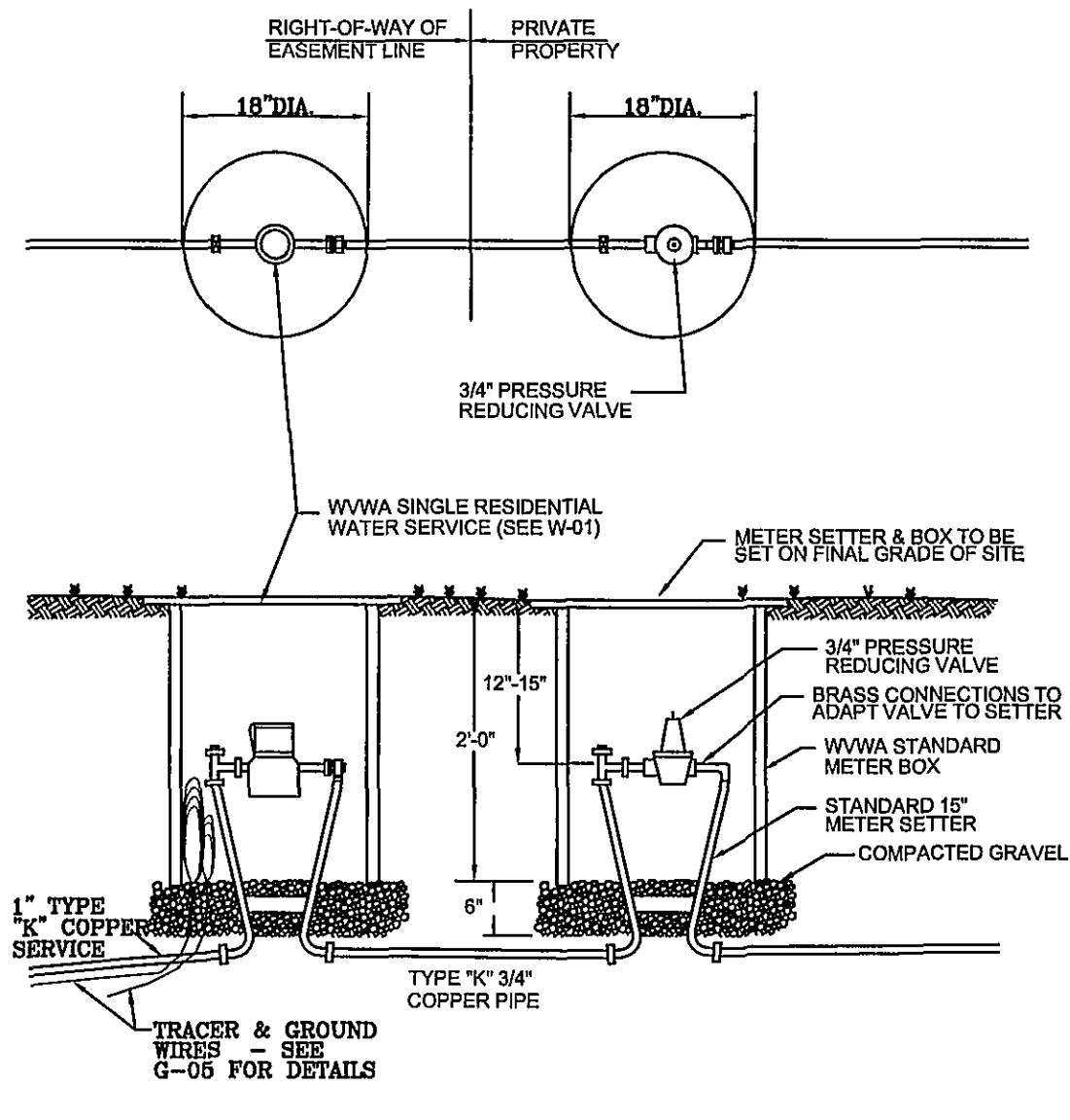
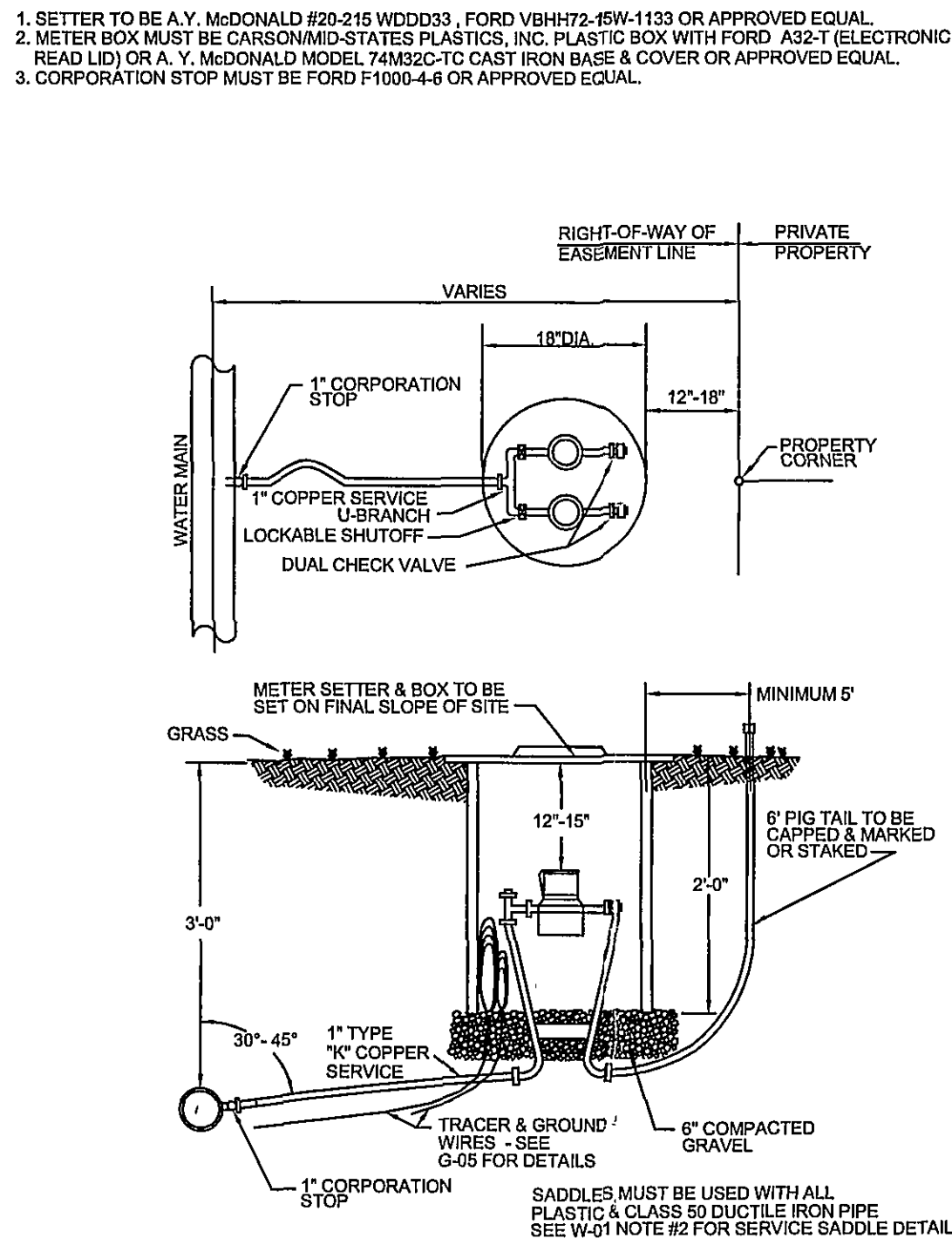


