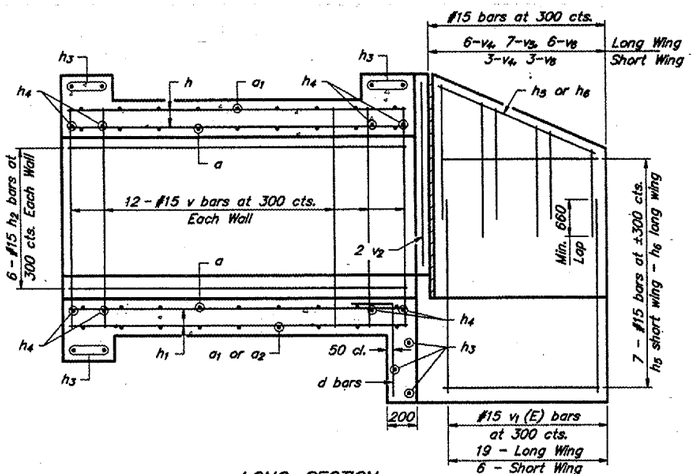
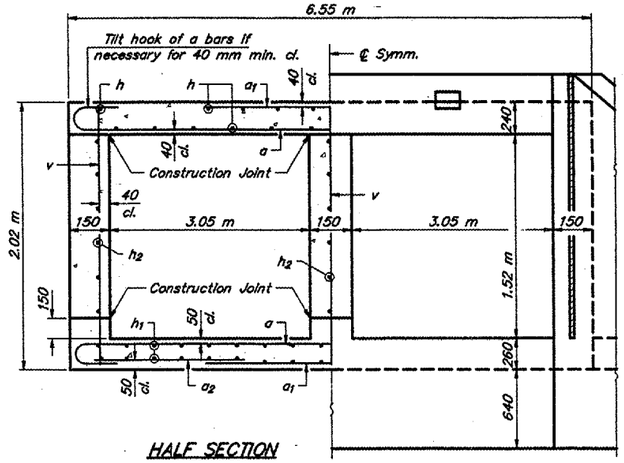
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1934	93-00017-01-RS	HARDIN	30	16
PROJECT NO. STPSR-1930(108)		CONTRACT NO. 99171		

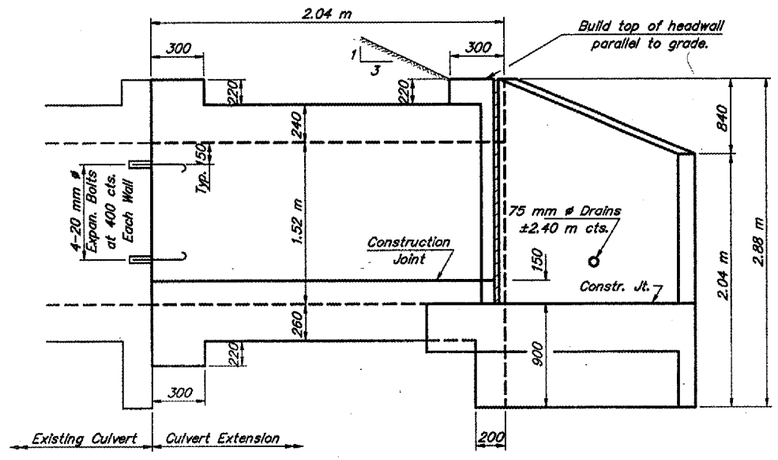


LONG. SECTION
Showing Reinforcement

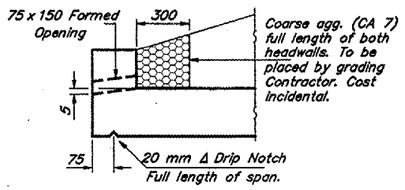


HALF SECTION THRU BARREL

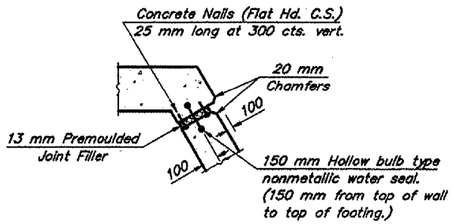
HALF END ELEVATION



ELEVATION
Showing Outline



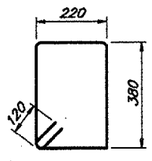
DRAIN DETAIL



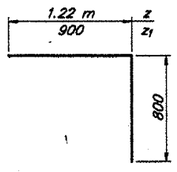
CORNER DETAIL

BILL OF MATERIAL
(One Extension)

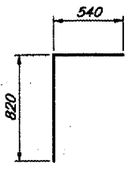
Bar	No.	Size	Length (m)
a	24	#25	7.01
a1	24	#25	2.60
a2	12	#15	2.50
d	21	#15	1.36
h	26	#25	3.46
h1	28	#20	3.46
h2	18	#15	3.46
h3	9	#20	11.00
h4	8	#25	11.00
h5	10	#15	1.64
h6	10	#15	5.60
s	37	#15	1.44
v	36	#15	1.92
v1(E)	25	#15	1.88
v2	4	#15	2.18
v4	9	#15	1.05
v5	7	#15	1.32
v6	9	#15	1.65
w	4	#15	7.37
w1	5	#15	2.98
w2	1	#15	4.73
z	23	#15	2.02
z1	6	#15	1.70
Conc. Box Culverts		m^3	24.3
Reinforcement Bars		kg	2800
Reinforcement Bars Epoxy Coated		kg	80
Expansion Bolts		Each	40



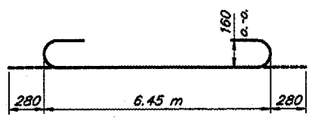
BAR s



BARS z & z1



BAR d



BAR a

DESIGN STRESSES
fy = 400 MPa
f'c = 24 MPa

LOADING MS 18 & ALT.

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 ø 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.

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