

B.M.: Chiseled "□" on top of N.W. wingwall, Sta. 416+94.59, 18.23' Lt.
Elev. 529.78

Existing Structure: SN 032-0084 was originally constructed in 1980 as Section 0-BR-1. The superstructure consists of a single span of 33" precast prestressed concrete deck beams on concrete pile bent abutments. The back-to-back abutments dimension measures 82'-0" while the out-to-out width measures 33'-0". The existing superstructure and substructure shall be removed according to Section 501 of the Standard Specifications. A traffic detour will be used during the construction of the culvert.

No salvage

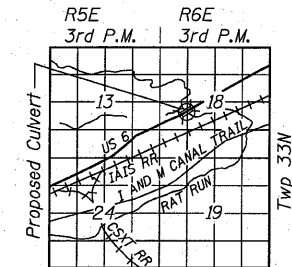
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

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1	General Plan
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CURVE DATA

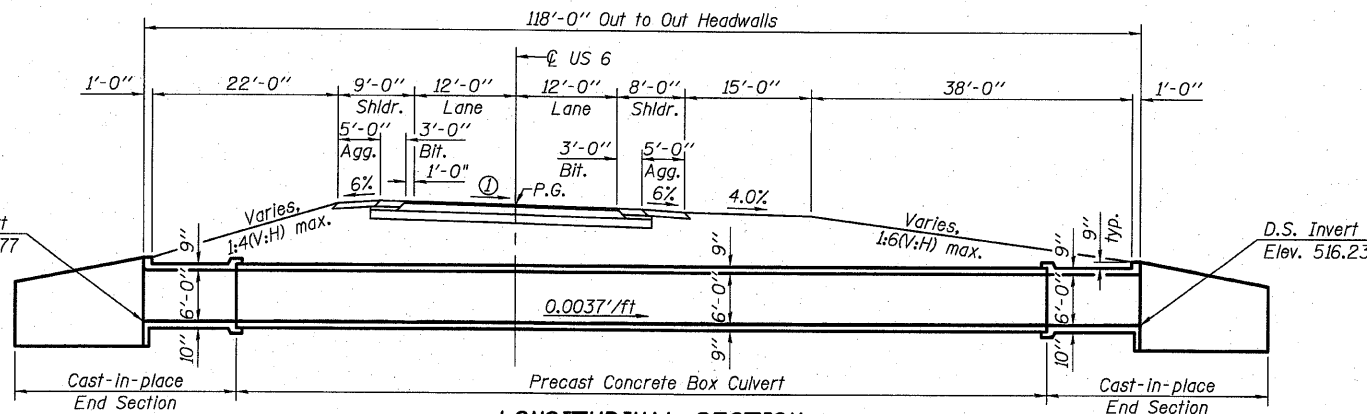
$\Delta = 6^{\circ}01'38''$ (Rt.)
 $D = 1^{\circ}30'00''$
 $T = 201.09'$
 $L = 401.81'$
 $E = 5.29'$
 $R = 3,819.72'$
 $S.E. = \text{①}$
 $P.C. = \text{Sta. } 414+37.64$
 $P.T. = \text{Sta. } 418+39.45$
 $P.I. = \text{Sta. } 416+38.73$



LOCATION SKETCH

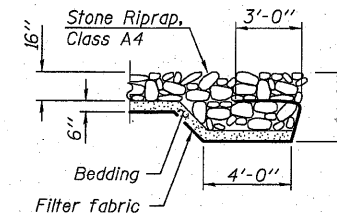
STATION 417+45
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 623 SEC. (O) BR
 LOADING HS20
 STRUCTURE NO. 032-2020

