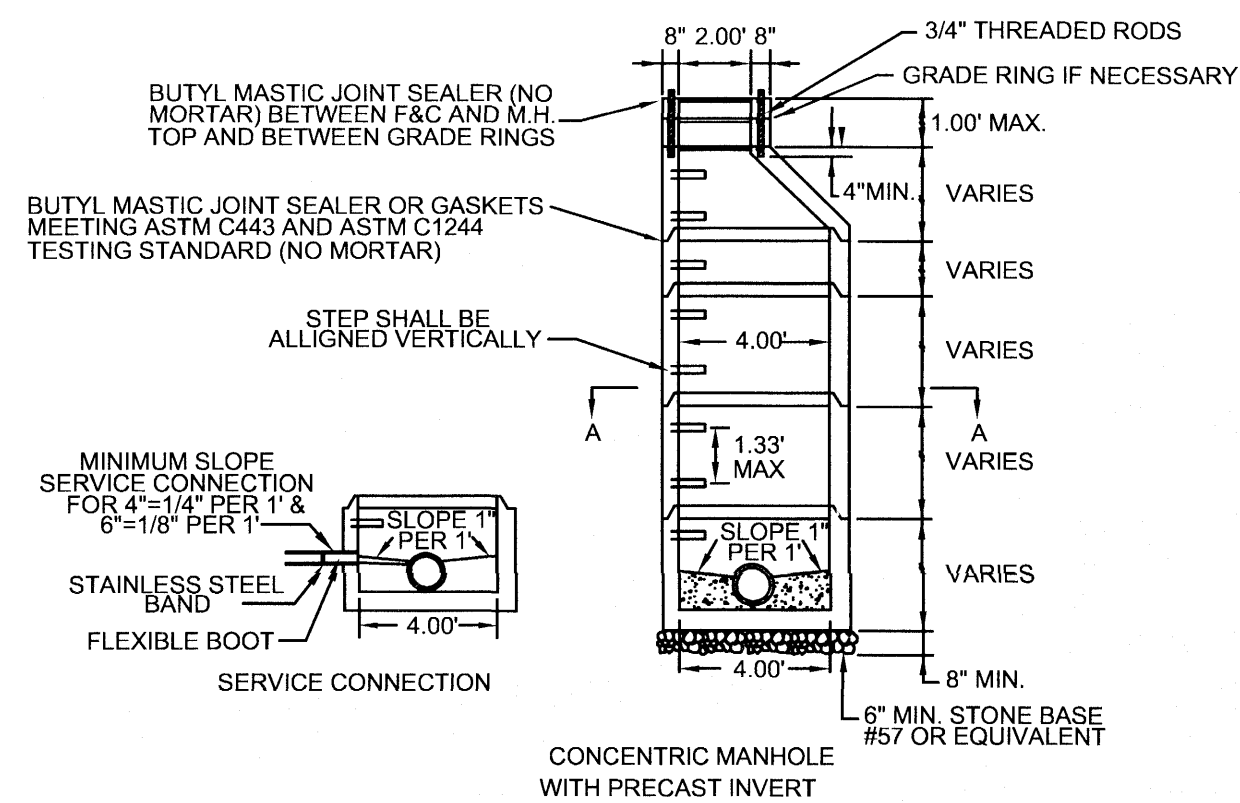
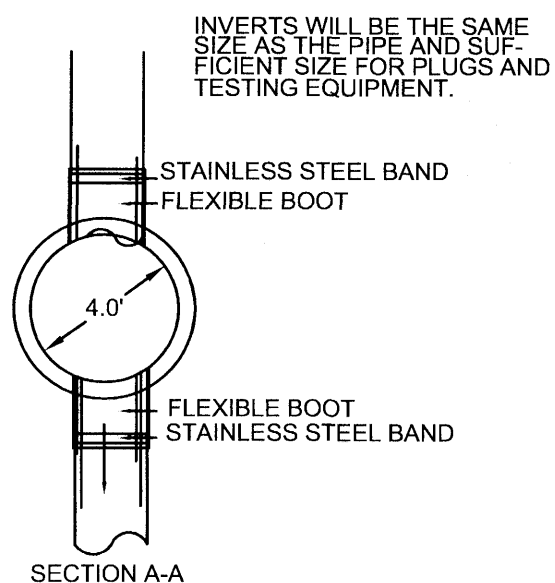
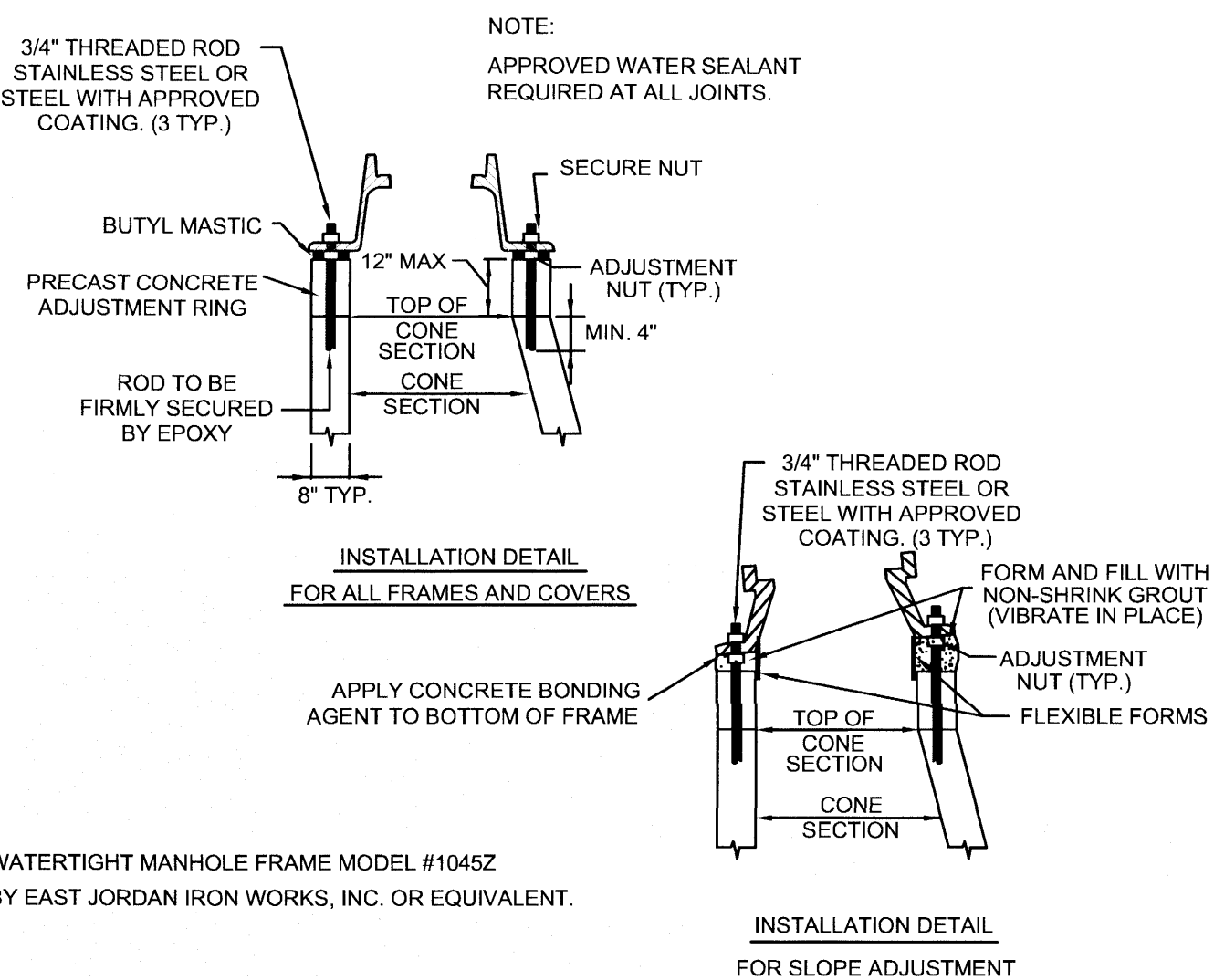
