

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

- INDEX OF SHEETS**
- 1.) General Plan & Elevation
  - 2.) Culvert Details (South End Section)
  - 3.) Culvert Details (North End Section)
  - 4.) Boring Sheet

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1613	23B	SANGAMON	19	10
SHEET NO. 1 4 SHEETS				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
Contract # 72B44				

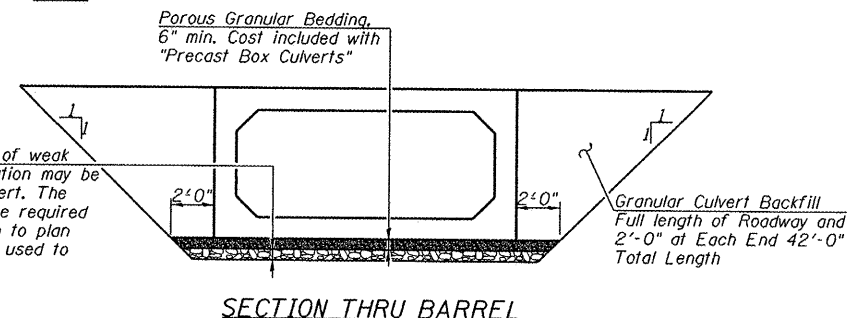
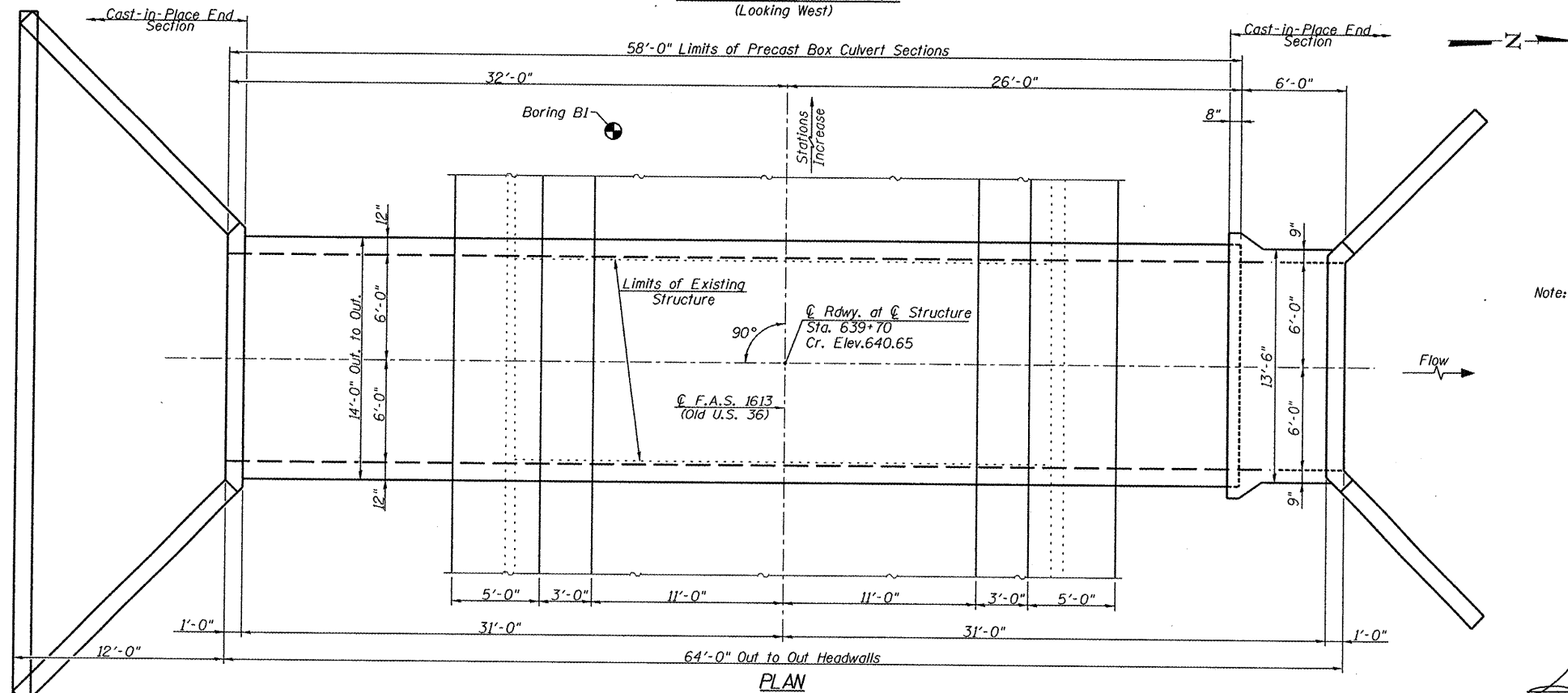
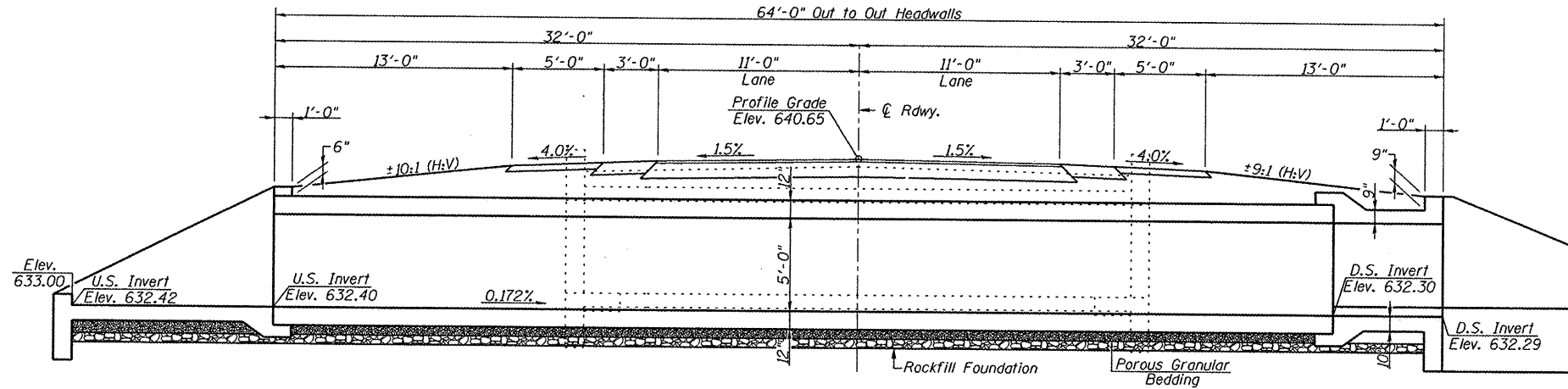
**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity
Precast Concrete Box Culverts 12' x 5' (M273)	Foot	58
Concrete Box Culverts	Cu. Yd.	35.0
Reinforcement Bars	Pound	3890
Granular Culvert Backfill	Cu. Yd.	189
Rockfill Foundation	Ton	43
Stone Riprap, Class A3	Tons	52
Filter Fabric	Sq. Yd.	103
Removal of Existing Structures	L. Sum	1

