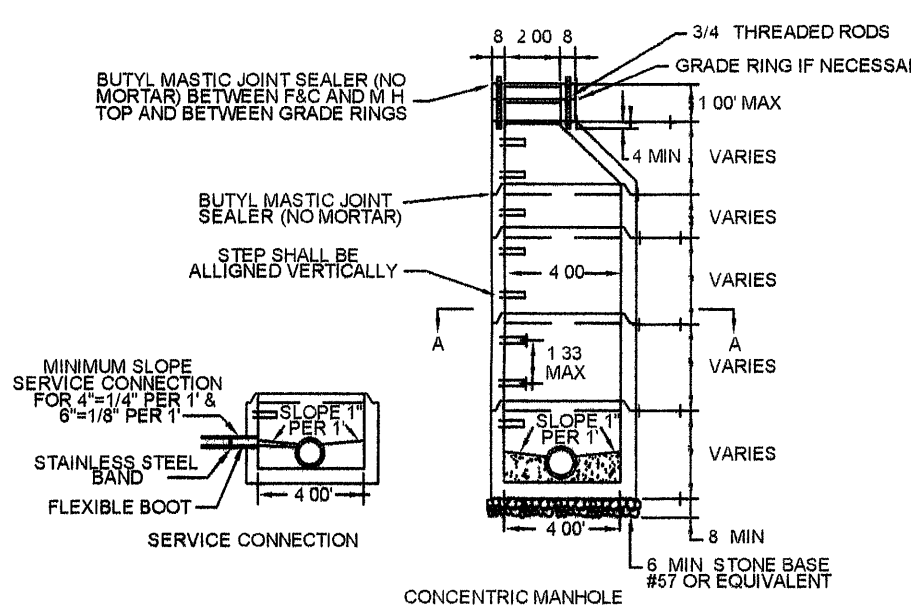
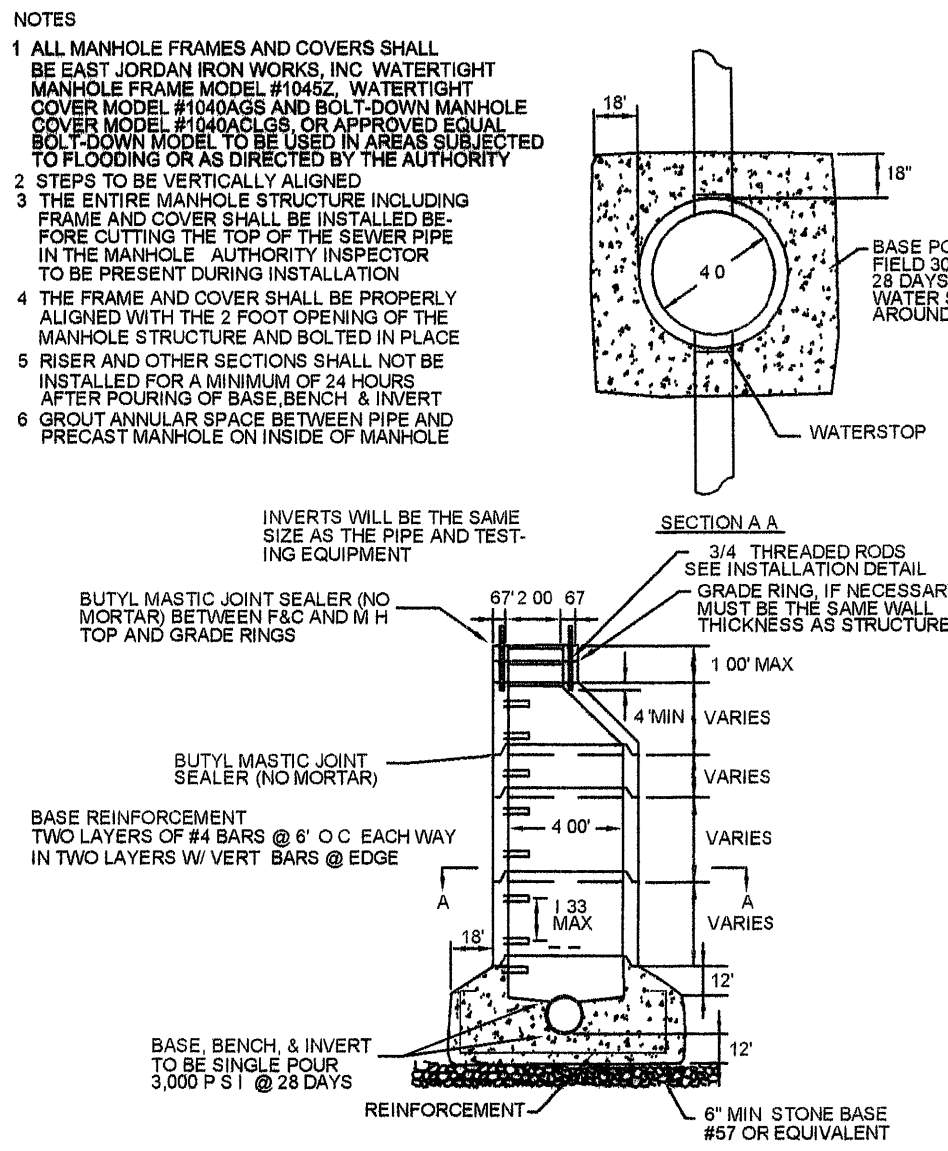