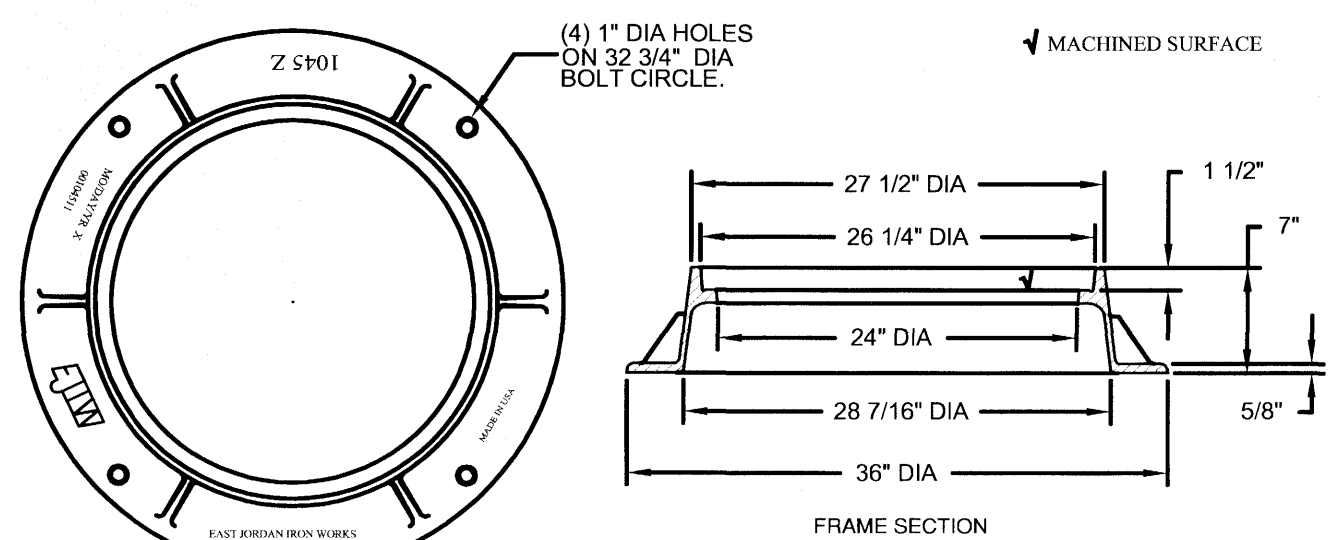
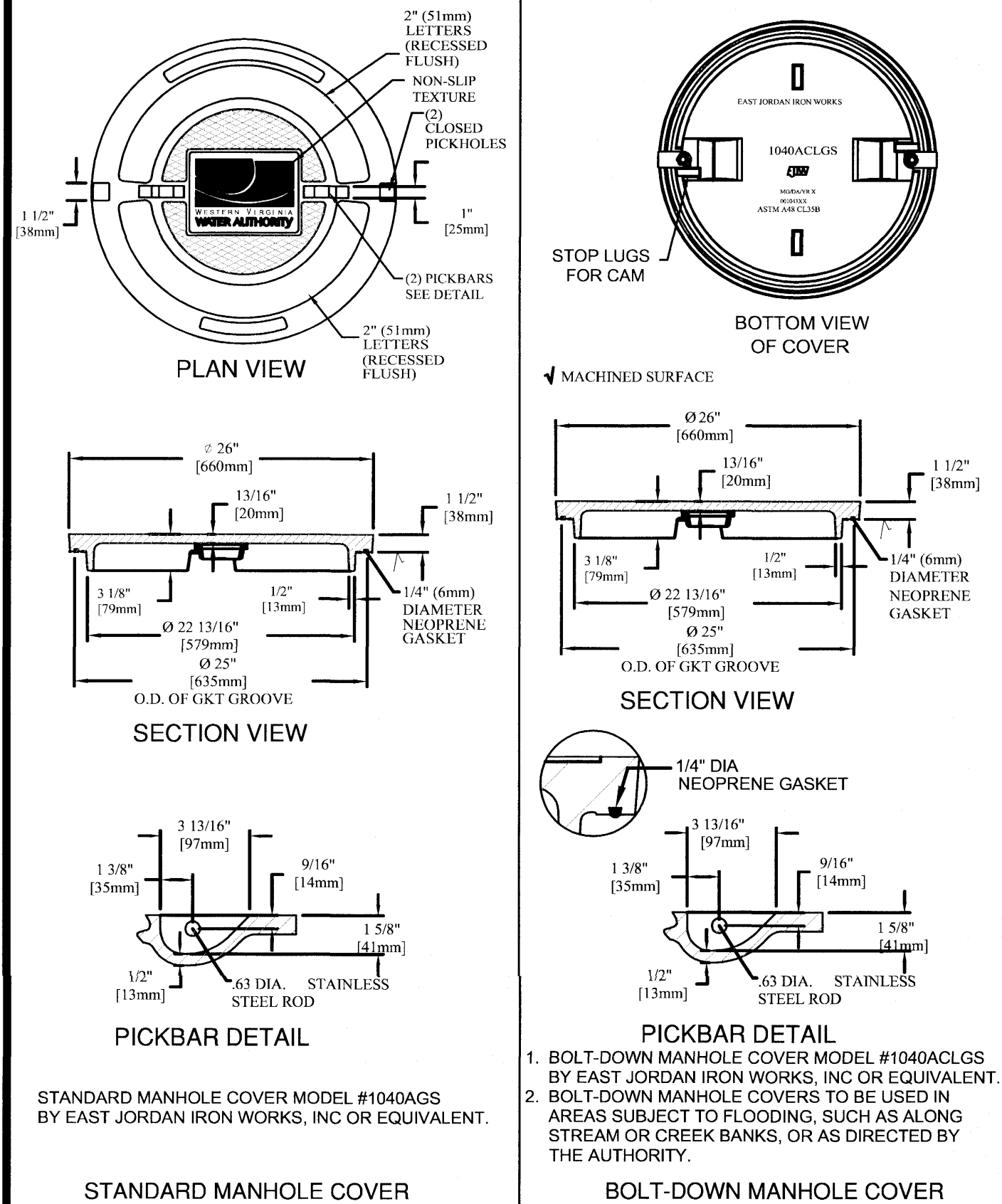


