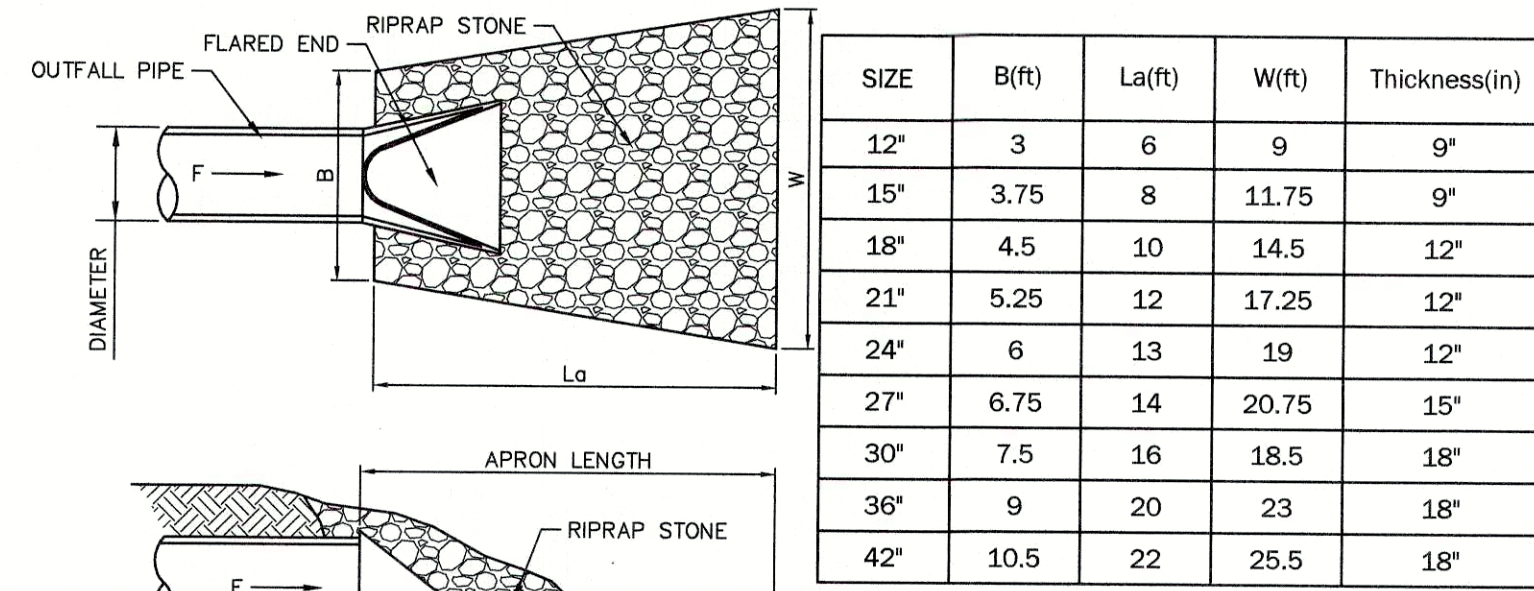
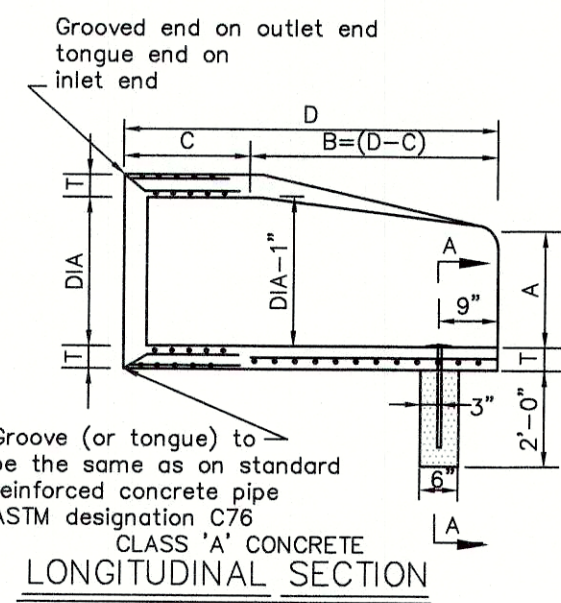
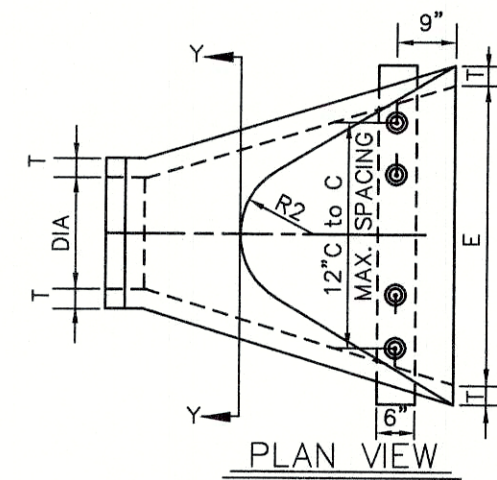
