

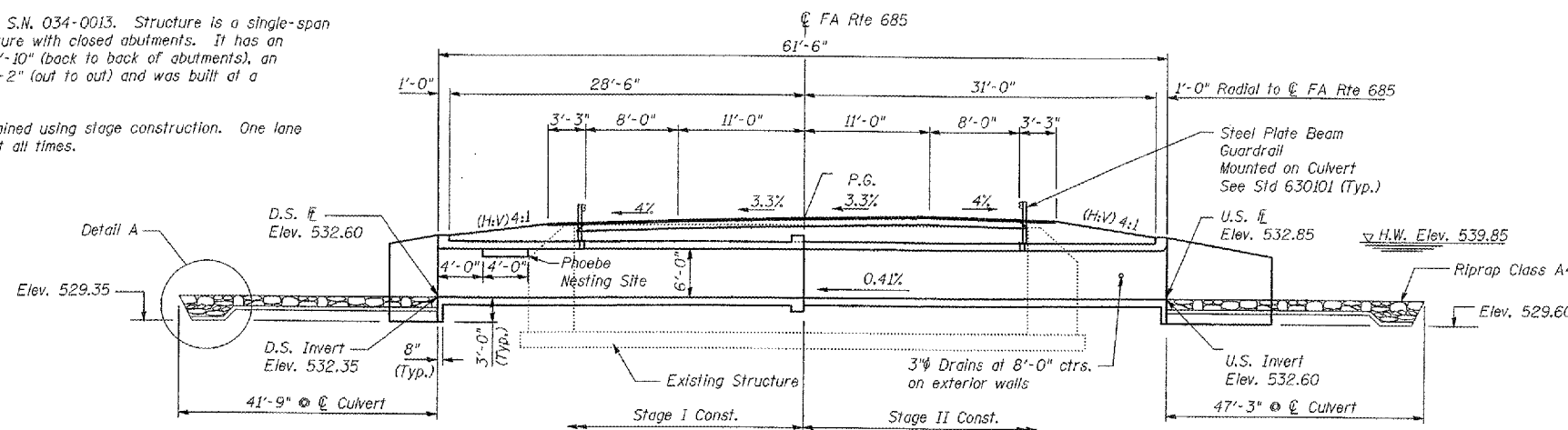
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	113B-2	HANCOCK	45	27
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Benchmark: Chiseled Square on top of northwest wingwall of existing bridge. Elevation 541.02

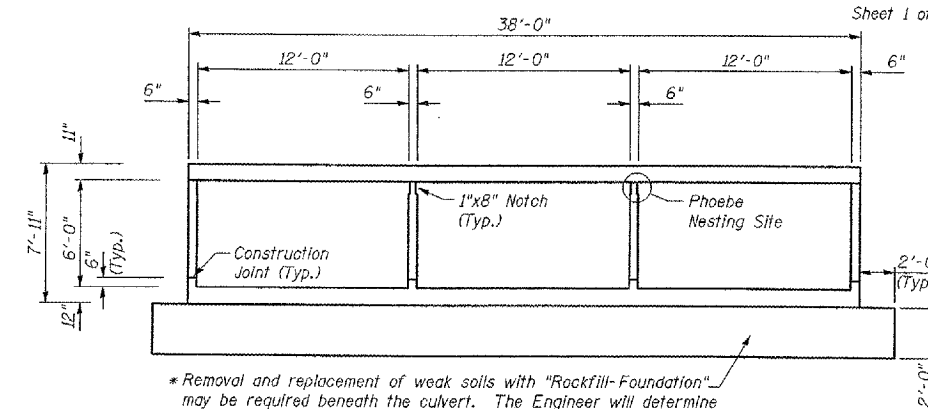
Existing Structure: S.N. 034-0013. Structure is a single-span concrete slab structure with closed abutments. It has an overall length of 30'-10" (back to back of abutments), an overall width of 36'-2" (out to out) and was built at a 45 degree skew.

Traffic to be maintained using stage construction. One lane is to remain open at all times.

No salvage.



