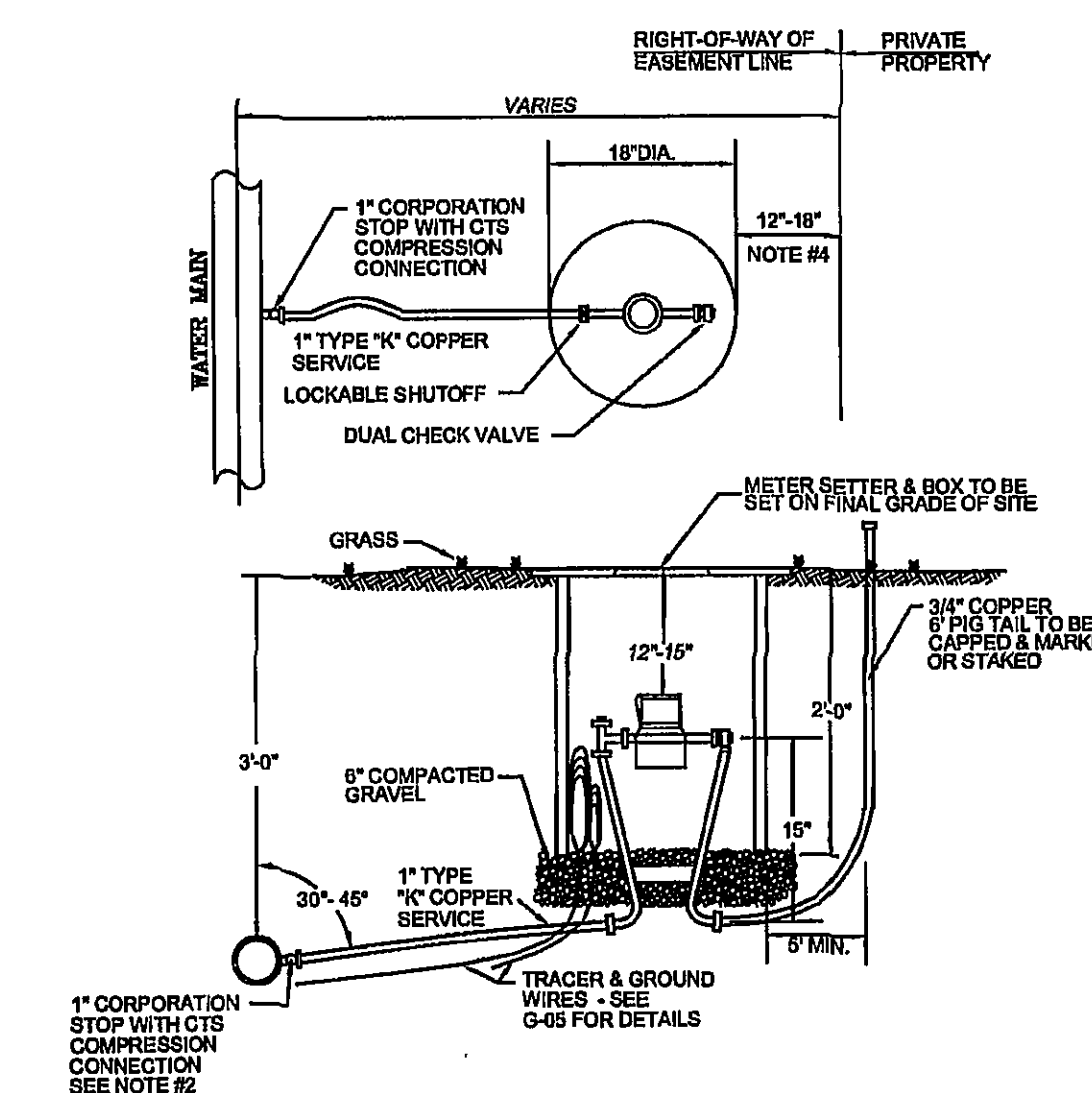
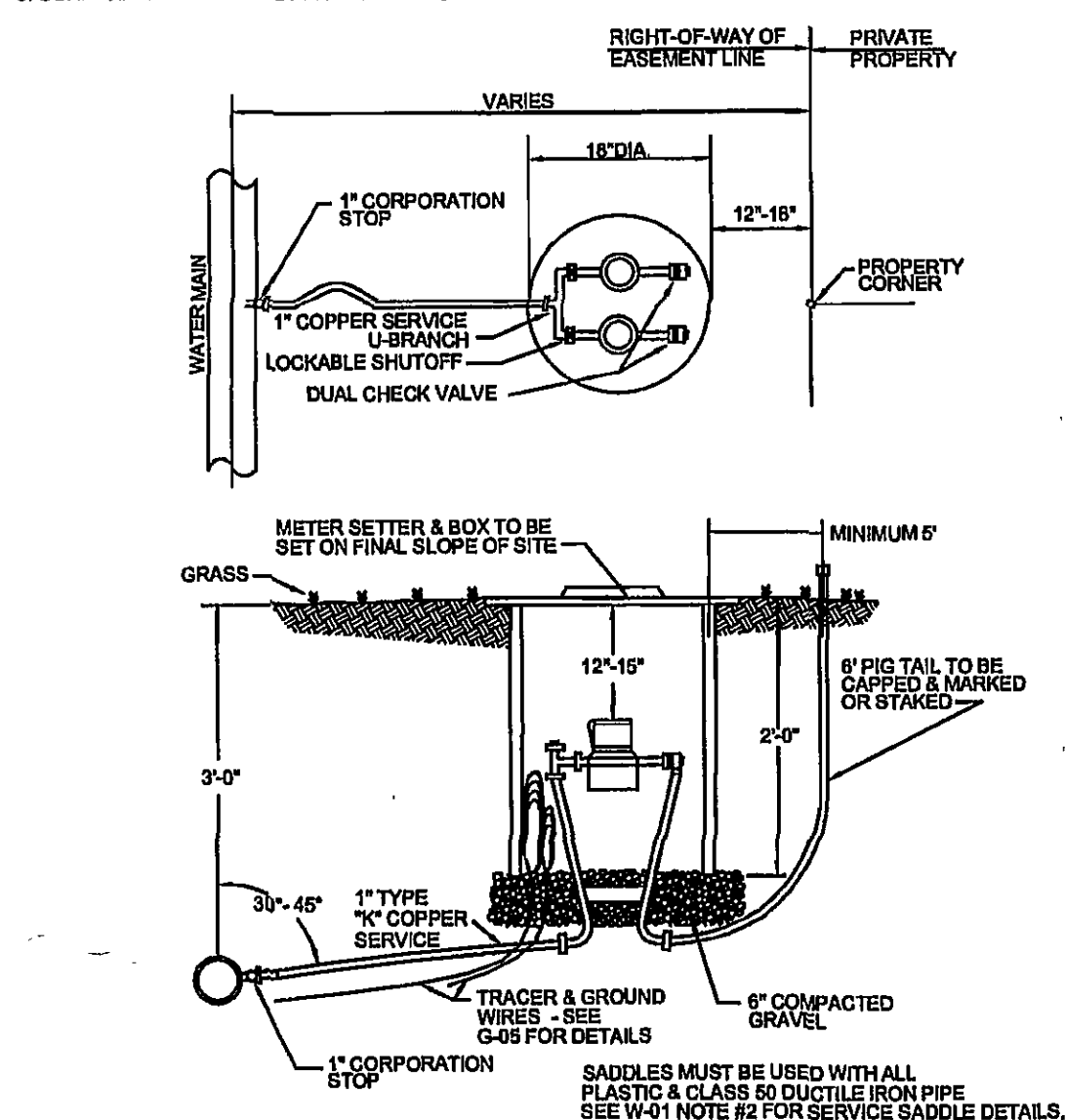


