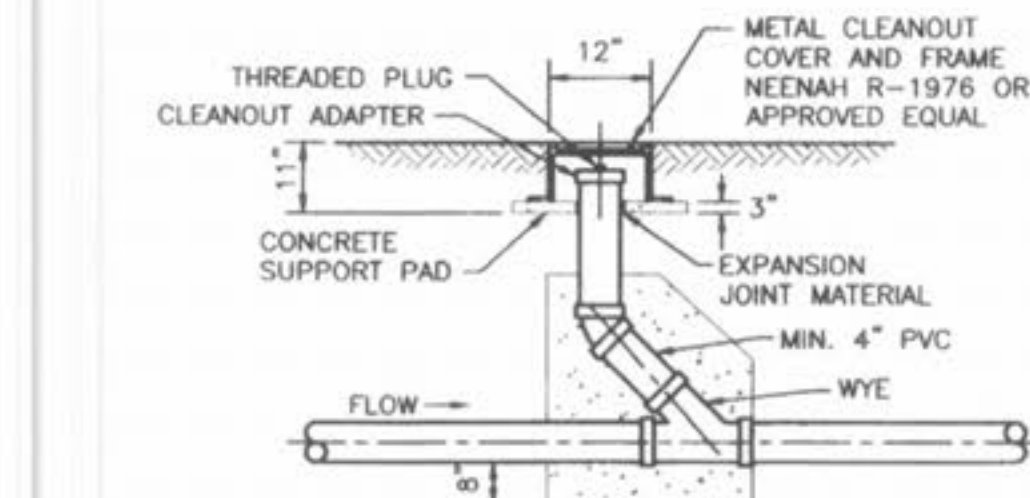


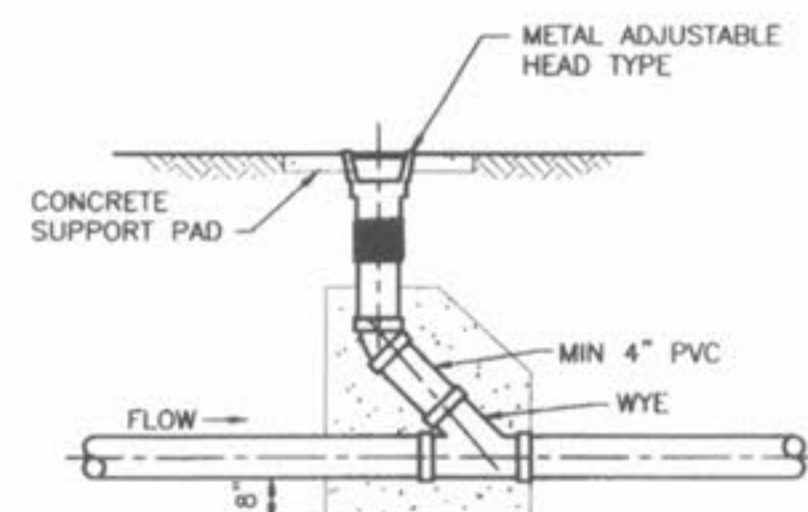
- NOTES:
1. GROUTED RIP-RAP IS REQUIRED AT ALL CREEK CROSSINGS WHERE THE EMBANKMENTS CROSSED ARE STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL RATIO SLOPE; AND ALSO WHERE THERE IS 3 FEET OR LESS COVER OVER THE TOP OF THE SEWER MAIN.
 2. PLACE RIP-RAP ON LOWER 3/4 OF SLOPE, GRADE UPPER 1/4 OF SLOPE AT 1 VERTICAL TO 2 HORIZONTAL SLOPE FOR SOD OR 1 VERTICAL TO 2.5 HORIZONTAL SLOPE FOR SEED AND STRAW.
 3. RIP-RAP TO BE "MSD 5" GRADATION, MINIMUM 12" THICK, GROUTED WITH 8 SACK MIX, SAND-CEMENT SLURRY, BROOM FINISH.
 4. INCORPORATE A 3 FEET DEEP TOE WALL ON EMBANKMENT'S UPPER EDGE OF RIP-RAP.
 5. TOP SURFACE OF RIP-RAP SHOULD NOT BE HIGHER THAN ADJACENT GROUND SURFACE.
 6. IF PIPE HAS LESS THAN 12" COVER, A PAVED CHANNEL MAY BE REQUIRED.
 7. DUCTILE IRON PIPE IS REQUIRED WITHIN THE CREEK LIMITS.