1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, VALVE BOXES OR VENTS, WATER METERS AND FIRE HYDRANTS AS ACCESS POINTS.
2. TRACER WIRE SHALL BE A 12 GAUGE SOLID COPPER WIRE WITH POLYETHYLENE INSULATION OF 30 MIL THICKNESS.
3. SPLICES SHALL BE MADE USING A 3M DIRECT BURY SPLICE KIT (DBV) OR EQUIVALENT.
4. TRACER WIRE SHALL BE LONG ENOUGH TO EXTEND A DISTANCE OF FIVE (5) FEET BEYOND THE STRUCTURE.
5. ASSEMBLY SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S).
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 MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.
7. WHERE LINES ARE GREATER THAN SIX(6) FEET IN DEPTH, WIRE SHALL BE BROUGHT TO THE SURFACE EVERY ONE HUNDRED (100) FEET AND PLACED IN A WATER METER BOX OR APPROVED JUNCTION BOX.
8. THE TRACER WIRE SHALL BE TESTED BY THE AUTHORITY AS PART OF THE PROJECT'S FINAL ACCEPTANCE.
9. THE GROUND WIRE SHALL BE 80 GAUGE COPPER WIRE AND INSTALLED TO EXTEND A DISTANCE OF FIVE (5) FEET INTO THE GROUND. GROUND WIRE SHALL BE OF ADEQUATE LENGTH TO EXTEND FIVE (5) FEET BEYOND THE TOP OF STRUCTURE AND THE END OF GROUND WIRE SHALL BE PLACED INTO THE K&B CONNECTOR.
10. THE GROUND BAR SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED USING 8S 1/4" X 1 1/4" SS HEX TAPCON. THE FOLLOWING SHALL BE INSTALLED IN 4 (FOUR) CENTER HOLES: 10-32 SS NUTS, #10 SS WASHERS AND 10-32 X 3/4 SS PHILLIPS. THE FOURTH HOLE SHALL HAVE A BURNED CONNECTOR K&B FOR THE 80 GAUGE GROUND WIRE. THE ASSEMBLY CAN BE ACQUIRED AT MAGIC CITY SUPPLY - CLARK REC-11. THE ENDS OF THE TRACER WIRES SHALL BE PLACED IN THE GROUND BAR AS SHOWN.