1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VEH72-15W-1133 OR APPROVED EQUAL.
2. SADDLES MUST BE USED WITH ALL PLASTIC & CLASS 90 DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH SECTION 2805 OF THE WATER STANDARDS. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE: POWERSEAL 3417, OR 3412AS, ROMAC 2025, OR 305, OR FORD F2022 OR F2023. FOR DUCTILE IRON PIPE USE THE ABOVE OR OVERGAL 3415, ROMAC 202 OR FORD F2022.
3. METER BOX MUST BE CARBONMID STATES PLASTICS, INC. PLASTIC BOX WITH FORD A52-7 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M32C-TG CAST IRON BASE & COVER OR APPROVED EQUAL. USE OF PLASTIC BEARING BOX SHALL BE APPROVED BY THE AUTHORITY. TOPSOIL BEARING BOX SHALL BE CARBONMID STATES PLASTICS #20 OR EQUIVALENT AND LID SHALL BE FORD METER BOX C32H OR EQUIVALENT.
4. WHENEVER SIDEWALK EXISTS OR IS PROPOSED, MODIFY METER LOCATION AS DIRECTED.
5. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.

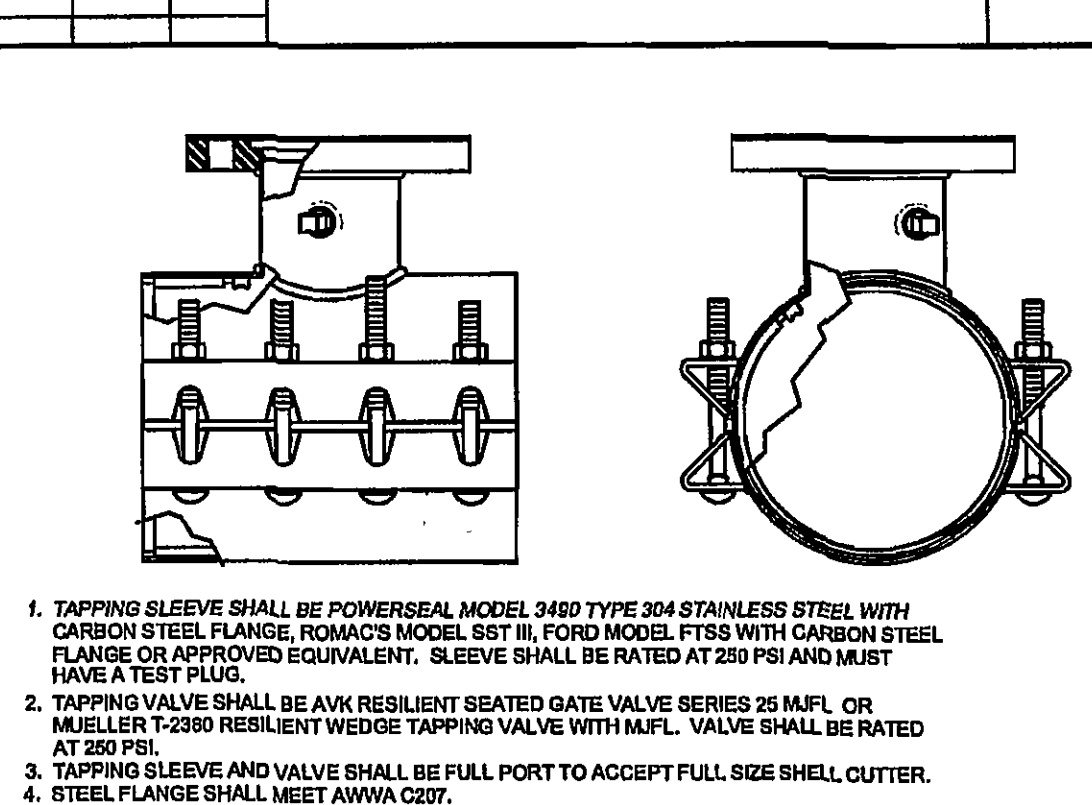


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	MAIN LINE	W-14	
07/01/04			
03/01/08			

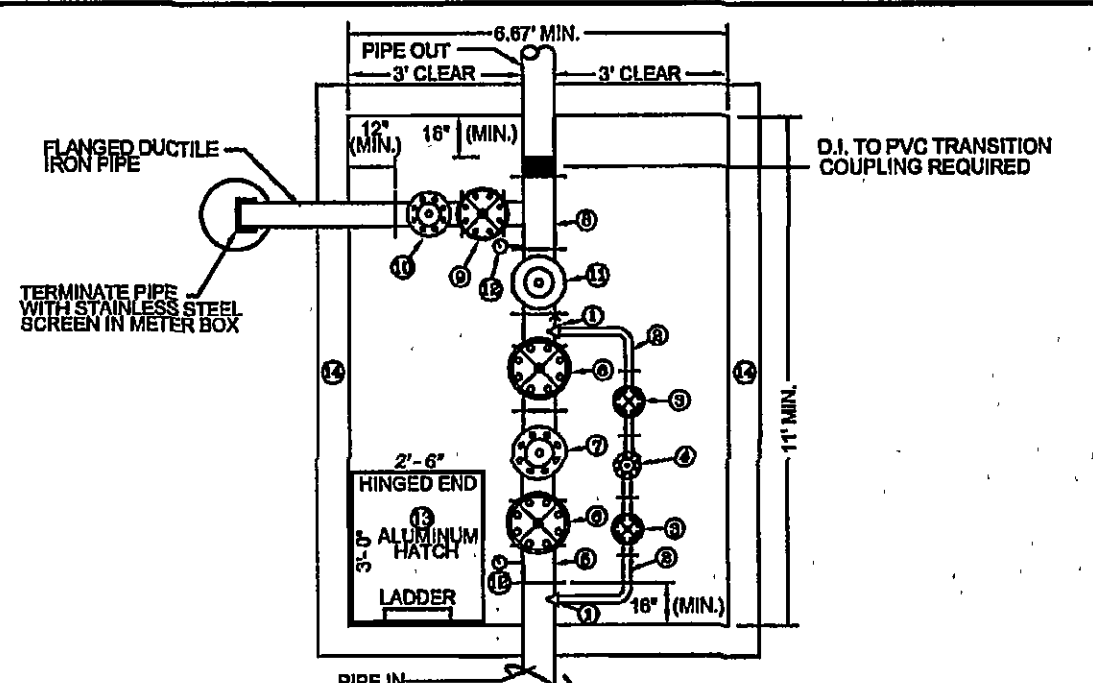
1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VEH72-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARBONMID STATES PLASTICS, INC. PLASTIC BOX WITH FORD A52-7 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M32C-TG CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DOUBLE RESIDENTIAL	W-04	
07/01/04			
03/01/08			

