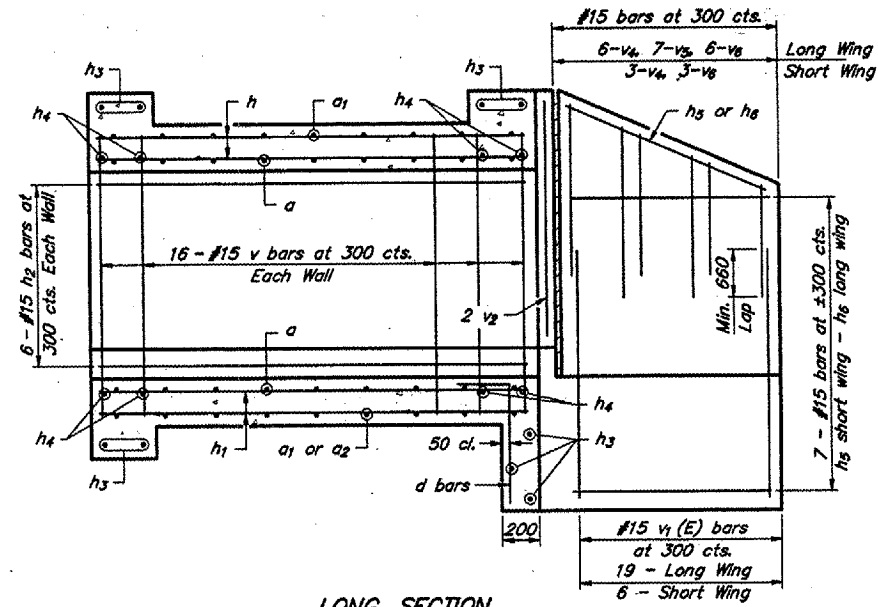
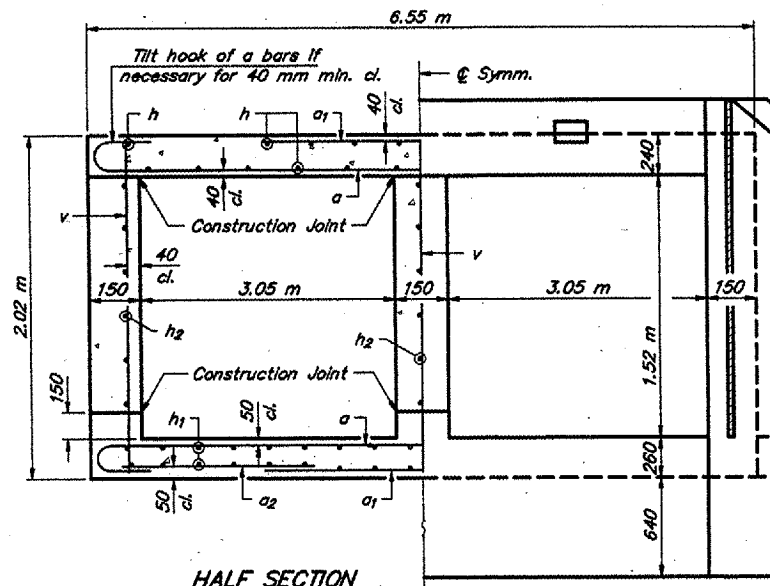


ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1934	93-00017-01-RS	HARDIN	30	18
PROJECT NO. STPSR-1930 (108)			CONTRACT NO. 99171	