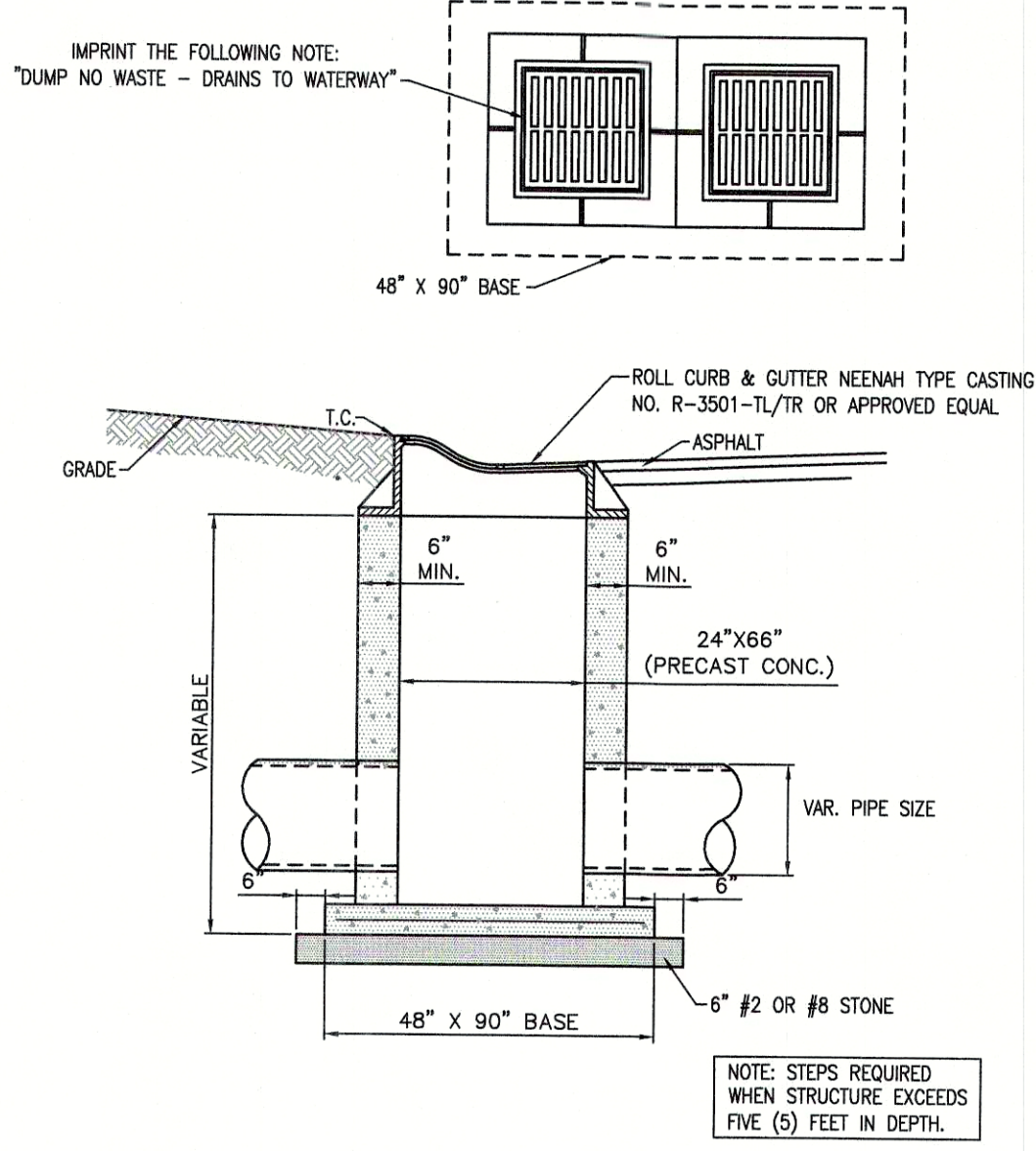
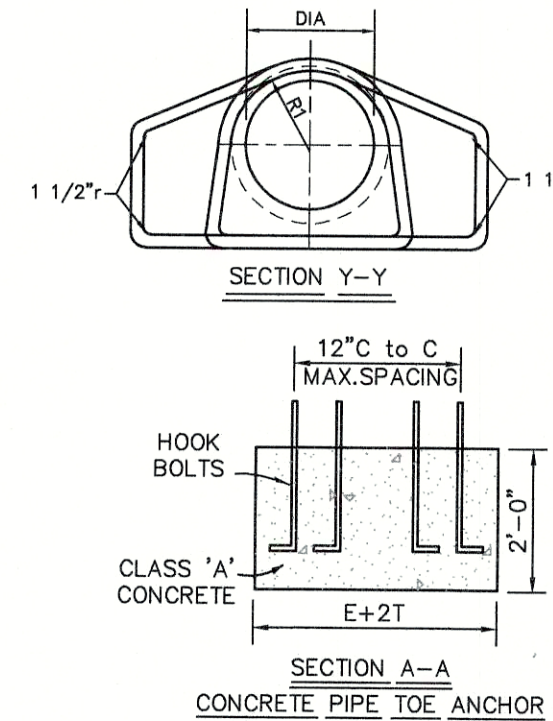
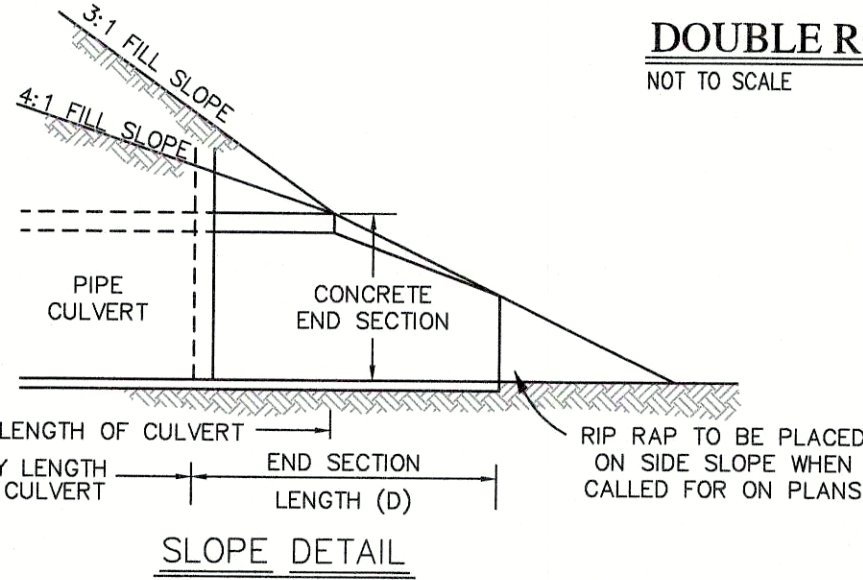