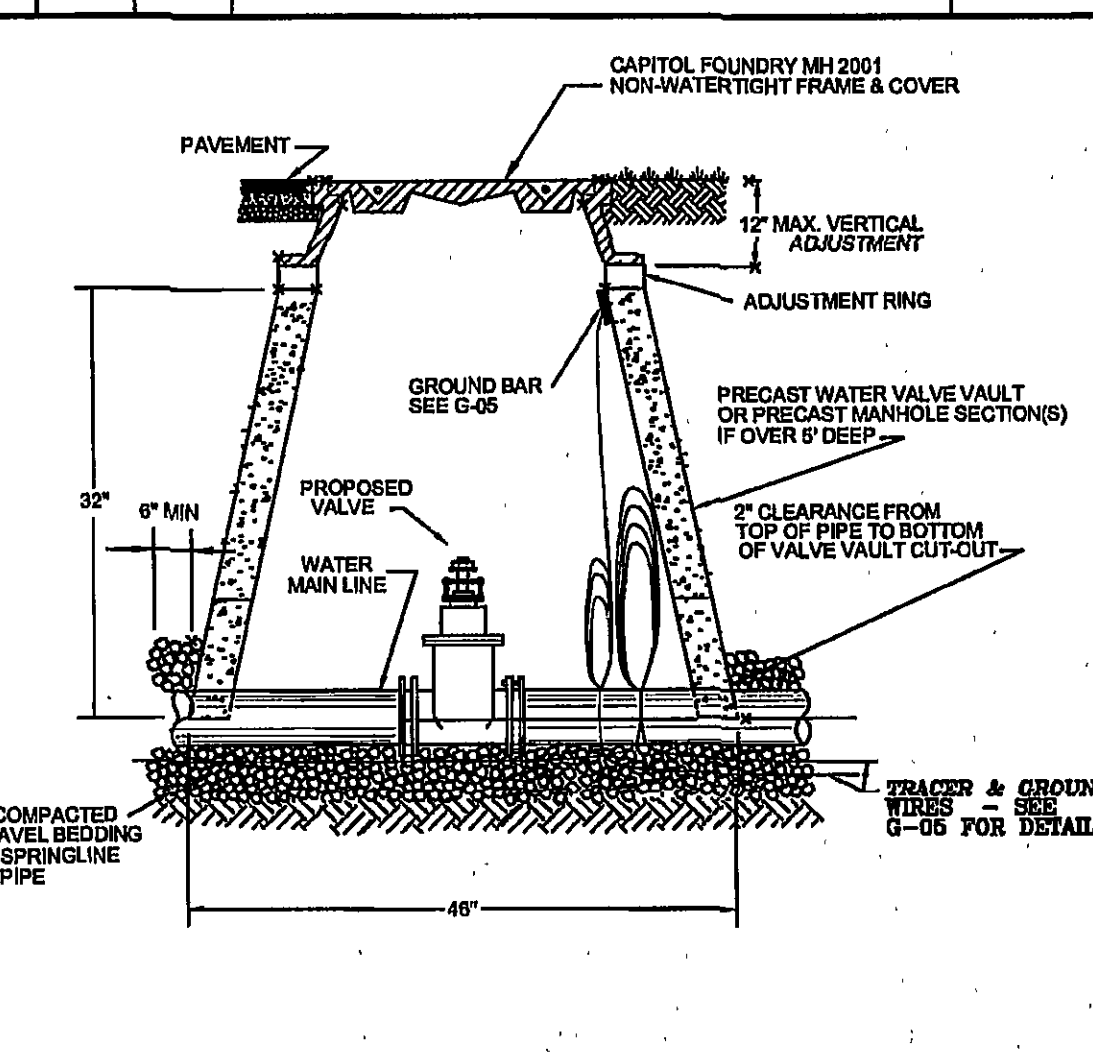


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	TAPPING SLEEVE AND VALVE	W-23	
07/01/04			
03/01/08			

