

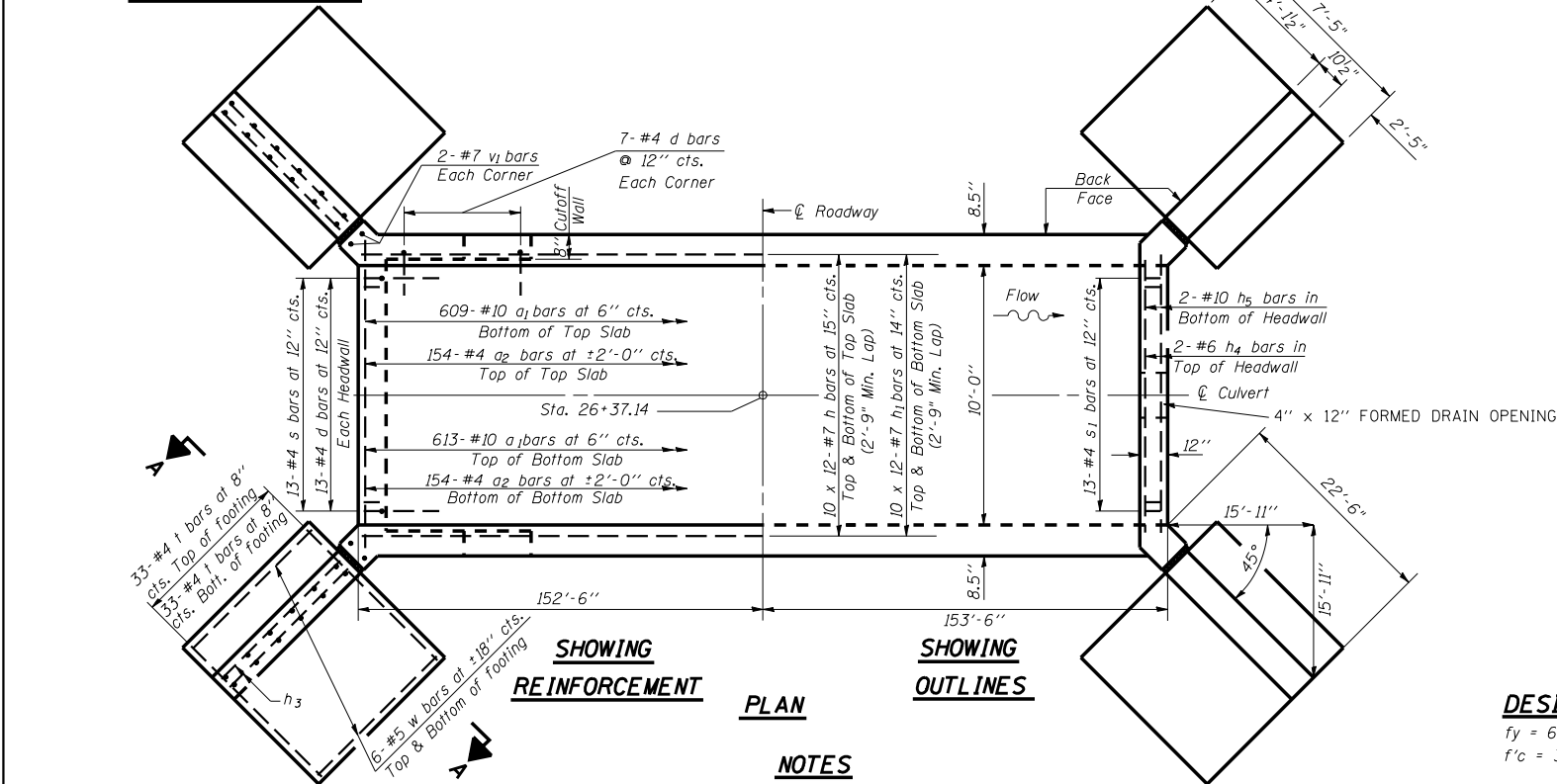
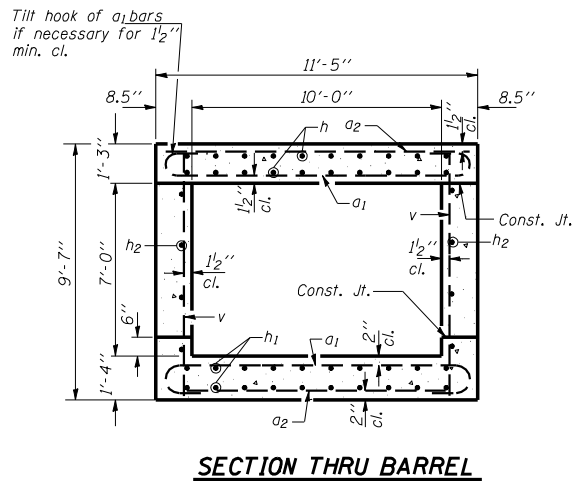
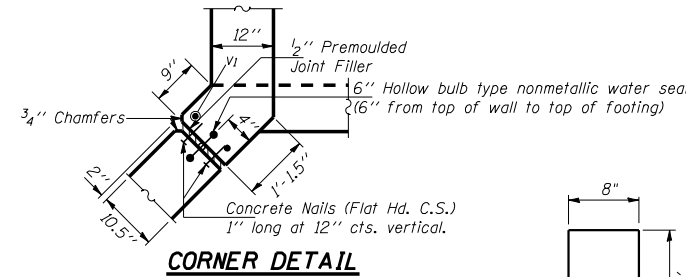
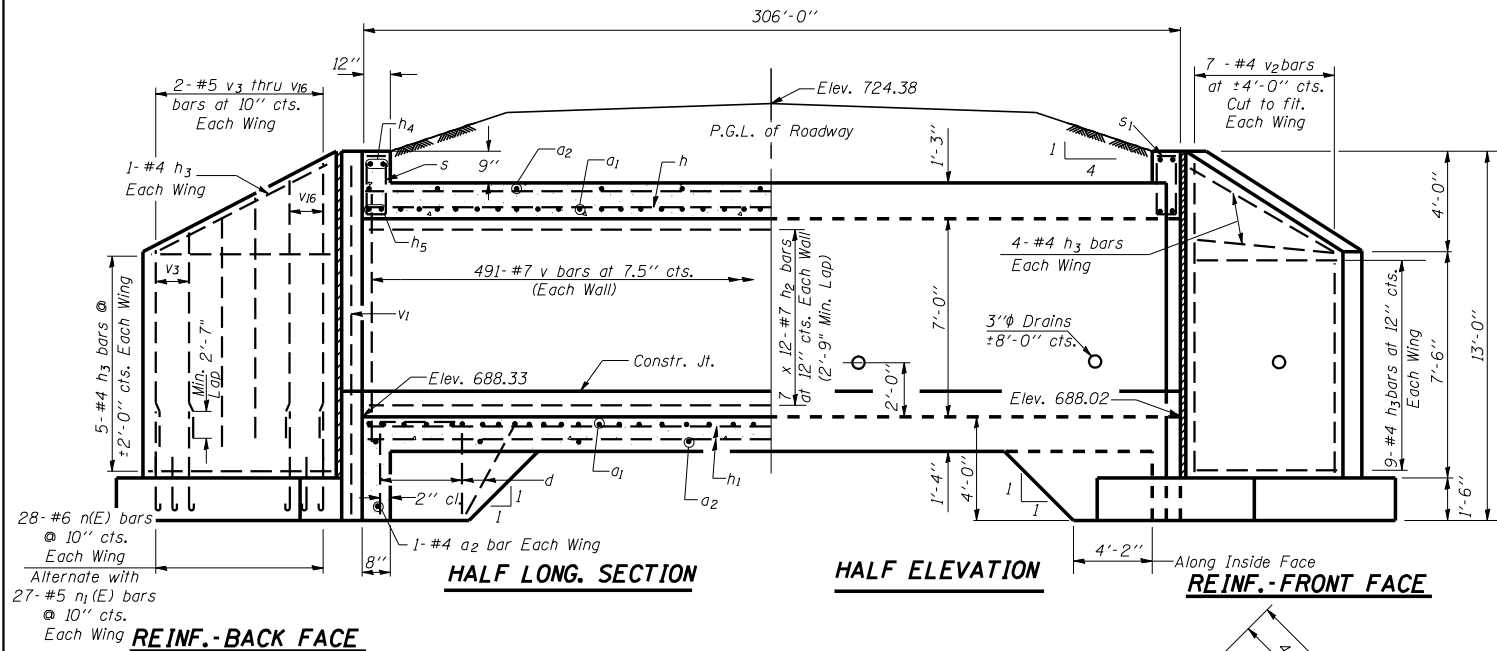
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	10-32HB-3,K	Champaign	352	161
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 90758</b>				