FACTOR OF SAFETY = 1.5												
PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALUE / PLUG BRANCH	TEE	REDUCER (NOTE 2)	VERT. UPT. 22 1/2°	VERT. UPT. 11 1/4°	VERT. UPT. 90°	
6"	D	28'	12'	6'	3'	38'	20'	23'	11'	5'		
8"	D	37'	15'	7'	4'	51'	27'	30'	15'	7'		
10"	D	45'	19'	9'	4'	61'	37'	20'	37'	18'	9'	
12"	D	53'	22'	11'	5'	69'	38'	43'	20'	12'	10'	
16"	PVC	60'	12'	6'	3'	56'	38'	43'	21'	12'	10'	
8"	PVC	40'	16'	8'	4'	54'	36'	31'	46'	22'	11'	
10"	PVC	47'	20'	9'	5'	68'	32'	30'	56'	27'	13'	
12"	PVC	56'	23'	11'	6'	105'	38'	56'	66'	32'	16'	

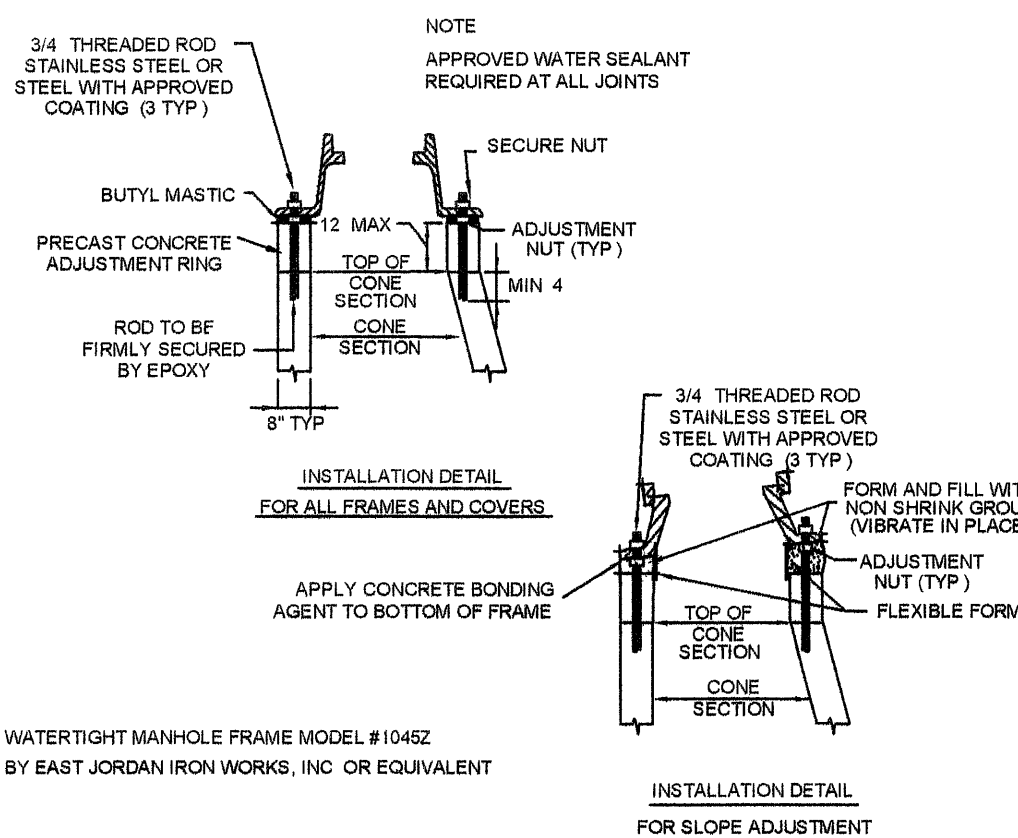
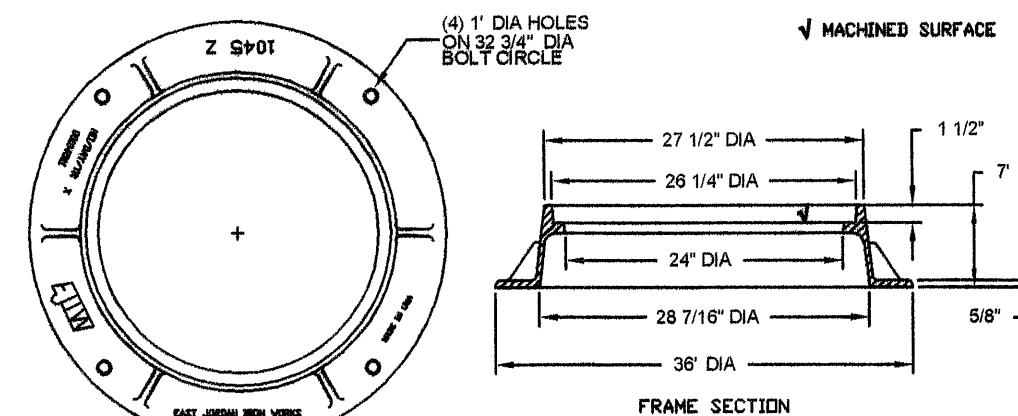
- 1 ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED
- 2 REDUCER IS ONE SIZE SMALLER THAN PIPE LISTED RESTRAINED LENGTH IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER



