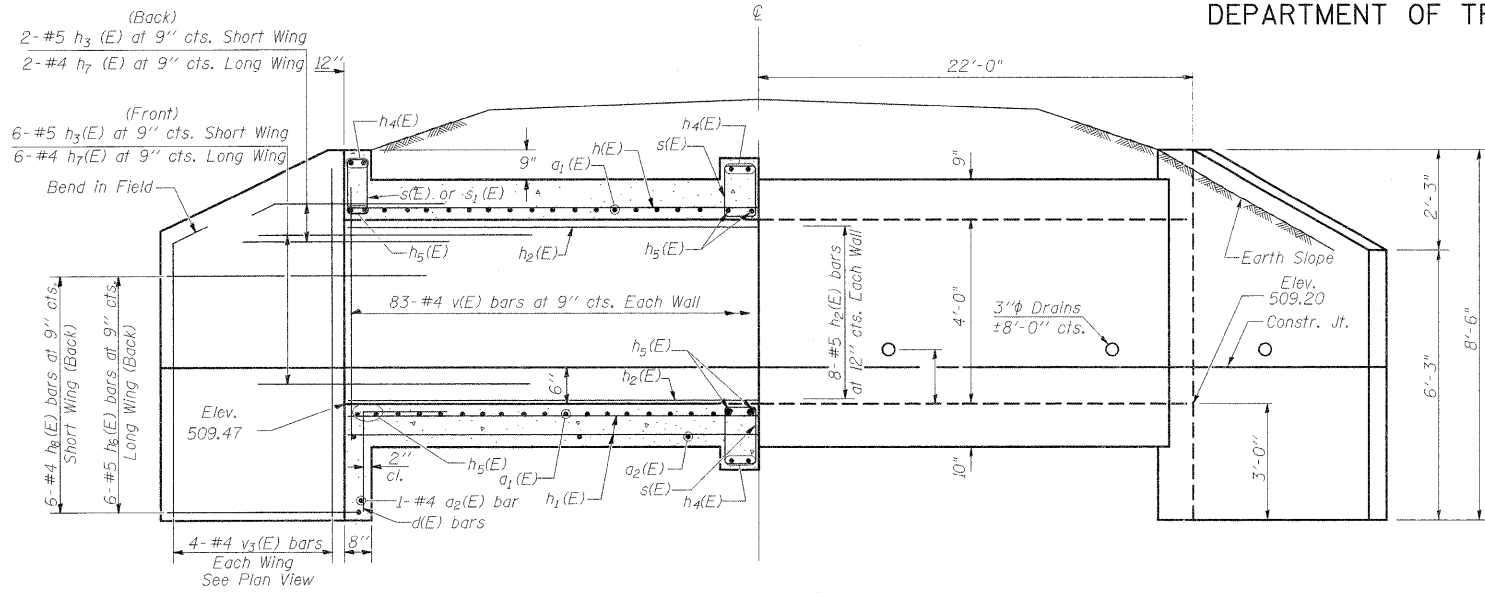


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

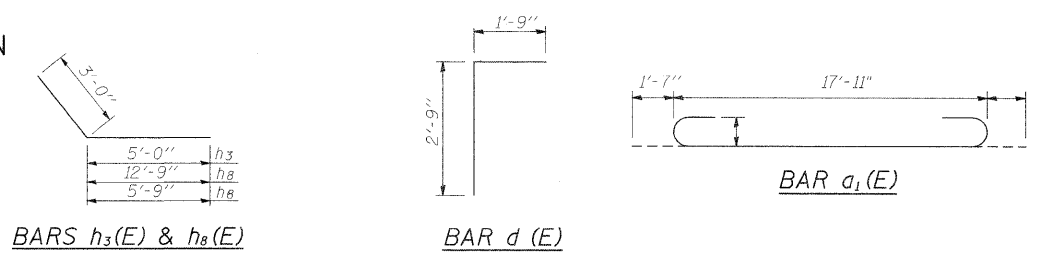


ELEVATION

Dimensions at Rt. L's to \perp Roadway

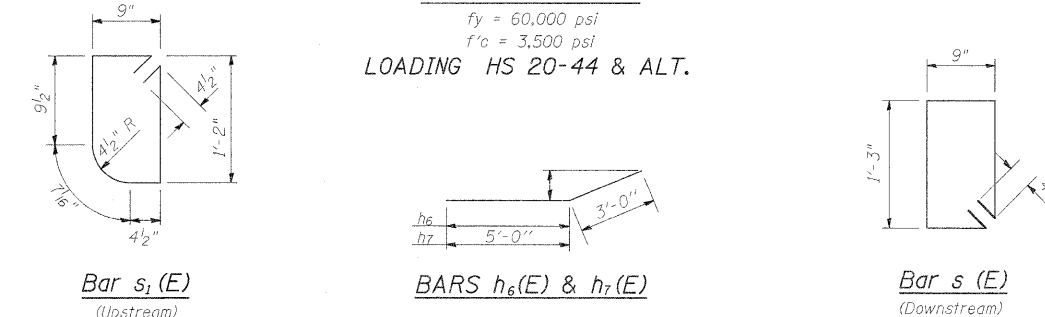
BAR SPLICERS (E)

Bar Size	No. Assemblies Required	Location
#8	13	Bot. of Top Slab
#8	13	Top of Top Slab
#5	24	Top and Bot. of Bot. Slab
#5	16	Side Walls

