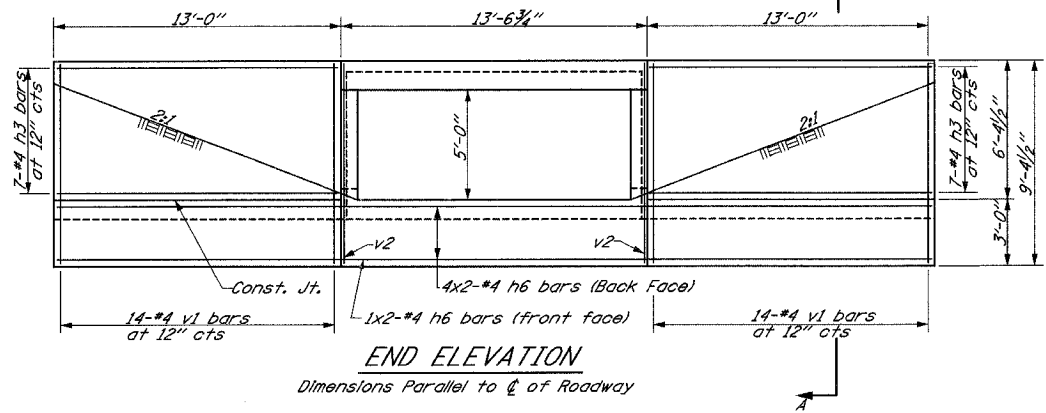
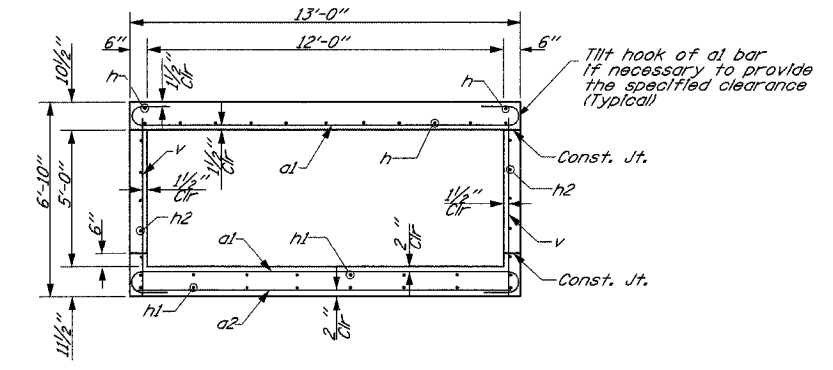


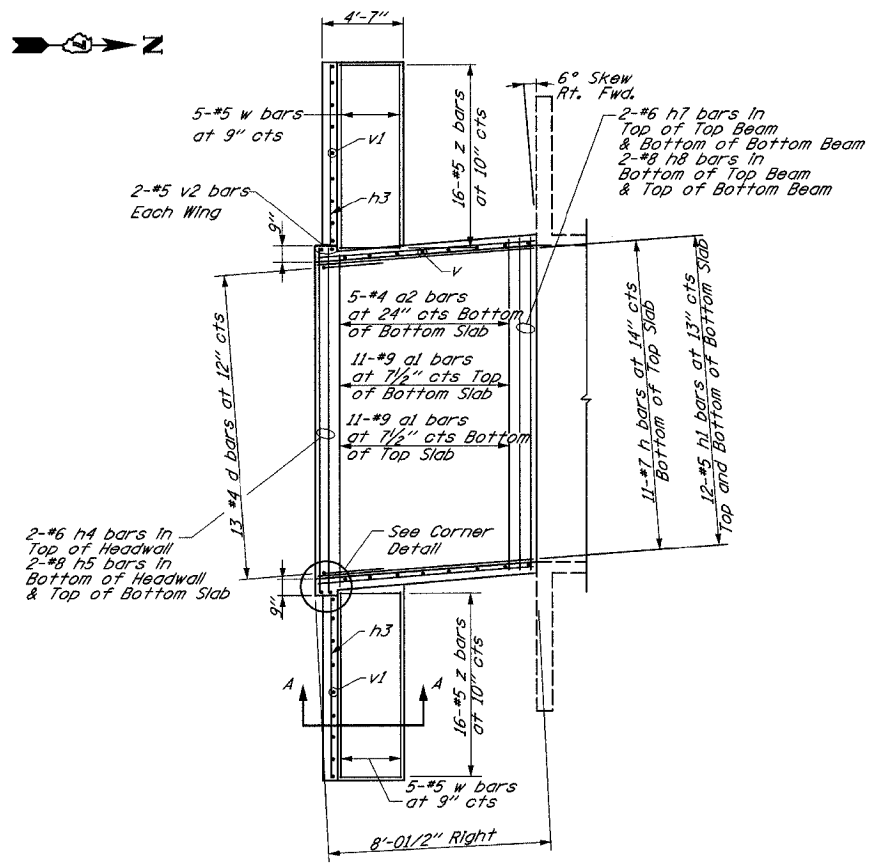
HALF LONG SECTION
Dimensions at Rt L to & Roadway



