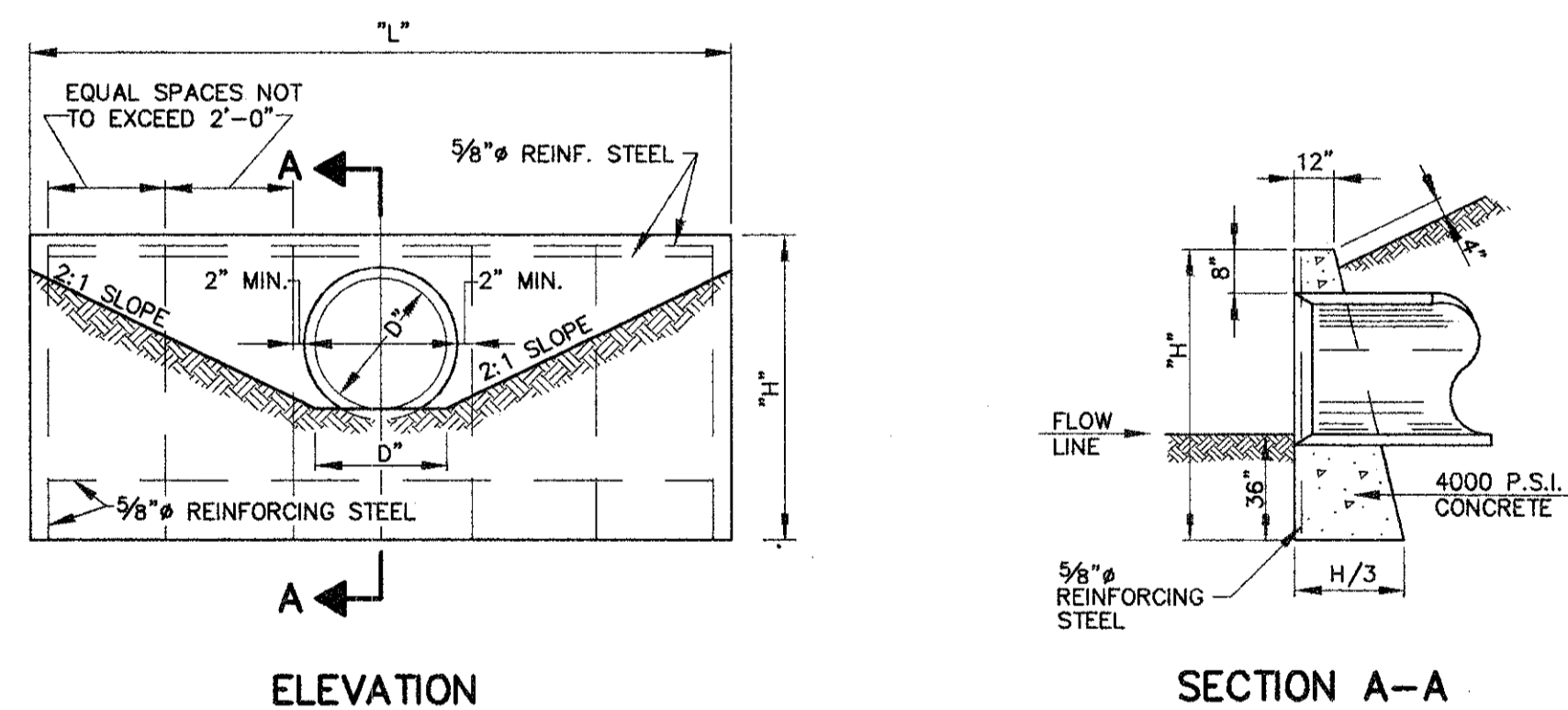


PROFILE END VIEW

NOTE: CHAMFER ALL EXPOSED CORNERS 3/4 OF AN INCH.

