

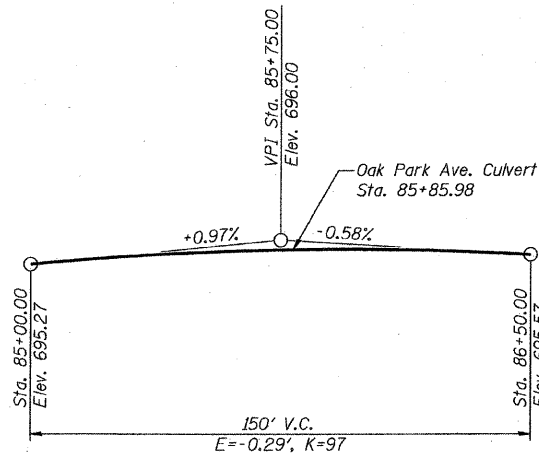
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**Bench Mark:**  
Bolt spike flush with ground near west 1/4 corner section 7-35-13, approximately 50 feet east of Northbound Rte. 43 in west face of power pole with transformer, opposite Harris Bank @ 195th Street Elevation 700.09.

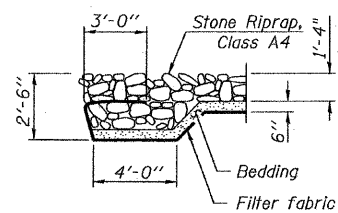
**Existing Structure:**  
Structure Number 016-1019, was built in 1931 and carries Oak Park Avenue over Union Drainage Ditch. The 6-foot x 10.5-foot Double Box Culvert measures 23 feet out-to-out and 54.5 feet wide.

**Staging:**  
None - Traffic will be detoured during construction.

**No Salvage.**



**PROFILE GRADE**  
(Along Oak Park Ave.)



**SECTION A-A**

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Reuben E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