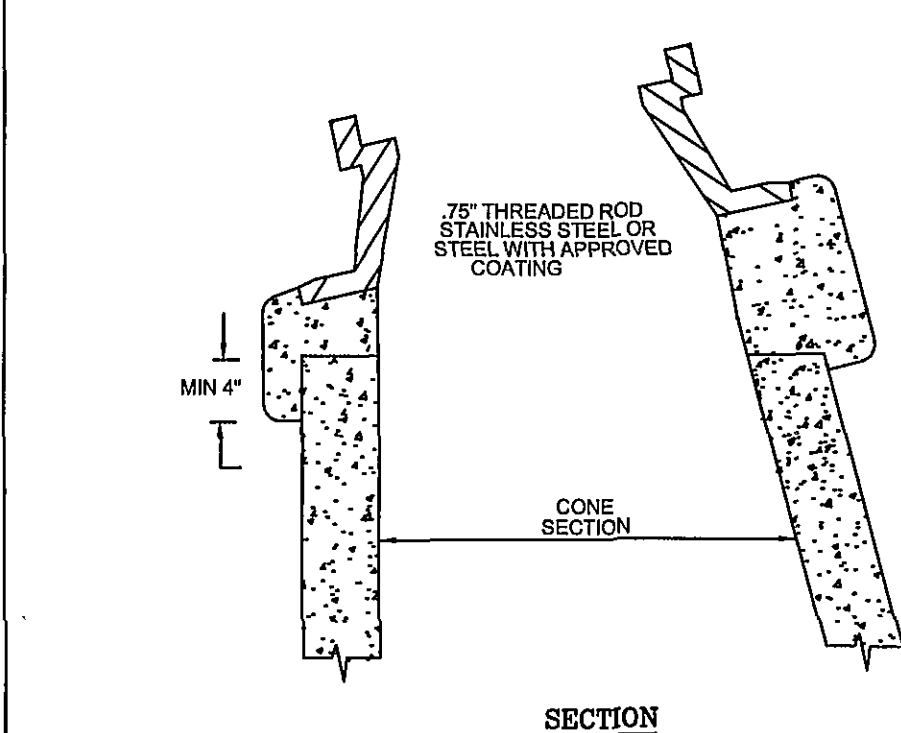


SEE W-01 NOTE #2 FOR SERVICE SADDLE DETAILS.

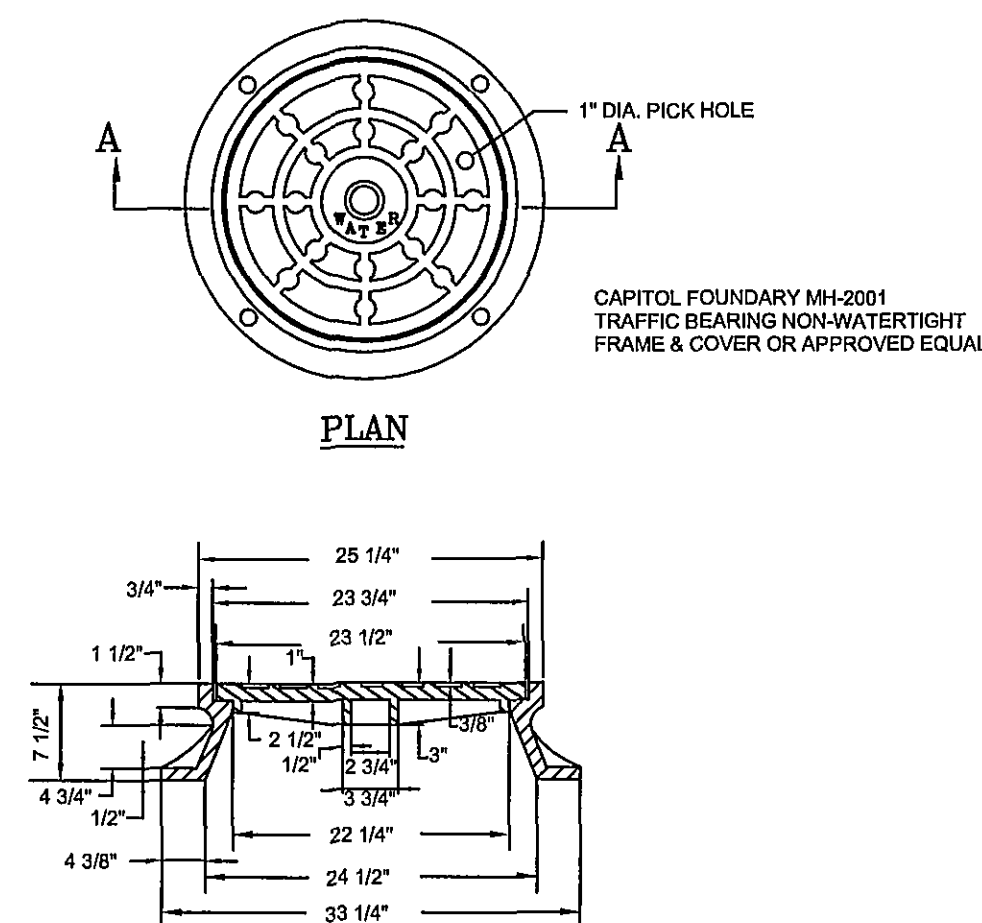
1. THIS CONFIGURATION REQUIRED WHEN WATER PRESSURE AT THE WATER MAIN IS BETWEEN 80 AND 120 PSI.



