

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 840	139 BR-2	KANKAKEE	69	62
FED. ROAD DIST. NO. 7		S.L. DIST.	FED. AID PROJ. NO.	

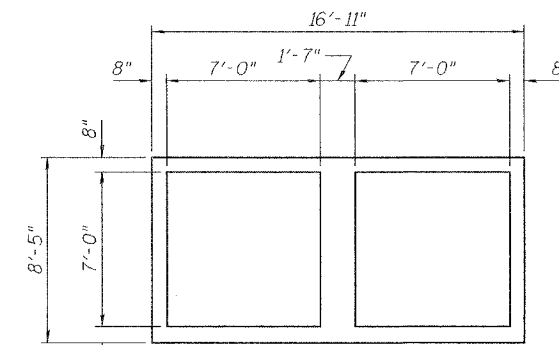
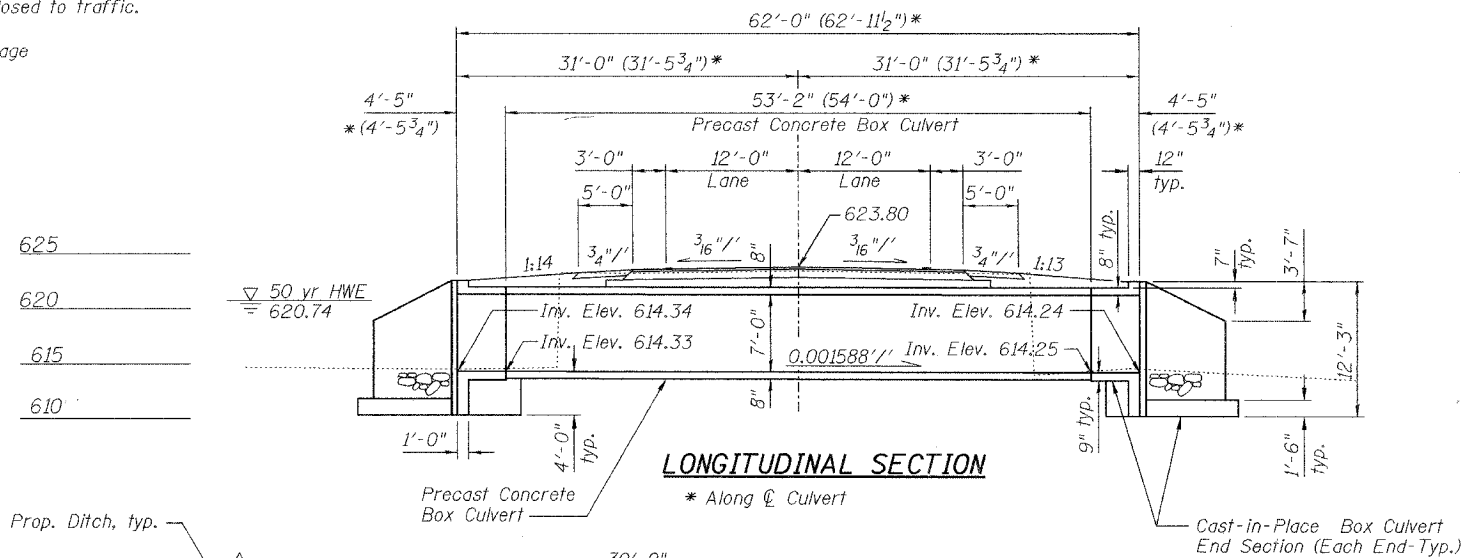
Contract # 66543

Bench Mark: Chiseled "□" on S.W. wingwall El. 623.24. To be relocated.

