecting Structural Steel	Pound	2,840
Temporary Soil Retention System	Sq. Ft.	148
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	52.8
Precast Concrete Box Culvert 7'x6'	Foot	108
Sheet Waterproofing Membrane System	Sq. Yd.	395

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.  
Design Fill Ht. > 2'

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

PRECAST

$f'_c = 5,000$  psi  
 $f_y = 65,000$  psi (welded wire fabric)

CAST-IN-PLACE

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

HORIZONTAL CURVE DATA

PI Sta. = 683+80.98  
 $\Delta = 10^\circ 55' 03''$  (LT)  
 $D = 0^\circ 30' 13''$   
 $R = 11,375.00'$   
 $T = 1,087.01'$   
 $L = 2,167.44'$   
 $E = 51.82'$   
P.C. Sta. = 672+93.97  
P.T. Sta. = 694+61.41

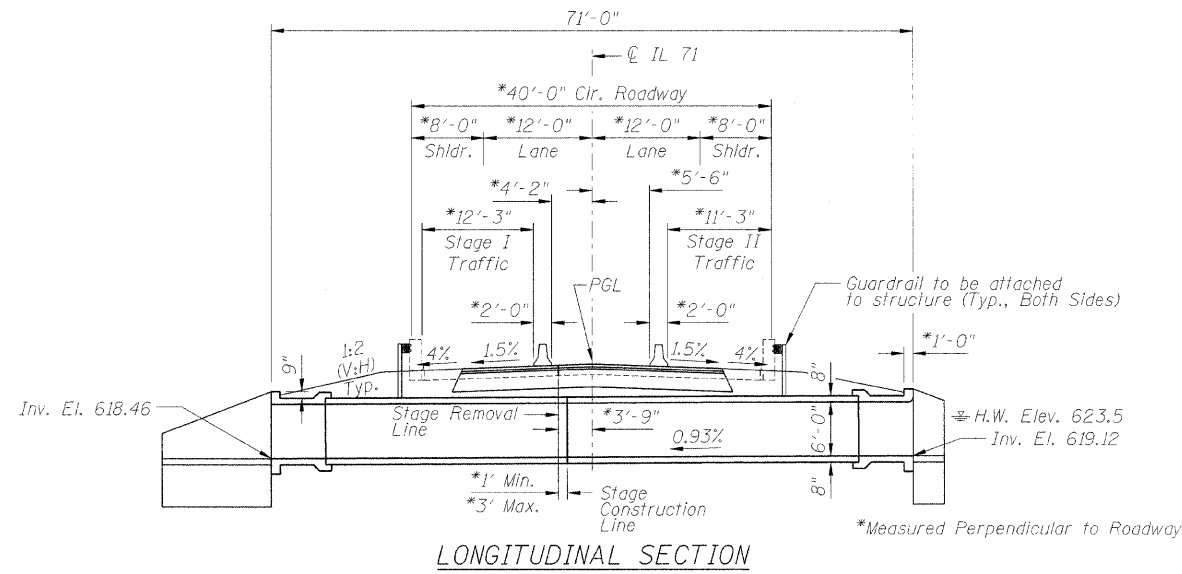
WATERWAY INFORMATION

Drainage Area = 0.75 Sq. Mi.  
Exist. Low Grade Elev. 629.06 @ Sta. 181+00 Prop. Low Grade Elev. 629.06 @ Sta. 181+00

