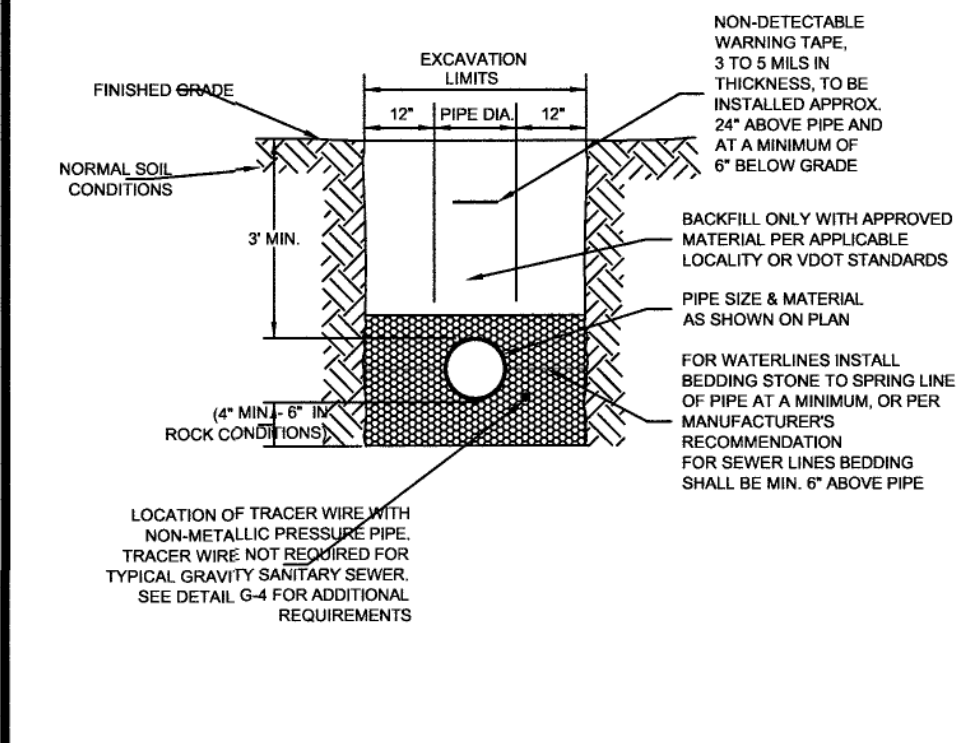
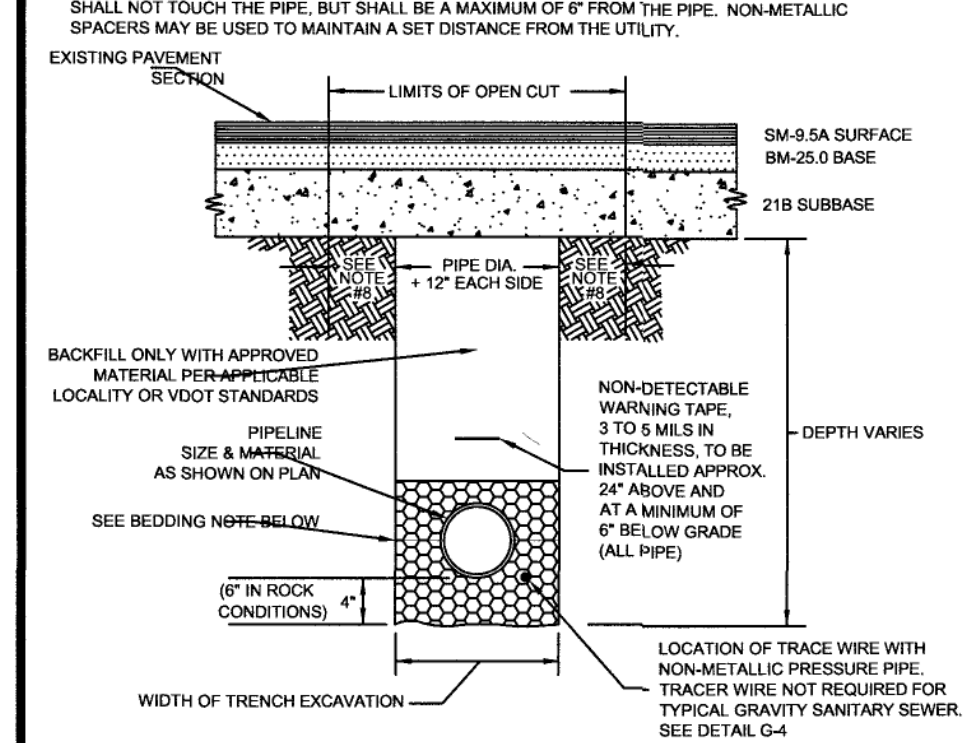


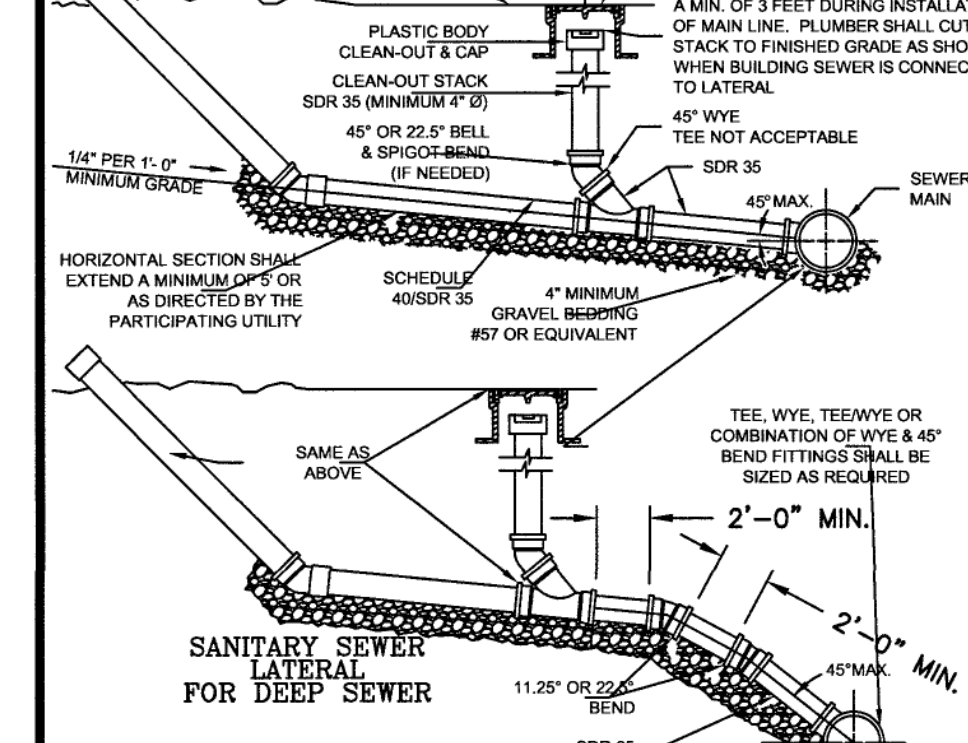
1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #58 STONE, OR CRUSHER RUN.
3. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 1" LIFTS FROM BOTTOM OF TRENCH TO 1" ABOVE THE PIPE AND THE REMAINING SHALL BE PLACED IN 10" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
4. BEDDING REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MINIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



