

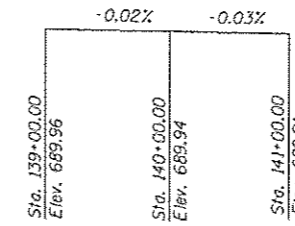
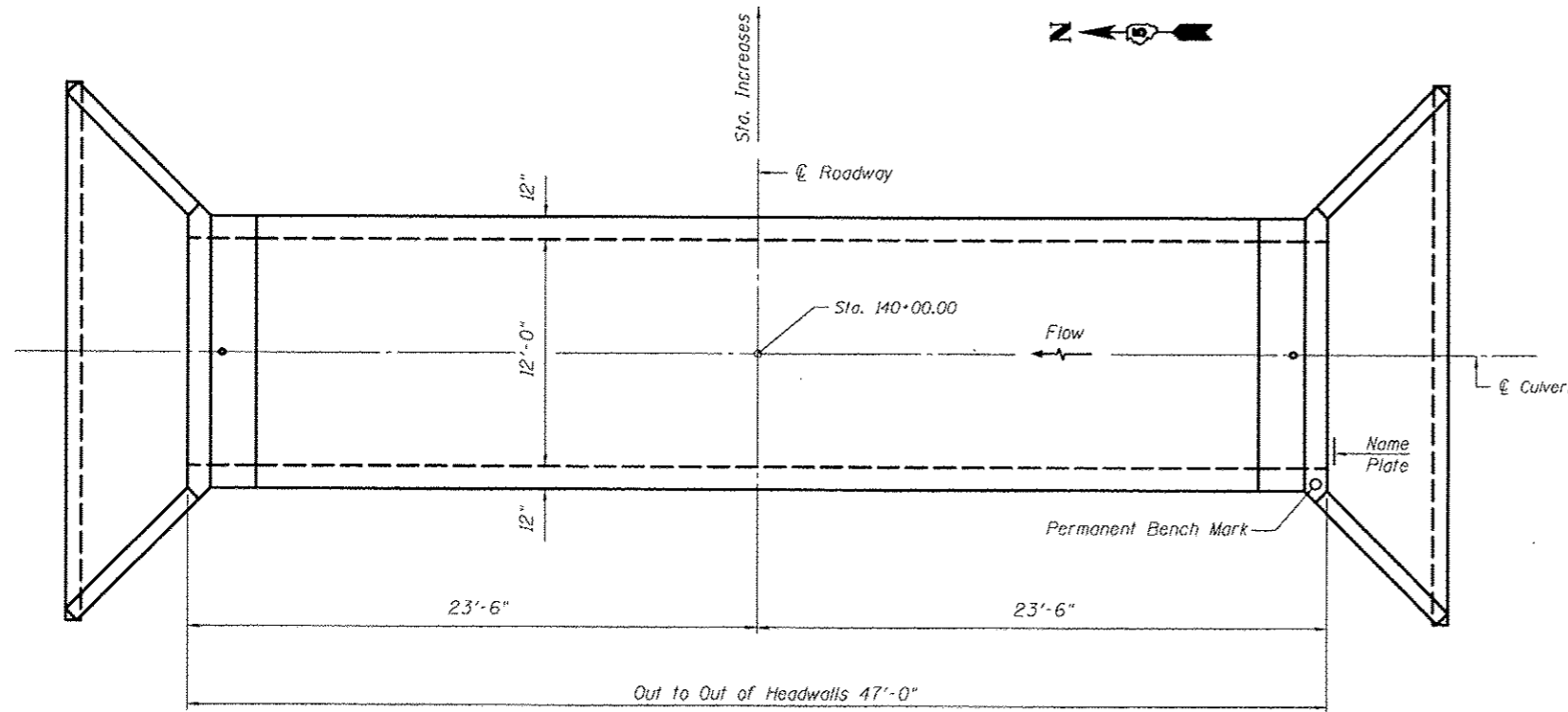
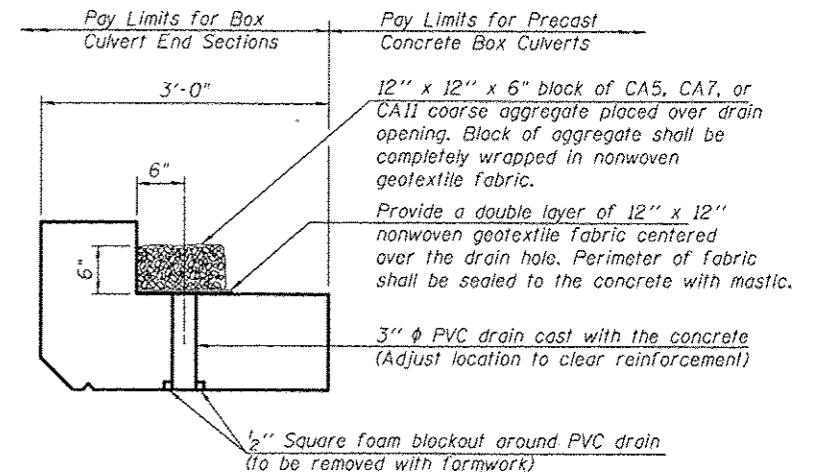
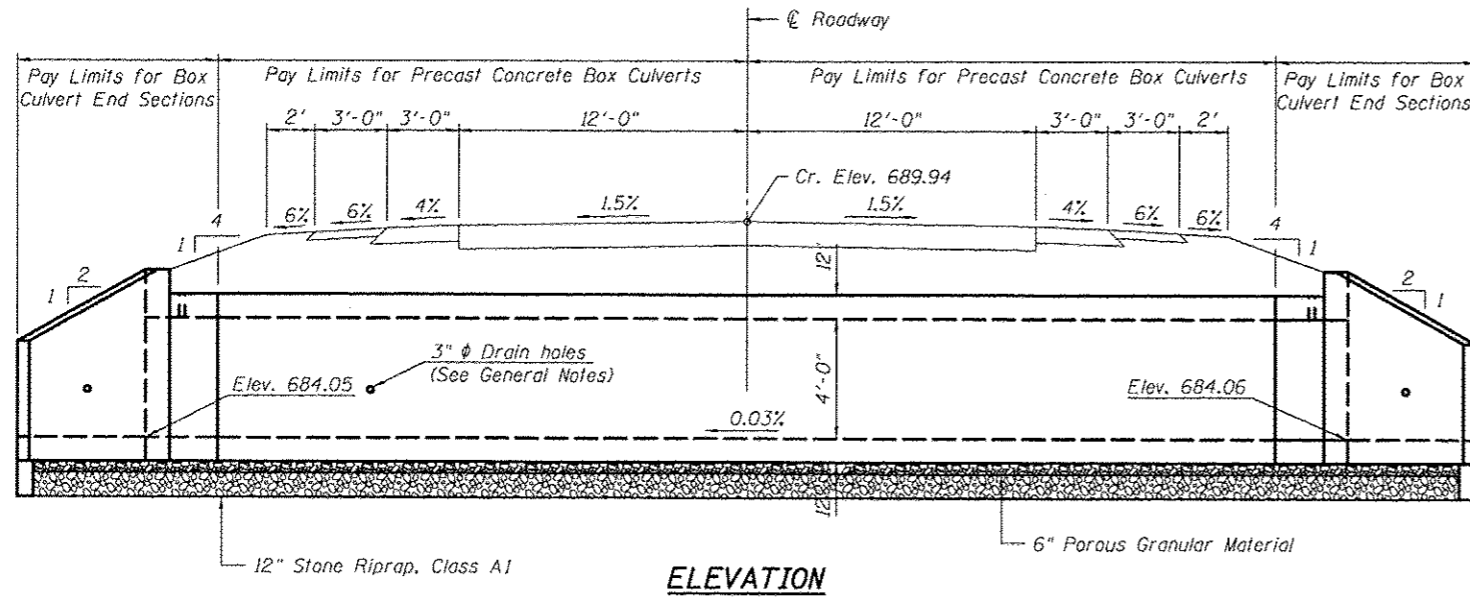
Benchmark: 687.296, Chiseled square on top of headwall of existing structure NE QUAD of Cottonwood Rd.  
 Existing Structure: Sta. 141+82.60, 5'x2' cast-in-place box culvert with concrete headwalls to be capped and filled with CLSM.