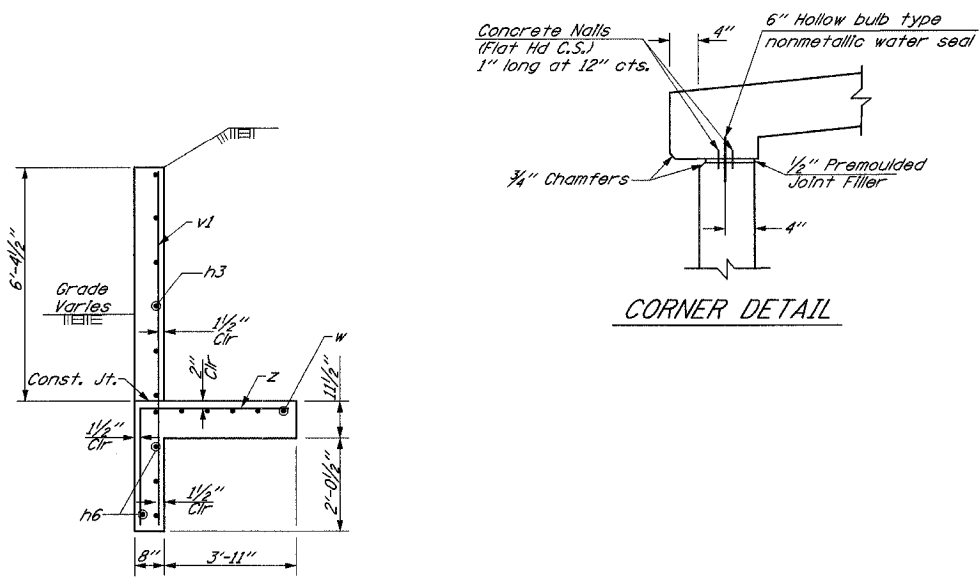
END ELEVATION
Dimensions Parallel to & of Roadway



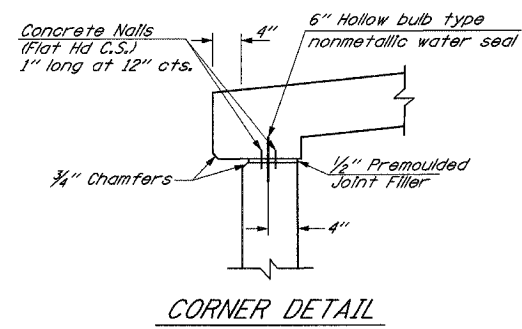
SECTION THRU BARREL



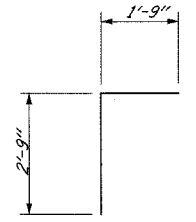
PLAN SHOWING REINFORCEMENT



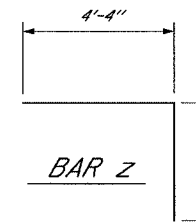
SECTION A-A



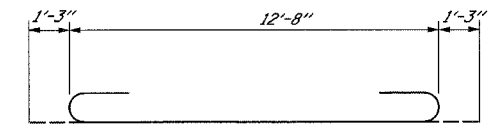
CORNER DETAIL



BAR d



BAR z



BAR a1

BILL OF MATERIAL

Bar	No.	Size	Length
a1	22	#9	15'-2"
a2	5	#4	12'-8"
d	13	#4	4'-6"
h	13	#7	7'-8"
h1	24	#5	7'-8"
h2	10	#5	7'-8"
h3	14	#4	12'-8"
h4	2	#6	13'-2"
h5	4	#8	13'-2"
h6	10	#4	21'-4"
h7	4	#6	12'-8"
h8	4	#8	12'-8"
v	22	#4	6'-6"
v1	28	#4	9'-0"
v2	4	#5	9'-0"
w	10	#5	12'-10"
z	32	#4	7'-0"
Concrete Structures	Cu Yd		19.7
Reinforcement Bars	Pound		2930
Expansion Bolts 3/4"	Each		24

NOTES:

- Bench Mark: & IL Route 33 at & Culvert (Sta. 238+44.88), Elev. 589.55.
- Design Fill Height 2' Rt.
- Exposed edges shall be chamfered 3/4".
- Class SI Concrete shall be used throughout.
- Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.
- Bars Indicated thus 12x4-#5 etc. Indicates 12 lines of #5 bars with 4 lengths per line.
- Nonmetallic water seal used in the wingwall joints shall extend from the top of the footing to within 6" of the top of the headwall.
- For Backfilling and Embankment, see Standard Specifications.
- Hooked Expansion Bolts shall consist of self-drilling expansion shields and hooked bolts. Hooked Bolts shall extend a minimum of 9" into new concrete.

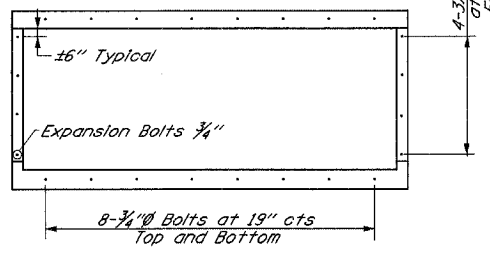
SPECIFICATION

1996 AASHTO with 1997, 1998, 1999, 2000 and 2002 Interims

DESIGN STRESSES

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

LOADING HS 20-44



EXPANSION BOLT PLACEMENT DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CULVERT EXTENSION DETAILS
& STA. 238+44.88 RT.
SHEET 1 OF 5

DATE 9/01
DRAWN BY BDM
CHECKED BY SJK