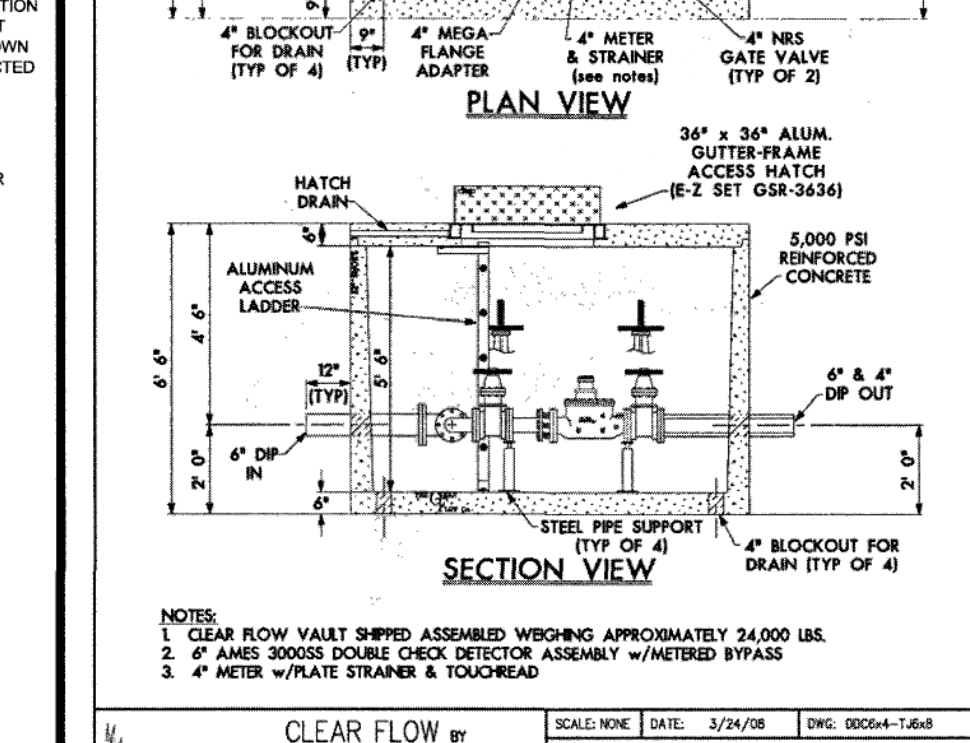
1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #58 STONE.
3. IN VDOT ROW, THE CONTRACTOR SHALL REPLACE THE OPEN CUT WITH A MINIMUM TOP COURSE OF 12" MINIMUM VDOT #58-5A, BASE COURSE OF 8" VDOT #58-5A, AND SUBBASE OF 10" VDOT #21B, OR AS REQUIRED BY VDOT. IN ROADWAY CITY, CONTRACTOR SHALL REPLACE THE OPEN CUT OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION RESTORATION STANDARDS, LATEST EDITION.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 1" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
7. ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE IRON SEWER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
8. BENCHMARK ON EACH SIDE OF PAVEMENT: CITY OF ROANOKE: 12" VDOT RIGHT-OF-WAY = 6".
9. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
10. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MINIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



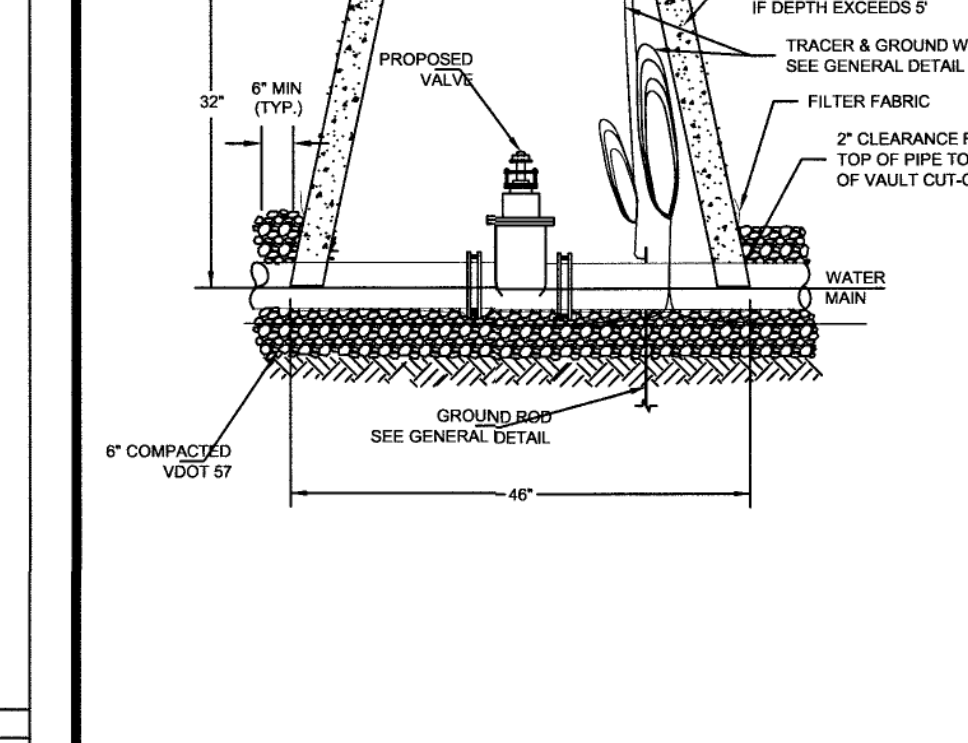
1. TRAFFIC BEARING BOX AND LID REQUIRED IN TRAFFIC AREAS (CAPITOL FOUNDRY VB-8'S).
2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
3. ALL PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #58 STONE.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEANOUT STACK TEE.
5. ALL MAIN LINE TAPS ON ACTIVE MAINS SHALL BE PERFORMED BY PARTICIPATING UTILITY.
6. PIPING ON PRIVATE SIDE OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION RESTORATION STANDARDS, LATEST EDITION.
7. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3) FEET.
8. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3) FEET.
9. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE (IN ACCORDANCE WITH THIS DETAIL WHEN MAIN TENANCE OCCURS).
10. LOWEST SERVED FINISHED FLOOR ELEVATION SHALL BE A MINIMUM OF THREE FEET (3') ABOVE THE TOP OF THE MAIN AT THE POINT WHERE THE SEWER LATERAL CONNECTS TO THE MAIN.
11. WHEN CONNECTING TO EXISTING LATERAL, USE FERRIS FLEXIBLE COUPLER.