1. ALL MANHOLE FRAMES AND COVERS SHALL BE EAST JORDAN IRON WORKS, INC. WATERIGHT COVER MODEL #1045Z, WATERIGHT COVER MODEL #1046Z, OR APPROVED EQUAL. #1040Z OR APPROVED EQUAL MANHOLE COVER MODEL #1040ACLOS, OR APPROVED EQUAL. BOLT-DOWN MODEL TO BE USED IN AREAS SUBJECT TO TRAFFIC OR EXCESSIVE LOADS. THE AUTHORITY.
2. STEPS TO BE VERTICALLY ALIGNED.
3. THE FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2-FOOT OPENING OF THE STRUCTURE TO BE OPENED TO PROVIDE ACCESS.
4. FLAT TOP MANHOLES MAY ONLY BE SUBSTITUTED WITH THE PERMISSION OF THE UTILITY DIRECTOR. WHEN USED, THE ECCENTRIC OPENING MUST LINE UP WITH THE CURB.
5. SAMPLING MANHOLES IN TRAFFIC AREAS SHALL BE CONSTRUCTED AS PER MANHOLE DETAILS.
6. ALL MANHOLE FRAMES AND COVERS SHALL BE AS MANUFACTURED BY PRE-SEAL GASKET CORPORATION OR EQUAL.
7. GRANT MINIMUM SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE.