CIRCULAR PIPE	DIMENSIONS			
	D	W	H	T
12"	2'-0"	3'-0"	12"	
15"	2'-8"	3'-2"	12"	
18"	3'-0"	3'-3"	12"	
21"	3'-8"	3'-4"	12"	
24"	4'-0"	3'-6"	12"	

HW-4B HEADWALL DETAIL



ELEVATION

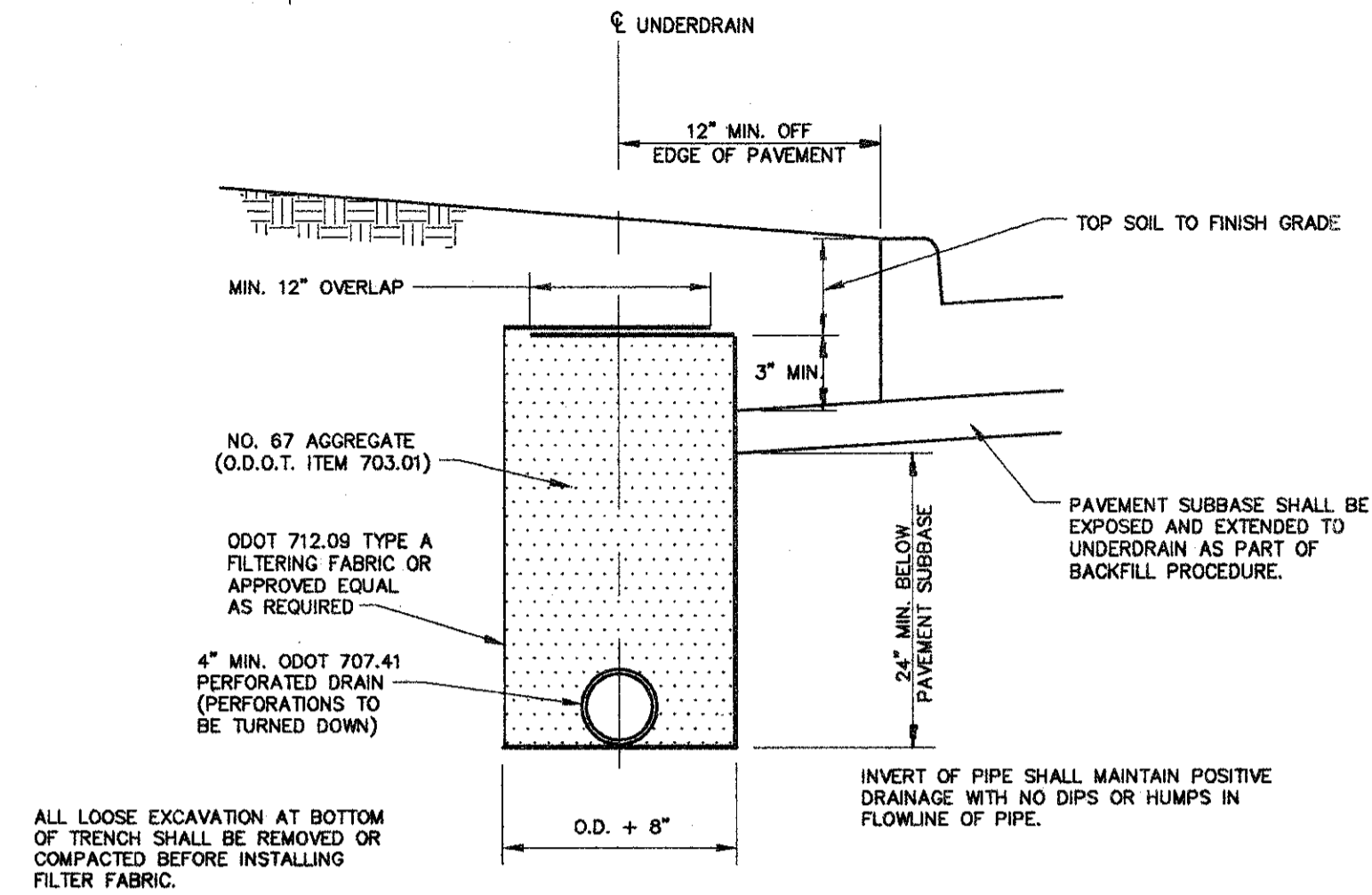
SECTION A-A

CHAMFER ALL EXPOSED CORNERS 3/4 OF AN INCH.

DIAMETER	DIMENSIONS		QUANTITIES ONE HEADWALL	
	"H"	"L"	CONCRETE CU.YDS.	REINFORCING STEEL LBS.
12"	4'-11"	5'-8"	1.2	30
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57

NOTE: WHERE SOIL BEARING CAPACITY IS LESS THAN 2600 P.S.F., INCREASE WIDTH OF BASE.