1. FILTER FABRIC TO BE INSTALLED BETWEEN BOTTOM OF PIPE AND BEDDING STONE.
2. FABRIC TO EXTEND VERTICALLY A MINIMUM OF 6" FROM BOTTOM OF VAULT FULL CIRCUMFERENCE.
3. IN ADDITION TO ANCHOR BLOCKS, RESTRAINED JOINT PIPE WILL BE REQUIRED FOR ALL SLOPES EXCEEDING 20%.
4. MINIMUM SPACING REQUIREMENTS SHALL BE AS FOLLOWS:



1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT AND PRIVATE HYDRANTS SHALL BE PAINTED WHITE WITH AN OIL-BASED PAINT.
2. FIRE HYDRANT SHALL BE INSTALLED 2' MIN. AND 1' MAX. FROM BACK OF CURB ON 6" MIN. AND 12' MAX. FROM EDGE OF PAVEMENT WHEN CURB IS NOT PRESENT. FIRE HYDRANT 1 TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
3. AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNRESTRICTED.
4. WATERPROOF BAGS OR OUT OF SERVICE RINGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE OF ALL 3 RESTRAINTS.
6. IF DURING CONSTRUCTION THE SEASONAL WATER LEVEL IS NOTED TO BE ABOVE THE DRAIN OUTLETS OF THE PROPOSED HYDRANT, THE PARTICIPATING UTILITY WILL BE NOTIFIED IMMEDIATELY SO THAT THE HYDRANT CAN BE RELOCATED TO A SATISFACTORY LOCATION, OMITTED, OR THE DRAIN HOLE PLUGGED.
7. TWO WRAPS OF TRACER WIRE SHALL BE WRAPPED AROUND BASE OF HYDRANT.
8. APPROVED MODELS - ANK MODEL 2780, AFC MODEL 8-84-B, MUELLER CENTURION A423, KENNEDY K810 EQUIVALENT.