- GENERAL NOTES
1. TRAFFIC BEARING BOSS REQUIRED IN TRAFFIC AREAS
 2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL
 3. ALL PIPE SHALL BE OF SIZE SHOWN
 4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEAN-OUT 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 COVER FOR ALL SEWER LATERALS SHALL BE THREE (3) FEET
 8. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS



- NOTE
- 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



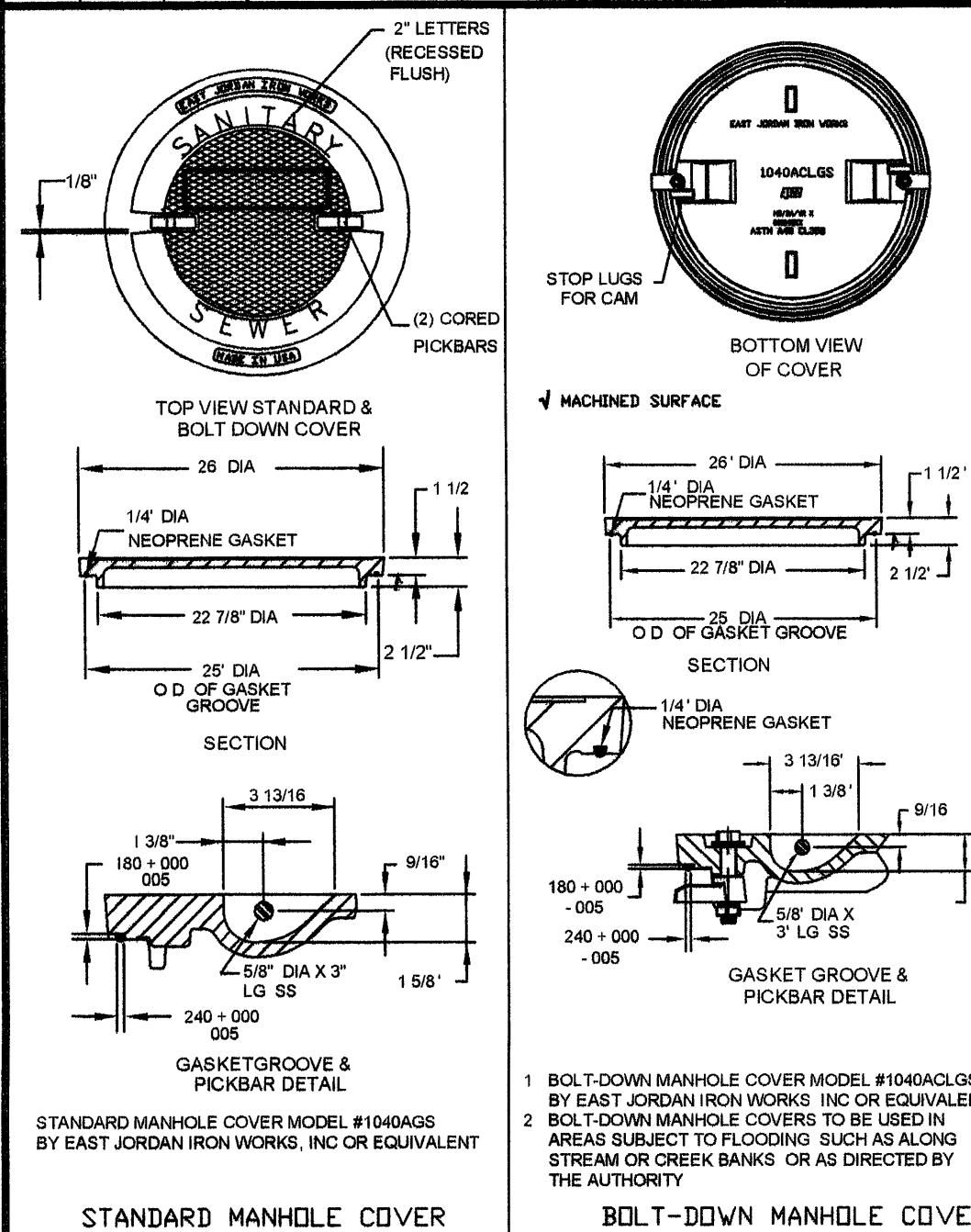
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE		<p style="text-align: center;"><i>THRUST BLOCK CONSTRUCTION</i></p>	<p style="text-align: center;">W-19</p>
07/01/04			

