

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: Chiseled X in NW corner of North Headwall, Elev. 613.60.

Existing Structure: SN 043-1004 was originally built in 1927 and extended in 1963. It is a 14' x 8'-6" single cell concrete structure with concrete wingwalls. Traffic is to be maintained using staged construction.

No salvage.
Precast alternate not allowed.

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications
for Highway Bridges

LOADING HS20-44

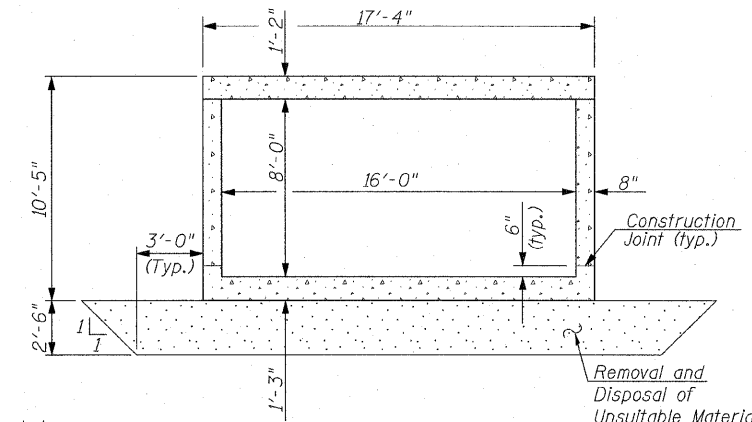
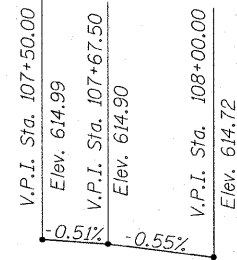
Allow 50#/sq. Ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PROFILE GRADE
(Along CL US20)



TYPICAL SECTION THRU BARREL

TOTAL BILL OF MATERIAL

Item	Unit	Total
Removal and Disposal of Unsuitable Material	CU YD	234
Geotechnical Fabric for Ground Stabilization	SQ YD	248
Stone Riprap, Class A4	SQ YD	383
Filter Fabric	SQ YD	432
Removal of Existing Structures, No. 1	EACH	1
Structure Excavation	CU YD	398
Reinforcement Bars	LBS	50,980
Bar Splicers	EACH	84
Concrete Box Culverts	CU YD	210.7
Name Plates	EACH	1
Breaker Run Crushed Stone	TON	445
Temporary Soil Retention System	SQ FT	989

INDEX OF DRAWINGS:

Sheet No.	Sheet Title
1.	General Plan & Elevation
2.	Staged Construction
3.	Box Plan & Elevation I
4.	Box Plan & Elevation II
5.	Bar Splicer Assembly Details
6.	Temporary Concrete Barrier for Stage Construction
7.	Boring Log, B-1
8.	Boring Log, B-2

WATERWAY INFORMATION

Exist. Low Grade Elev. 614.33 @ Sta. 107+69.2
Prop. Low Grade Elev. 614.33 @ Sta. 107+69.2