RIP-RAP PLACEMENT
NOT TO SCALE



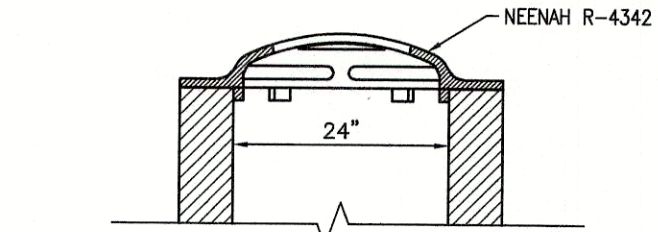
PRE CAST CONCRETE END SECTION
NOT TO SCALE



DOUBLE ROLL CURB INLET
NOT TO SCALE

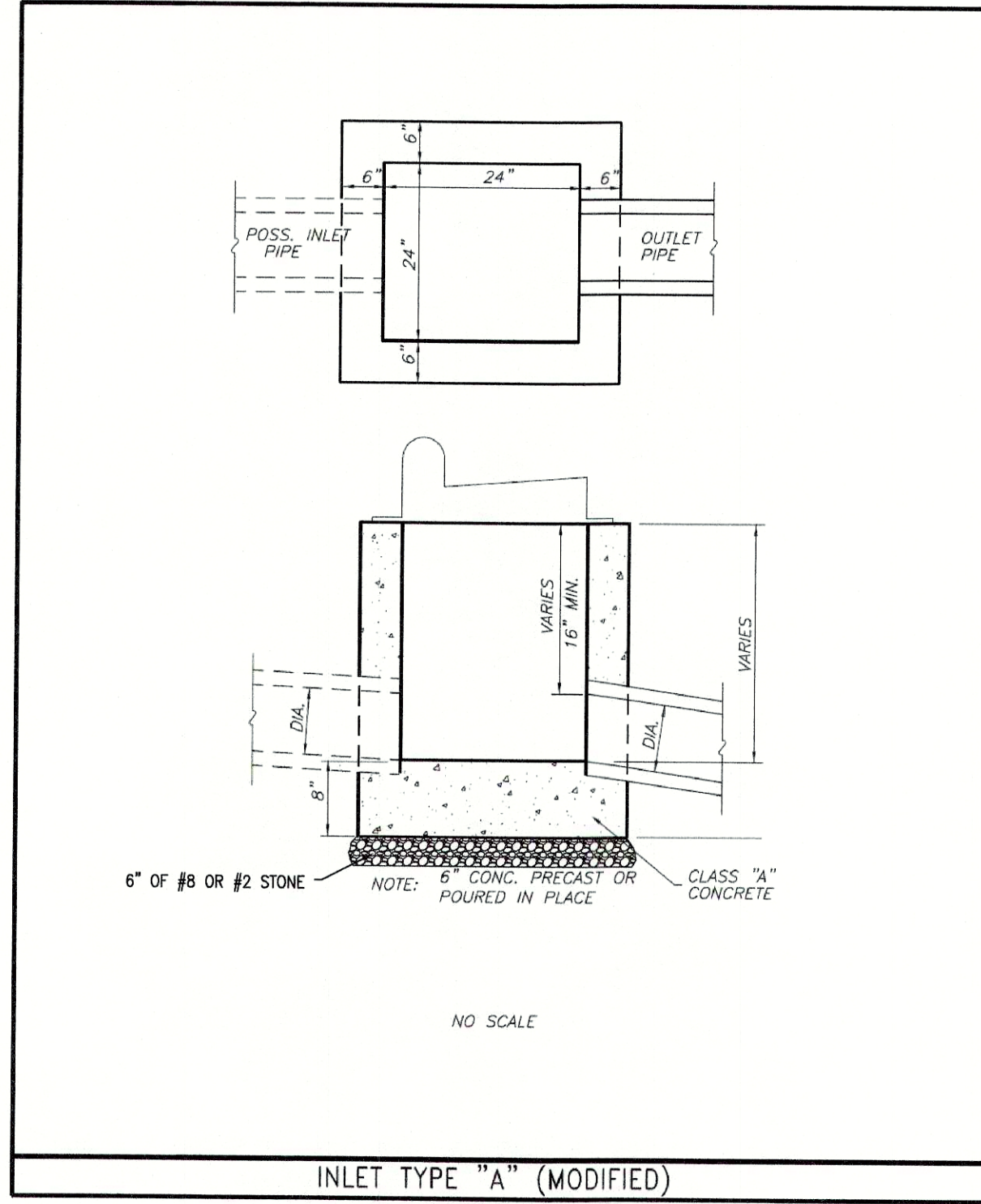
DIMENSIONS OF CONCRETE END SECTIONS FOR ROUND PIPE											
DIA	T (MIN)	A*	C*	D*	E*	K	R ₁	R ₂	APPROX. WEIGHT		
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"	9"	800		
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	1.5	12 1/2"	11"	1,100		
18"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	1.8	15 1/2"	12"	1,300		
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	2.1	16 1/8"	13"	1,500		
24"	3"	1'-0"	2'-8"	6'-3"	4'-0"	2.3	16 3/16"	14"	1,800		
27"	3 1/4"	1'-1"	2'-5"	6'-3"	4'-6"	2.6	18 1/2"	14 1/2"	2,100		
30"	3 1/2"	1'-2"	1'-10"	6'-3"	5'-0"	2.9	18 3/16"	15"	2,400		
33"	3 3/4"	1'-3"	3'-6"	8'-3"	5'-6"	3.1	18 1/2"	17 1/2"	4,100		
36"	4"	1'-5"	3'-1"	8'-3"	6'-0"	3.4	23 3/4"	20"	4,200		
48"	5"	2'-0"	2'-2"	8'-2"	7'-0"		28 1/8"	22"	6,500		

* TOLERANCE +/- 1"