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS		
REVISION DATE	<p style="text-align: center;"><i>THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS</i></p>	W-20
07/01/04		

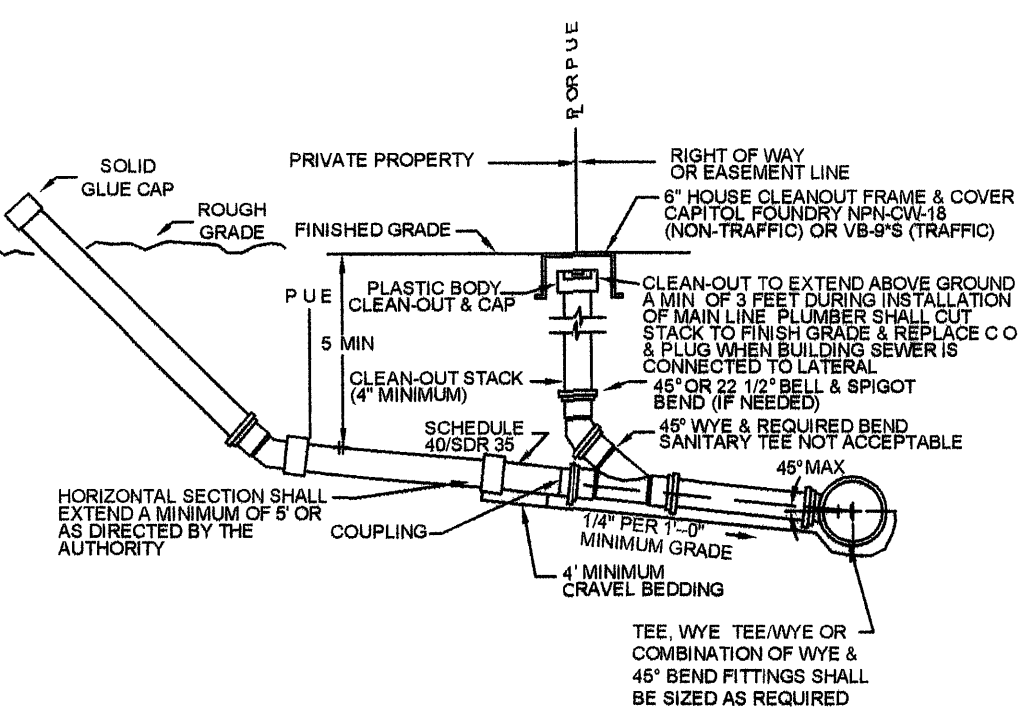
WESTERN VIRGINIA WATER AUTHORITY -- CONSTRUCTION STANDARDS		
REVISION DATE		
07/01/04	4' STANDARD MANHOLE FOR PIPE 15" OR SMALLER	S-01