**INDEX OF SHEETS**

1. Plan & Profile Sheet
2. General Plan and Elevation
- 3-4. Precast Concrete Box Culvert Apron End Section Details
5. Porous Granular Embankment Details

**GENERAL NOTES**

The design fill height for this box is < 2 feet. The precast box culvert sections shall conform to the requirements of AASHTO C 1577.  
 Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.  
 The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.  
 Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.  
 All exposed edges shall be chamfered 3/4" per article 503.06 of the Standard Specifications.



**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications  
 6th Edition

**LOADING HL-93**

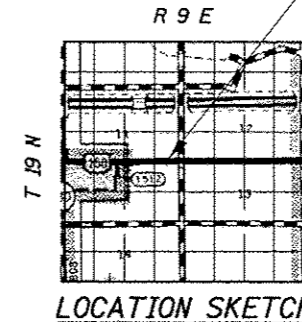
**DESIGN STRESSES**

**PRECAST UNITS**

f'c = 5,000 psi  
 fy = 65,000 psi (Welded Wire Fabric)

**NAME PLATE**  
 See Std. 515001

STATION 140+00.00  
 BUILT 2014 BY  
 STATE OF ILLINOIS  
 F.A.U. RT. 7152 US 150  
 SEC. (2X,3)RS-3 & 2RS-4  
 LOADING HL-93  
 STR. NO. 010-8157



PROP. S.N. 010-8157  
 STA. 140+00.00

**GENERAL PLAN AND ELEVATION**  
**SINGLE 12'x4' PRECAST BOX CULVERT**  
**F.A.U. ROUTE 7152 (US 150)**  
**SECTION (2X,3)RS-3 & 2RS-4**  
**CHAMPAIGN COUNTY**  
**STATION 140+00.00, S.N. 010-8157**  
**CULVERT NO. 2**

**WATERWAY INFORMATION**

Drainage Area = 1.4 sq. mi. Low Grade Elev. 689.90 @ Sta. 142+00.00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.
Design	10	318	9.5	39	687.3	N/A	1.3	over 688.6
Base	50	399	9.5	48	688.4	N/A	1.4	over 689.8
Overtopping	100	451	9.5	48	688.8	N/A	1.3	over 690.1
	55	405	9.5	48	688.5	N/A	1.4	over 689.9

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	Upstream	Downstream
	681.06	681.05