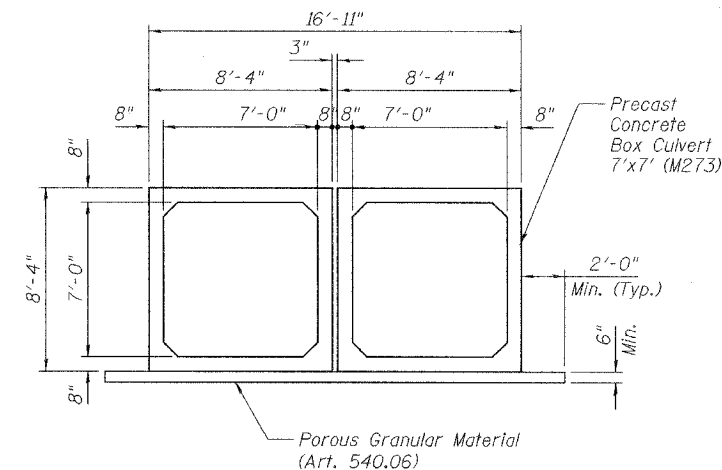
Existing Structure: S.N. 046-0098 built in 1928 as a single span closed abutment structure with a reinforced concrete slab measuring 16'-0" clear face to face of abutments, and out to out deck width of 42'-2", and 0° skew. Structure to be removed and replaced.

Road closed to traffic.

No Salvage



SECTION THRU CAST-IN-PLACE END SECTION



SECTION THRU PRECAST BARREL

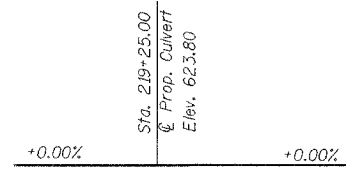
3" nominal space shall be left between adjacent precast sections. After the precast cells are in place and backfill has been placed to midheight of the precast concrete box section on each side, the space between the cells shall be filled with class SI concrete.

GENERAL NOTES

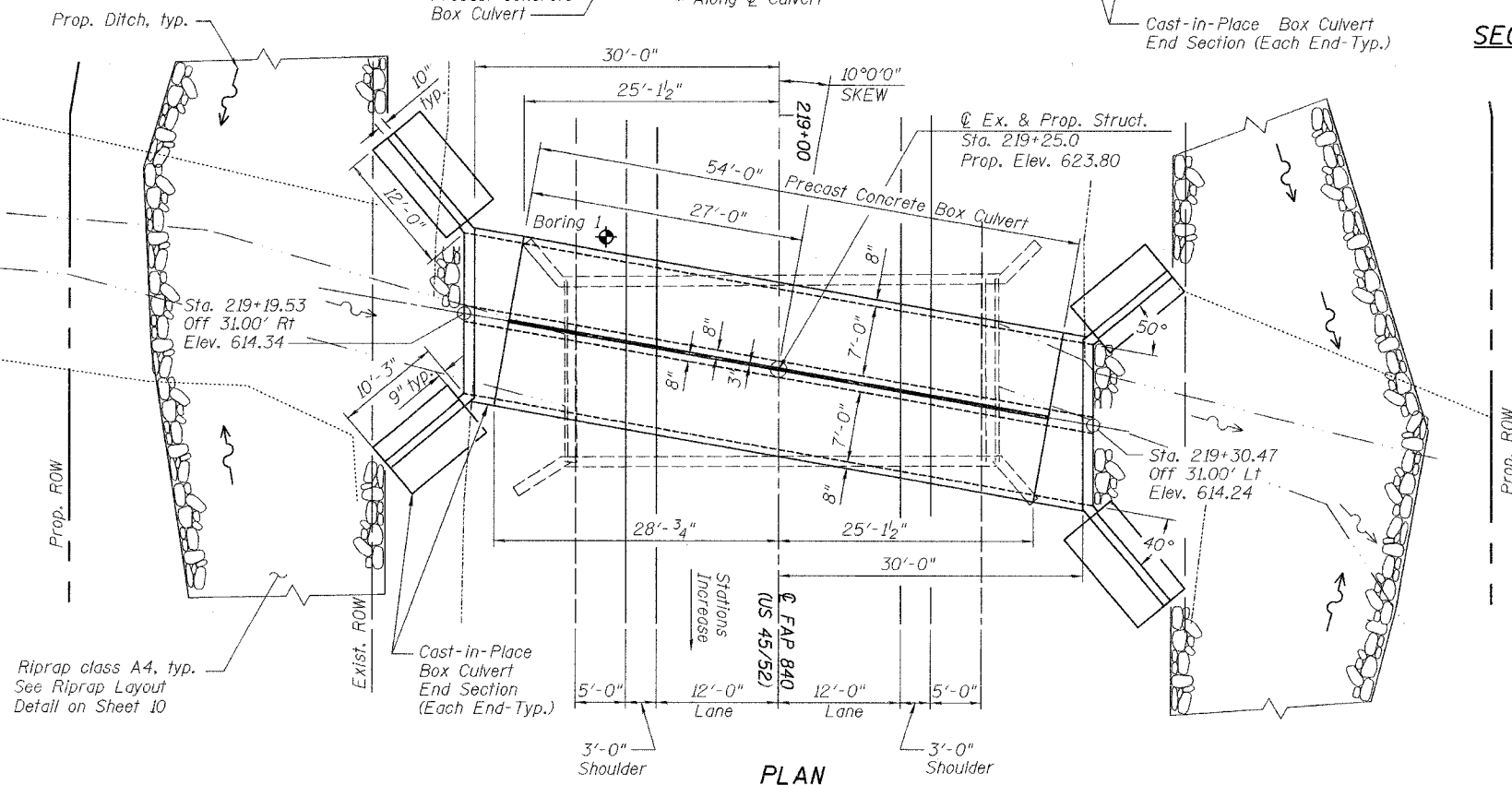
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (LL Modified). See Special Provisions.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. All construction joints shall be bonded.
4. Excavation behind existing abutment walls shall be done before removing the existing superstructure.
5. Precast alternate is not allowed for end sections.
6. The end precast concrete box culvert sections shall be cast with 2'-0" of longitudinal reinforcement protruding from the end of the unit. The concrete half lap joint shall be eliminated at the outside box culvert units to facilitate reinforcement placement.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A4	Sq. Yd.	233
Filter Fabric	Sq. Yd.	233
Removal of Existing Structures	Each	1
Box Culvert End Sections	Each	2
Precast Concrete Box Culverts 7'x7' (M273)	Foot	108