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE		<p style="text-align: center;"><i>STRADDLE MANHOLE FOR PIPE 15" OR SMALLER</i></p>	S-02
07/01/04			

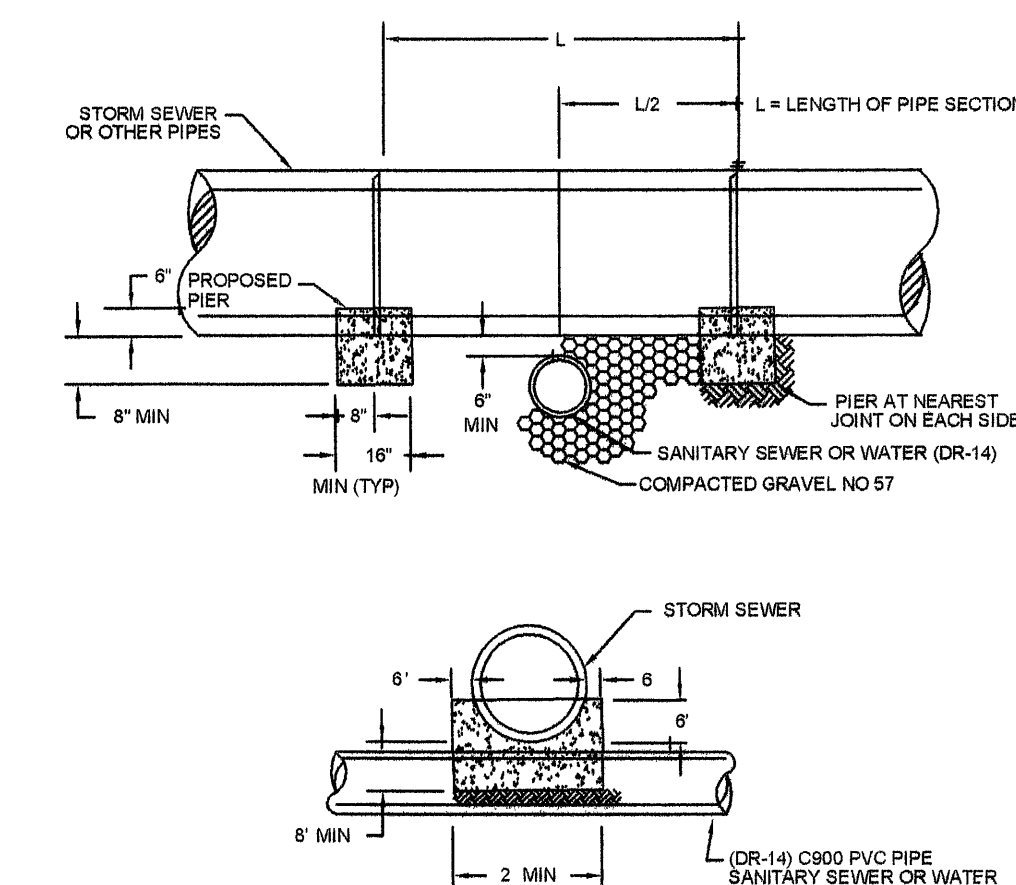
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE		<p style="text-align: center;"><i>WATERTIGHT MANHOLE FRAME</i></p>	S-05
07/21/04			



- GENERAL NOTES**
- 1 TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS
 - 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 VAIN 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 SEWER LATERALS SHALL BE THREE(3) FEET
 - 9 PROPERTY OWNERS RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS



- | | | | | | |
|--|-------|---|--|--|----|
| WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARD | | | | | |
| REVISION DATE | | | | | |
| | 01/04 | | | | S- |
| | | <i>COMBINED 6" BY
TWO 4" LATERALS</i> | | | |



- NOTE
- 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

[illegible]

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

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS		
REVISION DATE	<p style="text-align: center;"><i>COMBINED 6" BY TWO 4" LATERALS</i></p>	S-11
07/01/04		

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS		
REVISION DATE	CONCRETE PIER	S-17
07/21/04		