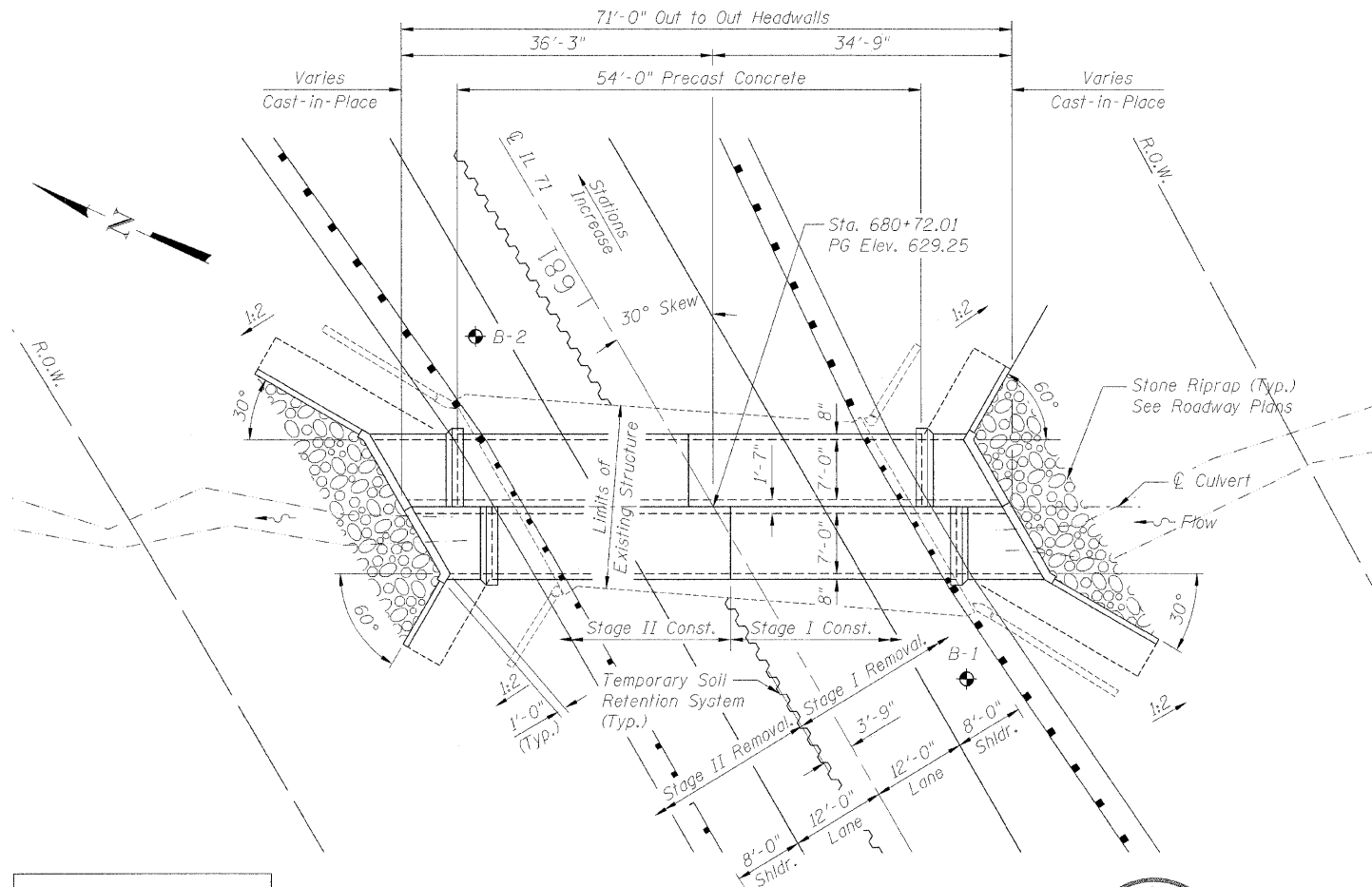
Flood Year	Freq. cfs	Opening Sq. Ft.		Nat. H.W.E.	Head - Foot		Headwater Elev. (ft)		
		Existing	Proposed		Existing	Proposed	Existing	Proposed	
Design	10	179	34	54	623.0	0.3	0.1	623.3	623.1
Base	50	278	44	61	623.5	0.6	0.1	624.1	623.6
Overtopping	100	319	48	64	623.7	0.7	0.1	624.4	623.8
Max. Calc.	500	420	54	68	624.0	1.0	0.4	625.0	624.4

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	616.12	615.46



LONGITUDINAL SECTION

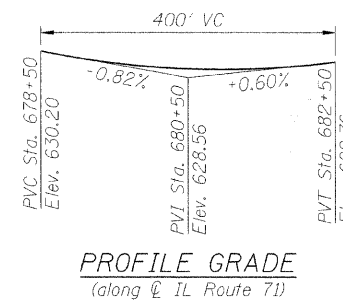


PLAN

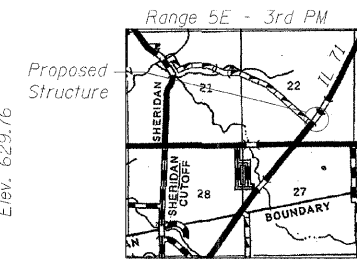
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS



Signature: *Deborah A. Erick* Date: 9-30-09  
November 30, 2010 Expires



PROFILE GRADE  
(along IL Route 71)



LOCATION SKETCH

GENERAL PLAN  
IL 71 OVER BRANCH OF MISSION CREEK  
FAP ROUTE 311  
SECTION (3)BR-1,2,3 & (4)BR  
LASALLE COUNTY  
STA. 680+72.01  
S.N. 050-2049