SEE W-01 NOTE #2 FOR SERVICE SADDLE DETAILS.



- NOTE:
1. USE MODERATELY STIFF MIX OF NON SHRINK CEMENT.
 2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
 3. ALL PIPE SHALL BE OF SAME SIZE.
 4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEANOUT STACK WYE. (EXCEPT AS NOTED)
 5. ALL MAIN LINE TAPS ON ACTIVE MAINS WILL BE PERFORMED BY WESTERN VIRGINIA WATER AUTHORITY.
 6. PIPING BEHIND CLEANOUT TO BE INSTALLED PER BOCA CODE.
 7. MINIMUM LATERAL SIZE:
 8. 4" FOR RESIDENTIAL SERVICE
 9. 6" FOR NON-RESIDENTIAL SERVICE
 10. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE(3) FEET.
 11. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS. IN ACCORDANCE WITH THIS STANDARD.
 12. FLOWLINE AT CLEANOUT WYE SHALL BE A MINIMUM OF THREE FEET (3') BELOW LOWEST SERVED FINISHED FLOOR.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

TRACER WIRE FOR NON-METALLIC PRESSURE PIPE

G-05

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

TYPE "B" SINGLE RESIDENTIAL WATER SERVICE (LINE PRESSURE UNDER 80 TO 120 PSI)

W-02

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

DOUBLE RESIDENTIAL WATER SERVICE

W-04

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

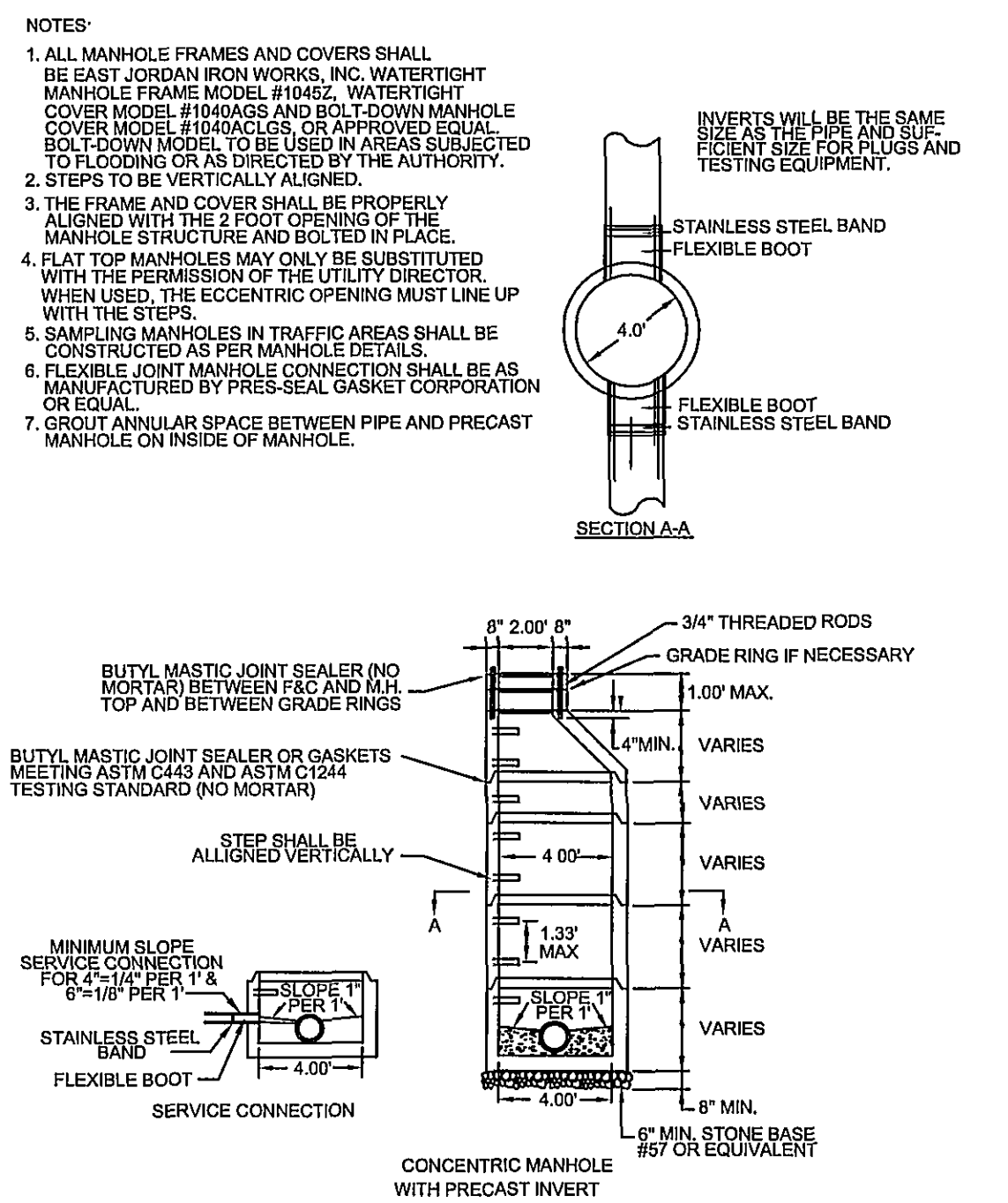
INSTALLATION DETAIL FOR ALL FRAMES AND COVERS