**LONGITUDINAL SECTION**  
(Horiz. Dim. @ Rt. L's to @ FA Rte 685)



**SECTION THRU BARREL**

**GENERAL NOTES**

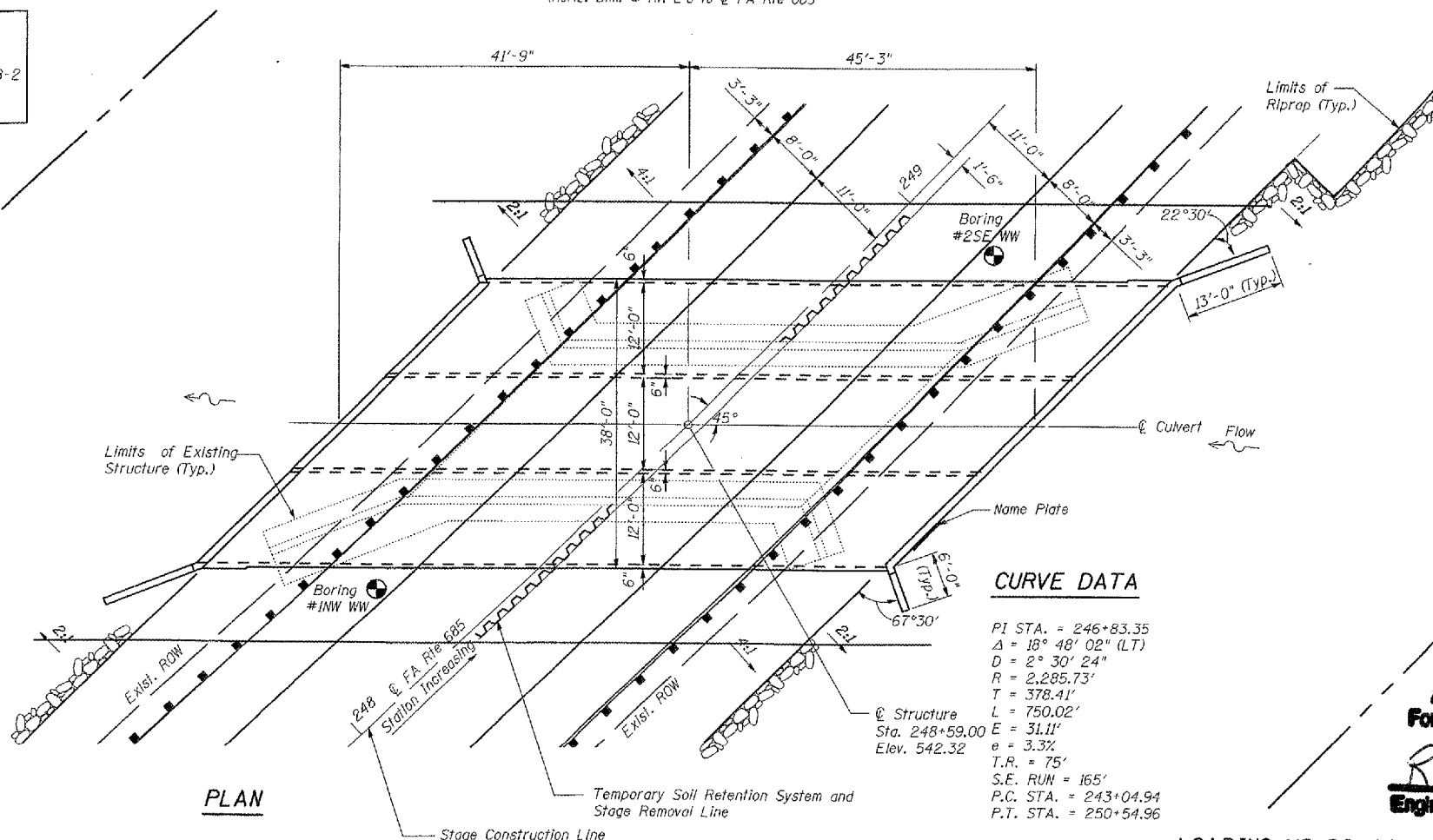
1. Precast Box Culvert alternate is not allowed.
2. Reinforcement Bars shall conform to the requirements of ASTM A706 GR 60 (LL Modified). See Special Provisions.
3. At least seven feet of Barrel shall be poured monolithically with wing walls.
4. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
5. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing Superstructure. The Contractor shall saw cut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
6. A Cantilevered Sheet Piling design does not appear feasible and additional members or other retention systems may be necessary. The contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
7. See Sheet 2 of 8 for Detail A.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton		946	946
Filter Fabric	Sq. Yd.		1420	1420
Removal of Existing Structures	Each		1	1
Bar Splicers	Each	160		160
Concrete Box Culverts	Cu. Yd.		301.2	301.2
Reinforcement Bars	Lb.		94810	94810
Name Plates	Each		1	1
Temporary Soil Retention System	Sq. Ft.		565	565
Rock Fill - Foundation	Ton		525	525
Granular Culvert Backfill	Cu. Yd.		630	630
Steel Plate Beam Guardrail, Attached to Structures	Foot		125	125