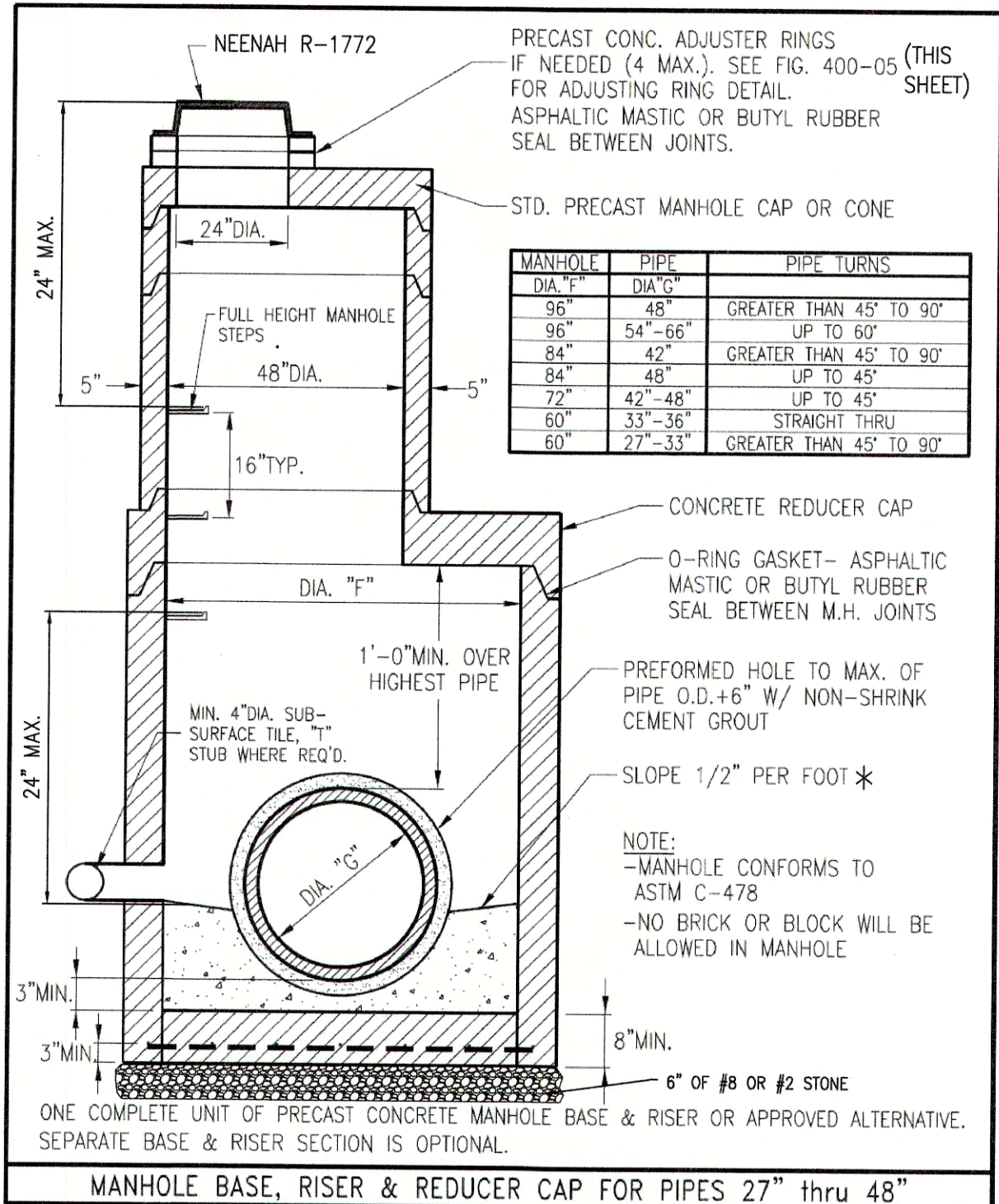
