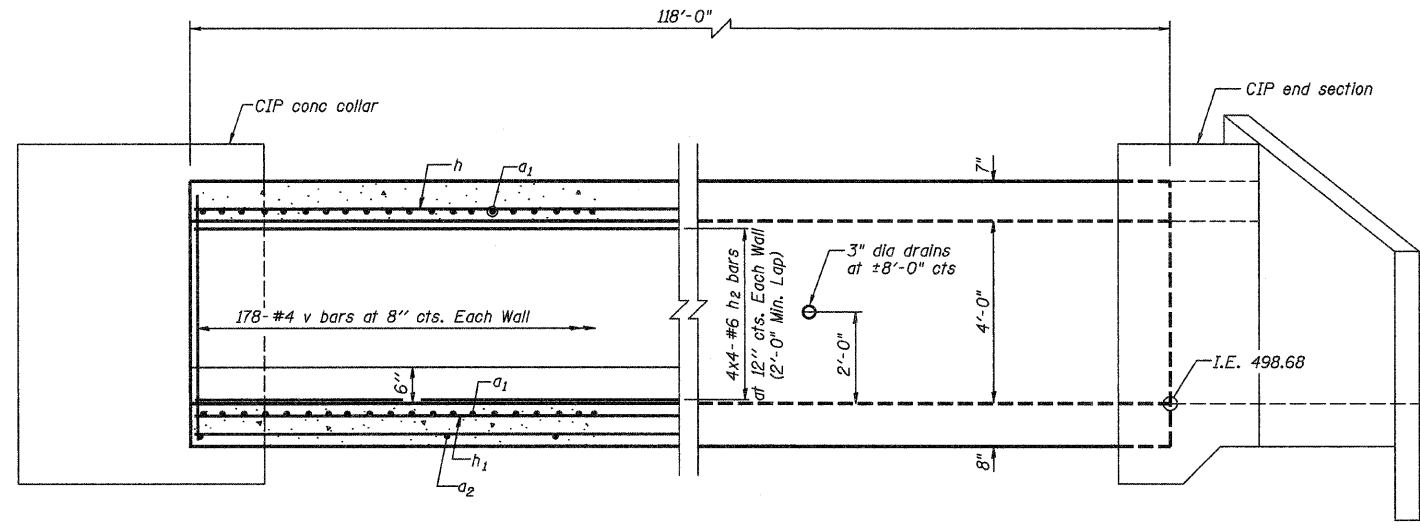


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HALF LONG SECTION

HALF ELEVATION

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

DESIGN STRESSES

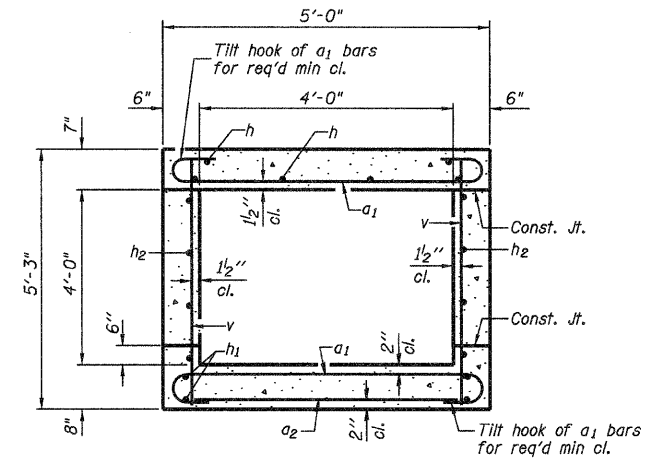
$f_y = 60,000 \text{ psi}$
 $f'_c = 3,500 \text{ psi}$

LOADING HS 20-44

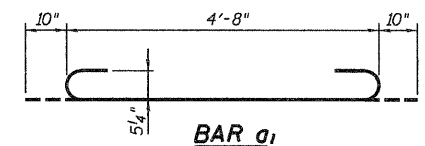
Allow 50 lb/sq. ft. for future wearing surface.

INDEX OF SHEETS

- 1 DOWNSTREAM 4'x4' BOX CULVERT EXTENSION
- 2 DOWNSTREAM 4'x4' END SECTION DETAILS
- 3 DOWNSTREAM 4'x4' SETTLEMENT COLLAR DETAILS