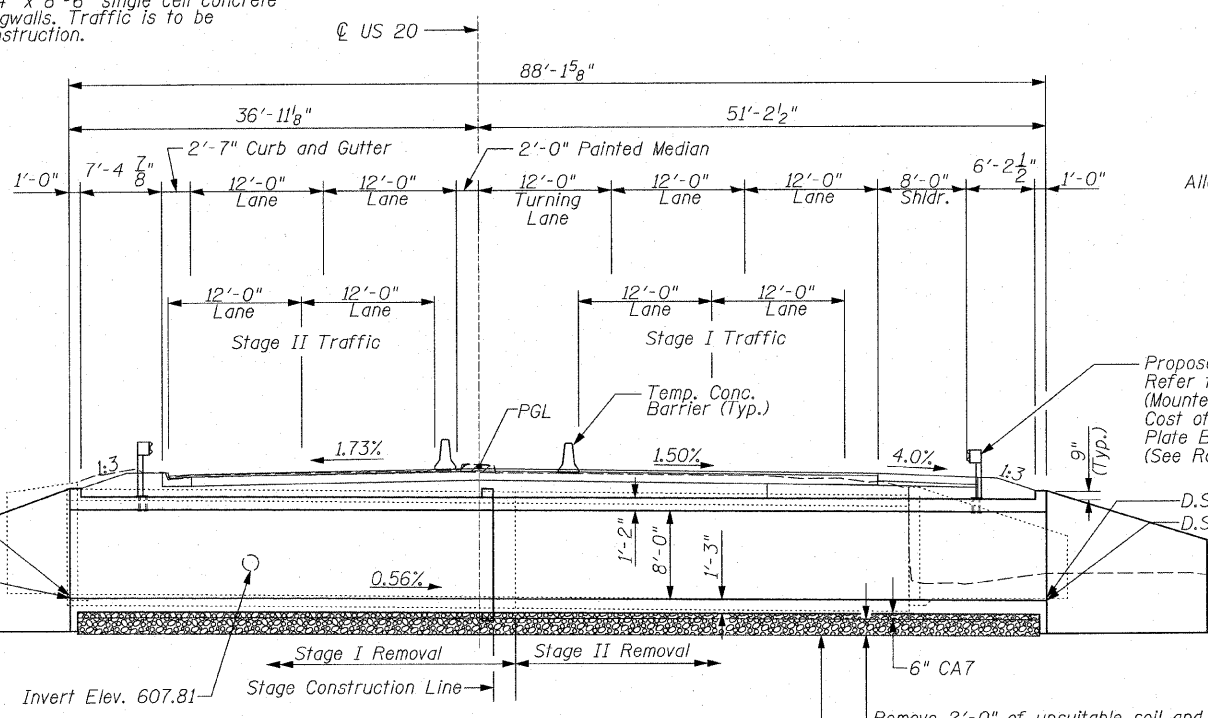
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Ten-Year	10	171	71.4	81.6	608.76			608.76	608.76
Design	50	506	112.6	128.0	611.70	0.20	0.19	611.90	611.89
Base	100	753	124.3	128.0	612.54	0.50	0.54	613.04	613.08
Max. Calc.	500	1693	126.0	128.0	613.23	0.76	0.82	613.99	614.05

10 year velocity through Exist. bridge = 1.71 fps 10 year velocity through Prop. bridge = 1.71 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	600.41	599.91

**GENERAL PLAN & ELEVATION
US 20 OVER UNNAMED TRIBUTARY
FAP 301 - SECTION 43T
JO DAVIESS COUNTY
STATION 107+67.50
STRUCTURE NO. 043-1076**

