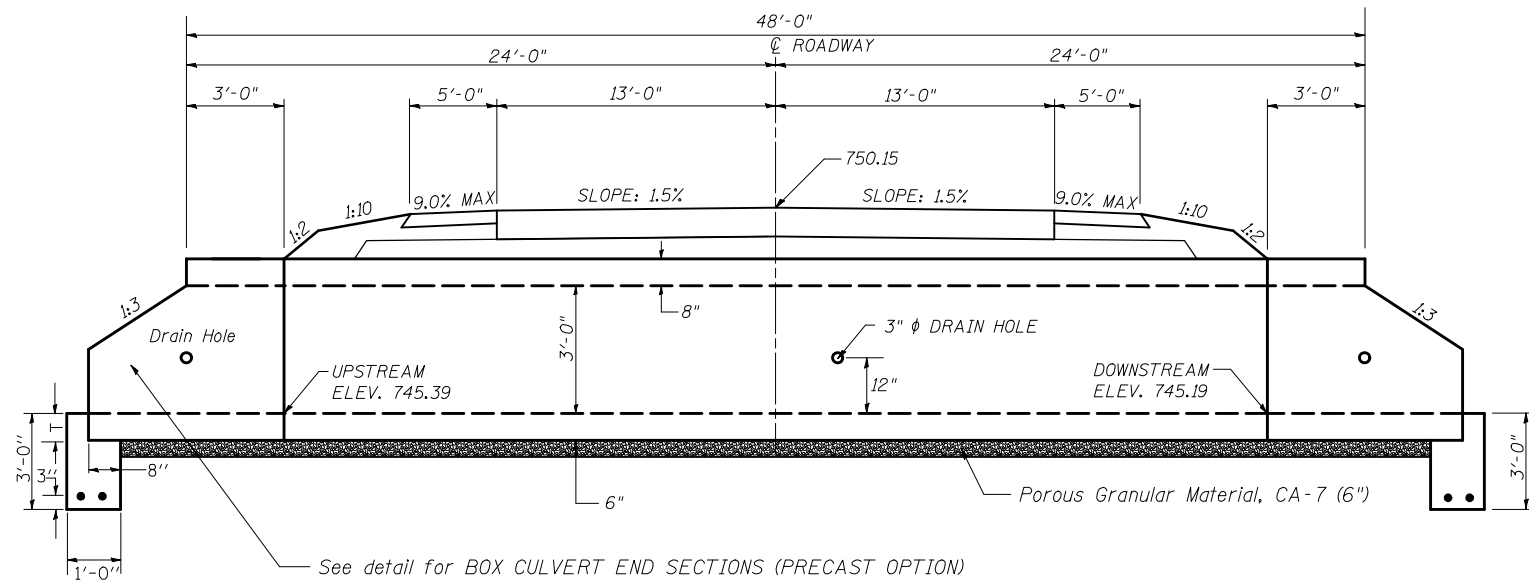
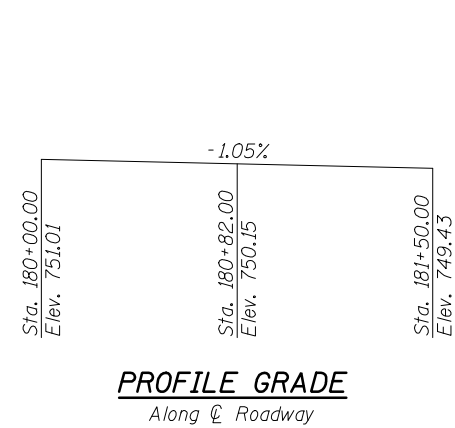
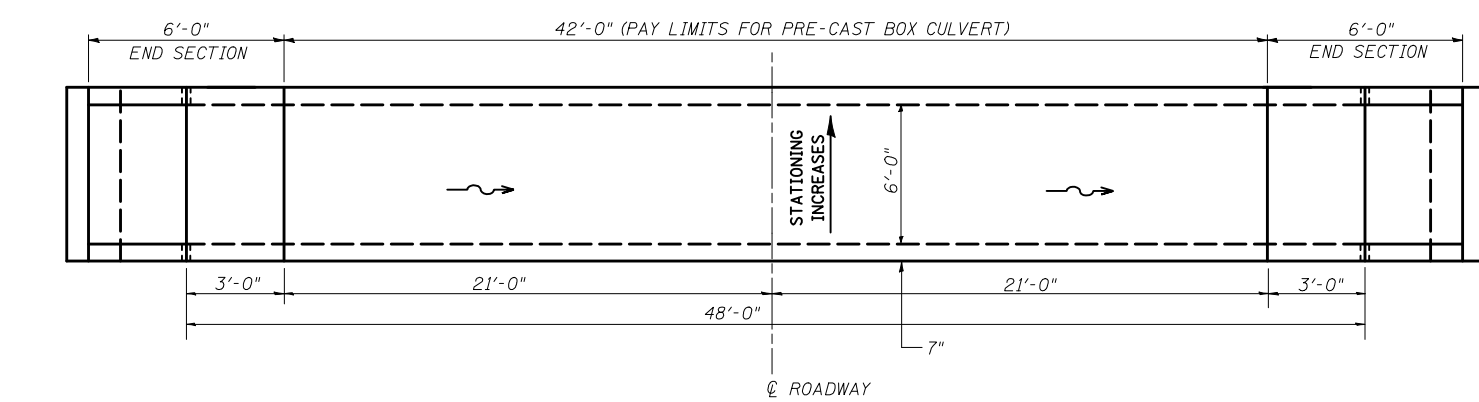


EXISTING STRUCTURE: A 4'x2.5'x58.5' concrete box culvert was constructed in 1931 as part of SBI Route 120 Section 113A in Dewitt County. The existing structure is to be partially removed and the remaining portion is to be filled. Staged construction will be utilized to construct the new structure.



ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO CL OF ROADWAY)



PLAN

WATERWAY INFORMATION

Drainage Area = 0.10 sq.mi. Proposed Low Grade Elev. 750.07 @ Sta. 180+82

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	50	10	14				750.7	748.2	
Design	50	86	10	15			Over	749.3	
Base	100	103	10	15			Over	749.9	
Overtopping									
Max. Calc.	500	146	10	15			Over	Over	

10 year velocity through existing bridge = 9.90 fps 10 year velocity through proposed bridge = 4.39 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	742.39	742.19

GENERAL NOTES

- All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.
- Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.
- All bars should be rounded and conform to the requirements of Article 1006.10 of the Standard Specifications.
- The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.
- End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.
- Class SI Concrete shall be used throughout.
- Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.
- If the Contractor elects to use a precast cut-off wall, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.
- The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273.
- The joints between precast box sections shall be sealed and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.
- All dimensions are in FEET (') - INCHES (") unless otherwise noted.
- Drawings not to scale.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Structures No. 1	Each	1.0
Precast Concrete Box Culvert 6'x3' (M273)	Foot	42.0
Box Culvert End Section, Culvert No. 1	Each	2.0
Porous Granular Embankment	Cu Yd	30.8
Filling Existing Culverts	Cu Yd	18.0
Name Plates	Each	1.0

GENERAL PLAN AND ELEVATION
SINGLE 6'x3' PRECAST BOX CULVERT
E.A.P. ROUTE 721 - SECTION (113RS-4, 124RS)
STATION 180+82.00
CULVERT NO. 1 S.N. 020-8042