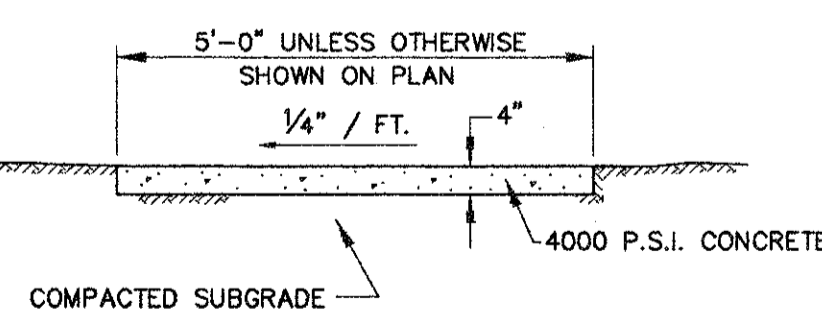
HW-1 HEADWALL DETAIL



UNDERDRAIN DETAIL

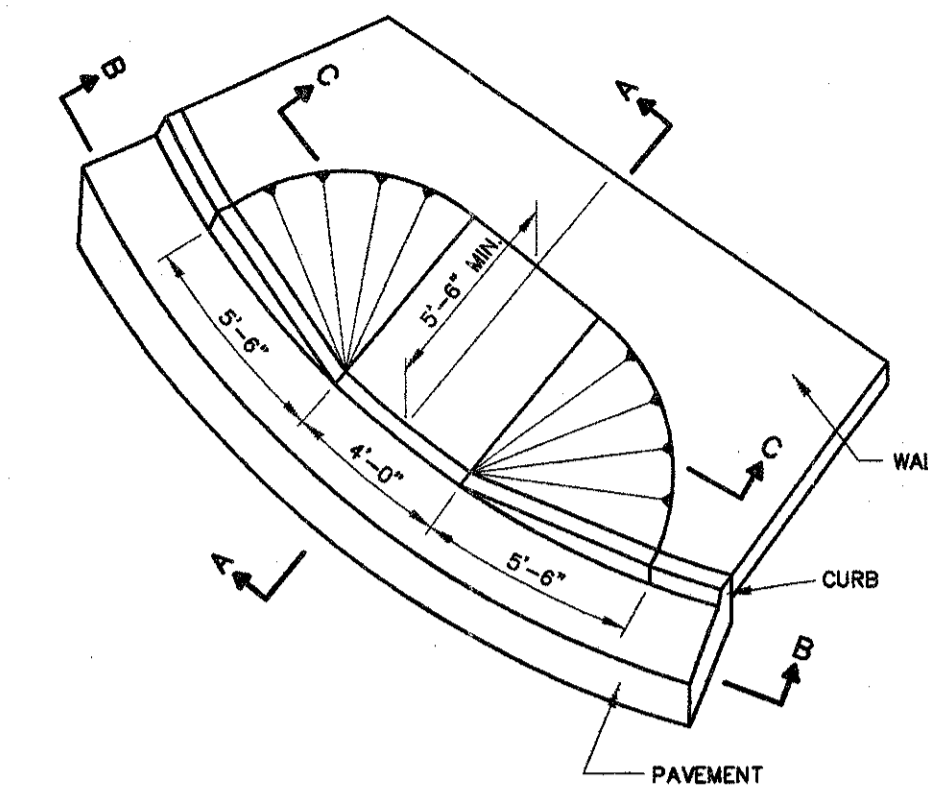
ALL LOOSE EXCAVATION AT BOTTOM OF TRENCH SHALL BE REMOVED OR COMPACTED BEFORE INSTALLING FILTER FABRIC.

INVERT OF PIPE SHALL MAINTAIN POSITIVE DRAINAGE WITH NO DIPS OR HUMPS IN FLOWLINE OF PIPE.



