

**WATERSTOP  
DETAIL**

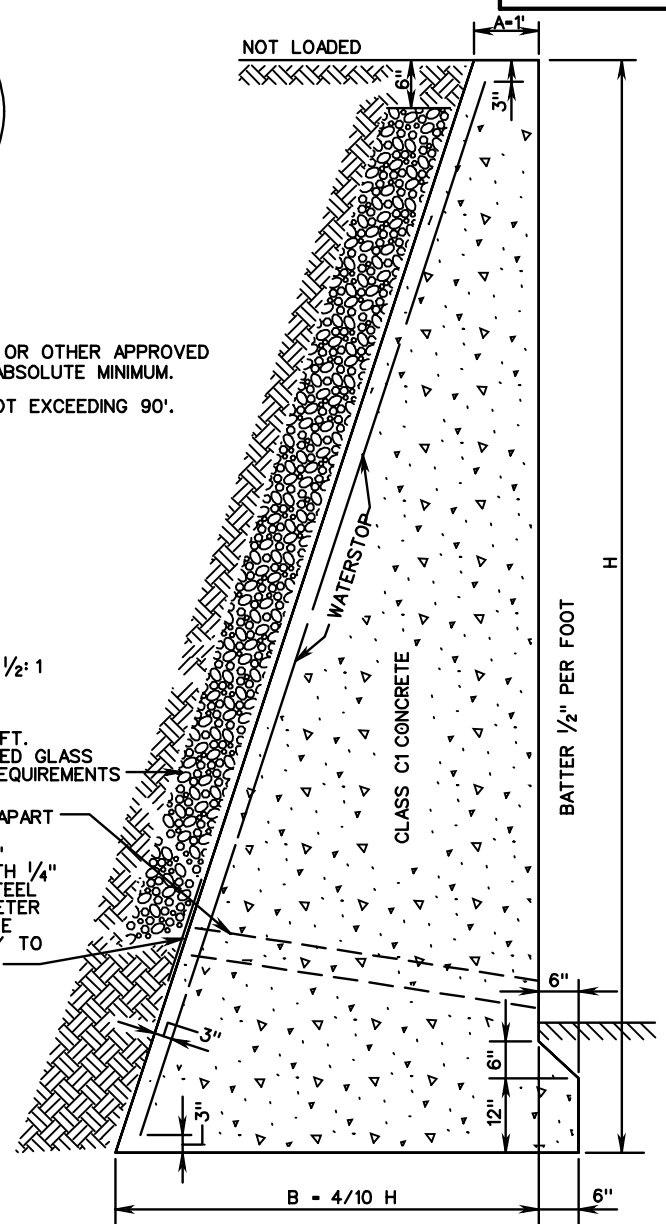
\* WATER STOPS TO BE ELASTOMERIC OR OTHER APPROVED MATERIAL. DIMENSIONS SHOWN ARE ABSOLUTE MINIMUM.  
EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 90'.

HEIGHT OF WALL "H" IN FEET	THICKNESS AT TOP "A" IN FEET	THICKNESS AT BASE B=4H	COMPRESSION AT TOE LBS. PER SQ. FT.	AREA OF SECTION SQ. FT.
2	1'-0"	1'-0"	627	2.63
3	"	1'-2 <sup>3</sup> / <sub>8</sub> "	1009	3.93
4	"	1'-7 <sup>1</sup> / <sub>4</sub> "	1369	5.83
5	"	2'-0"	1709	8.13
6	"	2'-4 <sup>3</sup> / <sub>8</sub> "	2049	10.83
7	"	2'-9 <sup>5</sup> / <sub>8</sub> "	2385	13.93
8	"	3'-2 <sup>3</sup> / <sub>8</sub> "	2720	17.43
9	"	3'-7 <sup>1</sup> / <sub>4</sub> "	3054	21.33
10	"	4'-0"	3386	25.63
11	"	4'-4 <sup>3</sup> / <sub>8</sub> "	3718	30.33
12	"	4'-9 <sup>5</sup> / <sub>8</sub> "	4050	35.43
13	"	5'-2 <sup>3</sup> / <sub>8</sub> "	4381	40.93
14	"	5'-7 <sup>1</sup> / <sub>4</sub> "	4712	46.83
15	"	6'-0"	5043	53.13

H - HEIGHT IN FT.  
A - 1'  
BASE - 4/10 H  
EARTH - 100 LBS.  
CONCRETE - 150 LBS.  
ANGLE OF REPOSE - 1 1/2:1

POROUS BACKFILL @ 100 LBS./CU. FT.  
#78 OR #8 AGGREGATE OR CRUSHED GLASS  
MEETING #78 OR #8 GRADATION REQUIREMENTS

3" DRAIN PIPE 8' APART  
WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", #4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO OUTSIDE OF STRUCTURE.



NOTE:  
IF COMPRESSION AT TOE EXCEEDS SAFE BEARING CAPACITY OF SOIL, A SPECIAL FOOTING IS TO BE USED.  
DEPTH OF WALL IN GROUND DETERMINED BY CONDITIONS. TO BE NOT LESS THAN 1'-6".

SAFE BEARING CAPACITY OF SOIL	
ROCK MINIMUM.....	10,000 - 20,000 LBS. PER SQ. FT.
GRAVEL AND COARSE SAND, WELL CEMENTED .....	16,000 - 20,000 LBS. PER SQ. FT.
CLAY IN THICK BEDS, ALWAYS DRY.....	12,000 - 16,000 LBS. PER SQ. FT.
CLAY IN THICK BEDS, MODERATELY DRY.....	8,000 - 12,000 LBS. PER SQ. FT.
CLAY, SOFT .....	2,000 - 4,000 LBS. PER SQ. FT.
SAND, DRY, COMPACT, AND WELL CEMENTED .....	8,000 - 12,000 LBS. PER SQ. FT.
SAND, CLEAN, DRY .....	4,000 - 8,000 LBS. PER SQ. FT.
ALLUVIAL SOILS, ETC .....	1,000 - 2,000 LBS. PER SQ. FT.

SPECIFICATION REFERENCE  
  
506

# CONCRETE GRAVITY RETAINING WALL - LEVEL BACKFILL

VIRGINIA DEPARTMENT OF TRANSPORTATION

**VDOT**  
ROAD AND BRIDGE STANDARDS  
REVISION DATE SHEET 1 OF 1  
401.01