DUCKETT CREEK SANITARY DISTRICT

TYPICAL CREEK CROSSING	Des. By: BSM	App. By: KLA	Detail No. 24
	Chd. By: MDOB	Date: 1-8-01	



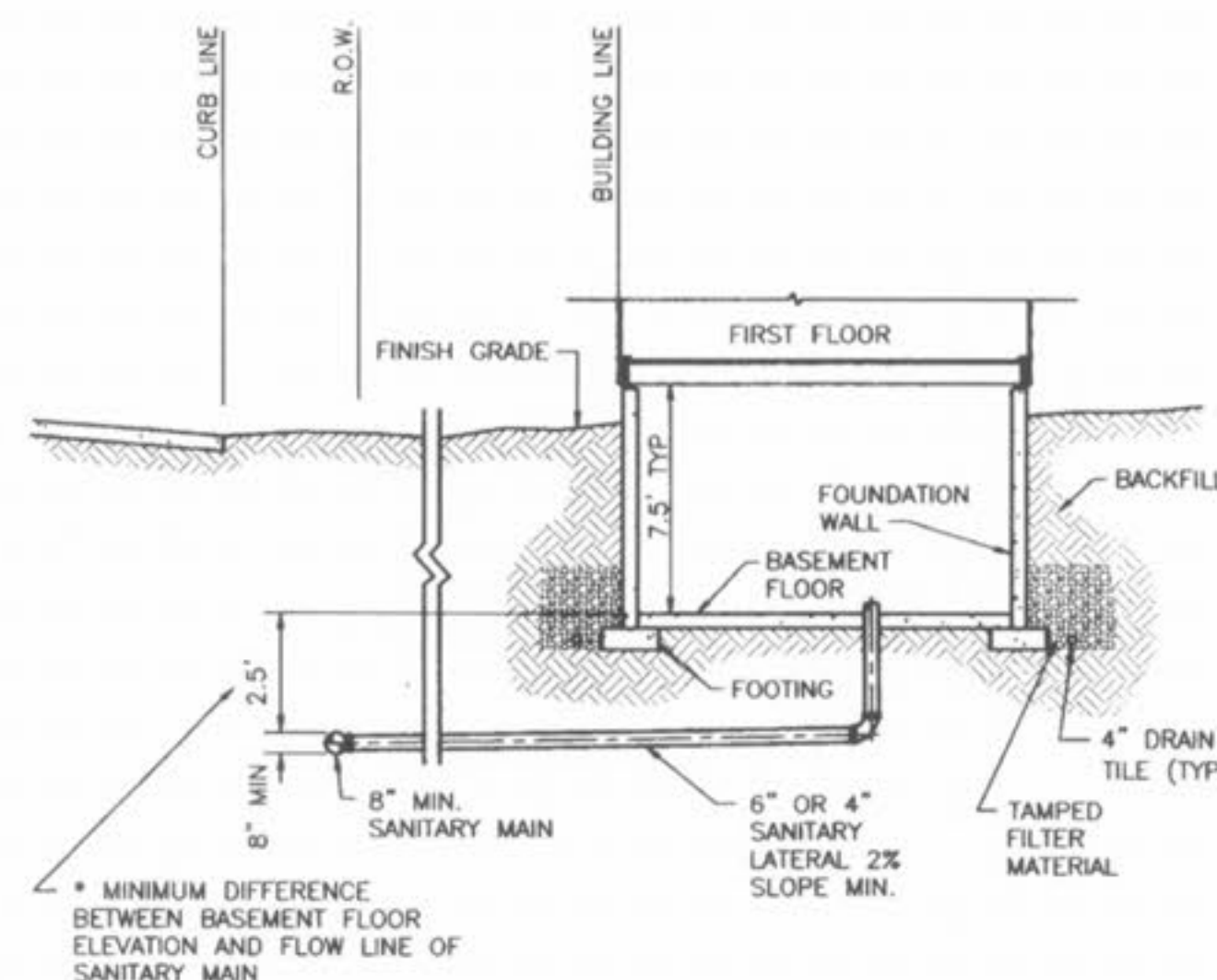
METAL FRAME AND COVER TYPE CLEANOUT



ADJUSTABLE HEAD TYPE CLEANOUT

DUCKETT CREEK SANITARY DISTRICT

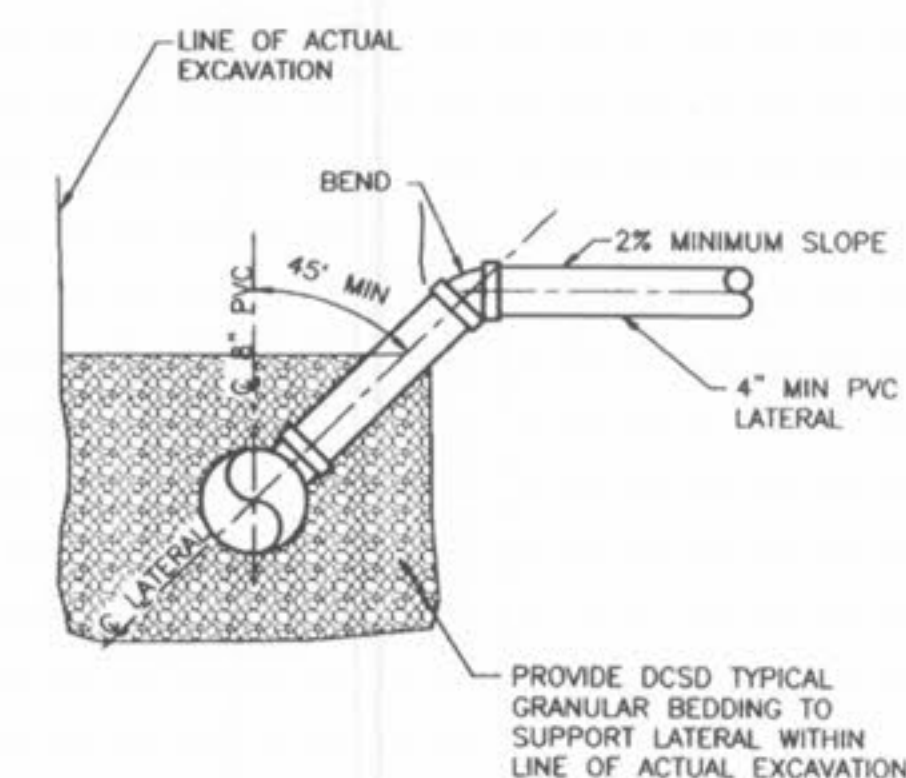