# DETAIL OF CAST IN PLACE BOX CULVERT & END SECTION

## A.R. BOX CULVERT 1 @ 10.0' X 7.0'

### STA. 26+37.14 (CULVERT NO. 18)

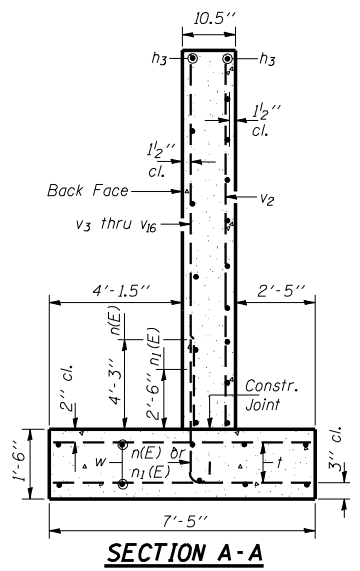
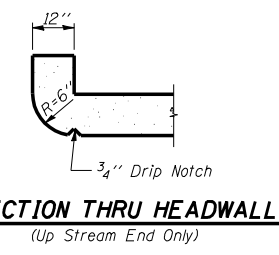
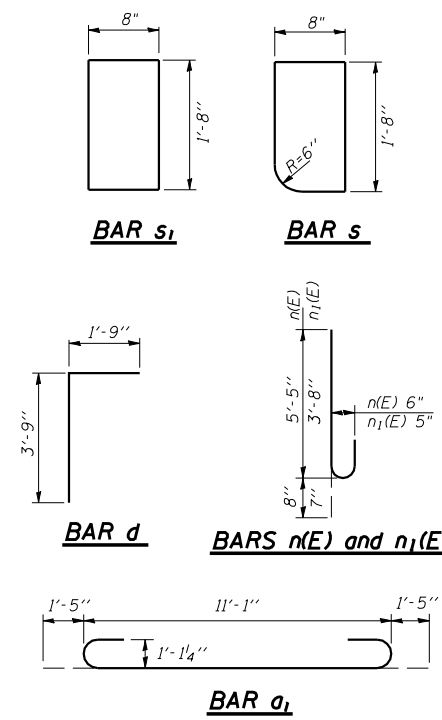
**PRECAST OPTION NOT ALLOWED**



F.A.I. RT. 57  
 SEC. 10-32HB-3,K  
 LOADING HS 20-44 & ALT.  
 STR. NO. 010-8352

**NAME PLATE**

- See Highway Standard 515001-02 for dimensions and placement.
- Name Plate will be paid for at the contract unit price per "EACH" for "NAME PLATES".



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$a_1$	1222	#10	13'-11"	[C]
$a_2$	310	#4	11'-1"	[C]
$d$	54	#4	5'-6"	[L]
$h$	240	#7	28'-0"	[L]
$h_1$	240	#7	28'-0"	[L]
$h_2$	168	#7	28'-0"	[L]
$h_3$	76	#4	21'-5"	[L]
$h_4$	4	#6	11'-1"	[L]
$h_5$	4	#10	11'-1"	[L]
$n(E)$	112	#6	6'-1"	[L]
$n_1(E)$	108	#5	4'-3"	[L]
$s$	13	#4	4'-8"	[L]
$s_1$	13	#4	4'-8"	[L]
$t$	264	#4	7'-1"	[L]
$v$	982	#7	9'-3"	[L]
$v_1$	8	#7	12'-8"	[L]
$v_2$	28	#4	11'-2"	[L]
$v_3$	8	#5	5'-10"	[L]
$v_4$	8	#5	6'-2"	[L]
$v_5$	8	#5	6'-6"	[L]
$v_6$	8	#5	6'-9"	[L]
$v_7$	8	#5	7'-1"	[L]
$v_8$	8	#5	7'-4"	[L]
$v_9$	8	#5	7'-8"	[L]
$v_{10}$	8	#5	7'-11"	[L]
$v_{11}$	8	#5	8'-3"	[L]
$v_{12}$	8	#5	8'-6"	[L]
$v_{13}$	8	#5	8'-10"	[L]
$v_{14}$	8	#5	9'-2"	[L]
$v_{15}$	8	#5	9'-5"	[L]
$v_{16}$	8	#5	9'-8"	[L]
$w$	48	#5	21'-5"	[L]
Concrete Box Culverts	Cu. Yd.		515.1	
Reinforcement Bars, Epoxy Coated	Pound		1,502	
Reinforcement Bars	Pound		136,480	

**DESIGN STRESSES**  
 $f_y = 60,000$  psi  
 $f'_c = 3,500$  psi  
 Max. Soil Pressure under footing = 3,382 psf

**LOADING HS 20-44 & ALT.**

**BOX CULVERT & END SECTIONS (CAST IN PLACE)**  
**1 @ 10.0' X 7.0'**  
**STA. 26+37.14 NO SKEW**

**REINFORCED CONCRETE CULVERT DETAILS**

ILLINOIS DEPARTMENT OF TRANSPORTATION

**CULVERT DETAILS**

REVISIONS	
NAME	DATE

SCALE: VERT. 1"=4'  
 HORIZ. 1"=10'  
 DATE 053105

DRAWN BY JDC  
 CHECKED BY JDE

**NOTES**

Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.  
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 All construction joints shall be bonded.  
 Any excavation required for box culvert construction shall be included in the contract unit price for concrete, per Art. 502.15.