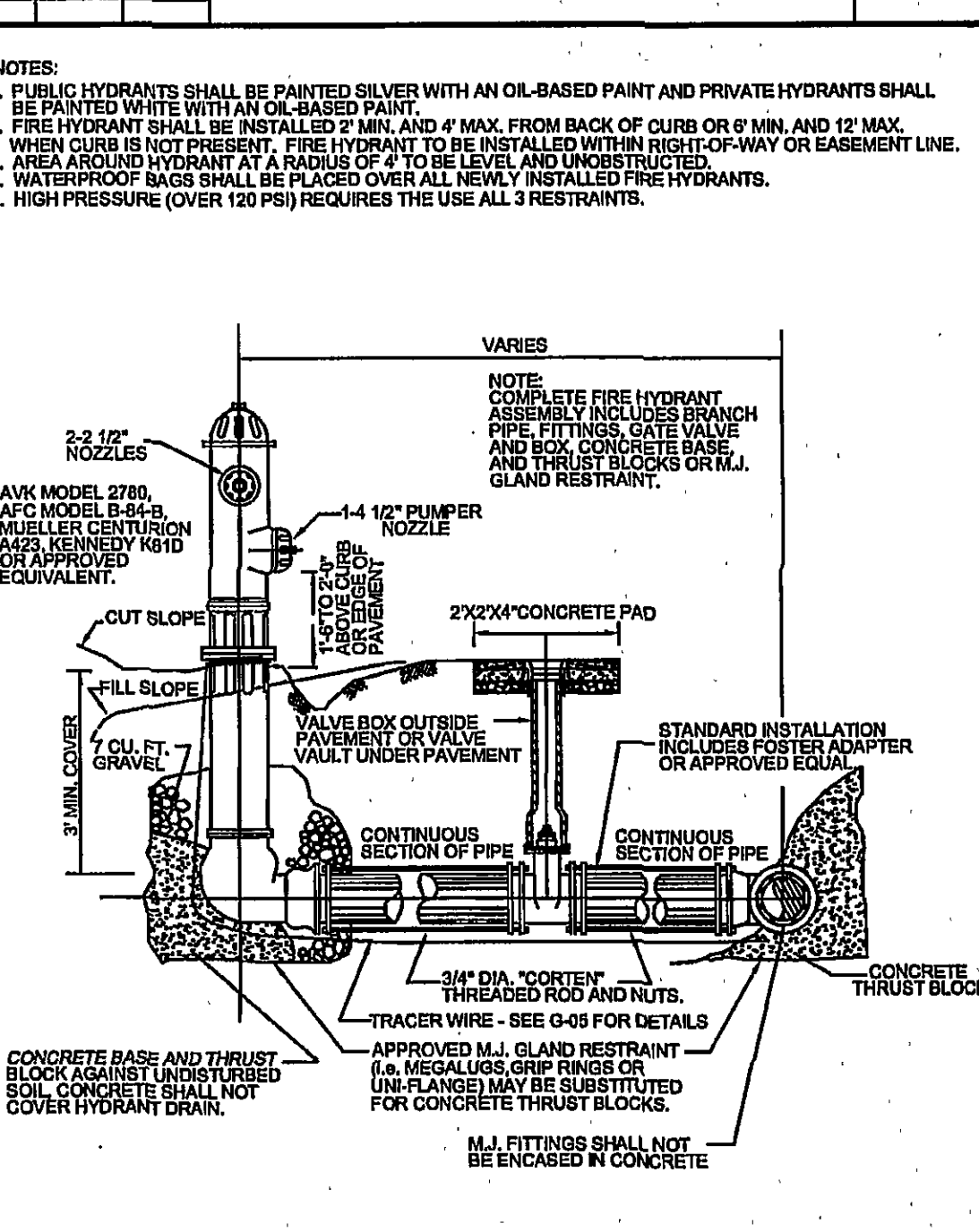


1. CORPORATION STOP
2. LOW-FLOW BYPASS LINE TYPE "K" COPPER
3. 2" NPT GATE VALVE
4. 2" FLANGED RATE OF FLOW PRESSURE REGULATING VALVE (CLAYVAL MODEL 48-11) SET AT WORKING PRESSURE 8 TO 100 GPM
5. FLANGE X MECH. JOINT ADAPTOR (SEE NOTE BELOW)
6. FLANGE X FLANGE MAIN LINE GATE VALVE
7. FLANGE X FLANGE MAIN LINE PRESSURE REGULATING VALVE (CLAYVAL MODEL 690-41) SET AT 3 PSI LESS THAN #4
8. FLANGE X FLANGE MAIN LINE REDUCING TEE
9. FLANGE X FLANGE GATE VALVE, ONE SIZE LESS THAN MAIN LINE
10. FLANGE X FLANGE PRESSURE RELIEF VALVE, ONE SIZE LESS THAN MAIN LINE (CLAYVAL MODEL 650-01) SET AT 5 PSI GREATER THAN #4
11. MAIN LINE "TURBO" TYPE WATER METER
12. LIQUID FILLED PRESSURE GAUGE
13. BLOC MODEL J-34L OR APPROVED EQUAL
14. PRE-CAST REINFORCED CONCRETE VAULT W/ 6" MIN. WALLS, TOP, AND BOTTOM

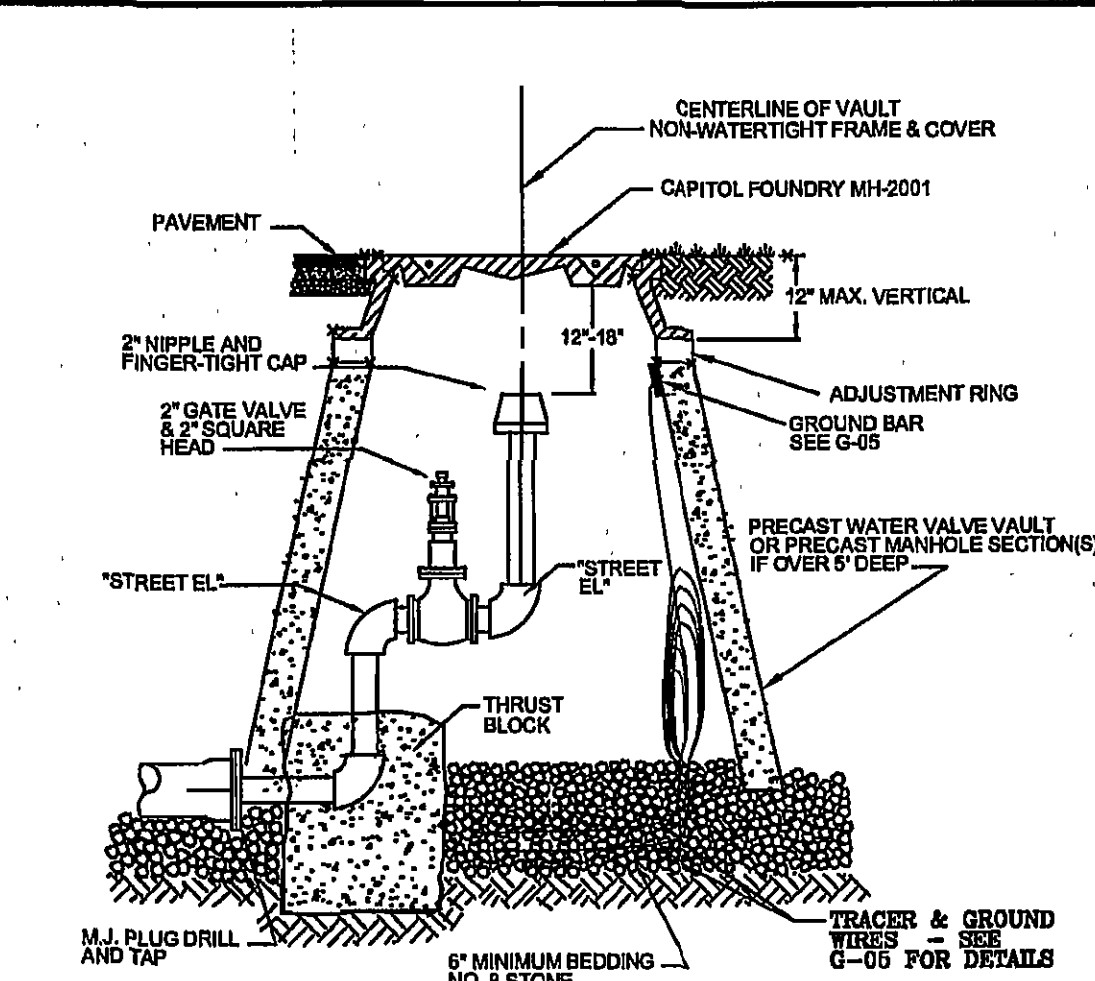
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	MAIN LINE	W-14	
07/01/04			
03/01/08			



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	WATER LINE VALVE	W-08	
07/01/04			
03/01/08			