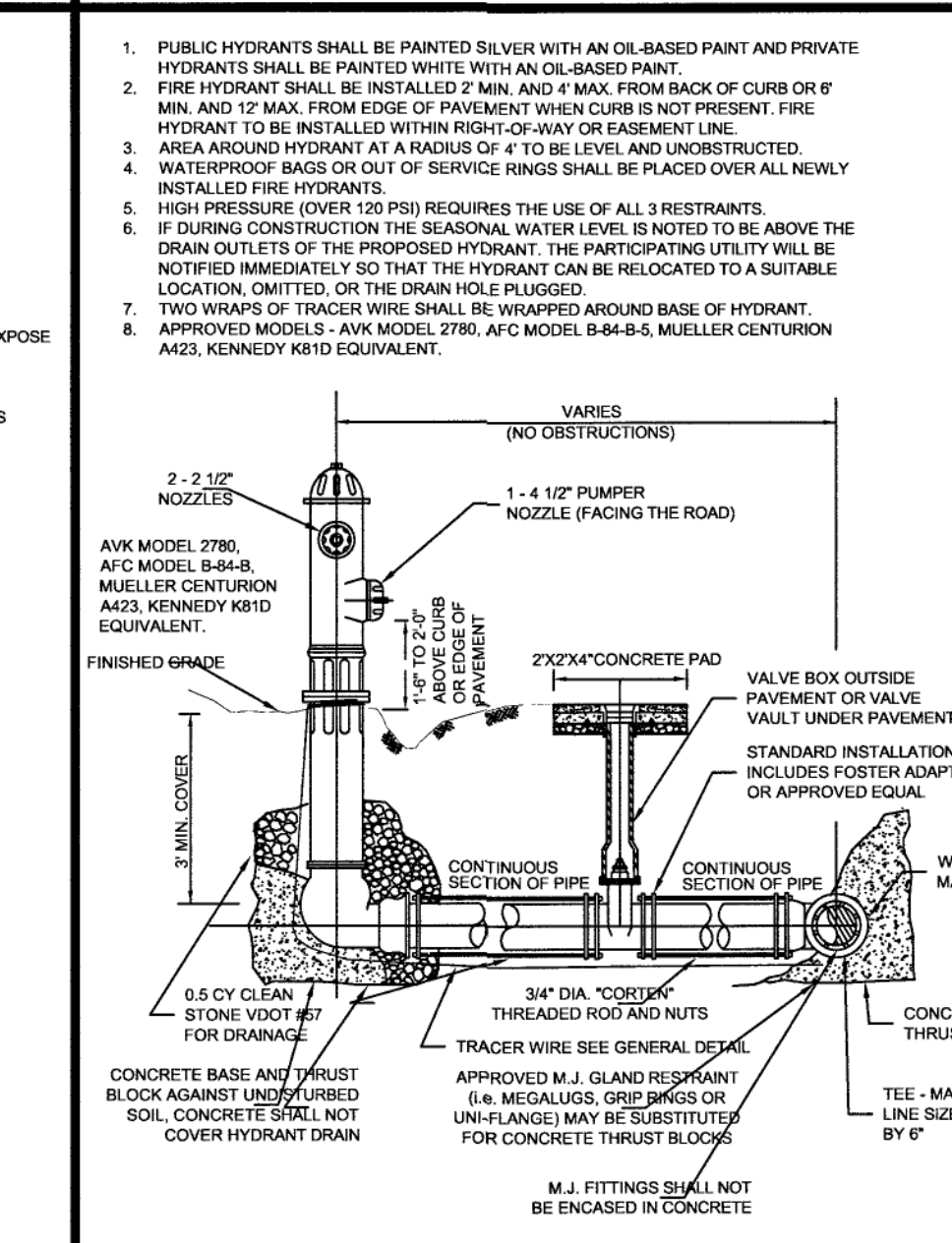
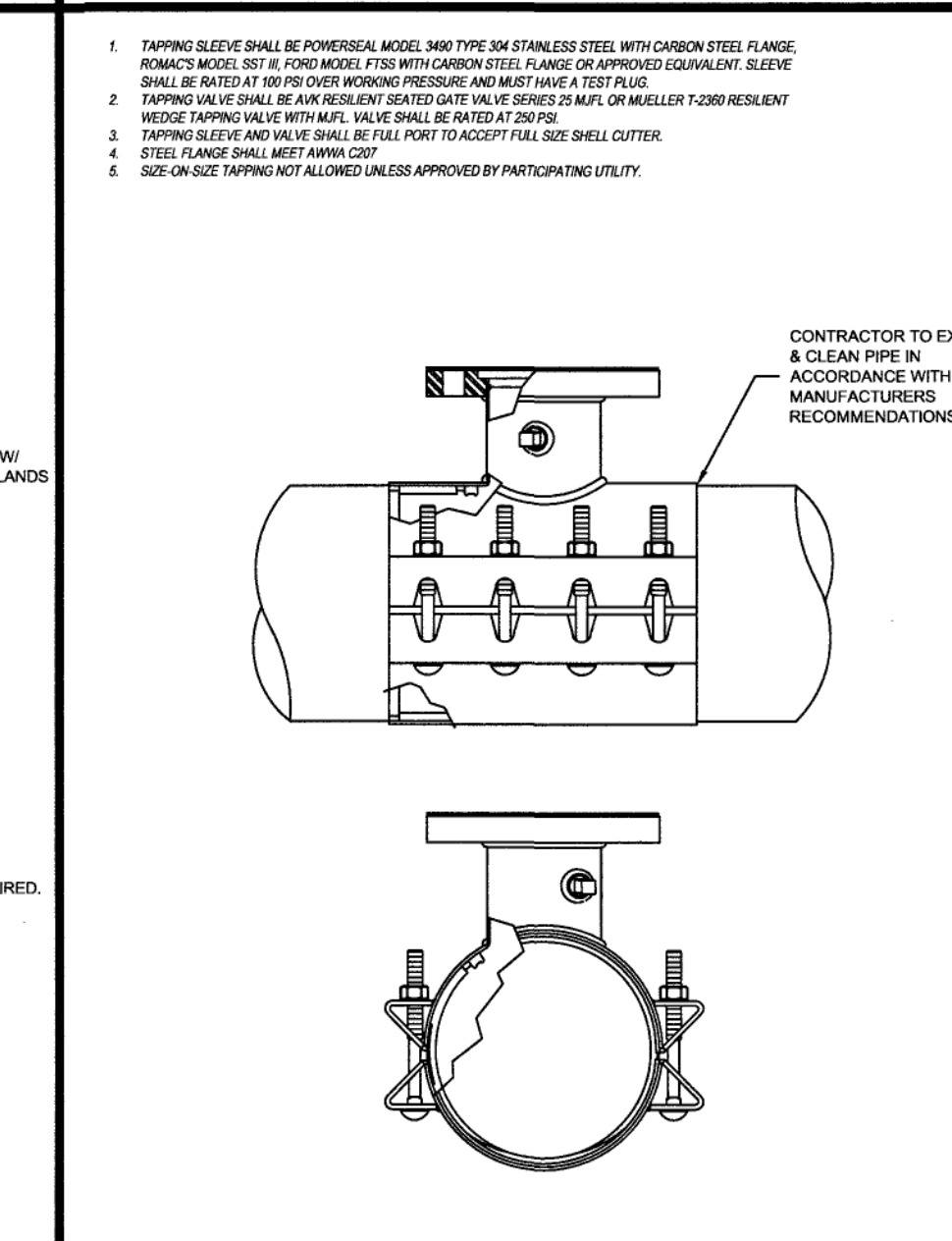
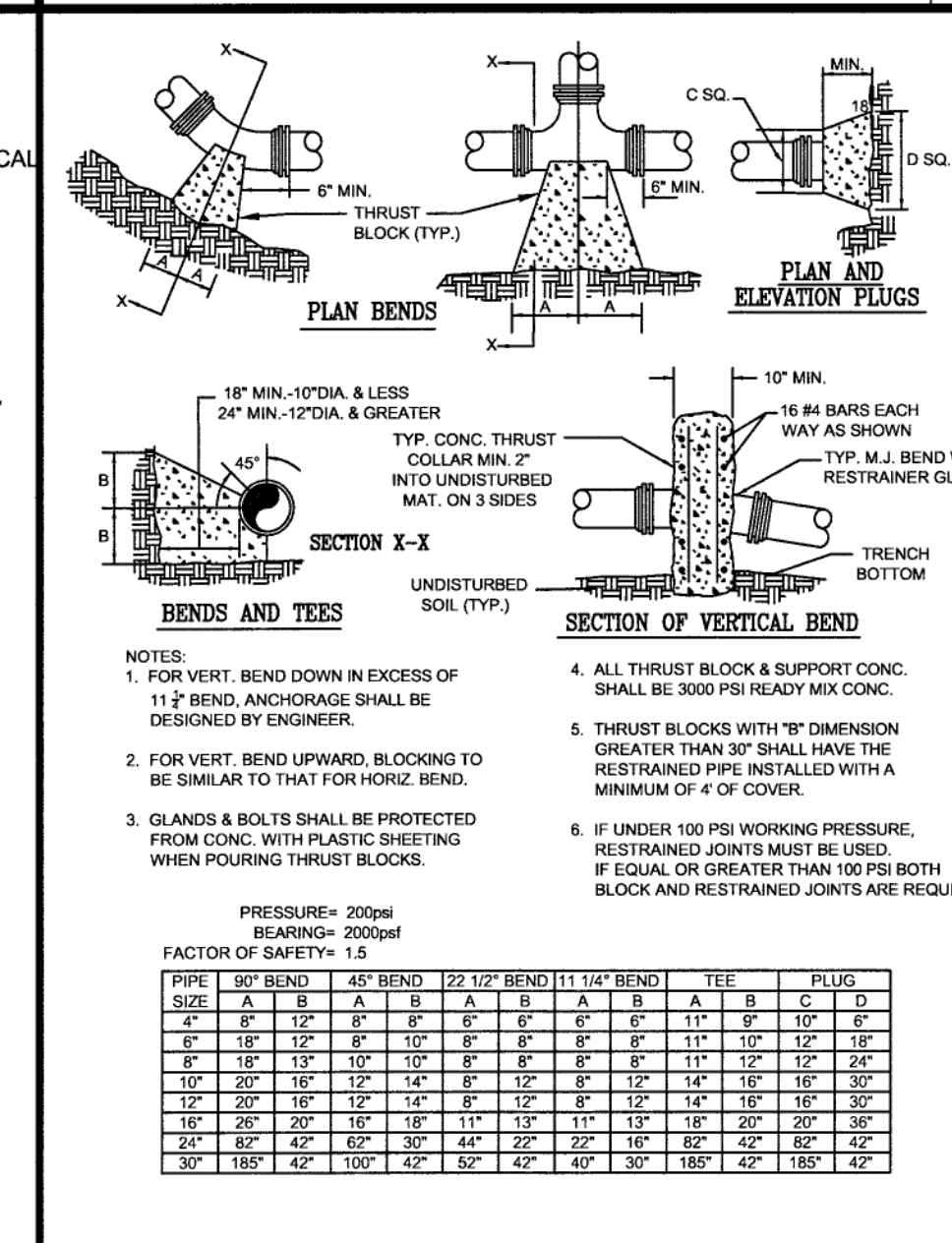