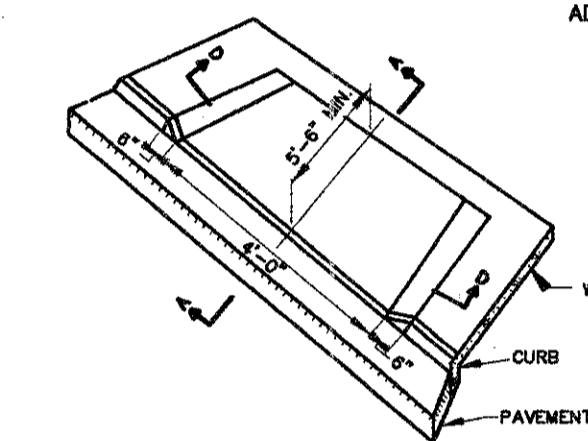
TYPICAL SIDEWALK DETAIL

NOTE: WALK TO BE DIVIDED INTO EQUALLY SPACED BLOCKS AT APPROXIMATELY 5' INTERVALS. EXPANSION JOINT FILLER 1/2" THICK SHALL BE INSTALLED BETWEEN WALK AND ANY FIXED STRUCTURE EXTENDING FOR THE FULL DEPTH OF THE SIDEWALK. THE EXPANSION JOINT FILLER SHALL BE 1/2" THICK WHERE WALK IS INSTALLED AGAINST BACK OF CURB.

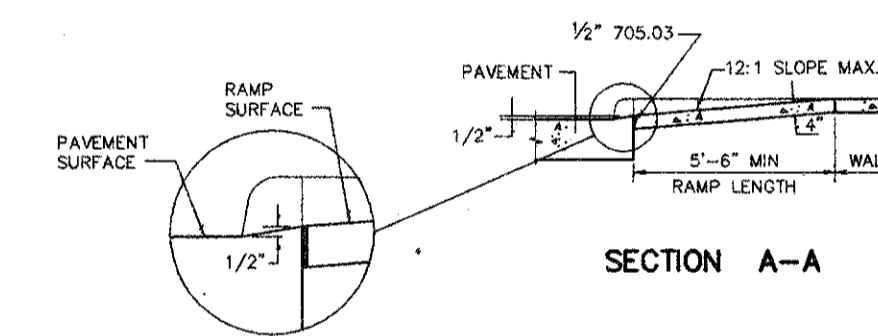


TYPE 1 CURB RAMP

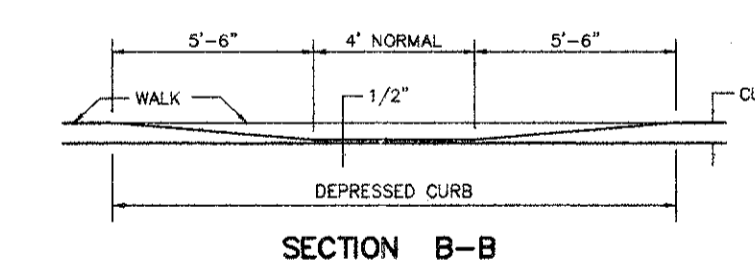
SURFACE TEXTURE OF RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AND SHALL BE ROUGHER THAN ADJACENT WALK.



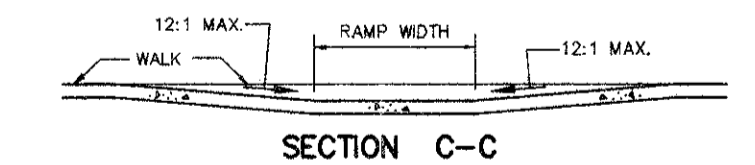
TYPE 2 CURB RAMP



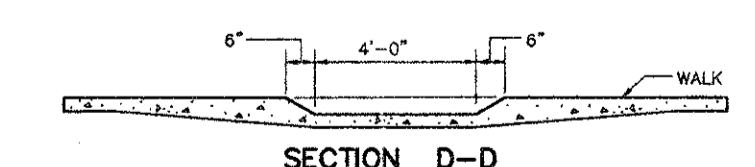
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

CURB RAMP DETAILS

CENTER STREET (STATE ROUTE 615)  
ROADWAY IMPROVEMENTS  
MISCELLANEOUS DETAILS

CT Consultants, Inc.  
Engineers • Architects • Planners  
Willoughby • Mentor • Columbus • North Canton • Youngstown

DATE: APRIL 1999

DRAWN BY: J.J.C.

CHECKED BY: C.C.H.

APPROVED BY:

SCALE:

HOR. 1" = 20'

VERT. -

CONTRACT NO.

98387

SHEET NO. OF

78 103