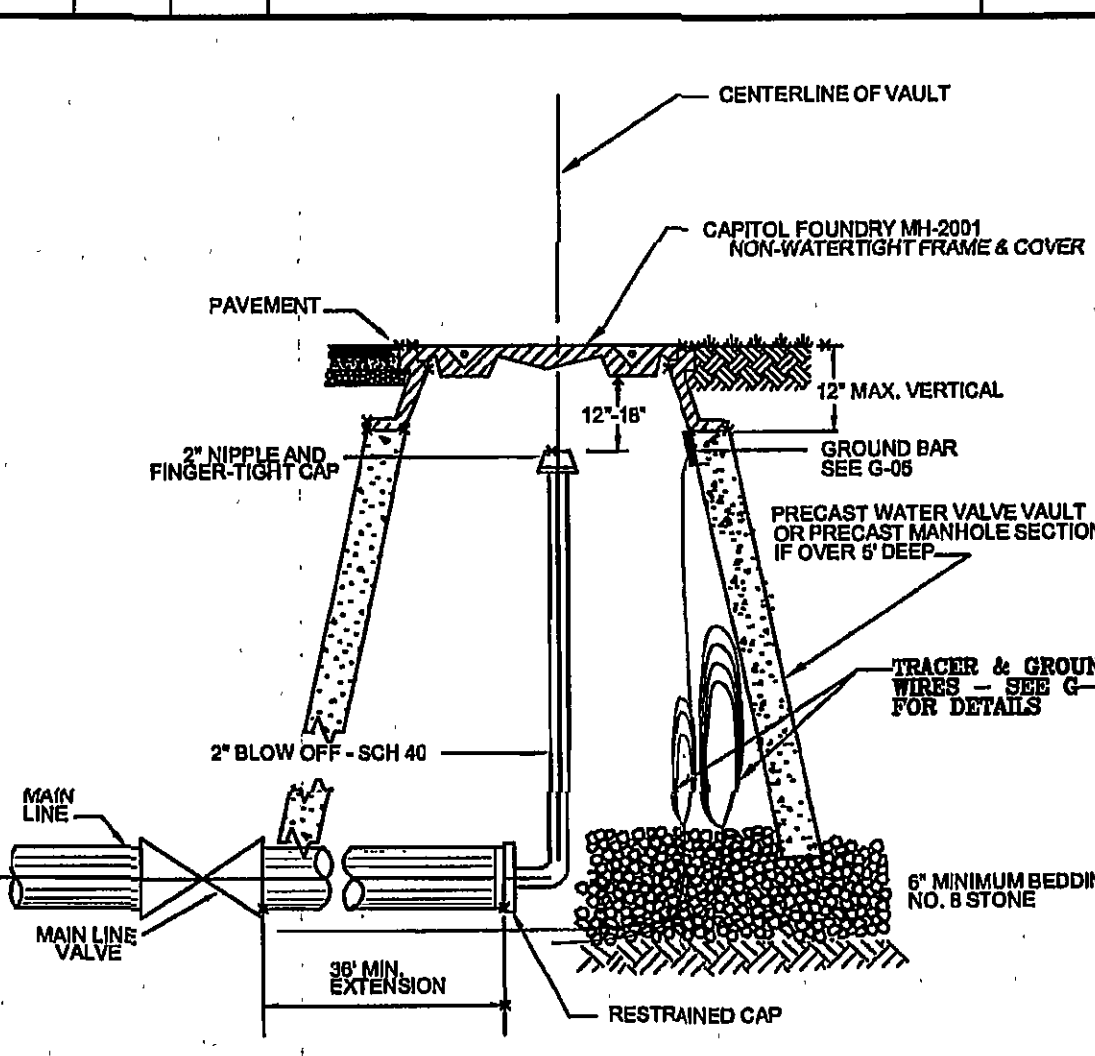


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	FIRE HYDRANT ASSEMBLY	W-18	
07/01/04			
03/01/08			

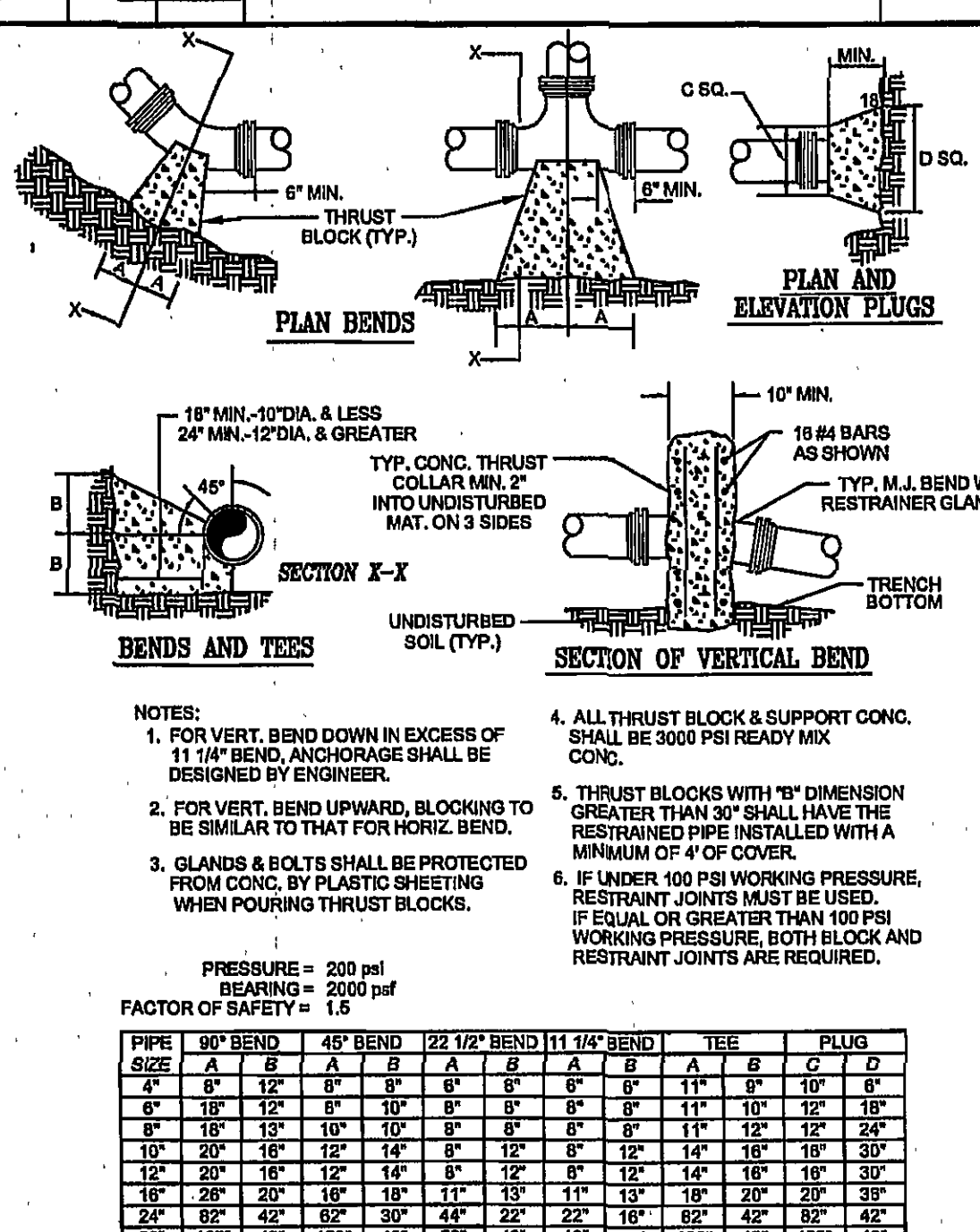


1. FIRE HYDRANT ASSEMBLY MAY BE USED AS PERMANENT END OF LINES.
2. DETAIL FOR UP TO 1" MAIN, LARGER LINES SEE SEC. 102.08 FOR MIN. FLUSHING VALVE REQUIREMENTS.
3. THE END OF A PIPELINE SHALL NOT TERMINATE IN A PAVED AREA OR UNDER A CONCRETE VALVE GUTTER.
4. THE LINE AND "STREET EL" BETWEEN THE MAIN LINE AND 2" GATE VALVE SHALL BE BRASS

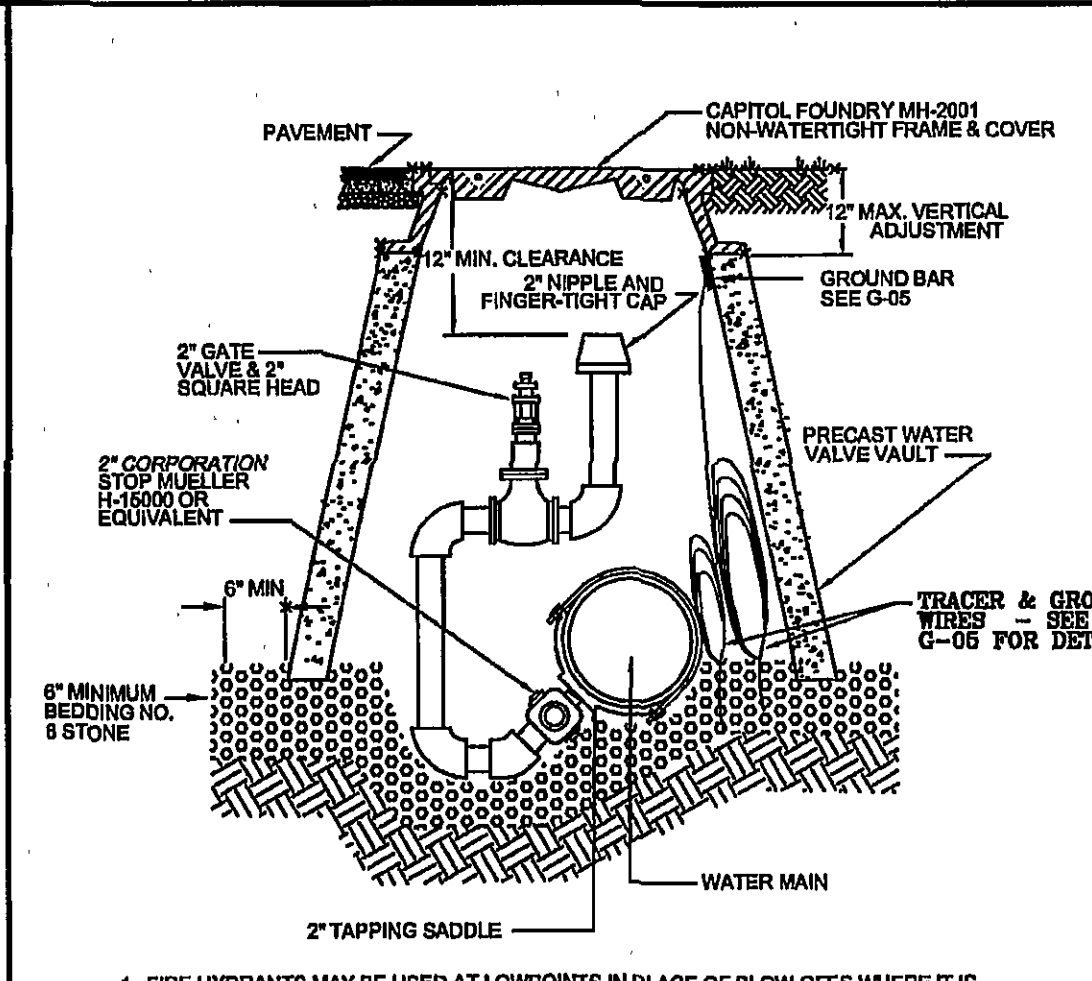
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	PERMANENT END OF LINE	W-09	
07/01/04			
03/01/08			