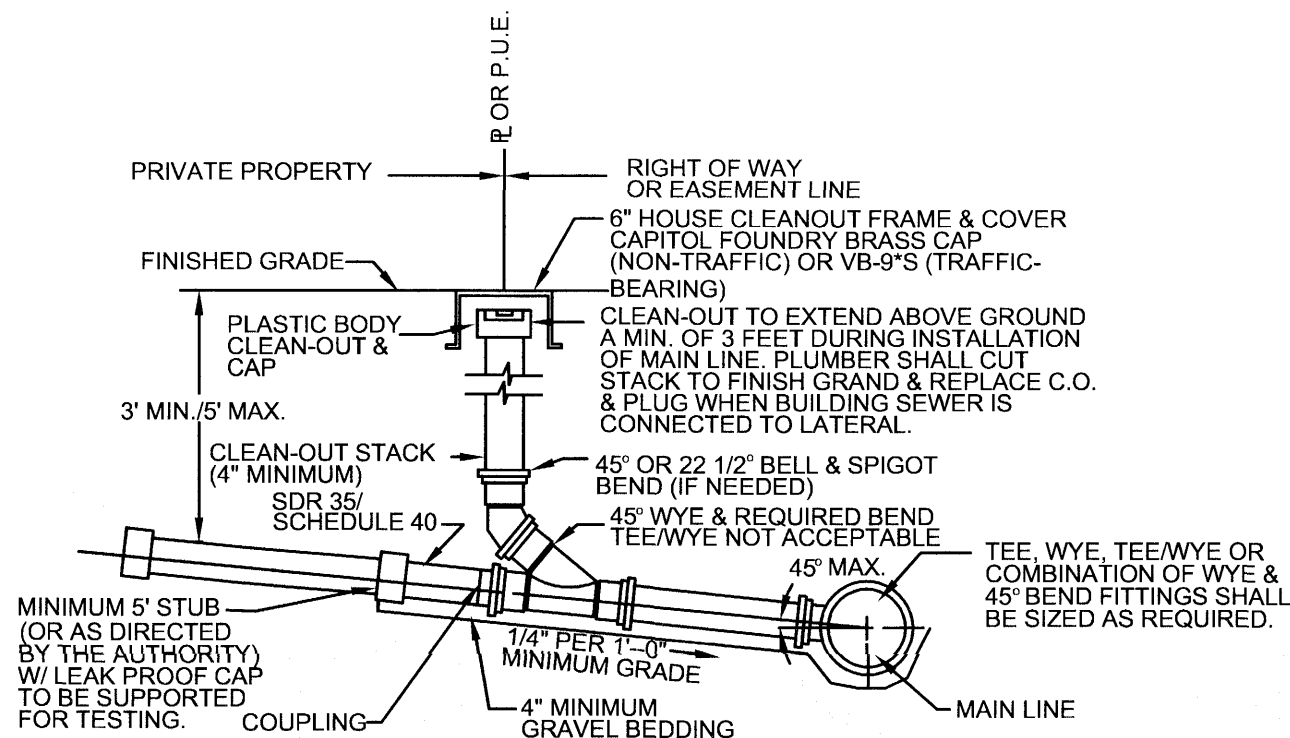
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WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS		
REVISION DATE	WATERTIGHT MANHOLE FRAME	S-05
07/01/04		