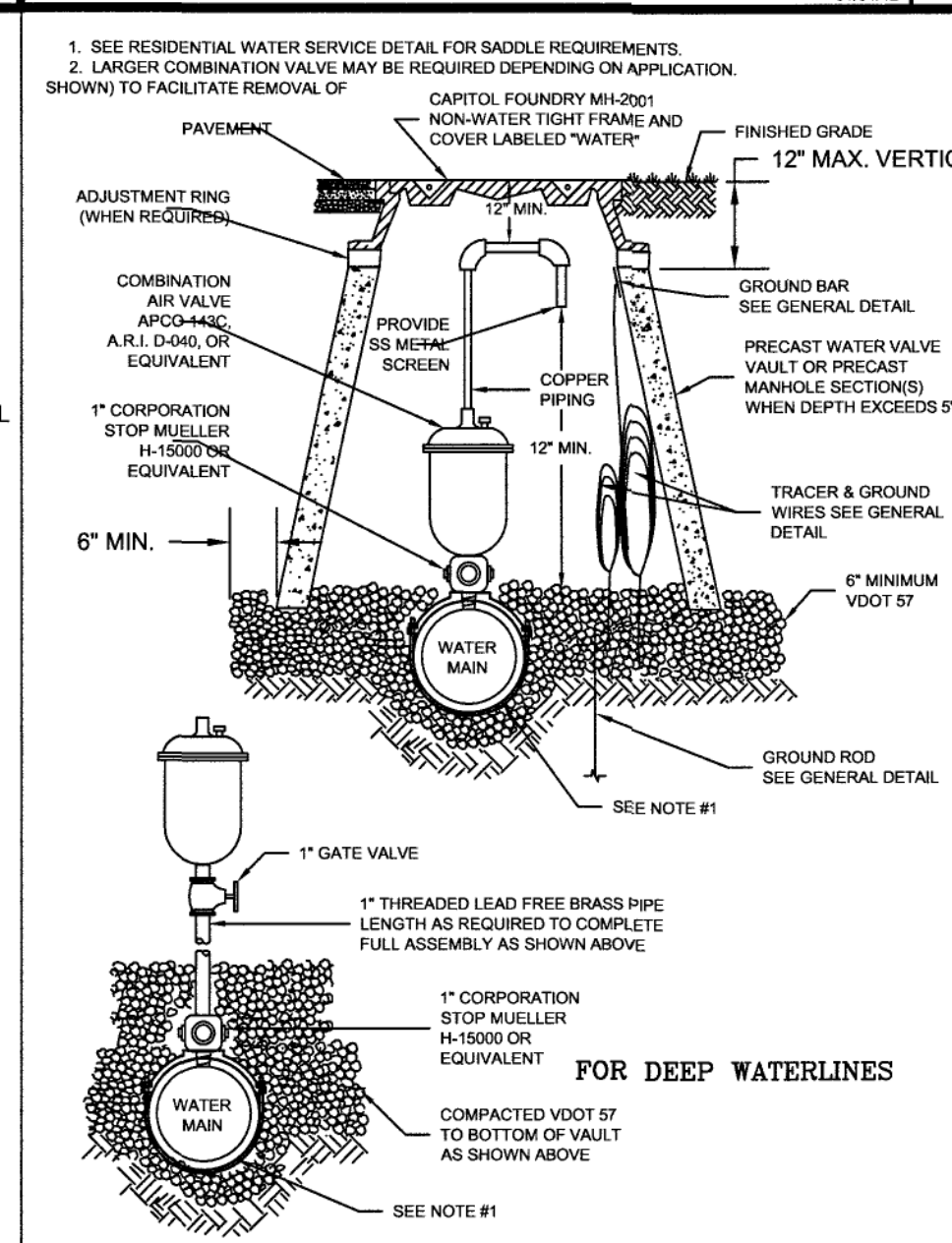
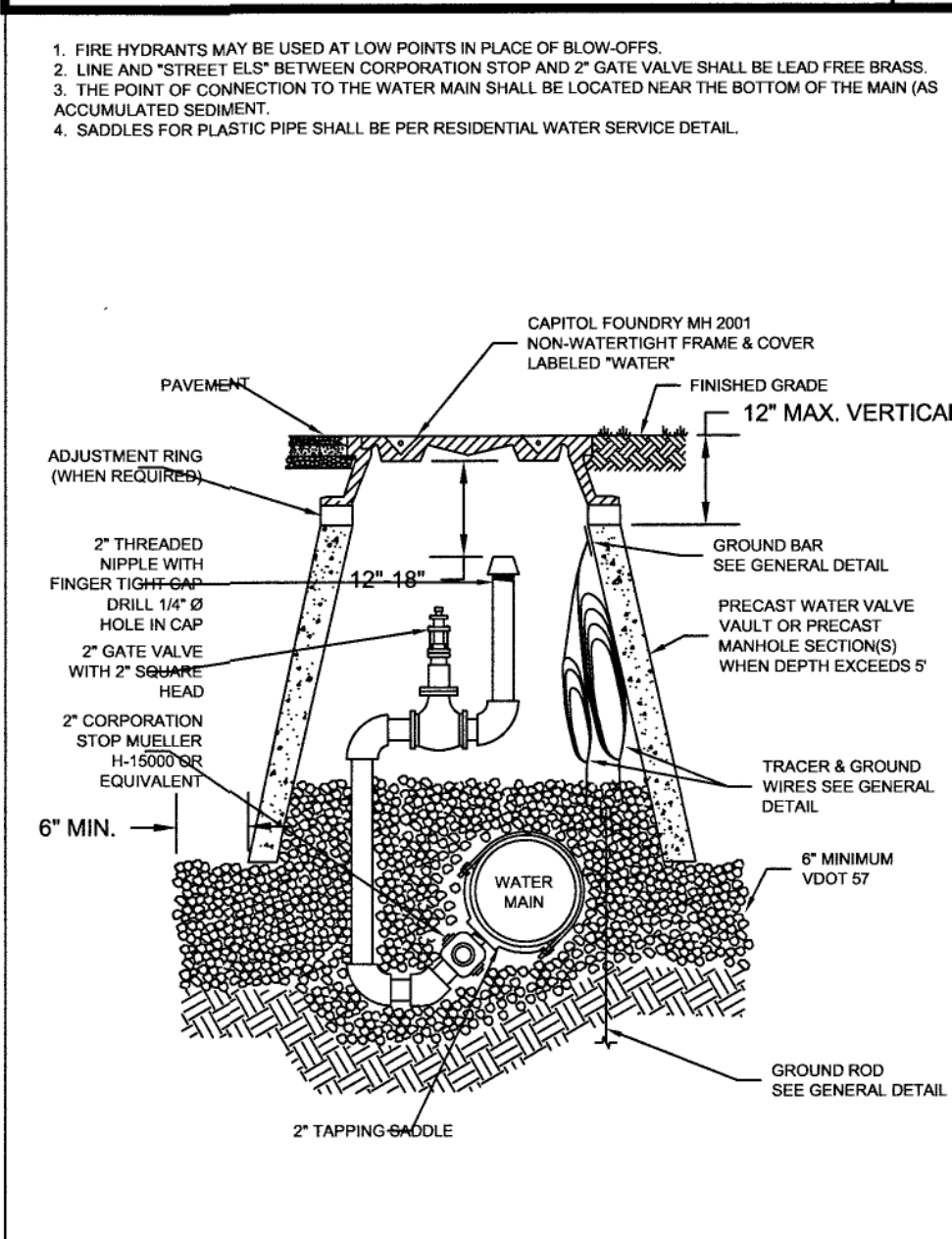
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
BEDDING AND BACKFILL
OUTSIDE OF PAVED AREAS
01/01/12 G-11