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	BLOW-OFF ASSEMBLY FOR MAIN LINE TEMPORARY TERMINATION	W-10	
07/01/04			
03/01/08			

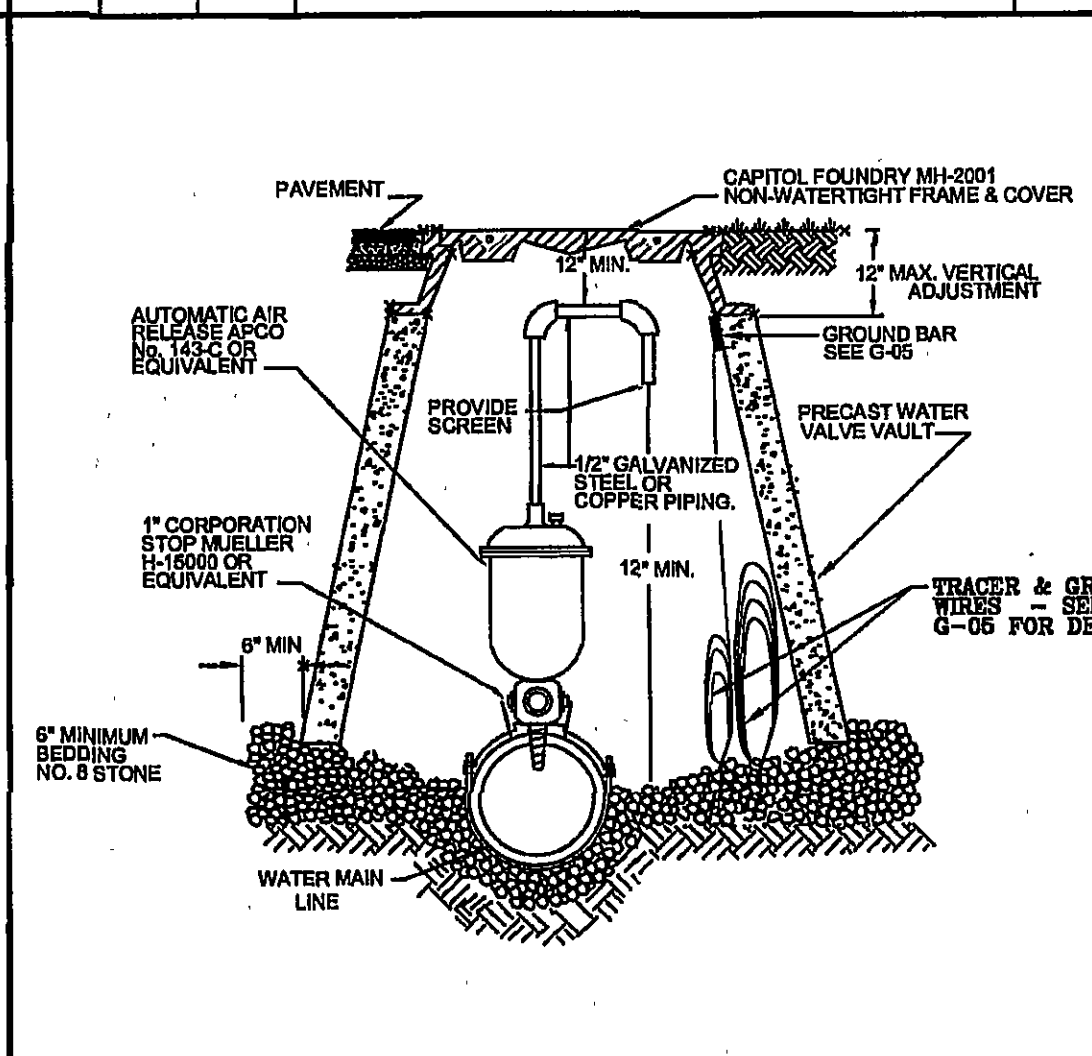


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	THRUST BLOCK CONSTRUCTION	W-19	
07/01/04			
03/01/08			