TYPICAL SEWER LATERAL CLEANOUT DETAILS	Des. By: BSM	App. By: KLA	Detail No. 25
	Chd. By: MDOB	Date: 1-8-01	



*NOTE:
DIFFERENCE IN DEPTH INCREASES WITH PIPE SIZE

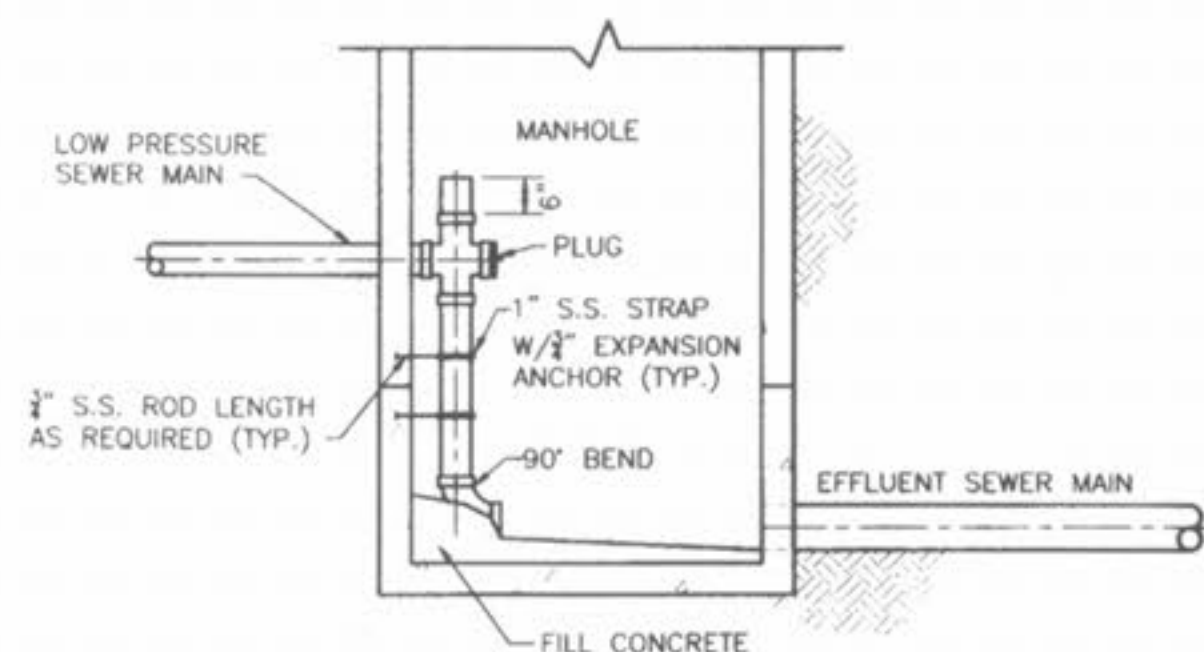
DUCKETT CREEK SANITARY DISTRICT

TYPICAL SANITARY SEWER LATERAL PROFILE	Des. By: BSM	App. By: KLA	Detail No. 26
	Chd. By: MDOB	Date: 1-9-01	