W-16

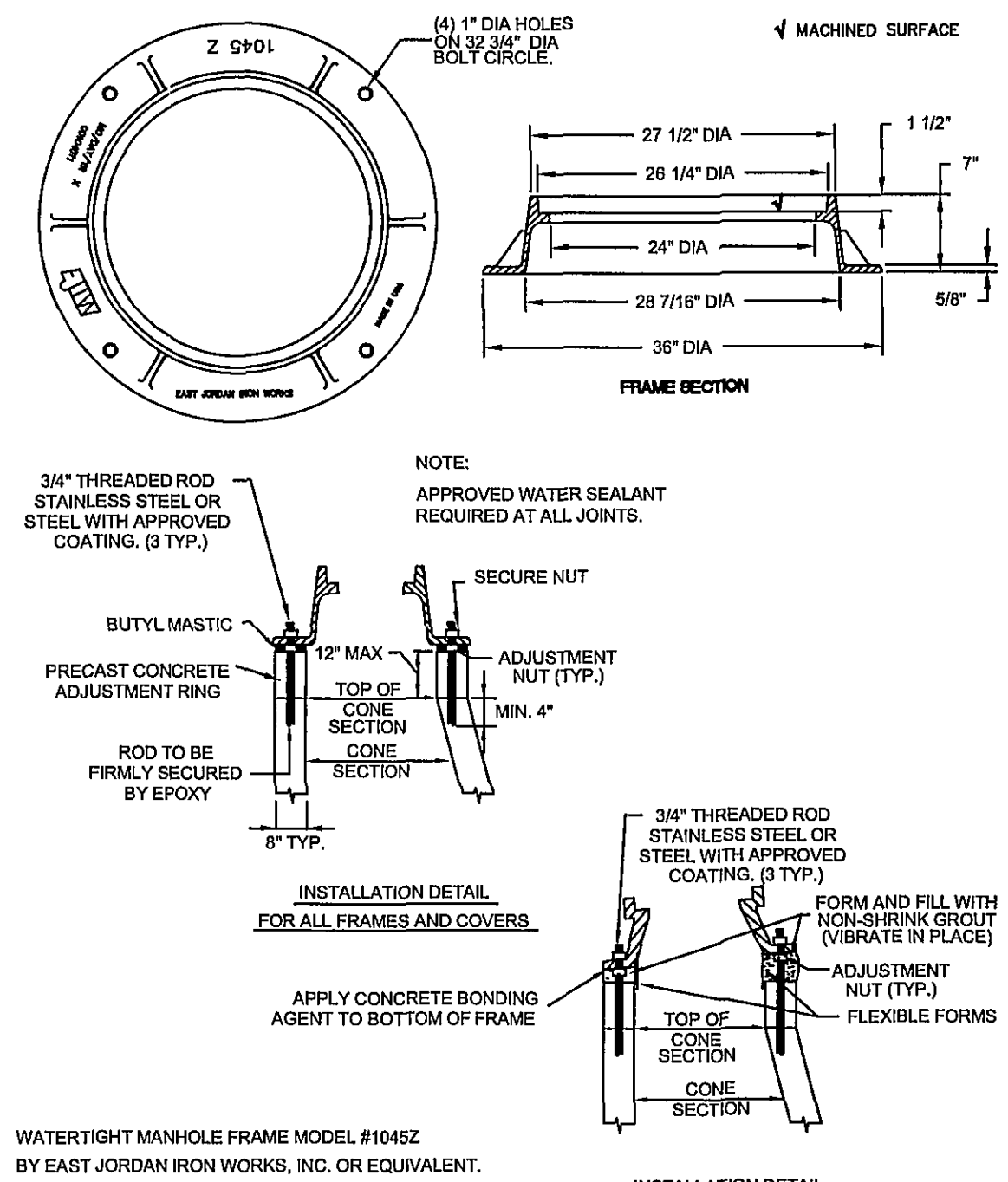
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