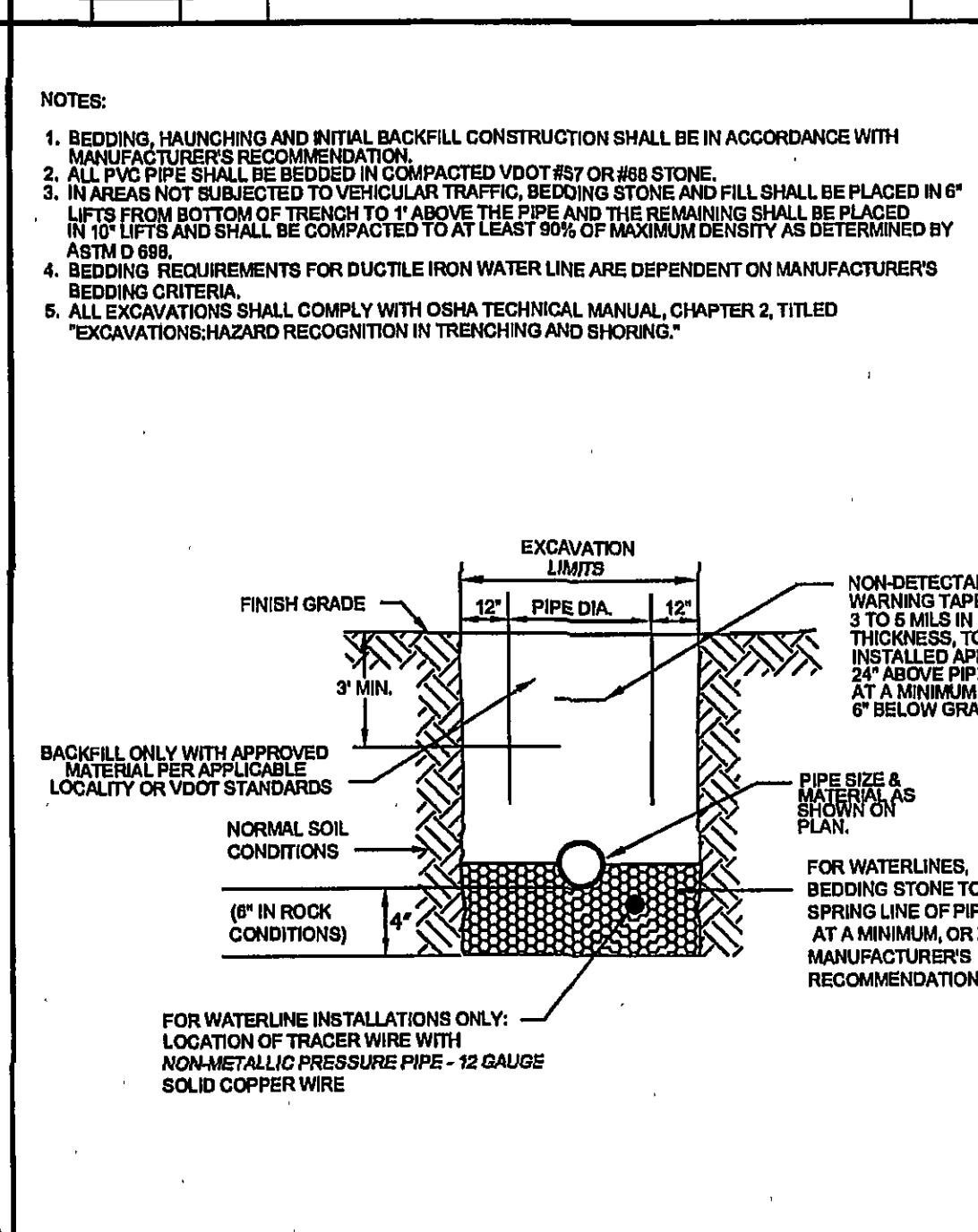


1. FIRE HYDRANTS MAY BE USED AT LOWPOINTS IN PLACE OF BLOW-OFFS WHERE IT IS DEMONSTRATED THAT A MINIMUM FLUSHING VELOCITY OF 4 FT/S IS PROVIDED.
2. LINE AND "STREET EL" BETWEEN CORPORATION STOP AND 2" GATE VALVE SHALL BE BRASS

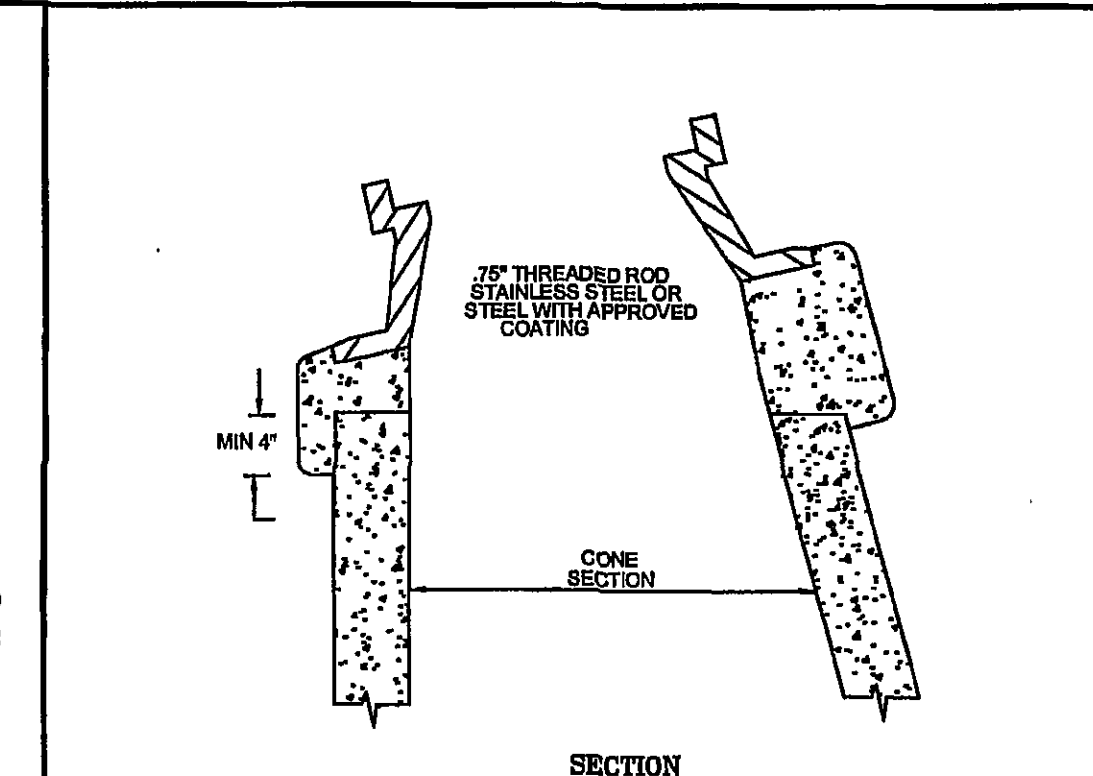
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	IN-LINE BLOW-OFF ASSEMBLY	W-11	
07/01/04			
03/01/08			



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	AUTOMATIC AIR RELEASE ASSEMBLY	W-12	
07/01/04			
03/01/08			