DUCKETT CREEK SANITARY DISTRICT

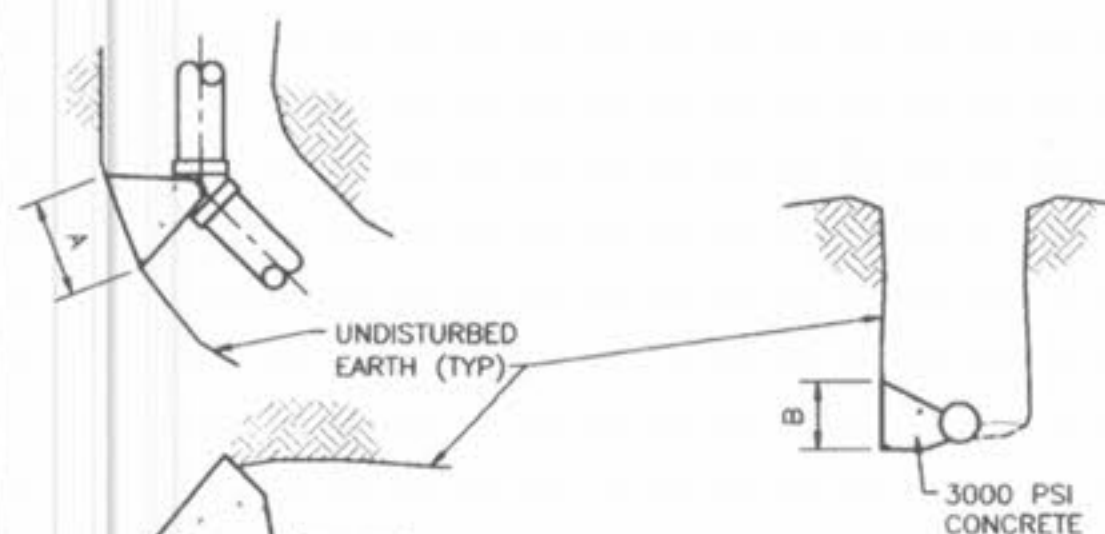
SANITARY SEWER LATERAL RISER DETAIL	Des. By: BSM	App. By: KLA	Detail No. 27
	Chd. By: MDOB	Date: 1-9-01	



NOTE:
INVERT-BOTTOM SHALL BE WORKED TO PROVIDE POSITIVE DRAINAGE THROUGH MANHOLE

DUCKETT CREEK SANITARY DISTRICT

LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE	Des. By: BSM	App. By: KLA	Detail No. 28
	Chd. By: MDOB	Date: 1-9-01	



MAIN SIZE	A x B	A x B	A x B	A x B
2"	22"	45"	90"	TEE
2"	.5' x 1'	.5' x 1'	1' x 1'	1' x 1'
4"	1' x 1'	1' x 1'	1.5' x 1'	1' x 1'
6"	1' x 1'	1.5' x 1'	2' x 1'	1.5' x 1'
8"	1' x 1'	2' x 1'	2' x 1'	2' x 1'

DUCKETT CREEK SANITARY DISTRICT

THRUST BLOCK DETAIL AND SIZE SCHEDULE	Des. By: BSM	App. By: KLA	Detail No. 29
	Chd. By: MDOB	Date: 1-9-01	

REVISIONS	DATE	REVISED PER CITY	REVISED PER CITY OF TALLON
NO.	DATE	REVISED PER CITY	REVISED PER CITY OF TALLON
1	10/25/04		
2	02/16/05		

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticated.

PICKETT, RAY & SILVER, INC.
STATE OF MISSOURI
HAROLD J. BARTCH
REGISTERED PROFESSIONAL ENGINEER
NUMBER 7751

DRAWN	J.E.E.	DATE	6-29-04
CHECKED	D.W.D.	DATE	6-29-04
PROJECT #	01267.SUPD.02R		
TASK #	2	FIELD BOOK	