NAME PLATE
 See Std. 515001

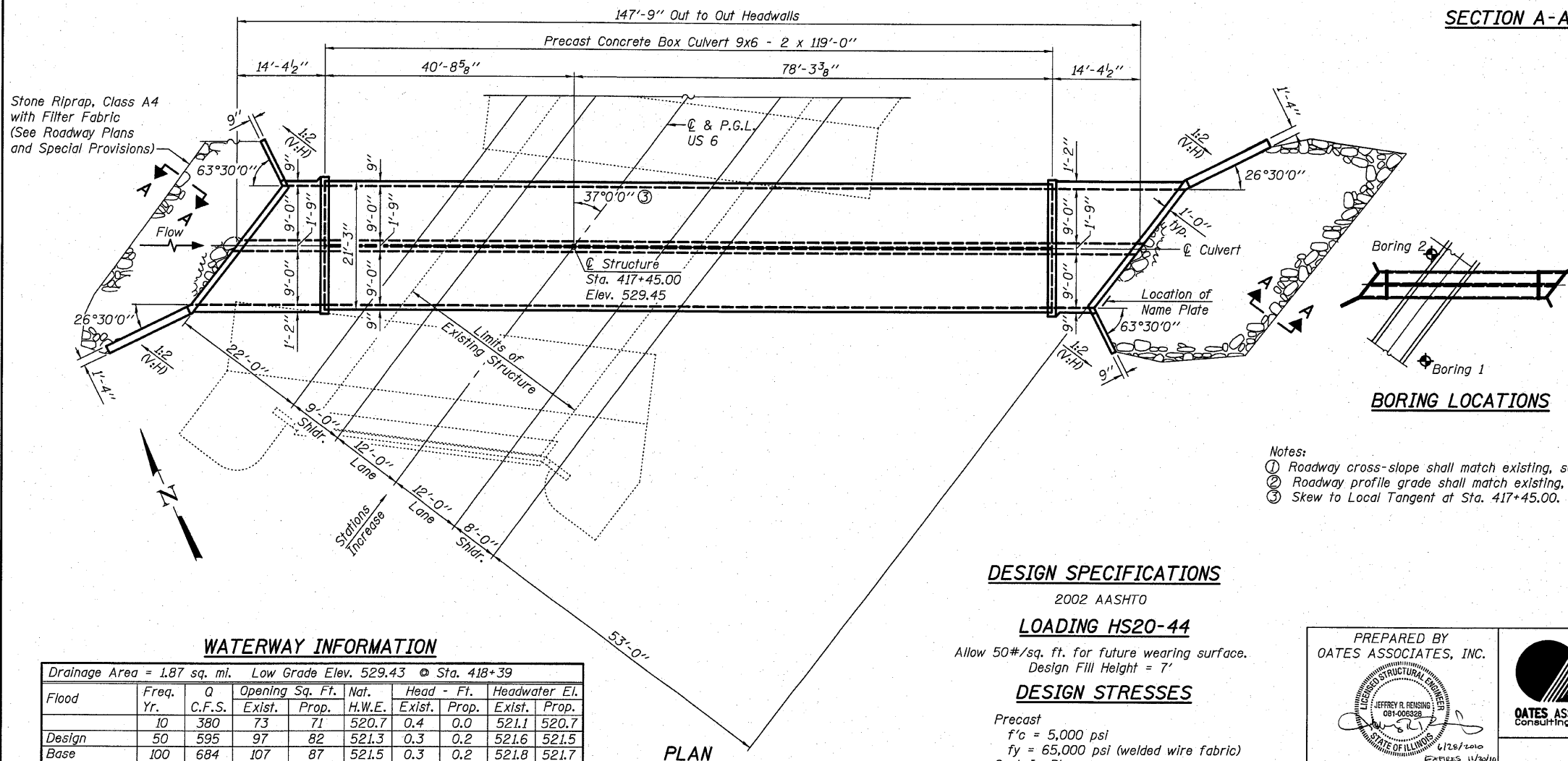


LONGITUDINAL SECTION

(Dimensions are at right angles to \perp Roadway)



SECTION A-A



BORING LOCATIONS

- Notes:
 ① Roadway cross-slope shall match existing, see roadway plans.
 ② Roadway profile grade shall match existing, see roadway plans.
 ③ Skew to Local Tangent at Sta. 417+45.00.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	1133
Porous Granular Embankment, Special	Cu. Yd.	205
Stone Riprap, Class A4	Sq. Yd.	181
Filter Fabric	Sq. Yd.	181
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	966
Reinforcement Bars	Pound	21,840
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	90.0
Precast Concrete Box Culvert 9'x6'	Foot	238
Asbestos Bearing Pad Removal	Each	22

GENERAL PLAN
 US 6 OVER RAT RUN
 FAP ROUTE 623 - SECTION (O) BR
 GRUNDY COUNTY
 STATION 417+45.00
 STRUCTURE NO. 032-2020

WATERWAY INFORMATION

Drainage Area = 1.87 sq. mi. Low Grade Elev. 529.43 @ Sta. 418+39

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	380	73	71	520.7	0.4	0.0	521.1	520.7	
Base	50	595	97	82	521.3	0.3	0.2	521.6	521.5	
Overtopping	100	684	107	87	521.5	0.3	0.2	521.8	521.7	
Max. Calc.	N/A	902	N/A	98	522.2	0.2	0.6	522.4	522.8	

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.
 Design Fill Height = 7'

DESIGN STRESSES

Precast
 $f'c = 5,000$ psi
 $f_y = 65,000$ psi (welded wire fabric)
 Cast-In-Place
 $f'c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PREPARED BY
 OATES ASSOCIATES, INC.



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 100 Lanter Court, Suite 1
 Collinsville, Illinois 62234
 618-345-2200
 Design Firm License No. 184.001115

DESIGNED JAD
 CHECKED NEL
 DRAWN JAD
 CHECKED NEL

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4 SHEETS	623	(O) BR	GRUNDY	35	14
CONTRACT NO. 66913					

ILLINOIS FED. AID PROJECT