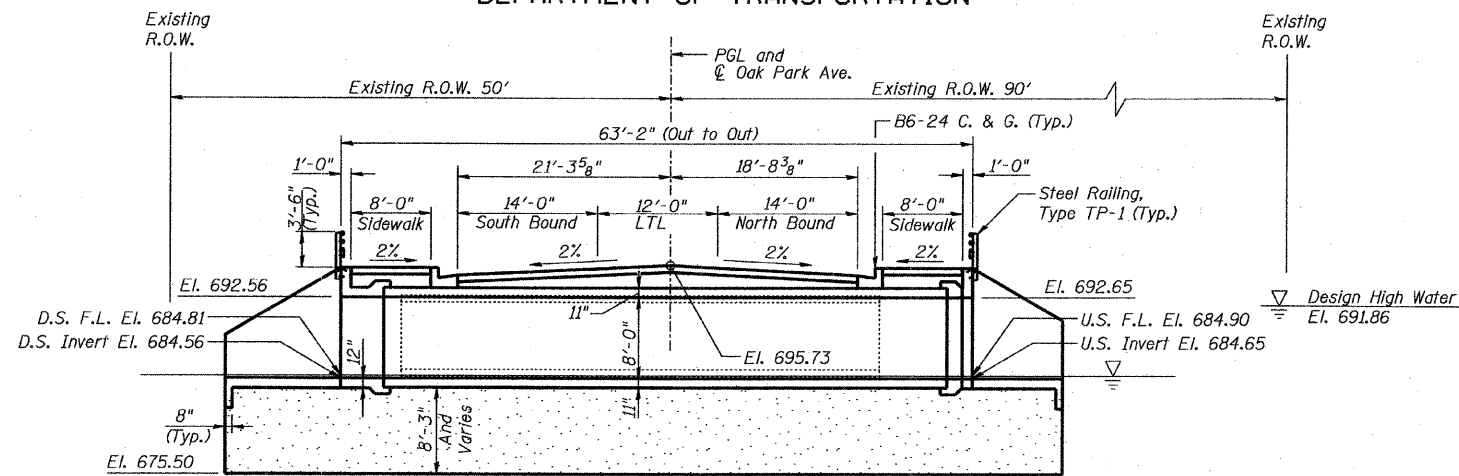


**COLLINS ENGINEERS, INC.**  
LUIS D. BENITEZ, P.E., S.E.  
NO. 81-008415  
EXP. 11/30/2010

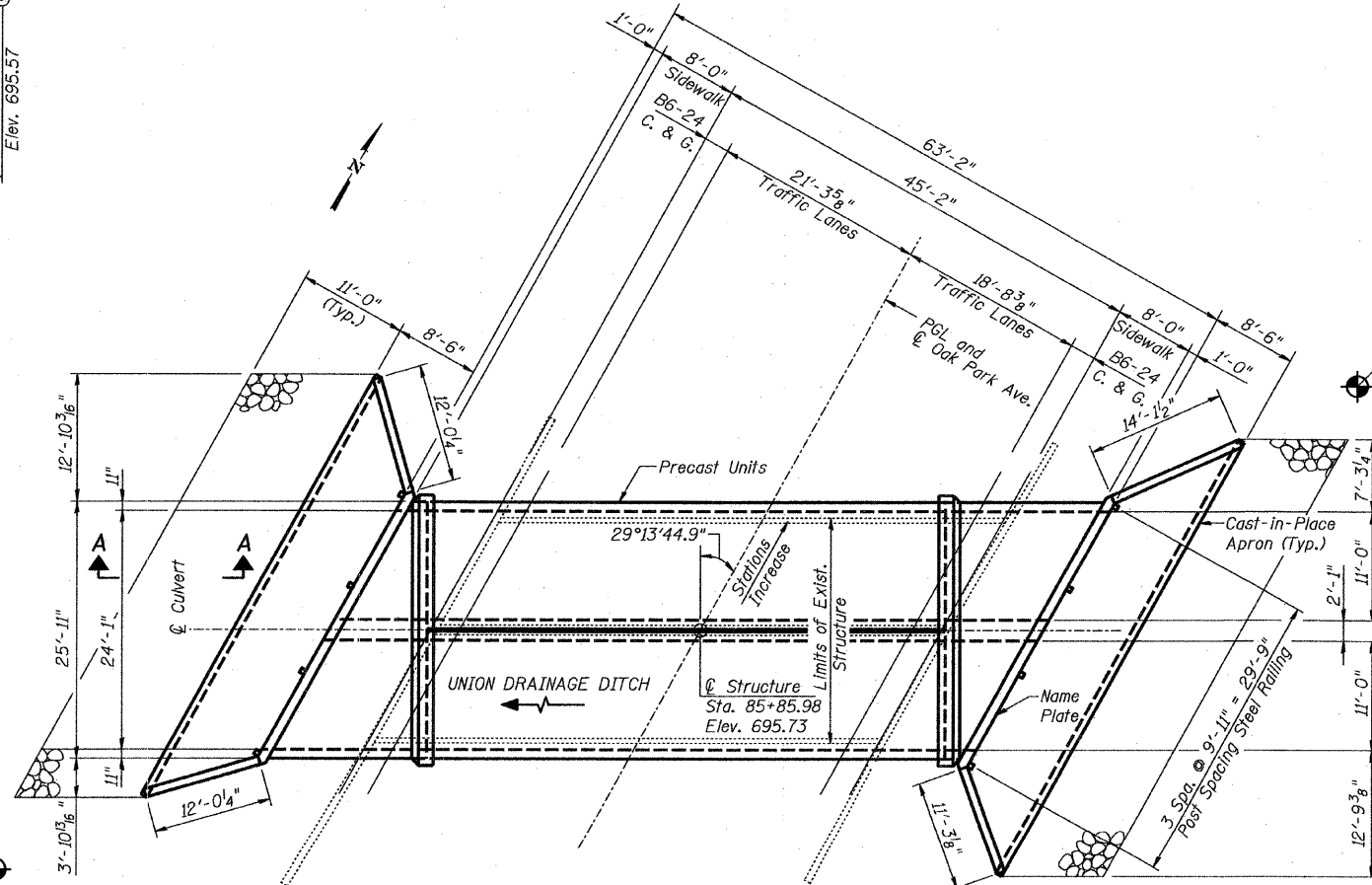
**WATERWAY INFORMATION**

Drainage Area = 5.92 Sq. Mi. Low Grade Elev. 693.60 @ Sta. 91+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	215	119.07	124.74	690.16	0.10	0.10	690.26	690.26
Base	50	315	126	162.36	691.86	0.14	0.11	692.00	691.97
Overtopping	100	361	126	176	692.55	0.18	0.13	692.73	692.68
Max. Calc.	500	470	126	176	694.24	0.06	0.06	694.30	694.30



**LONGITUDINAL SECTION**  
(LOOKING NORTH)



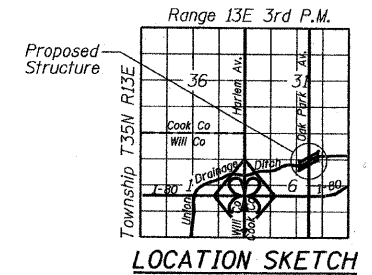
**PLAN**

**NOTES:**  
For General Notes and Total Bill of Materials see sheet S2 of S11.  
For Steel Railing Details see sheet S10 of S11.  
For Guardrail Details see Civil Drawings.  
For Box Culvert Layout see sheet S3 of S11.  
For side slope refer to the Proposed Plan and Profile and Cross Section sheets.

**LEGEND:**  
D.S. = Down Stream  
U.S. = Up Stream  
F.L. = Flow Line

**COLLINS ENGINEERS**  
DESIGNED: LDB CHECKED: JMH  
DATE: 3/27/09 DRAWN: DR

SHEET NO. S1 OF S11 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2774	0306T	COOK	55	26
SN: 016-2848			CONTRACT NO. 60C07		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					



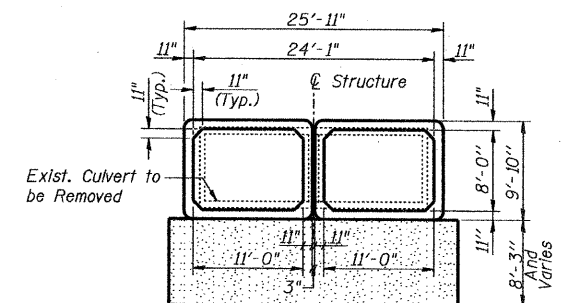
**DESIGN SPECIFICATIONS**  
2002 AASHTO Standard Specifications  
for Highway Bridges 17th Edition

**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**Field Units**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**Precast Units**  
f'c = 5,000 psi  
fy = 65,000 psi (Welded Wire Fabric)



**SECTION THRU DOUBLE BOX CULVERT**

**GENERAL PLAN**