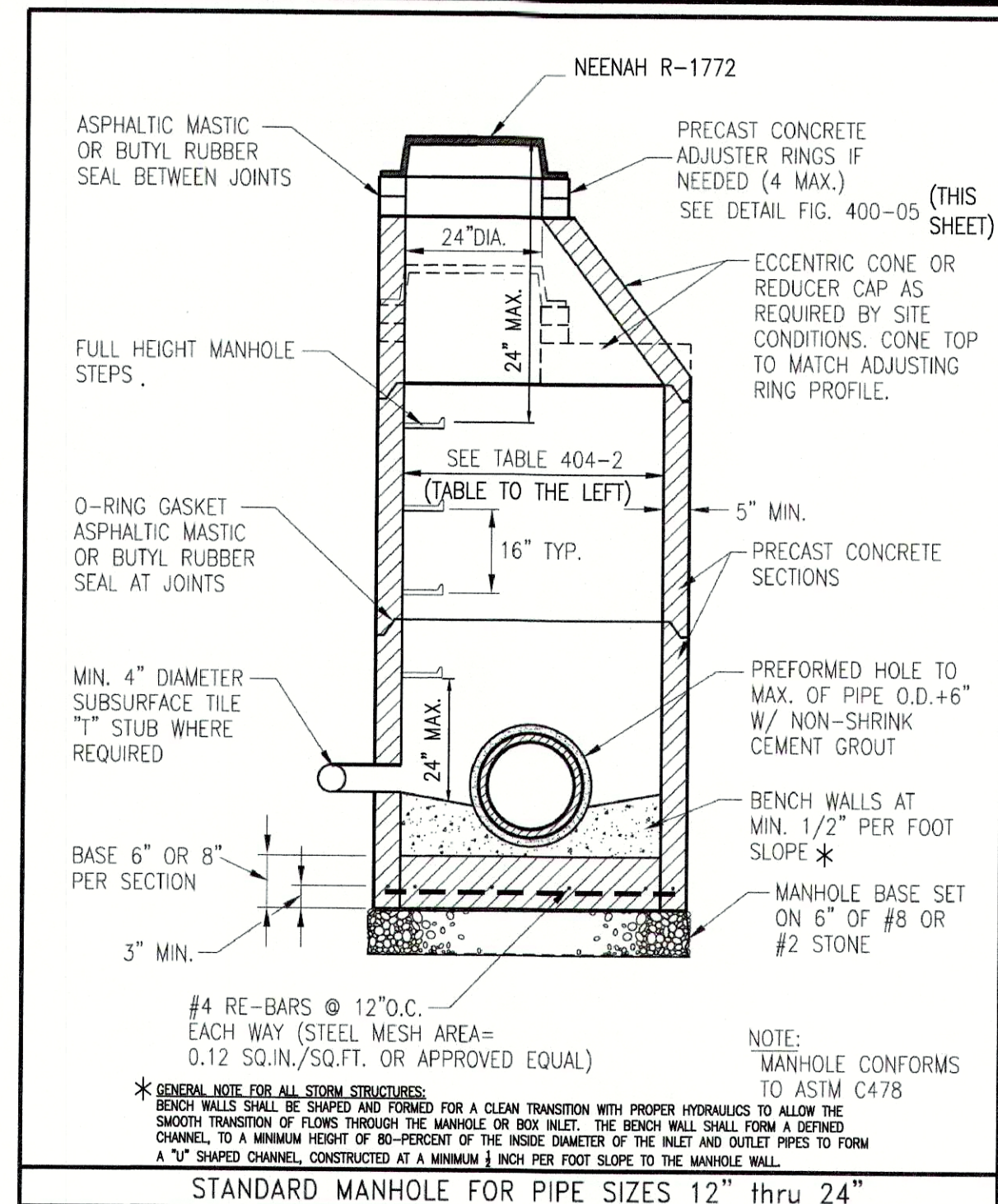