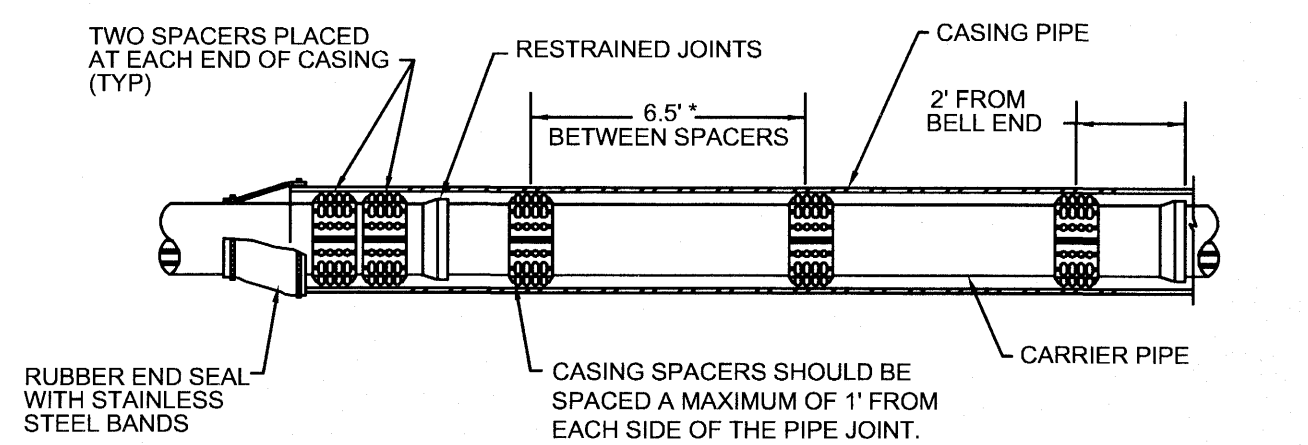


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS				
REVISION DATE		WATERTIGHT MANHOLE COVER	S-06	
07/01/04				
03/01/06				