PROFILE GRADE  
(Along C Roadway)  
(Existing & Proposed)



PLAN

Note:  
Wingwall dimensions for NE & SW wings are the same, and for the NW & SE wings are the same.

DESIGNED	MJB
CHECKED	MAJ
DRAWN	MSJ
CHECKED	WCC

WATERWAY INFORMATION

Drainage Area = 1.93 mi <sup>2</sup>		Low Grade Elev. 623.43 ft		Sta. 219+00					
Flood	Freq. Yr.	Q ft <sup>3</sup> /s	Opening Sq. ft		Nat. H.W.E. ft	Head - ft		Headwater Elev. - ft	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	369	88	90	620.0	0.1	0.0	620.1	620.0
Base	100	417	90	91	620.8	0.3	0.2	621.1	621.0
Overtopping									
Max. Calc.	500	527	94	95	621.1	0.6	0.5	621.7	621.6

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface. (Precast)

DESIGN SPECIFICATIONS

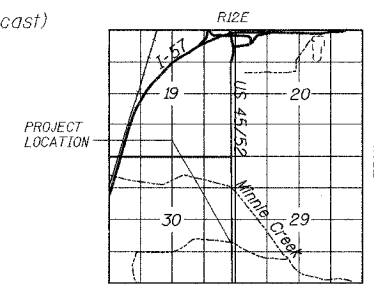
2003 AASHTO

DESIGN STRESSES

FIELD UNITS

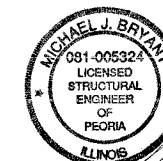
- f<sub>c</sub> = 3,500 psi (Cast-in-Place)
- f<sub>c</sub> = 5,000 psi (Precast)
- f<sub>y</sub> = 60,000 psi (reinforcement)
- f<sub>y</sub> = 65,000 psi (welded wire fabric)

Design Fill Height < 2' AASHTO Designation : M 273



LOCATION SKETCH

APPROVED  
FOR STRUCTURAL ADEQUACY ONLY



MICHAEL J. BRYANT, P.E., S.E.  
IL LICENSED STRUCTURAL ENGINEER  
ILLINOIS NO. 5324 EXPIRES NOVEMBER 30, 2006

DATE

GENERAL PLAN AND ELEVATION  
U.S. ROUTE 45/52 OVER  
UNNAMED TRIBUTARY TO MINNIE CREEK  
FAP ROUTE 840 - SEC. 139 BR-2  
KANKAKEE COUNTY  
STATION 219+25.00  
EXISTING SN 046-0098  
PROPOSED SN 046-2508