

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	180
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 66294	

GENERAL NOTES

1. The Precast Concrete Box Culvert shall conform to the requirements of AASHTO M-259M.
2. Precast toewalls and headwalls are incidental to "Precast Box Culvert End Sections."
3. For backfill and embankment see Standard Specifications.
4. The porous granular bedding material shall be gradation CA-7, CA-11, or CA-18 and shall be compacted to the satisfaction of the engineer by mechanical means. The cost of porous granular bedding material shall be included with cost of "Precast Concrete Box Culverts 7.5' x 2'."

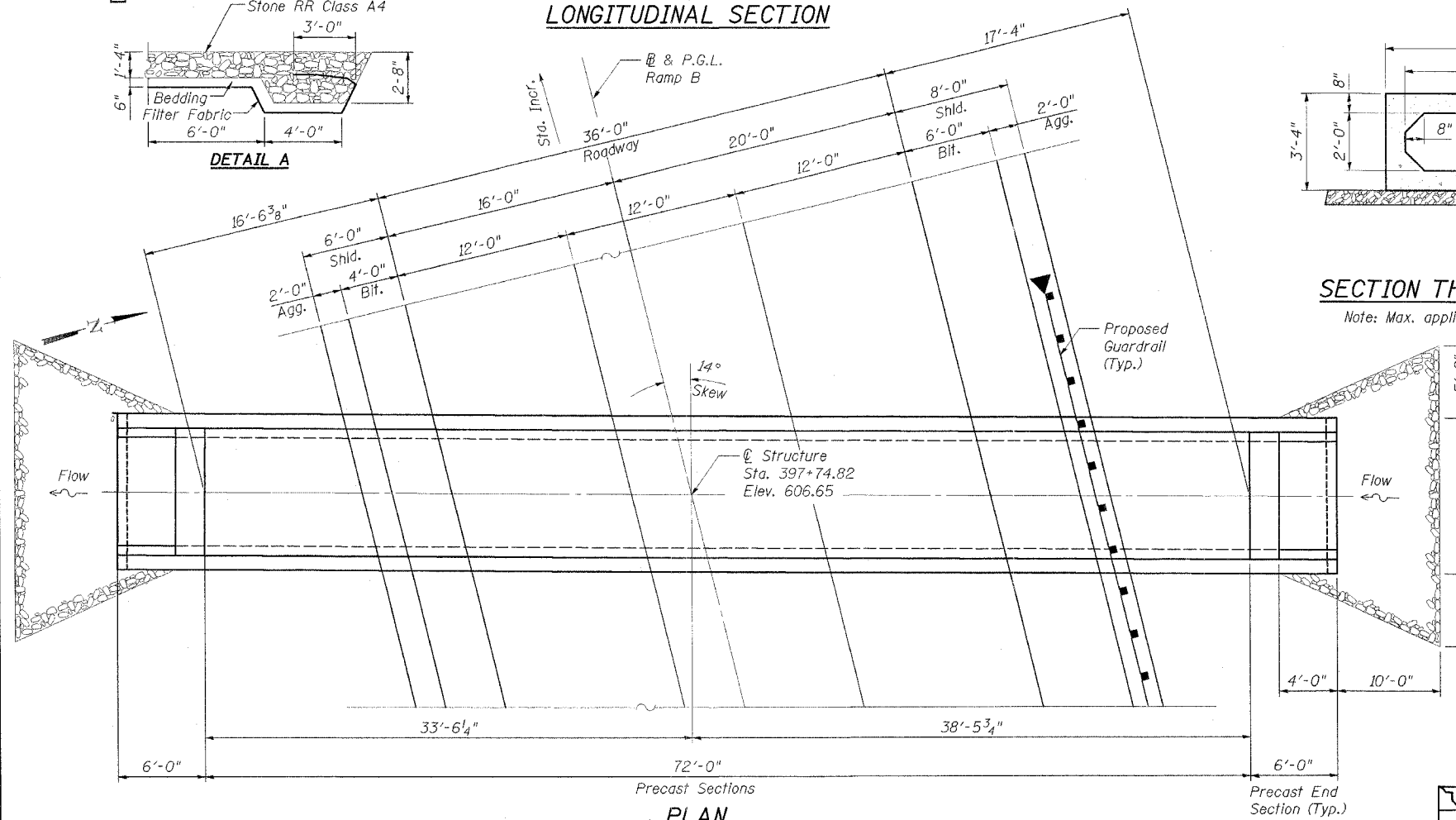
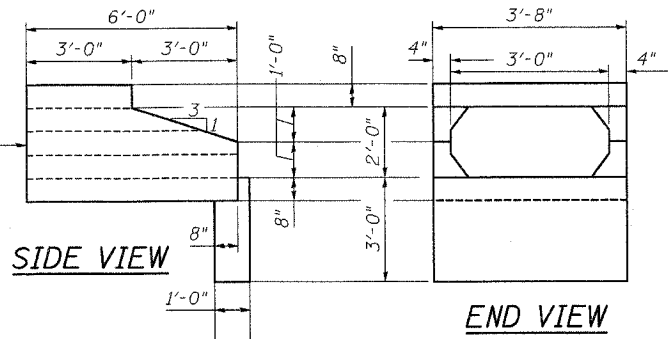
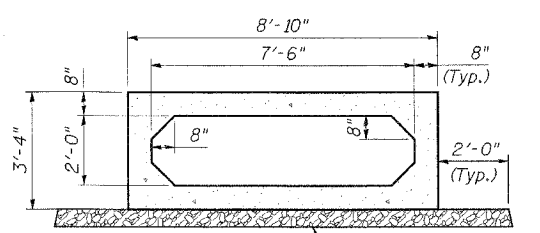
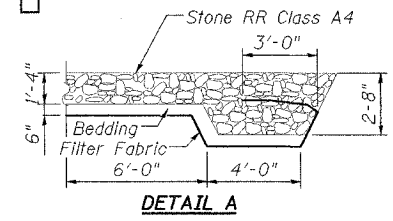
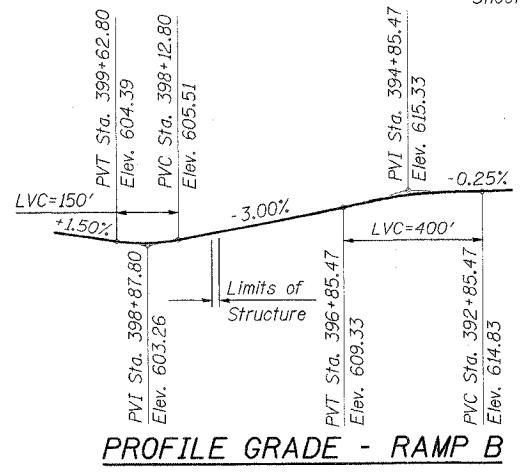
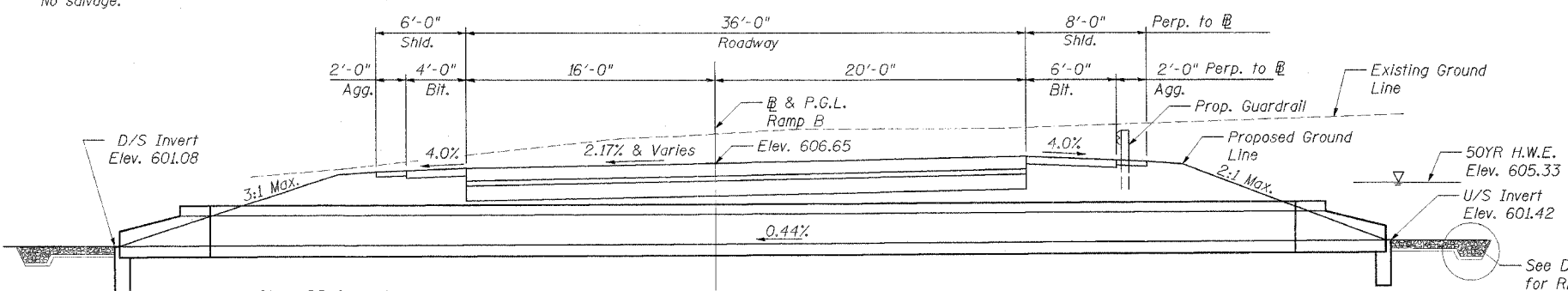
Bench Mark:

BM 1703 Chiseled "X" on light pole foundation bolt, Sta. 192+94.19, 6.41' Rt. El. 608.23

Existing Structure:

The existing structure is a 4'x2' cast in place reinforced concrete box culvert originally built in 1959. The existing structure is to be removed and replaced. Traffic is to be maintained on the existing ramp during construction.

No salvage.



SECTION THRU PRECAST BARREL

Note: Max. applied soil bearing pressure = 980 psf

DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 2002 and All Subsequent Interims

LOADING HS20-44 & ALT.

Allow 50 psf for future wearing surface.

DESIGN STRESSES

Precast Units
 f'c=5000 psi
 fy=65,000 psi (welded wire fabric)

SEISMIC DATA

Seismic Performance Category (SPC)=A
 Bedrock Acceleration Coefficient (A)=0.035g
 Site Coefficient (S)=1.0

PLAN PRECAST END SECTION DETAILS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
* RipRap	Sq. Yd.	36
Filter Fabric	Sq. Yd.	36
* Remove Existing Culverts	Each	1
Precast Concrete Box Culverts 7.5' x 2'	Foot	72
Box Culvert End Section, Culvert No. 4	Each	2

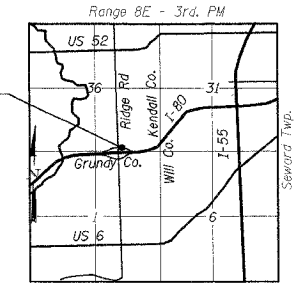
* See Special Provisions.

WATERWAY INFORMATION

Existing Low Grade Elev. 607.23 @ Sta. 399+00
 Proposed Low Grade Elev. 604.0 @ Sta. 399+25

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		*Nat. H.W.E.	Head (Ft.)		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	16	2.2	3.4	604.33/601.87	0.78	0.44	605.11	602.31
Base	50	38	4.2	5.5	604.82/602.15	1.39	0.84	606.21	602.99
Base	100	53	5.2	7.6	605.08/602.43	1.89	0.95	606.97	603.38

* upstream face of culvert



PATRICK ENGINEERING, INC.
 GREGORY J. HATLESTAD, S.E.



GREGORY J. HATLESTAD, S.E.
 # 081-005562

EXP _____
 DATE _____

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 4
 7.5'X2' BOX CULVERT- RAMP B
 GENERAL PLAN AND ELEVATION
 STA. 397+74.82
 SCALE: NONE DRAWN BY: M. TRYON / A.Y.
 DATE: 2/10/06 CHECKED BY: R. KAYE / A.Y.