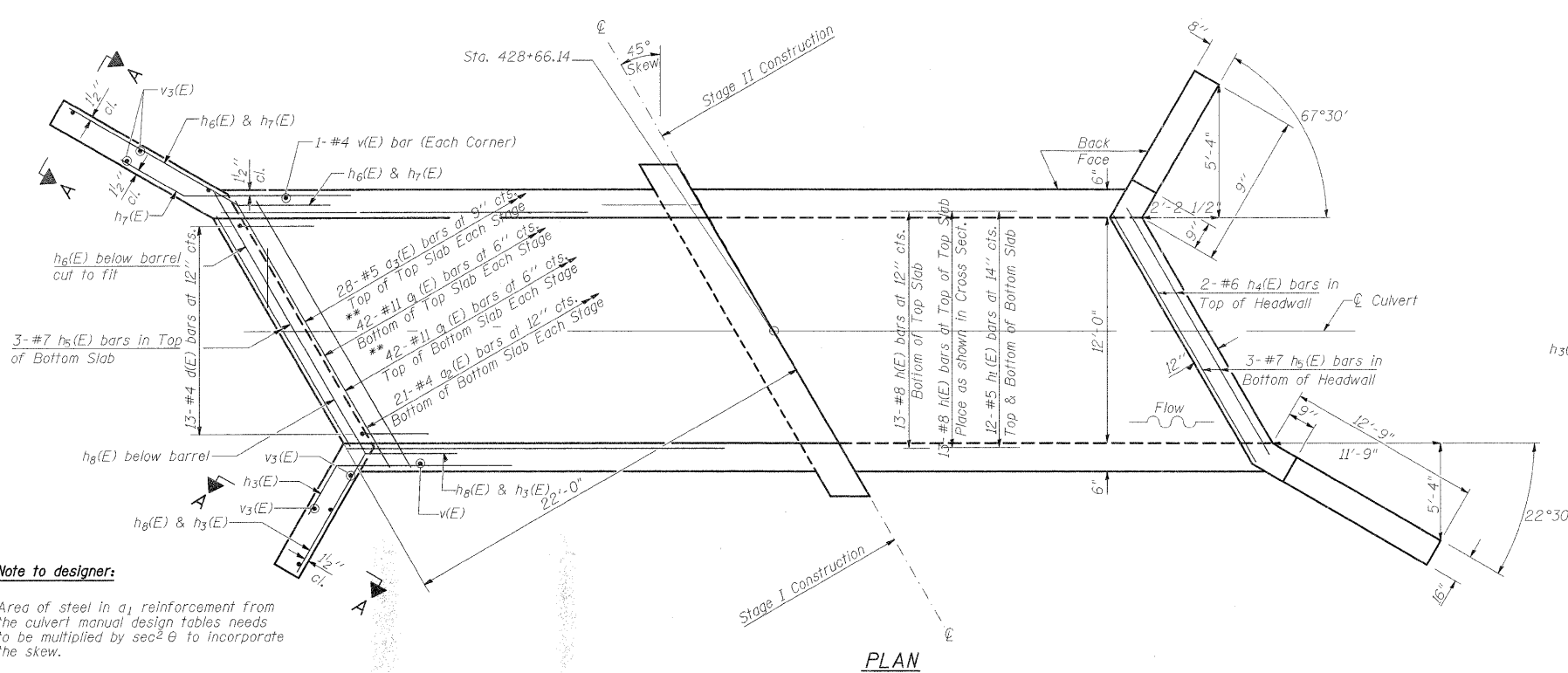


DESIGN STRESSES

$f_y = 60,000$ psi
 $f'_c = 3,500$ psi
LOADING HS 20-44 & ALT.



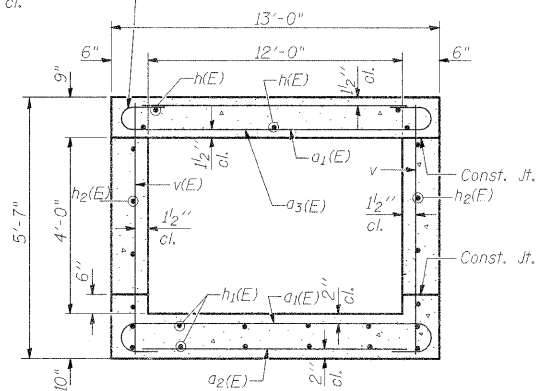
Tilt hook of $a_1(E)$ bars if necessary for $1\frac{1}{2}''$ min. cl.



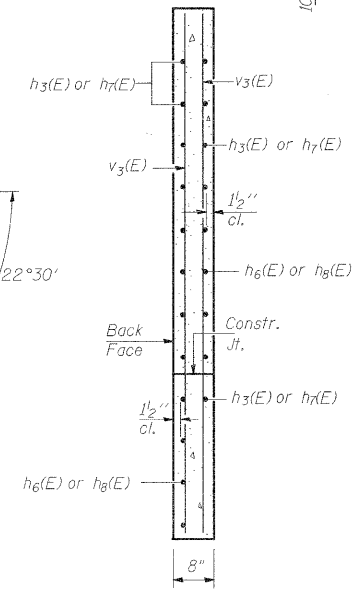
PLAN

NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
Reinforcement Bars designated (E) shall be Epoxy Coated.
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
All construction joints shall be bonded.
Expansion bolts shall be $\frac{3}{4}'' \phi \times 12''$ hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete and have a minimum certified proof load of 4,080 lbs.



SECTION THRU BARREL



SECTION A-A

SECTION THRU HEADWALL (Up Stream End Only)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_1(E)$	168	#11	21'-1"	
$a_2(E)$	44	#4	17'-8"	
$a_3(E)$	56	#5	17'-8"	
$d(E)$	26	#4	4'-6"	
$h(E)$	26	#8	31'-0"	
$h_1(E)$	24	#5	31'-0"	
$h_2(E)$	16	#5	31'-0"	
$h_3(E)$	16	#5	8'-0"	
$h_4(E)$	6	#6	17'-6"	
$h_5(E)$	8	#7	17'-6"	
$h_6(E)$	14	#5	8'-9"	
$h_7(E)$	16	#4	8'-0"	
$h_8(E)$	14	#4	15'-9"	
$s(E)$	34	#4	4'-7"	
$s_1(E)$	17	#4	4'-5"	
$v(E)$	166	#4	5'-2"	
$v_3(E)$	16	#4	8'-2"	
Concrete Box Culverts			Cu. Yd.	68.3
Reinforcement Bars, Epoxy Coated			Pound	25,650

REVISIONS

DRAWN	2-04
REVISED	5-09 SHT CELL
REVISED	
REVISED	

BASED ON: SSB-H-L 6-1-2000