SECTION THRU BARREL



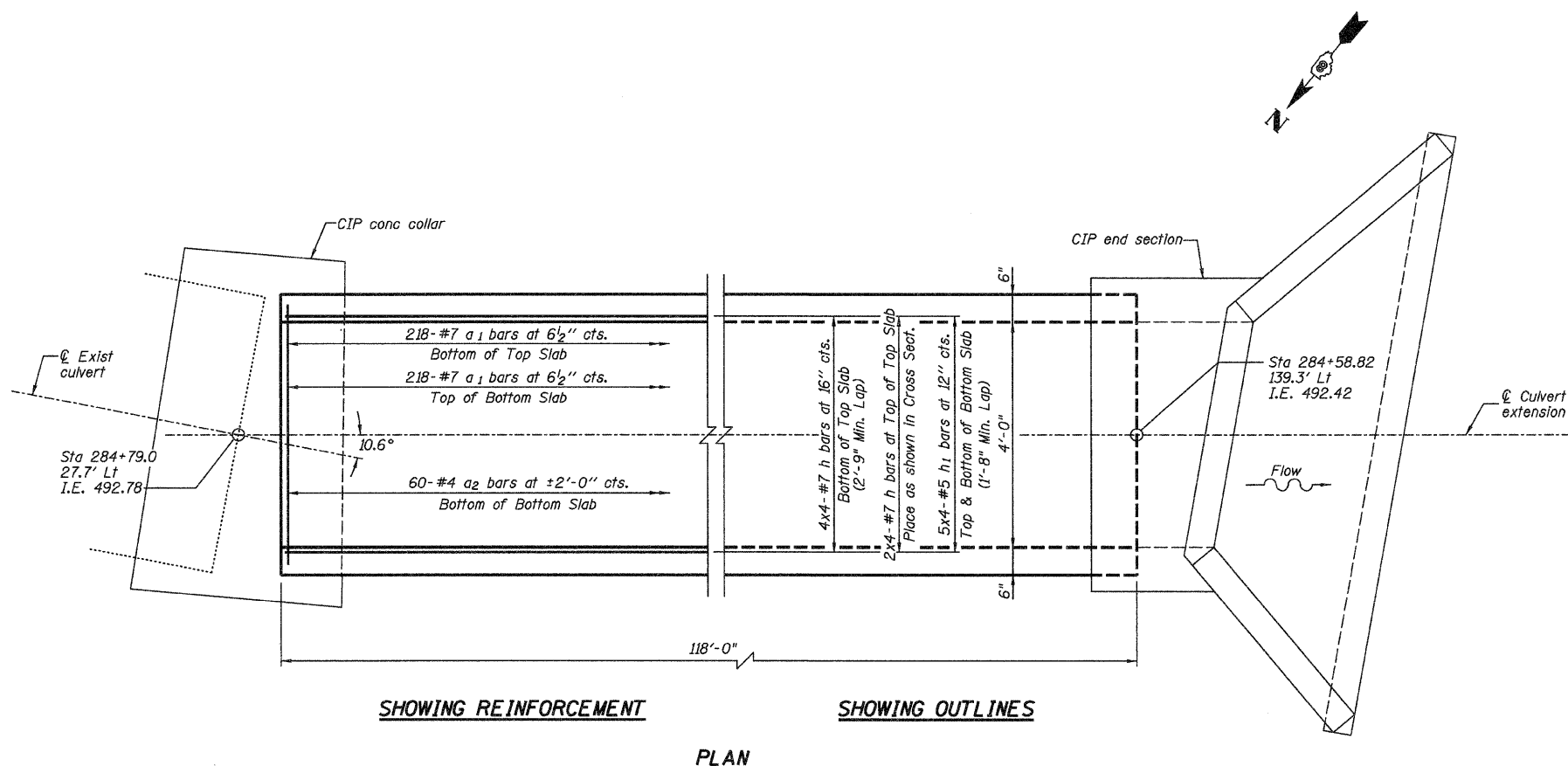
BAR a1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	436	#7	6'-4"	
a2	60	#4	4'-8"	
h	24	#7	31'-6"	
h1	40	#5	30'-8"	
h2	32	#6	30'-11"	
v	356	#4	4'-11"	
Concrete Box Culverts Cu. Yd.				44.8
Reinforcement Bars Pound				11,130

NOTES

Reinforcement Bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified) See Special Provisions.
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
All construction joints shall be bonded.



SHOWING REINFORCEMENT

SHOWING OUTLINES

PLAN

DESIGNED -	JMB
CHECKED -	TES
DRAWN -	R KING
CHECKED -	TES

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
DECATUR (217) 422-8544
CHICAGO (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

JEREMY BUENING, P.E., S.E.
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
Date 3-3-10
Exp 11-20-10

SHEET NO. 1 OF 3 SHEETS	F.A.P. RTE. 310	SECTION 60-16-1-1B	COUNTY MADISON	TOTAL SHEETS 481	SHEET NO. 158
	FAP ROUTE 310 (US 67)		CONTRACT NO. 76318		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

**STATION 284+79.00 LT
DOWNSTREAM 4'x4'
BOX CULVERT EXTENSION
FAP ROUTE 310 (US 67)
SECTION 60-16-1-1B
MADISON COUNTY**