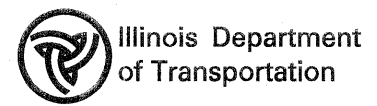


Bench Mark:
Chiseled 'X' in Concrete Sidewalk on East side of IL RT. 53. 14.65' Northwest of PK nail
In Power Pole and 41.00' Southwest of Building. Sta. 59+83.74, Offset 46.56 Rt., Elev. 747.43.

Existing Structure:
The existing structure is a 3'x4' concrete box culvert.
The existing structure is to be removed and replaced. Traffic is to be maintained on the existing roadway during construction by staging the construction.



INDEX OF SHEETS

- S1 - General Plan & Elevation
- S2 - Culvert Details
- S3 - Soil Borings

GENERAL NOTES

1. Precast Concrete Box Culvert shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M-259.
2. Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-322, Grade 60. The cost of reinforcement is included with "Cast-in-Place Reinforced Concrete End Sections".
3. Work this sheet with S2 for details of Cast-in-Place Sections.
4. All exposed concrete edges shall be chamfered 3/4" unless otherwise noted.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44

Allowance for Future Wearing Surface=50 lb/ft²

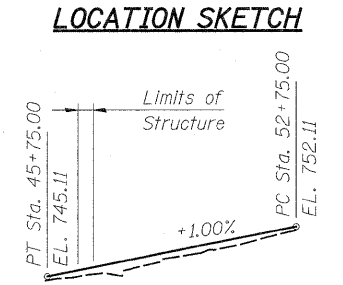
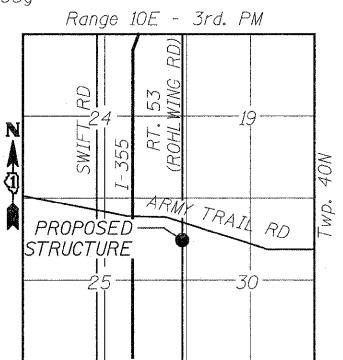
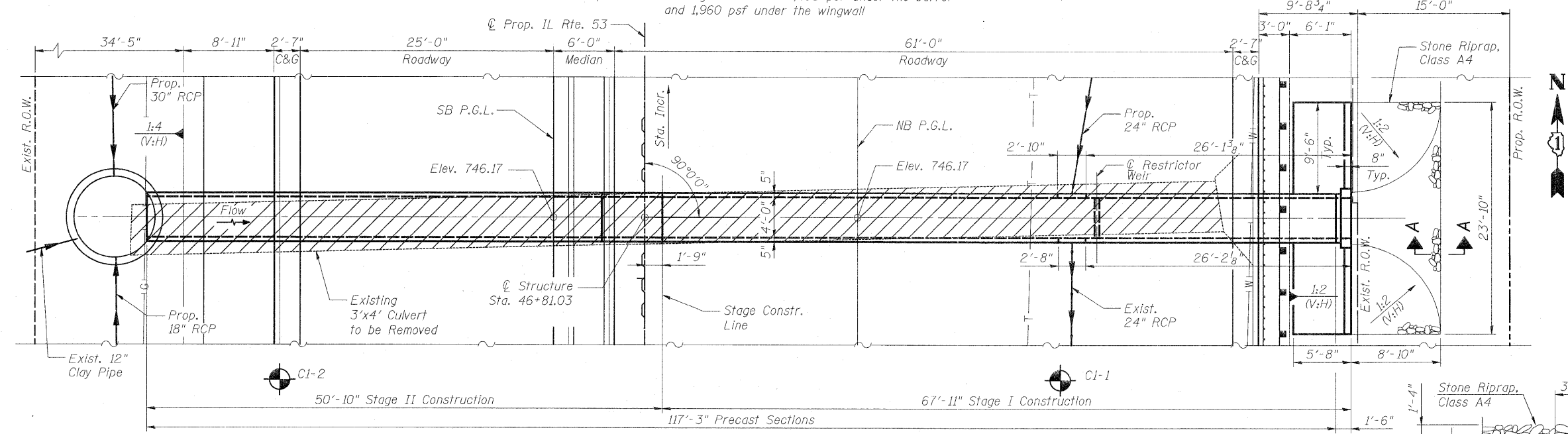
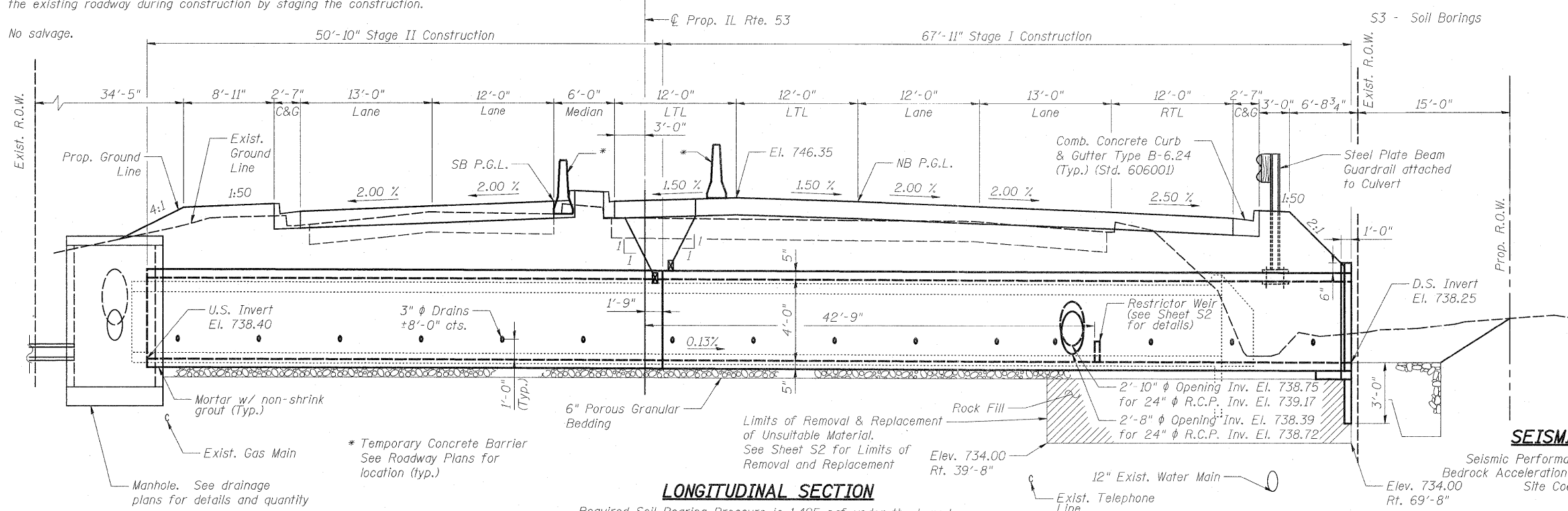
DESIGN STRESSES