NEENAH R-4342 BEEHIVE STORM MANHOLE FRAME & GRATE
NOT TO SCALE

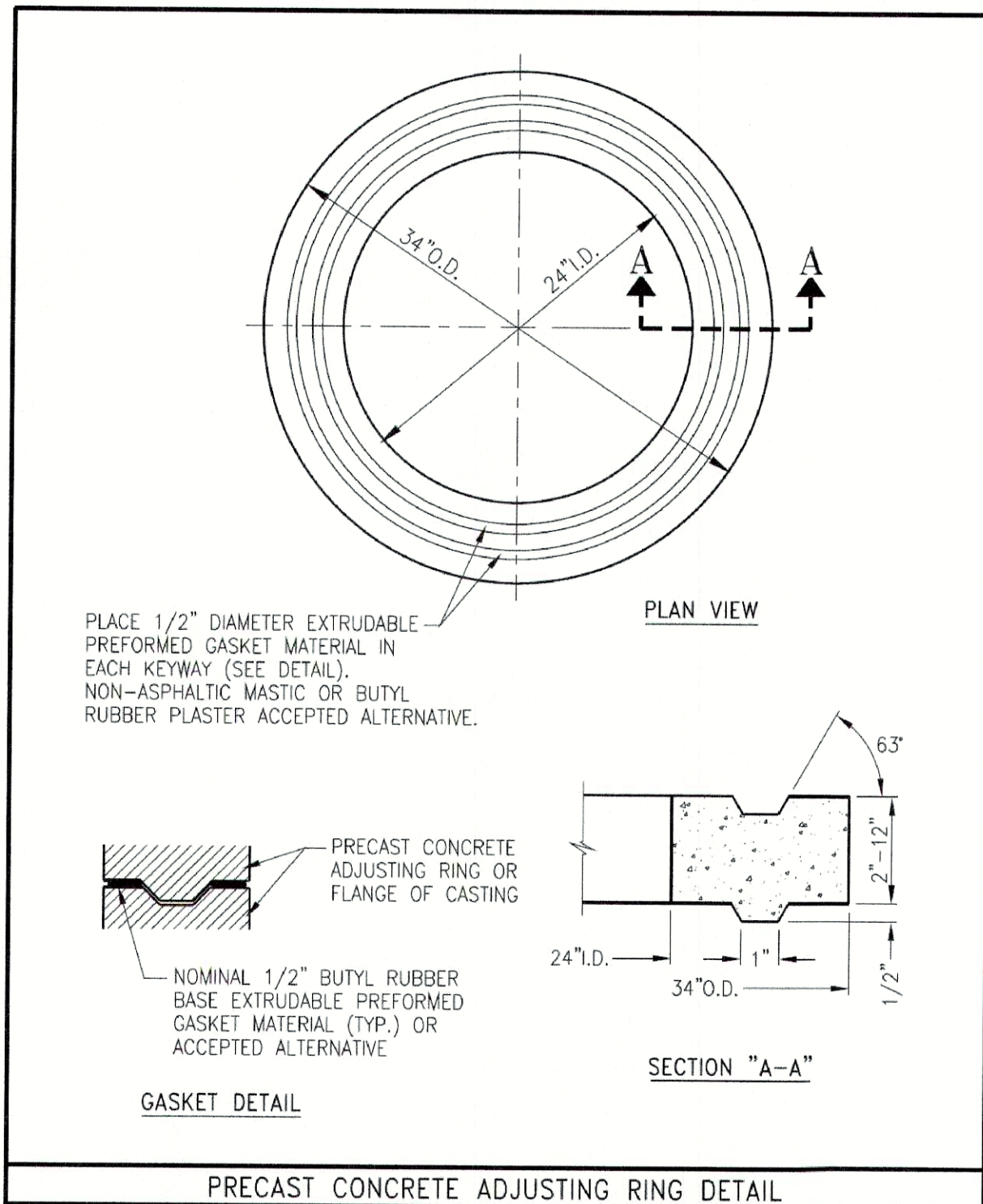
TABLE 404-02: MINIMUM MANHOLE DIAMETERS			
PIPE SIZE	PIPES ENTERING/ EXITING AT 0-45 DEGREES	PIPES ENTERING/ EXITING AT 45-90 DEGREES	
12"-21"	48"	48"	
24"	48"	60"	
27"-30"	60"	60"	
33"-36"	60"	72"	