**WATERWAY INFORMATION**

Drainage Area = 1.55 Sq. Mi.	Ex. Low Grade Elev. 640.25 ft. @ Sta. 640+00						
	Pr. Low Grade Elev. 640.38 ft. @ Sta. 640+00						
Flood	Freq.	Q	Opening	Sq. Ft.	Natural	Head - ft.	Headwater El.
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.
						Exist.	Prop.
Design	50	327	52	60	637.38	0.94	0.67
Base	100	406	56	60.0	637.69	1.26	1.04
Overtopping	-	-	-	-	-	-	-
Max. Calc.	500	655	60/81	60/37	638.39	2.20	2.38
						640.59	640.77

Benchmark: Chisled "X" in west end of south headwall of existing structure on old U.S. 36. Sta. 639+84, 15.5' L.T. El. 638.83  
Existing Structure: Built in 1920 as Section 23 of Station 640+60 of S.B.I. Route 10 Structure is a single barrel RC box culvert, 32' out to out headwalls. The existing structure is to be removed.  
Proposed Structure: Single 12'x5' precast box culvert with cast in place end sections. No salvage.



Removal and replacement of weak soils with rock fill foundation may be required beneath the culvert. The engineer will determine the required depth following excavation to plan grade. 6" min. depth was used to calculate plan quantity.

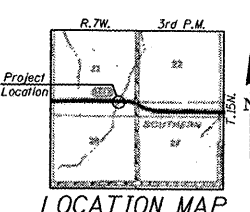
Note: See roadway plans for riprap layout and details

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of A.S.T.M. A 706, Grade 60 (IL Modified). See Special Provisions.  
For backfilling and embankment, see Special Provisions.  
Concrete required for the construction of the end sections is included in the quantity for Concrete Box Culverts.  
Layout of the riprap may be varied in the field to suit ground conditions as directed by the Engineer.  
Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.  
Precast concrete box culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of A.A.S.H.T.O. M 273.  
Precast End Sections will not be allowed. Cast in place concrete exposed edges shall be beveled 3/4".  
Outside end of precast sections at the ends of the culvert shall not have a bell or spigot.



*Gerald B. Rothermel* 5/8/08  
EXPIRATION: 11/30/2008



**LOADING HS 20-44**  
Allow 50#/sq.ft. for future wearing surface

**DESIGN SPECIFICATIONS**  
2002 A.A.S.H.T.O.

**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (reinforcement)

**PRECAST UNITS**  
f'c = 5,000 psi  
fy = 65,000 psi (welded wire fabric)

**GENERAL PLAN & ELEVATION**  
OLD U.S. 136 OVER UNNAMED TRIBUTARY OF SPRING CREEK  
F.A.S. ROUTE 1613 - SECTION 23B  
SANGAMON COUNTY  
STA. 639+70.00  
S.N. 084-7132

DESIGNED - GBR
CHECKED - MAH
DRAWN - MJS
CHECKED - GBR