Precast Units
f'c=5,000 psi
fy=65,000 psi (welded wire fabric)

Field Units
f'c=3,500 psi
fy=60,000 psi (Reinf.)

SEISMIC DATA

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



WATERWAY INFORMATION TABLE

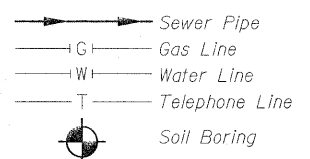
Drainage Area = 28.8 Acres Proposed Low Grade Elev. = 744.7 @ Sta. 45+00
Existing Low Grade Elev. = 744.6 @ Sta. 44+50

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		Nat. H.W.E.		Head (Ft.)		Headwater Elev.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	10	14	4	4	740.7	0.0	0.0	740.7	740.7		
Base	100	36	8	8	741.8	0.4	0.4	742.2	742.2		
Overlapping	Ex. & Pr. 500+ years										
Max. Calc.	500	73	12	12	743.3	1.8	1.8	745.1	745.1		

TOTAL BILL OF MATERIAL

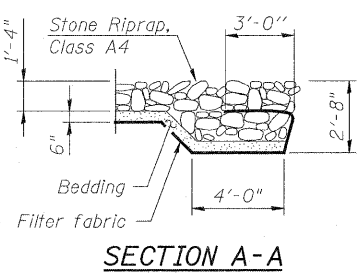
ITEM	UNIT	TOTAL
Removal And Disposal Of Unsuitable Material	Cu Yd	54
Stone Riprap, Class A4	Sq Yd	25
Filter Fabric	Sq Yd	25
Temporary Sheet Piling	Sq Ft	287
Cast-in-Place Reinforced Concrete End Sections	Cu Yd	7.6
Precast Concrete Box Culvert 4' X 4'	Foot	117.5
Box Culvert Removal	Foot	108
Rock Fill	Cu Yd	54

* See Special Provisions



LEGEND

PATRICK ENGINEERING INC.
4970 VARSITY DRIVE
LISLE, IL 60532
patrickengineering.com



DESIGNED - A. Durbak
CHECKED - R. DiGiulio
DRAWN - A. Durbak
CHECKED - R. DiGiulio

SHEET NO.	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S1 OF S25	2578	532B	DUPAGE	781	580
CONTRACT NO. 60477					
03/11/2011		ILLINOIS FED. AID PROJECT			