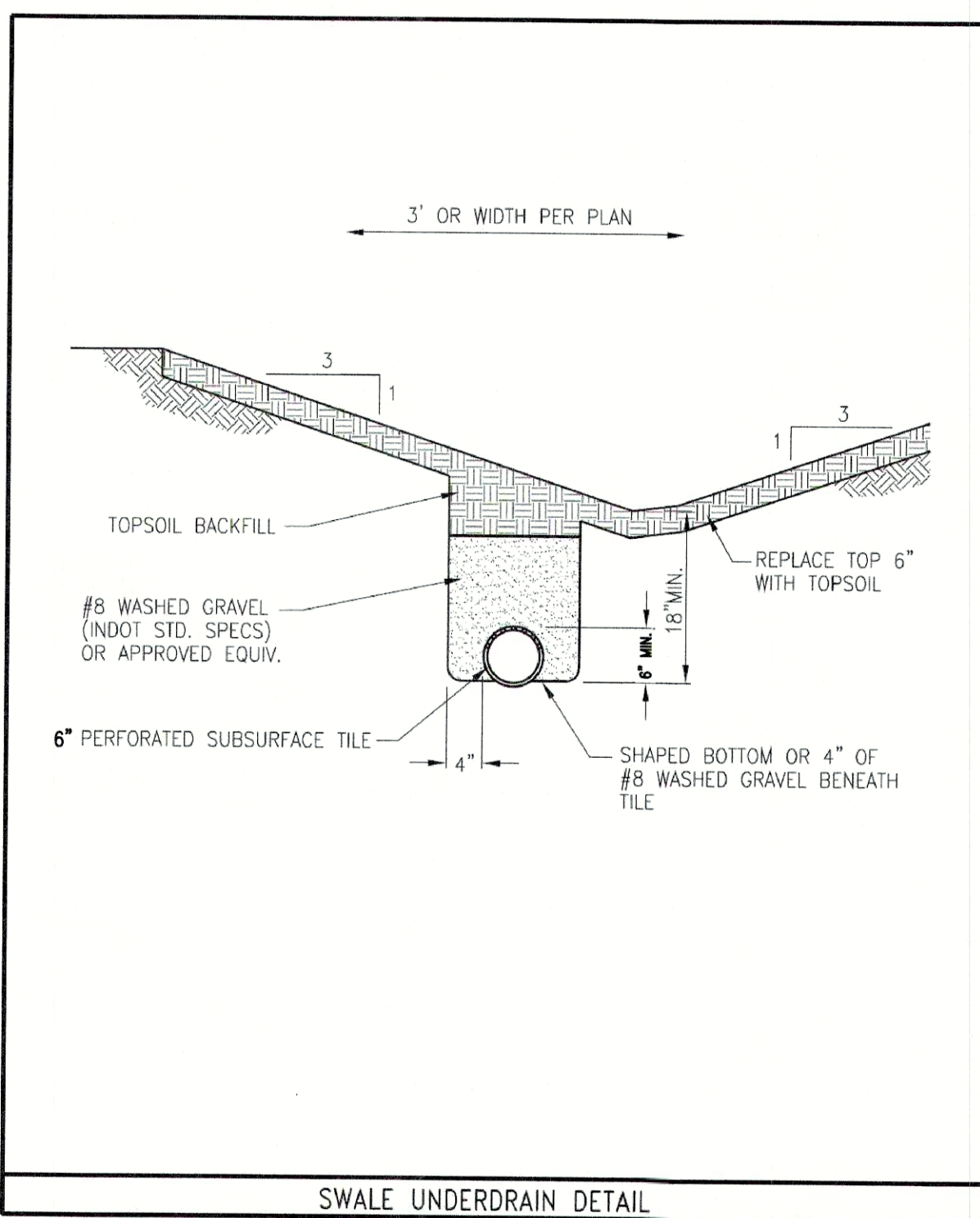
INLET TYPE "A" (MODIFIED)
(12" TO 18" PIPES)
GENERAL NOTE FOR ALL STORM STRUCTURES:
BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH TRANSITION OF FLOW THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A "V" SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/4 INCH PER FOOT SLOPE TO THE MANHOLE WALL.