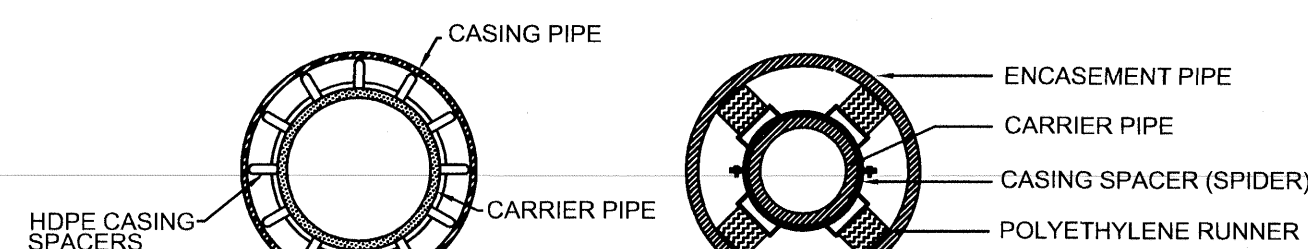
3. THIS CONFIGURATION MAY ONLY BE USED IN SPECIAL CASES WHEN SPECIFICALLY DESIGNED BY THE PROJECT ENGINEER AND INDICATED ON SITE PLANS.
2. ALL PIPE AND FITTINGS SHALL BE OF SAME MATERIAL.
3. ALL PIPE SHALL BE 12" MINIMUM DRAIN SIZE.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEAN OUT STACK WYE (EXCEPT AS NOTED)
5. ALL MAIN LATERALS TO THE WYE MAINS SHALL BE PERFORMED BY WESTERN VIRGINIA WATER AUTHORITY.
6. PIPING BEHIND CLEANOUT TO BE INSTALLED PER BOCA CODE.
7. MINIMUM LATERAL SIZE:
  - 4" FOR RESIDENTIAL SERVICE
  - 6" FOR NON-RESIDENTIAL SERVICE
8. MINIMUM COVER FOR A RESEWER LATERAL SHALL BE THREE (3) FEET.
9. MINIMUM COVER FOR A RESEWER MAIN FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS, IN ACCORDANCE WITH THIS STANDARD.
10. FILL IN AT CLEANOUT WYE SHALL BE A MINIMUM OF THREE FEET (3) BELOW CROWN OF MAIN PIPE.
11. CROWN OF MAIN PIPE SHALL BE 12" MINIMUM.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE		SANITARY SEWER LATERAL (FOR SPECIAL CASES)	S-10
07/01/04			
03/01/06			



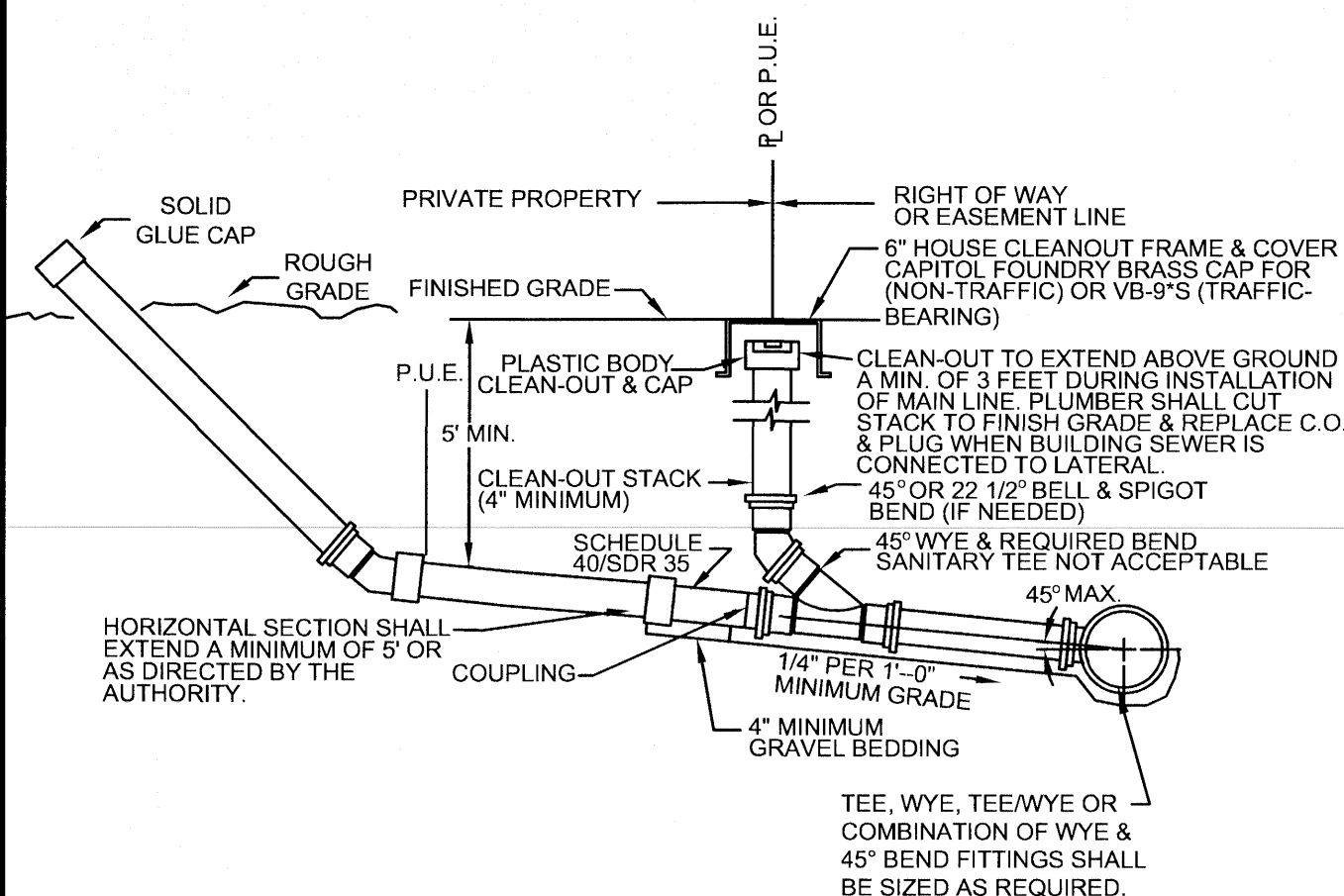
\* ADDITIONAL SPACING ALLOWED AS RECOMMENDED BY PIPE MANUFACTURER.