STATION 248+59.00  
BUILT 20 BY  
STATE OF ILLINOIS  
F.A.P. RTE. 685 SEC. 113B-2  
LOADING HS20  
STR. NO. 034-2519

**NAME PLATE**  
See Std. 515001



**PLAN**

**CURVE DATA**

PI STA. = 246+83.35  
Δ = 18° 48' 02" (LT)  
D = 2° 30' 24"  
R = 2,285.73'  
T = 378.41'  
L = 750.02'  
E = 31.11'  
e = 3.3%  
T.R. = 75°  
S.E. RUN = 165°  
P.C. STA. = 243+04.94  
P.T. STA. = 250+54.96

**APPROVED**  
For Structural Adequacy Only

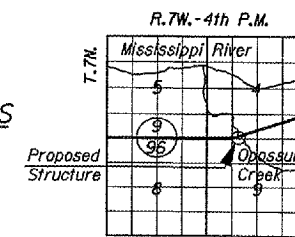
*Ralph E. Anderson (TSB)*  
Engineer of Bridges & Structures

**LOADING HS 20-44**  
Allow 50 Lb./Sq. Ft. for future wearing surface.

**DESIGN SPECIFICATIONS**  
AASHTO 2002

**DESIGN STRESSES**  
FIELD UNITS

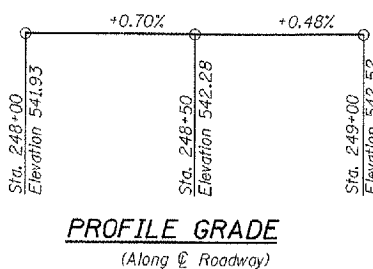
$f_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)



**LOCATION SKETCH**

**DESIGN SCOUR ELEV. TABLE**

	Upstream	Downstream
Design Scour Elev. (Ft.)	529.6	529.35



**PROFILE GRADE**  
(Along @ Roadway)

**WATERWAY INFORMATION**

Drainage Area = 1.25 Sq. Mi. Low Grade Elev. 540.75 ft @ Sta. 245+60

Flood	Freq. Yr.	Q cfs	Opening Sq. Ft.		Nat. H.W.E.		Head - ft.		Headwater Elev. - ft.	
			Exlst.	Prop.	Exlst.	Prop.	Exlst.	Prop.	Exlst.	Prop.
Design	10	589	112.8	210.2	538.65	0.43	0.00	539.08	538.65	
Overtopping	90	1128	138.4	216.0	539.85	1.58	0.52	541.43	540.37	
Base	100	1157	138.4	216.0	540.11	2.13	0.25	542.24	540.36	
Max. Calc.	500	1593	138.4	216.0	540.38	5.05	5.05	545.43	545.43	

**The Upchurch Group**  
HILLSIDE, IL. (708) 449-2321  
MATTOON, IL. (217) 285-3177

**MARTIN J. SILVESTER**  
081-001879 LICENSED STRUCTURAL ENGINEER  
CHICAGO, ILLINOIS  
*M. J. Silvester* 8-24-07  
MARTIN J. SILVESTER  
STRUCTURAL ENGINEER  
LICENSE EXP. DATE 11-30-08

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN**  
IL 9/96 OVER OPPOSUM CREEK  
FAP 685 SECTION 113B-2  
HANCOCK COUNTY  
STA. 248+59.00 STR. No. 034-2519  
SCALE: N.T.S. DRAWN BY SAE  
DATE: AUG 2007 CHECKED BY BJF