MANHOLE FRAME AND COVER

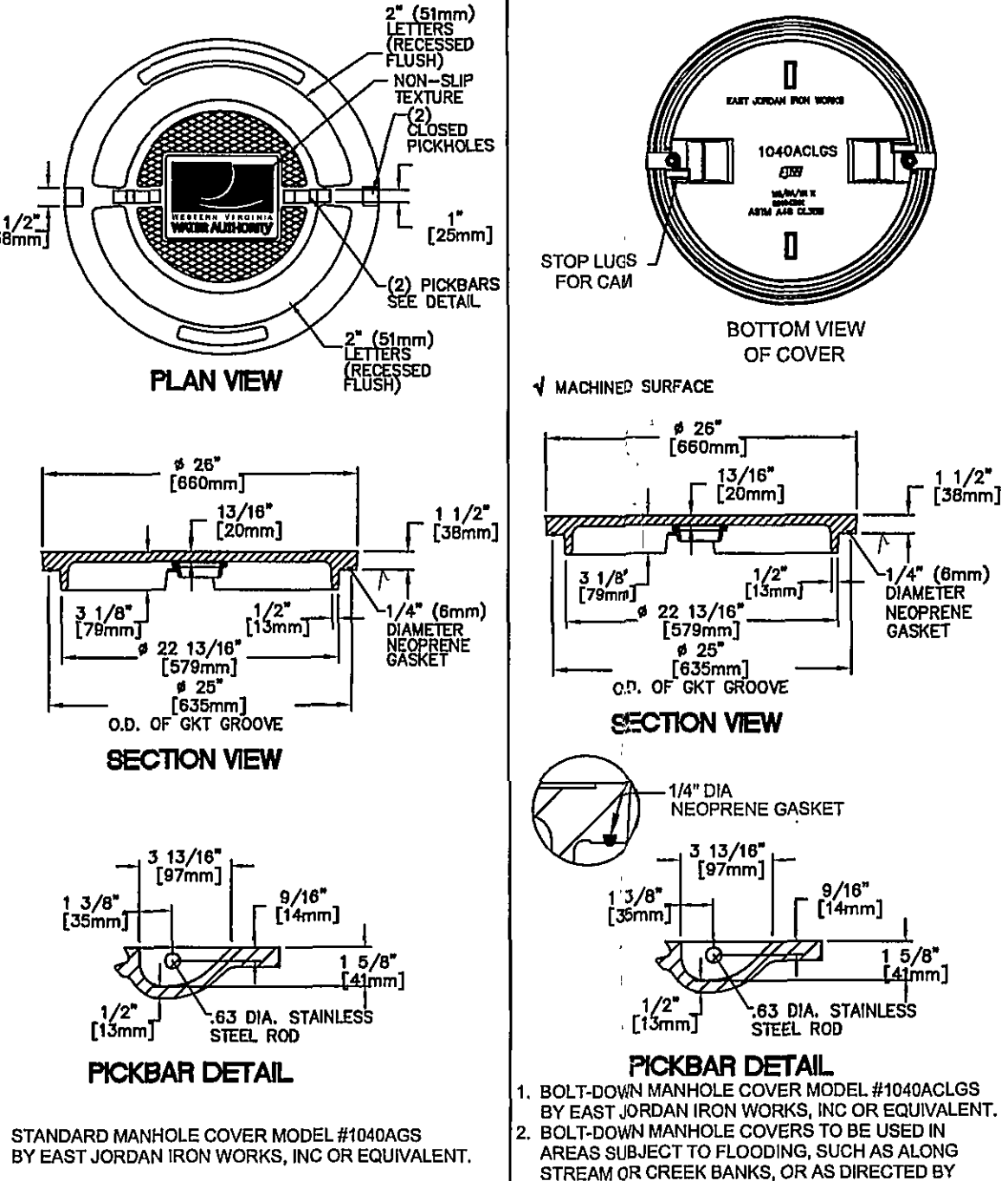
W-17



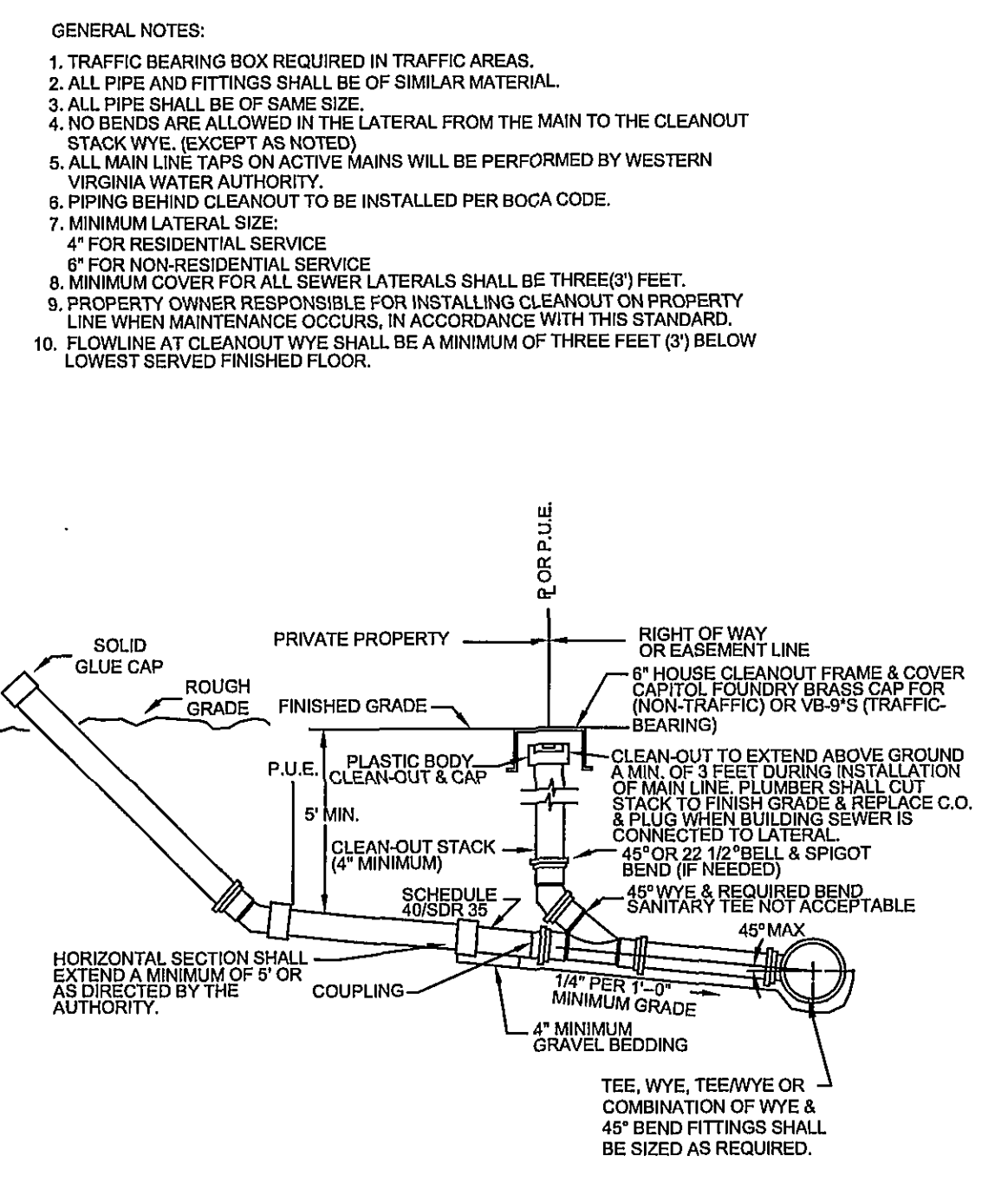
CONCENTRIC MANHOLE WITH PRECAST INVERT



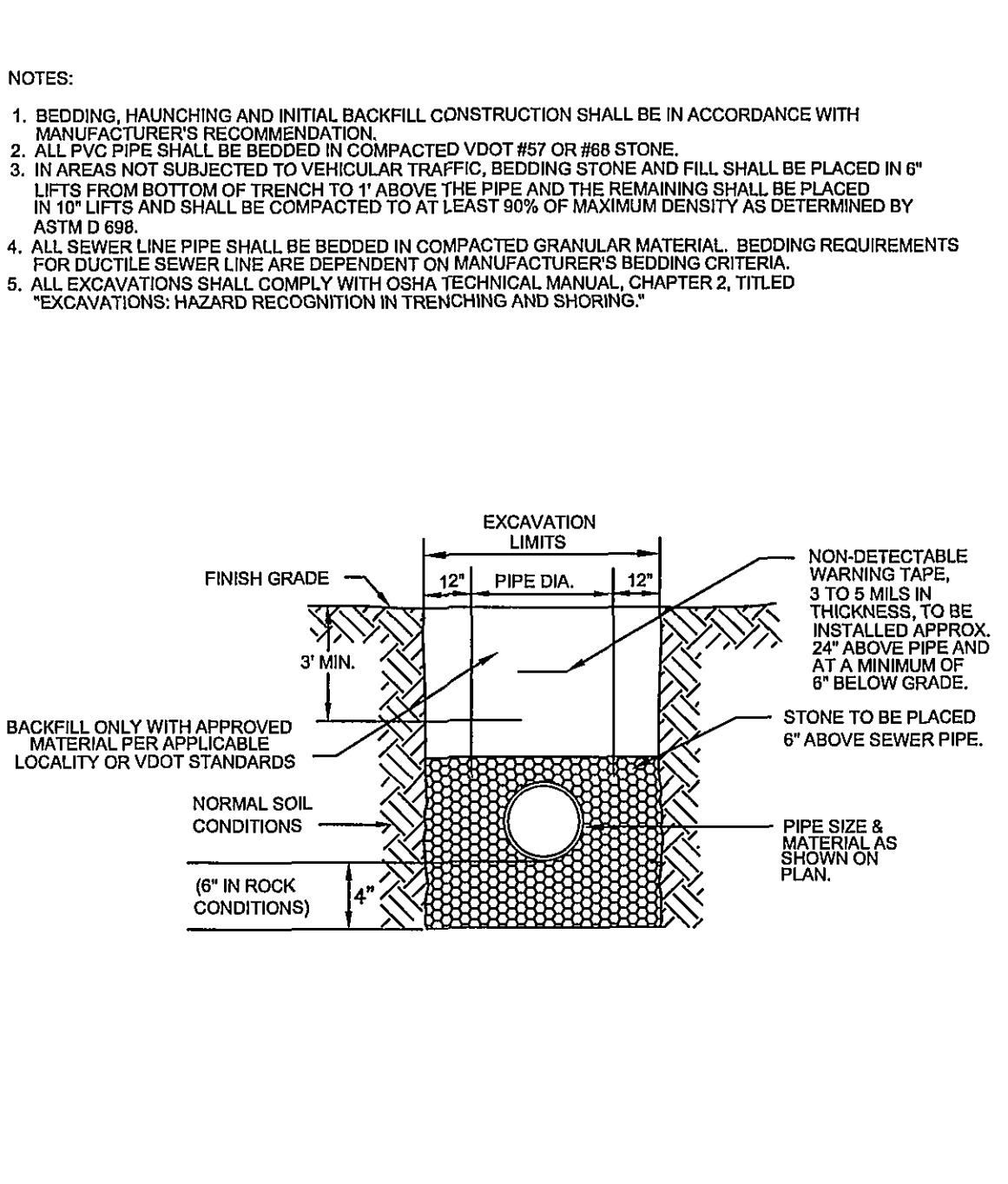
WATERTIGHT MANHOLE FRAME MODEL #1045Z BY EAST JORDAN IRON WORKS, INC. OR EQUIVALENT.



STANDARD MANHOLE COVER MODEL #1040AGS BY EAST JORDAN IRON WORKS, INC. OR EQUIVALENT.



1. BOLT-DOWN MANHOLE COVER MODEL #1040AGS BY EAST JORDAN IRON WORKS, INC. OR EQUIVALENT.
2. BOLT-DOWN MANHOLE COVERS TO BE USED IN AREAS SUBJECT TO FLOODING, SUCH AS ALONG STREAM OR CREEK BANKS, OR AS DIRECTED BY THE AUTHORITY.



- NOTES:
1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
 2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
 3. IN AREAS NOT SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" 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 998.
 4. ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE SEWER 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."

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

4' STANDARD MANHOLE FOR PIPE 15" OR SMALLER

S-01

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

WATERTIGHT MANHOLE FRAME

S-05

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

WATERTIGHT MANHOLE COVER

S-06

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

SANITARY SEWER LATERAL

S-08

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS	
REVISION DATE	
07/01/04	
03/01/06	

BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS

S-30

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BELLEVUE CREEK SUBDIVISION
W.V.W.A. DETAILS
ROANOKE CITY, VIRGINIA

DRAWN BY: CPB
DESIGNED BY: CPB
CHECKED BY: JVJ
DATE: 04/03/2007
REVISIONS:
05/04/2007
06/26/2007
08/02/2007
09/13/2007

SCALE: N/A
SHEET NO. **C-6**
JOB NO. R0600397.00