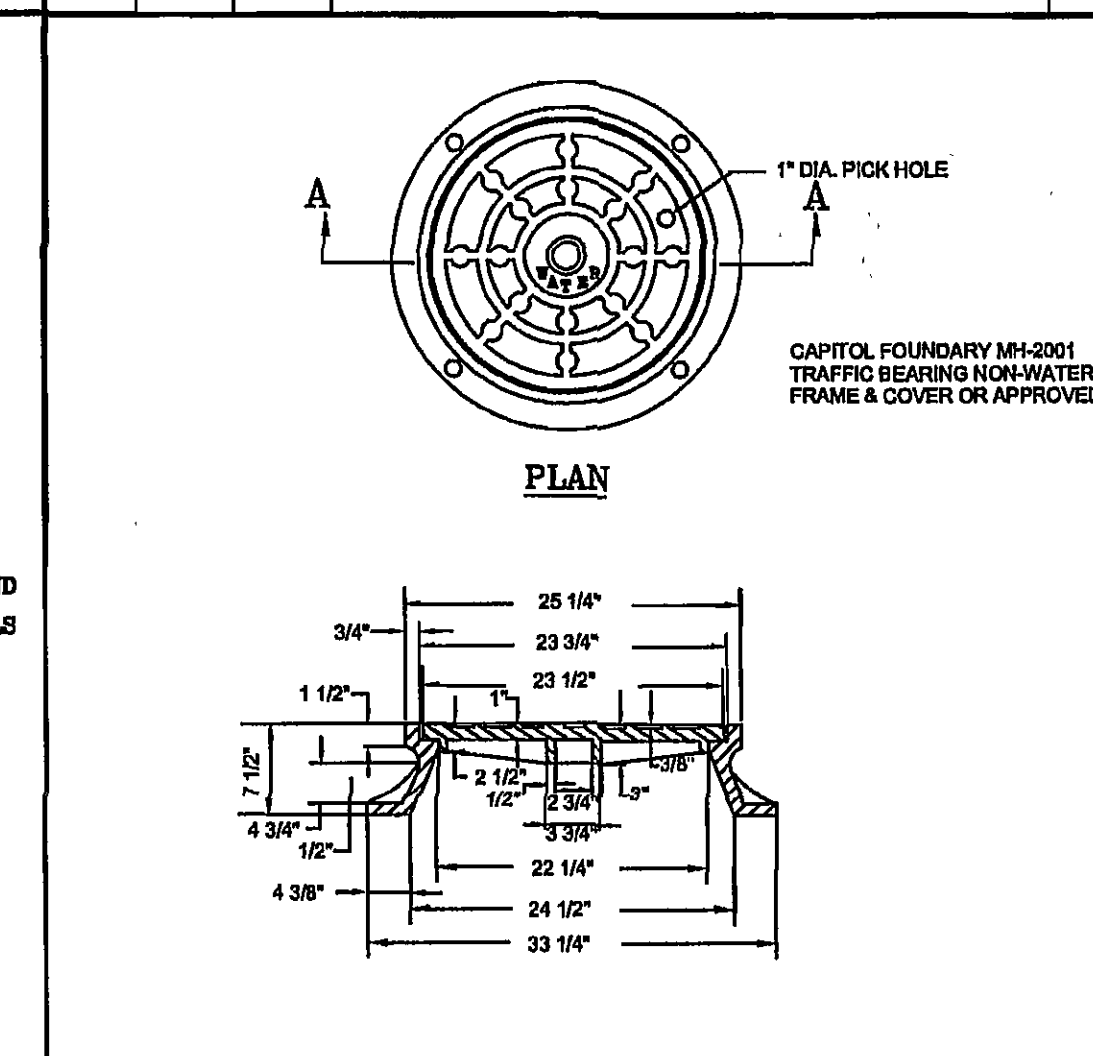


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS	S-30 & W-24	
07/01/04			
03/01/08			

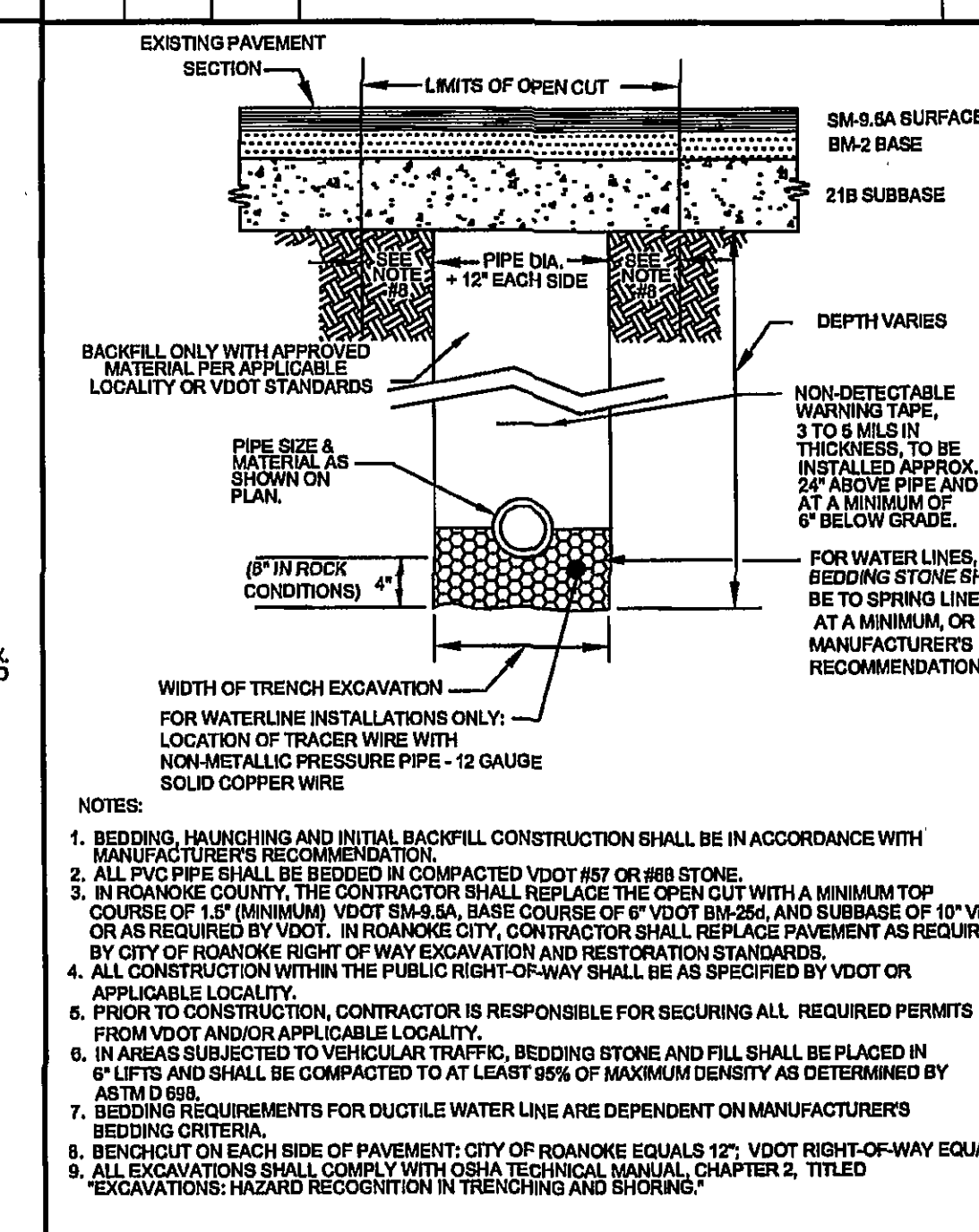


1. USE MODERATELY STIFF MIX OF NON-SHRINK CEMENT, SAND AND 1/2" TO 1" DIAMETER GRAVEL WITH 2" MAX. TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF GRAVEL.
2. MAX. GRAVEL OR CONCRETE BLOCKS TO BE USED.
3. DO NOT BACKFILL AROUND FRAME AND COVER FOR 48 HOURS.
4. STRENGTH CONCRETE WOULD REDUCE TIME TO (24HRS).
5. RESTRICT TRAFFIC LOAD FOR MAX. 24 HOURS.

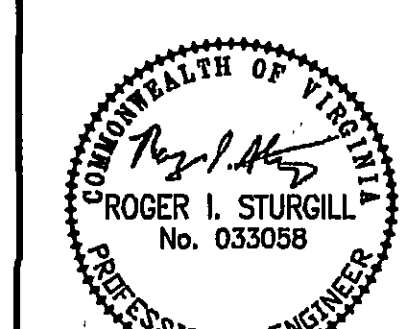
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	INSTALLATION DETAIL FOR ALL FRAMES AND COVERS	W-16	
07/01/04			
03/01/08			



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	MANHOLE FRAME AND COVER	W-17	
07/01/04			
03/01/08			



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	BEDDING AND BACKFILL UNDER PAVEMENT AND RIGHT-OF-WAY	S-31 & W-25	
07/01/04			
03/01/08			



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REED ESTATES
W.V.W.A. STANDARD DETAILS
ROANOKE CITY, VIRGINIA

DRAWN BY: JVJ
DESIGNED BY: JVJ
CHECKED BY: SMH
DATE: 11/14/2007
REVISIONS:

1st - 01/18/2008
per City Review
4th - 06/03/2008
per City Review

SHEET NO.
C-11
JOB NO.
R0700194.00