

NOTE:
Add Apron Between Wings and Construct Toe at End of Apron in Place of Toe at the End of the Barrels and along the Wingwalls.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QTY.
202(C)	Unclassified Excavation, Undersized	C.Y.	2293.0
501(A)	Structural Excavation, Undersized	C.Y.	110.0
501(G)	CLSM Backfill	C.Y.	28.0
504(E)	Concrete Rail (TR3)	L.F.	108.7
509(B)	Class A Concrete	C.Y.	326.5
511(A)	Reinforcing Steel (Grade 60)	LB.	48,614.0
601(A-1)	Type 1-A Plain Riprap	(2) TON	96.0
601(A-2)	Type 1-A Filter Blanket	(3) TON	17.0
601(E)	Filter Fabric (Riprap)	(3) S.Y.	52.0

- (1) Includes 69 C.Y. for Aprons
- (2) Includes 2490 Lb. for Aprons
- (3) To be Used in a Manner Approved by the Engineer.

DESIGN DATA

CLASS A CONCRETE ----- $f_c = 3 \text{ KSI} @ 28 \text{ days}$

REINFORCING STEEL (GR. 60) ----- $f_y = 60 \text{ KSI}$

STRUCTURAL STEEL (A36) ----- $f_y = 36,000 \text{ psi}$

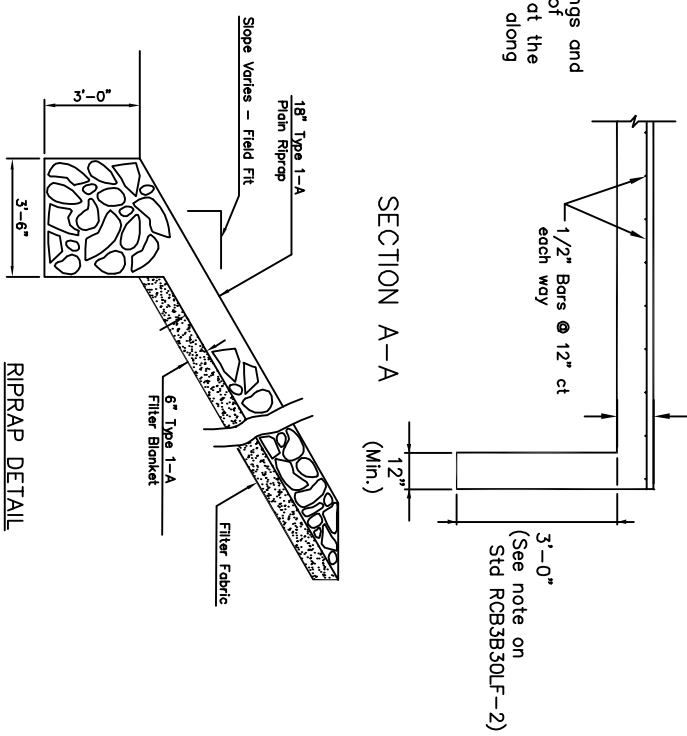
LOADING: HS 20

DESIGN: Load Factor Design

HYDRAULIC DATA

D.A. = 2.53 Sq. Mi. (1620 Ac.)

Q10	= 1,810 cfs	Q100	= 3,970 cfs
V10	= 4.10 fps	V100	= 6.48 fps
Q10 Comp. H.W.	= 657.54'	Q100 Comp. H.W.	= 660.63'
Q50	= 3,170 cfs	Q500	= 6,140 cfs
V50	= 3.65 fps	V500	= 6.28 fps
Q50 Comp. H.W.	= 659.85'	Q500 Comp. H.W.	= 661.75'



BRIDGE 'A'

Design	TR	2/14	Tulsa County Engineering
DRAWN	TR	2/14	GENERAL PLAN & ELEVATION
Checked	TR	8/15	CL STA. 12+34.28 CONST. 3-14.5'x9.5'x28.5'
Revised			ROB SKEW 30° LF W/TR3
Scale		1"=10'	

STATE JOB NO. 27822(04) Sheet No. B001