- NOTES:
1. A 1" DRAIN WILL BE REQUIRED ON THE LOWER END OF THE CASING IF THE CASING ENDS ARE SEALED WITH MORTAR AND BRICK.
  2. SPACERS SHALL BE RACI HDPE, SPIDER OR EQUIVALENT.
  3. SPACERS SHALL BE SPACED 6 1/2' ON SEWER PIPE.
  4. CARRIER PIPE SHALL BE DUCTILE OR HDPE IN ACCORDANCE WITH THE AUTHORITY STANDARDS

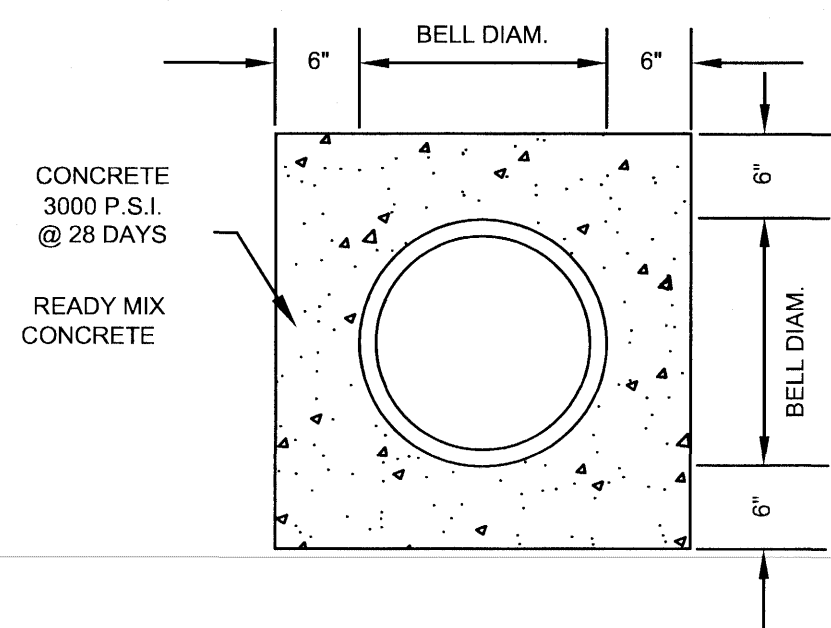
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1. TRAFFIC BEARING BOB REQUIRED IN TRAFFIC AREAS.
2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
3. ALL PIPE SHALL BE OF SAME SIZE.
4. JOINTS ARE ALLOWED TO BE 18" MAX LATERAL FROM THE MAIN TO THE CLEANOUT STACK WYE. (EXCEPT AS NOTED)
5. ALL 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:
  - 4" FOR RESIDENTIAL SERVICE
  - 6" FOR NON-RESIDENTIAL SERVICE
8. MINIMUM COVER FOR ALL COVER LATERALS SHALL BE THREE(3) FEET.
9. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS, IN ACCORDANCE WITH THIS STANDARD.
10. FLUSH CLEANOUT WYE SHALL BE A MINIMUM OF THREE FEET (3') BELOW LOWEST SERVICE MAINS D.C.