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
BEDDING AND BACKFILL
UNDER PAVEMENT AND IN RIGHT-OF-WAY
01/01/12 G-12

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
SANITARY SEWER LATERAL
01/01/12 S-6

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
WATER LINE VALVE & VAULT
01/01/12 W-9

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
FIRE HYDRANT ASSEMBLY
01/01/12 W-17



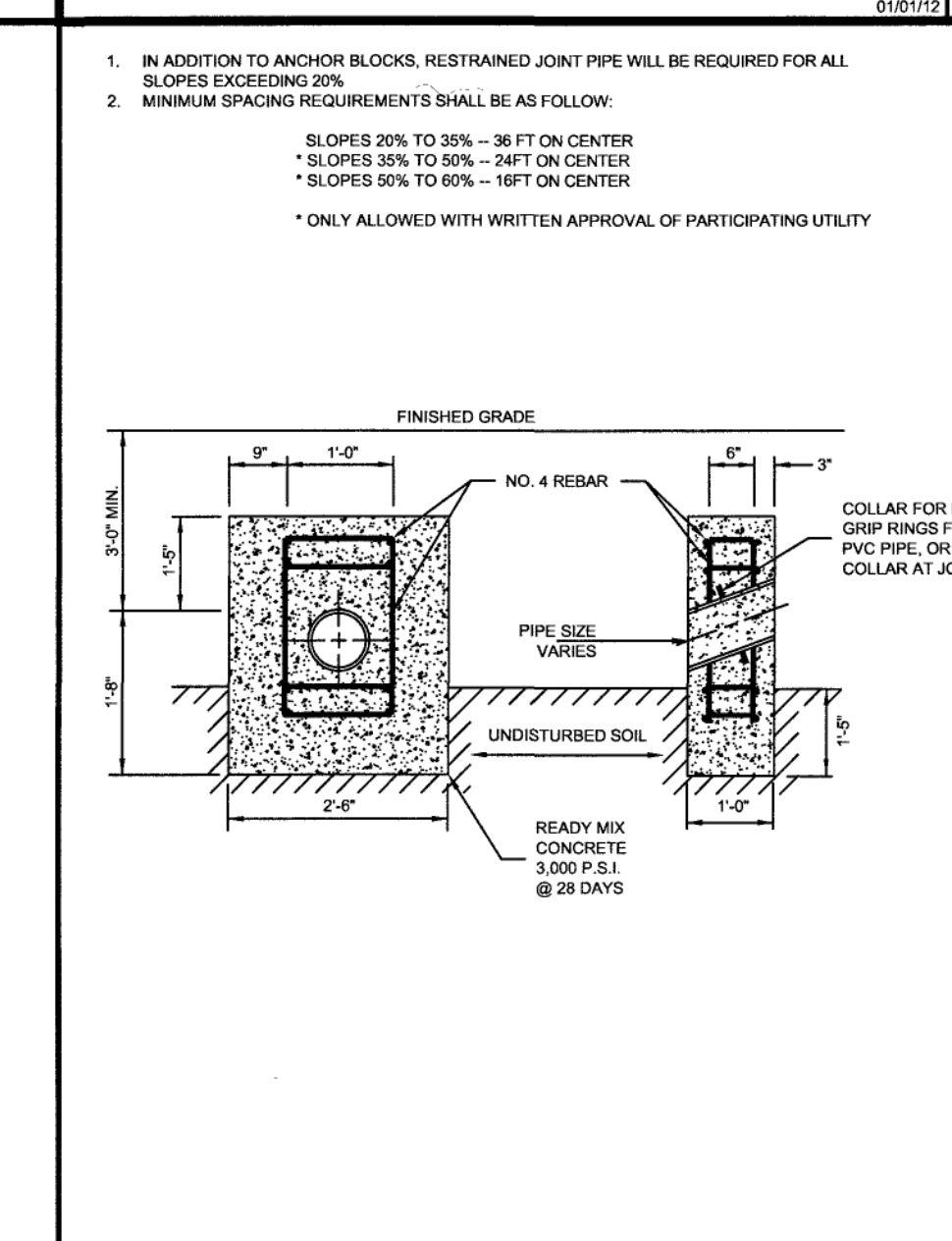
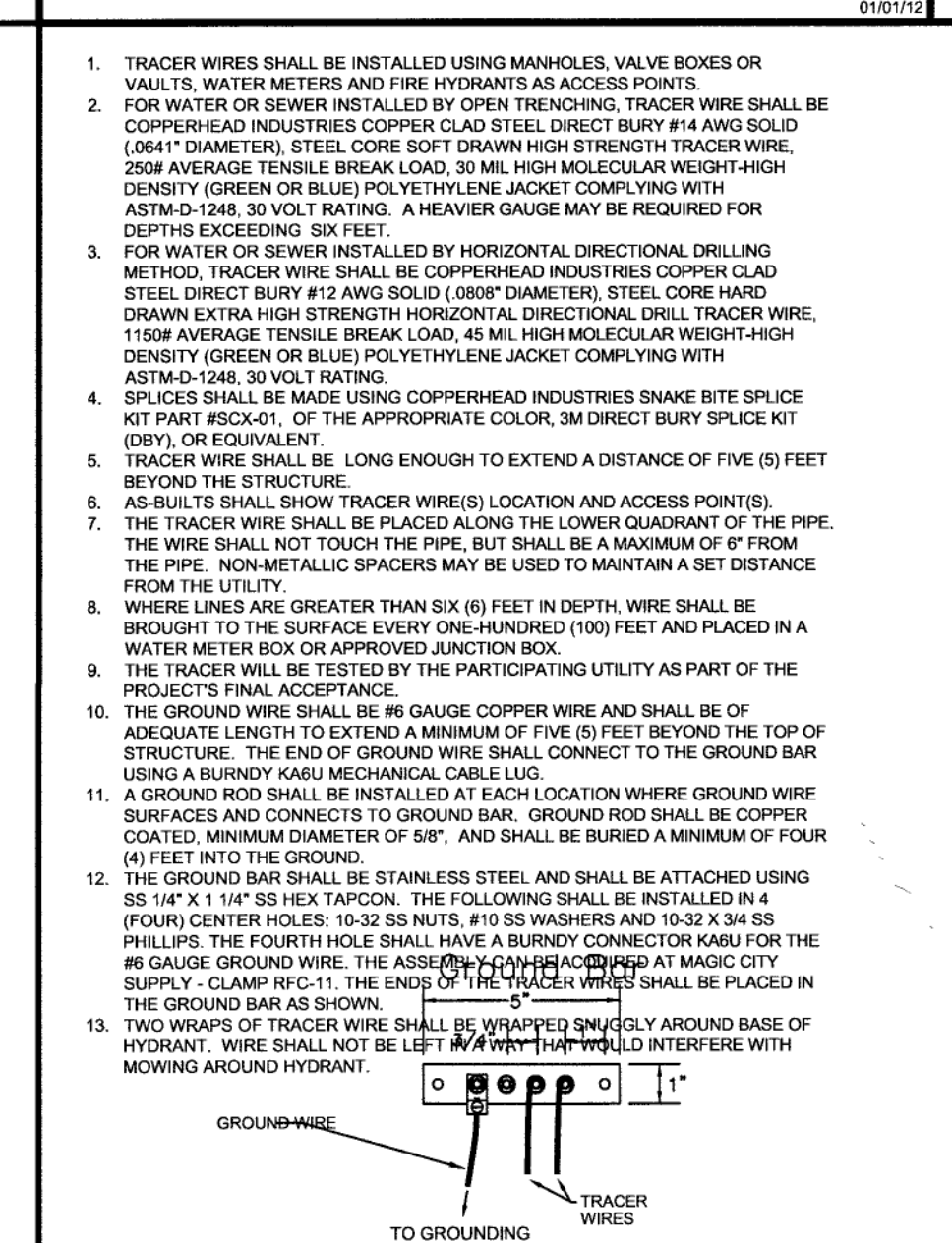
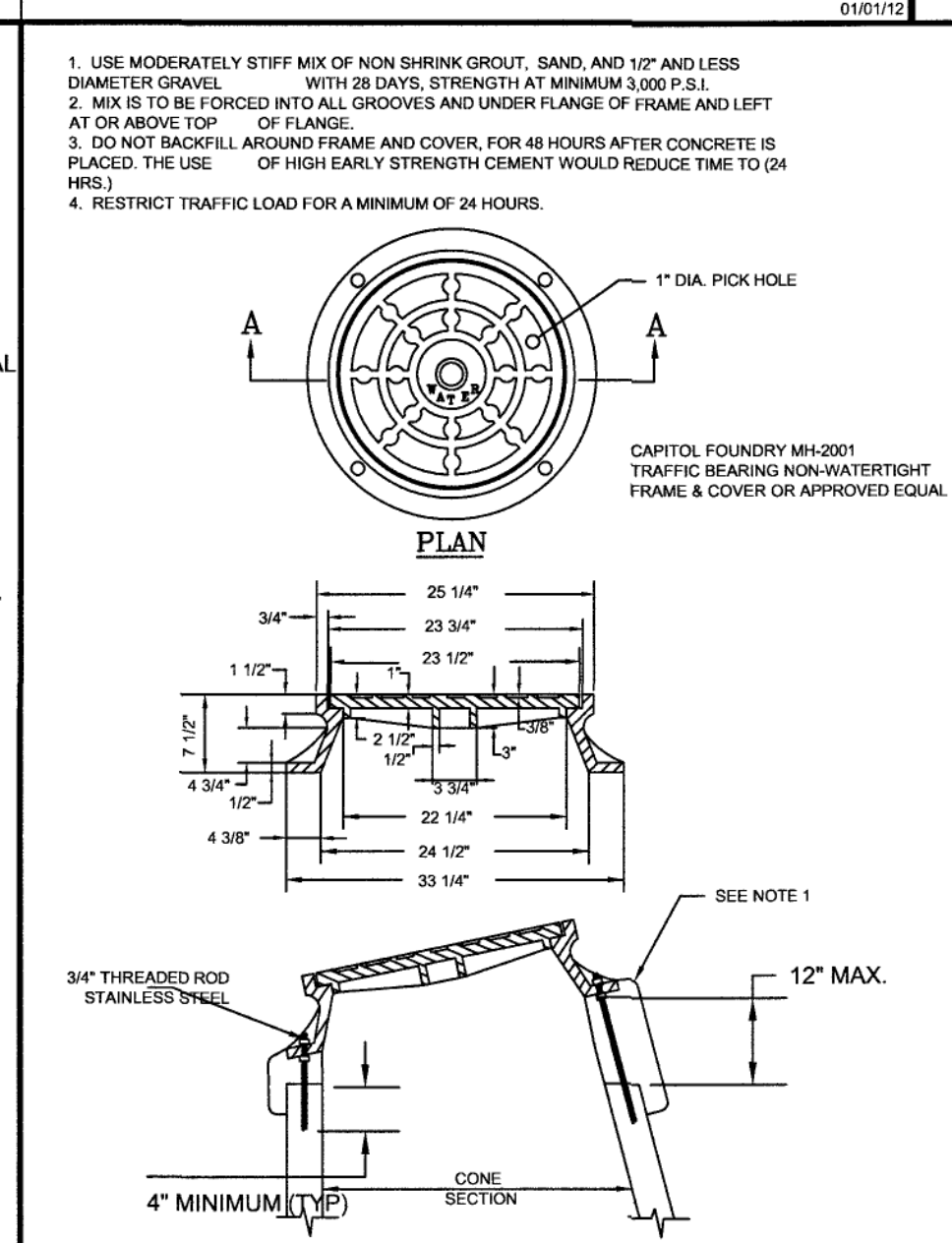
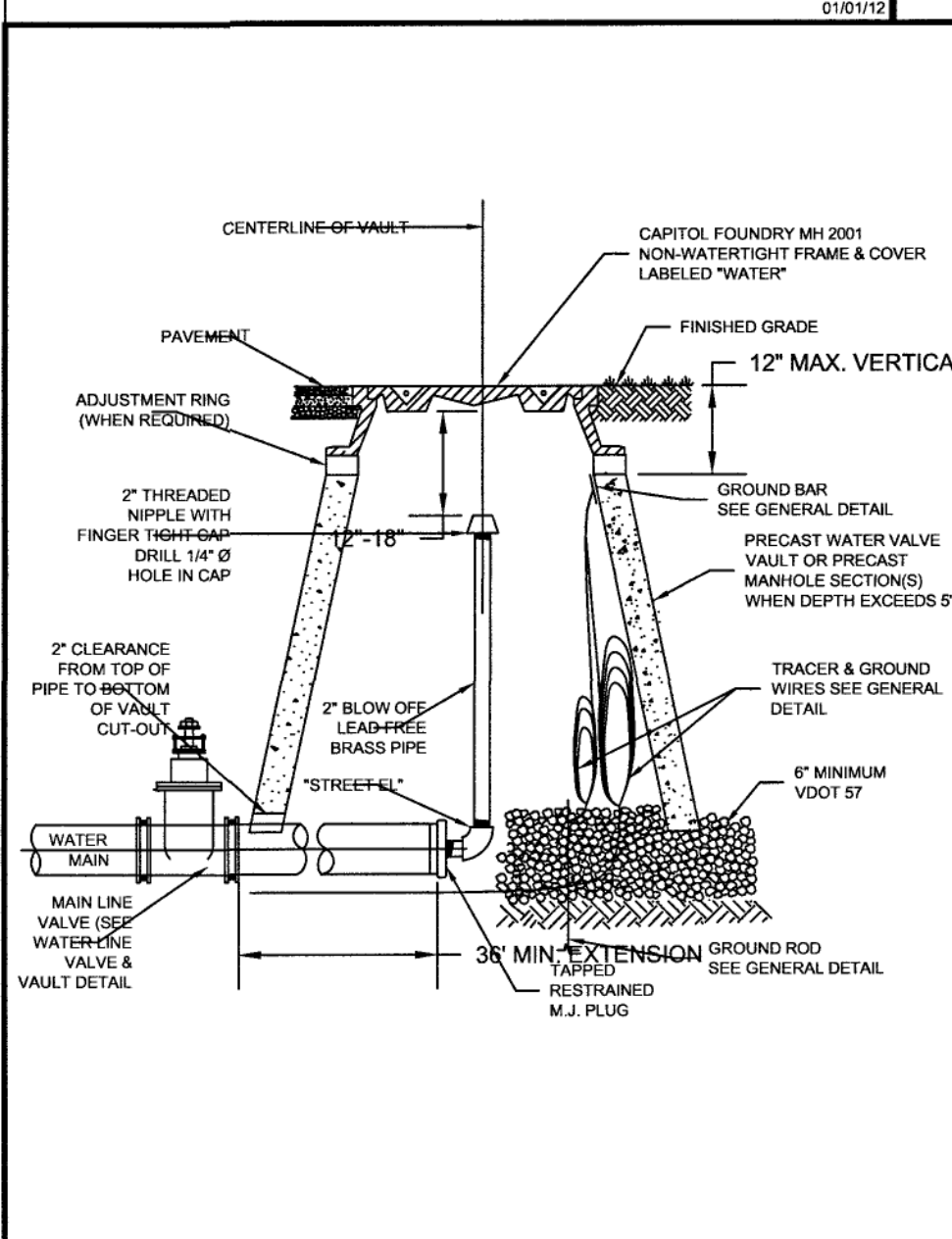
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
IN-LINE BLOW-OFF ASSEMBLY
01/01/12 W-12

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
COMBINATION AIR VALVE ASSEMBLY
01/01/12 W-13

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
THRUST BLOCK REQUIREMENTS
01/01/12 W-18

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
TAPPING SLEEVE AND VALVE
01/01/12 W-21

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
FIRE HYDRANT ASSEMBLY
01/01/12 W-17



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
TEMPORARY END OF LINE BLOW-OFF ASSEMBLY
01/01/12 W-11

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
VAULT FRAME AND COVER
01/01/12 W-16

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
TRACER WIRE FOR NON-METALLIC PRESSURE PIPE
01/01/12 G-4

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
ANCHOR BLOCK
01/01/12 G-10

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL
FIRE HYDRANT ASSEMBLY
01/01/12 W-17