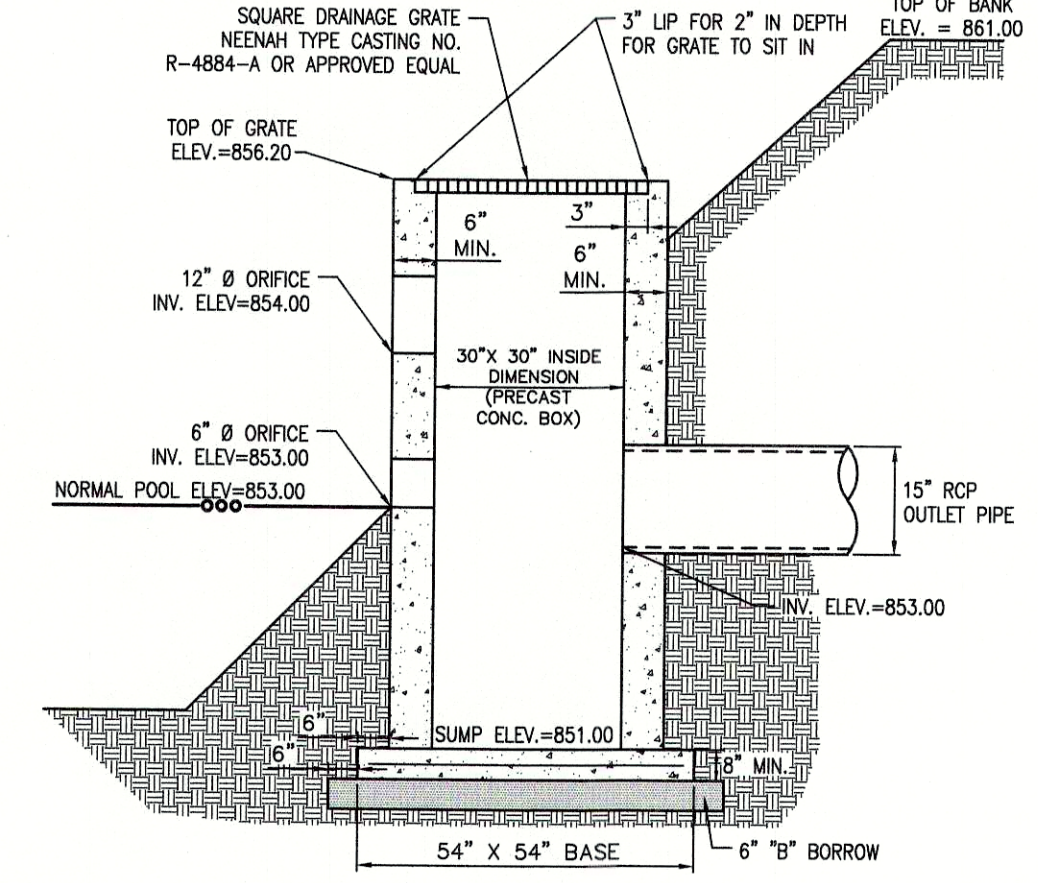
MANHOLE BASE, RISER & REDUCER CAP FOR PIPES 27" thru 48"
GENERAL NOTE FOR ALL STORM STRUCTURES:
BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH TRANSITION OF FLOW THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A "V" SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/4 INCH PER FOOT SLOPE TO THE MANHOLE WALL.



PRECAST CONCRETE ADJUSTING RING DETAIL



SWALE UNDERDRAIN DETAIL



LAKE #2 OUTLET CONTROL STRUCTURE (STR #278)
NOT TO SCALE

REVISIONS		
DATE	DESCRIPTION	BY



MAPLE TRAILS
SECTION 4
CONSTRUCTION DETAILS

Professional Engineer
No. 11400758
STATE OF INDIANA
K. K. Kichhorn
DRAWN BY: TD/TS/GM
CHECKED BY: KE
DATE: APRIL 16, 2020
SCALE: AS SHOWN
SHEET: C8.2
CONSTRUCTION DETAILS