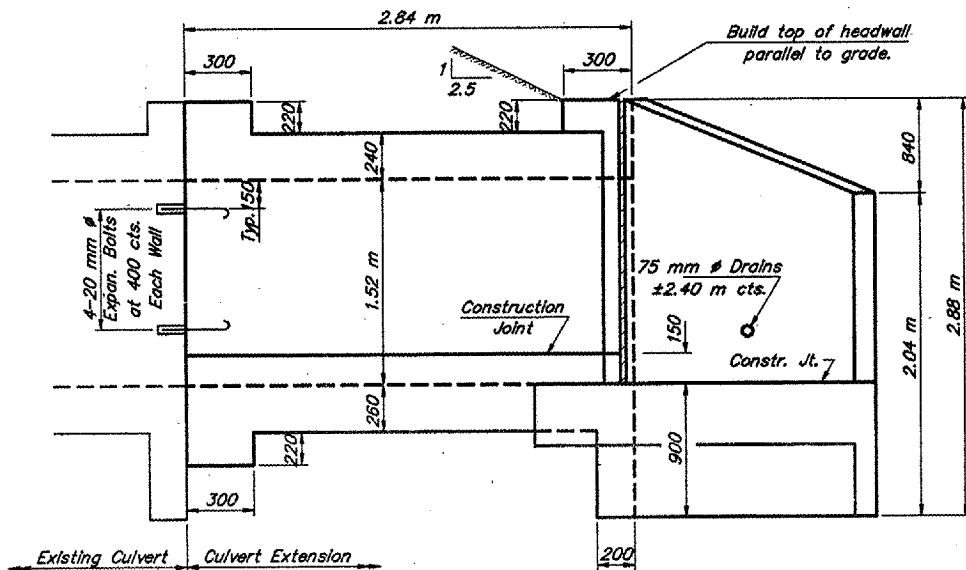
LONG SECTION
Showing Reinforcement



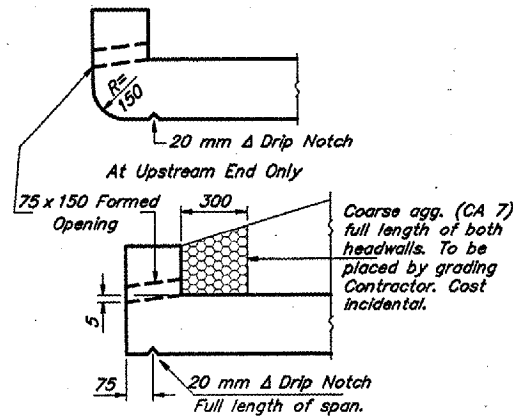
HALF SECTION THRU BARREL
HALF END ELEVATION

BILL OF MATERIAL
(One Extension)

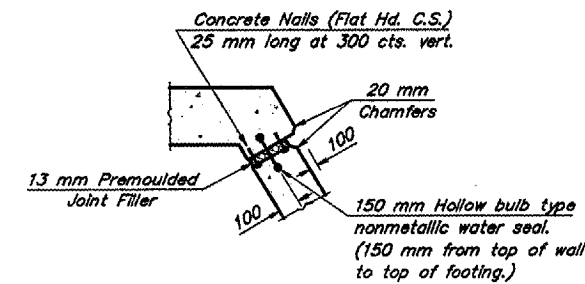
Bar	No.	Size	Length (m)
a	32	#25	7.01
a1	32	#25	2.60
a2	16	#15	2.50
d	21	#15	1.36
h	26	#25	4.85
h1	28	#20	4.85
h2	18	#15	4.85
h3	9	#20	11.00
h4	8	#25	11.00
h5	10	#15	1.64
h6	10	#15	5.60
s1	37	#15	1.39
v	48	#15	1.92
v1(E)	25	#15	1.88
v2	4	#15	2.18
v4	9	#15	1.05
v5	7	#15	1.32
v6	9	#15	1.65
w	5	#15	7.37
w1	5	#15	2.98
z	29	#15	2.02
Conc. Box Culverts			m ³ 30.1
Reinforcement Bars			kg 3430
Epoxy Coated			kg 80
Expansion Bolts			Each 40



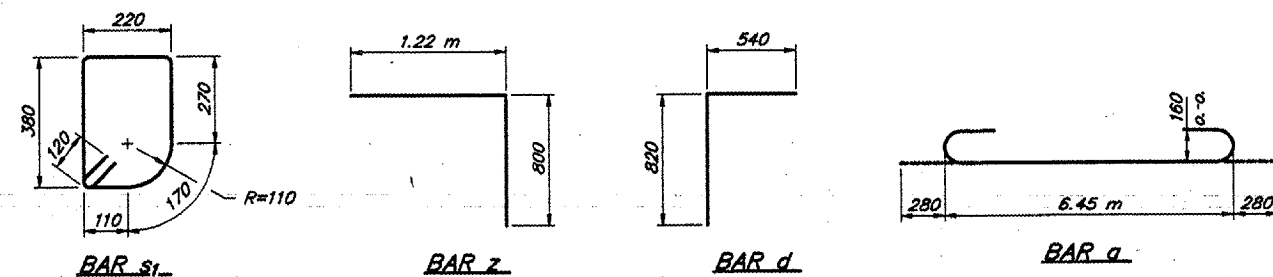
ELEVATION
Showing Outline



DRAIN DETAIL



CORNER DETAIL



DESIGN STRESSES

$f_y = 400 \text{ MPa}$
 $f_c = 24 \text{ MPa}$

LOADING MS 18 & ALI.

NOTES

Exposed edges shall be beveled 20 mm.
Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M, Grade 400.
Expansion bolts shall consist of self drilling expansion shields and 20 mm # hooked bolts. Bolts shall extend a minimum of 225 mm into new concrete.
All dimensions are in millimeters (mm) except as noted.
Reinforcement bars designated (E) shall be epoxy coated.

Sheet 1 of 2

BOX CULVERT EXTENSION
STATION 4+236.3 RT.
FAS ROUTE 1934
SECTION 93-00017-01-RS
PROJECT NO. STPSR-1934 (108)
HARDIN COUNTY