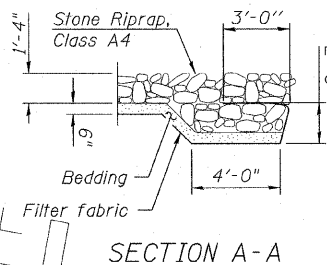


LONGITUDINAL SECTION

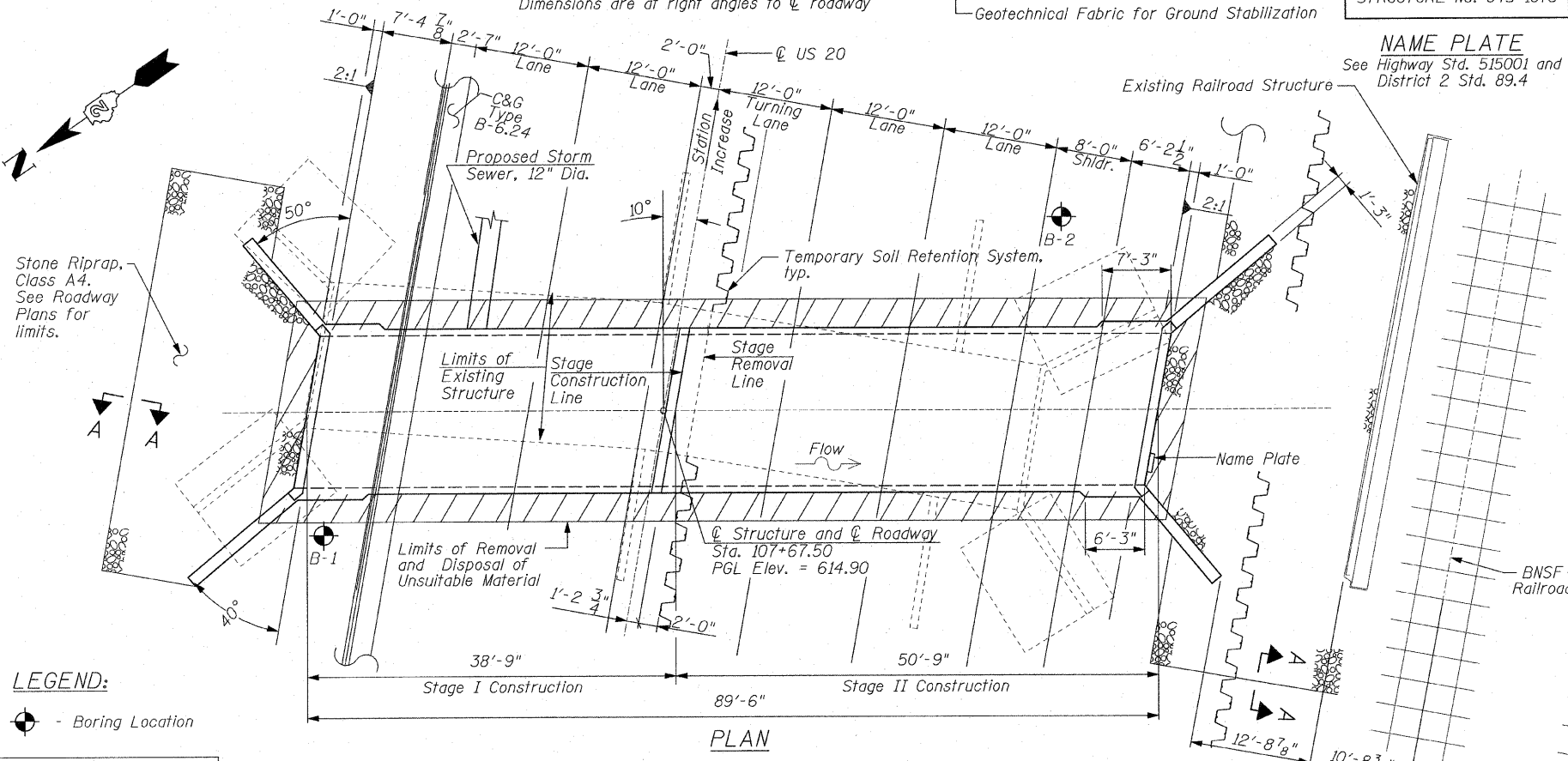
Dimensions are at right angles to CL roadway

NAME PLATE

See Highway Std. 515001 and District 2 Std. 89.4



SECTION A-A



PLAN

LEGEND:

⊙ - Boring Location

DESIGNED	MAS
CHECKED	BJM
DRAWN	TMF / JNH
CHECKED	BRT

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES



Brian J. Malone
12-1-2009
Expires 11-30-2010



Wight & Company
2500 North Frontage Road, Darien, IL 60561
630.969.7000 630.969.7979 fax
Design Firm Registration 184-000451

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8 SHEETS	301	43T	JO DAVIESS	80	44
STA. 107+58.88 TO STA. 107+76.13		CONTRACT NO. 64C68			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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