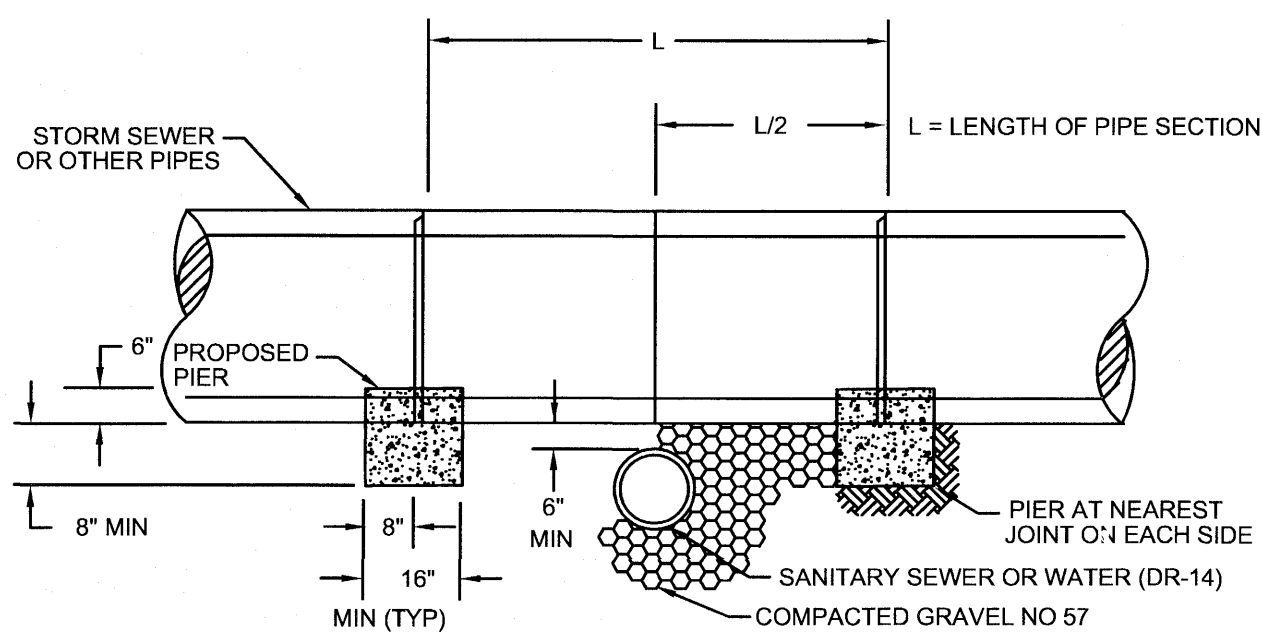


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION	DATE		
07/01/04		SANITARY SEWER LATERAL	S-08
03/01/06			

- NOTES:
1. When water line is located below a sewer line, the sewer line to be encased along its length where it is within 10' of water line.
  2. Sewer lines crossing streams must be concrete encased.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS				
REVISION DATE		CONCRETE ENCASED  PIPE	S-14	
07/01/04				



1. PIER REQUIRED WHEN STORM DRAIN OR OTHER PIPES  
CROSSES OVER THE OTHER UTILITY WITH A VERTICAL  
CLEARANCE OF LESS THAN 18".
2. PIER TO BE BUILT ON UNDISTURBED EARTH.
3. CONCRETE TO BE READY MIX, CLASS A3.

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS				
REVISION DATE		CONCRETE PIER	S-16	
07/01/04				



# ACS DESIGN

**ENGINEERING • SURVEYING**  
**LANDSCAPE ARCHITECTURE**  
**CONSTRUCTION MANAGEMENT**

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**Westlake Sewer Extension  
Western Virginia Water Authority  
Franklin County, Virginia**

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DRAWN BY:	JSH
DESIGNED BY:	DME/JSH
CHECKED BY:	DME
DATE:	02 JULY 2009
JOB NUMBER:	09012

REVISIONS:	
No. 1	
No. 2	
No. 3	
No. 4	

SHEET NO.:  
**C3.8**

## SANITARY SEWER DETAILS