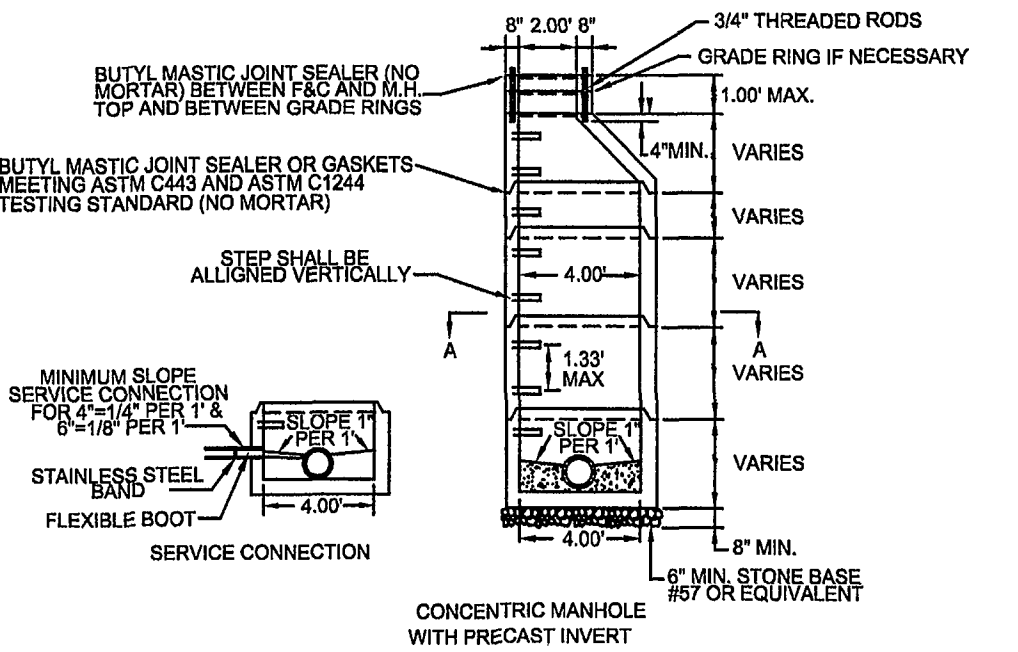
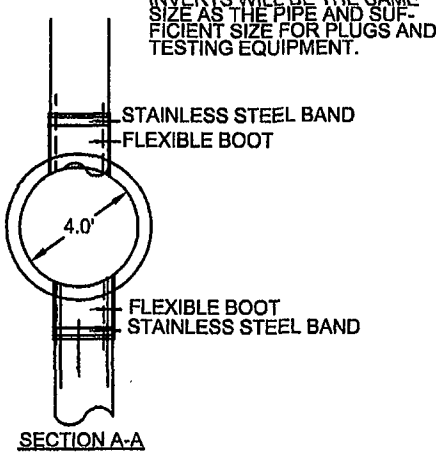


NOTES:

1. ALL MANHOLE FRAMES AND COVERS SHALL BE EAST JORDAN IRON WORKS, INC. WATERTIGHT MANHOLE FRAME MODEL #1045Z, WATERTIGHT COVER MODEL #1040AS AND BOLT-DOWN MANHOLE COVER MODEL #1040CLS, OR APPROVED EQUAL. BOLT-DOWN MODEL TO BE USED IN AREAS SUBJECT TO FLOODING OR AS DIRECTED BY THE AUTHORITY.
2. STEPS TO BE VERTICALLY ALIGNED.
3. THE FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
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 STEPS.
5. SAMPLING MANHOLES IN TRAFFIC AREAS SHALL BE CONSTRUCTED AS PER MANHOLE DETAILS.
6. FLEXIBLE JOINT MANHOLE CONNECTION SHALL BE AS MANUFACTURED BY PRES-SEAL GASKET CORPORATION OR EQUAL.
7. GROUT ANNUAL SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

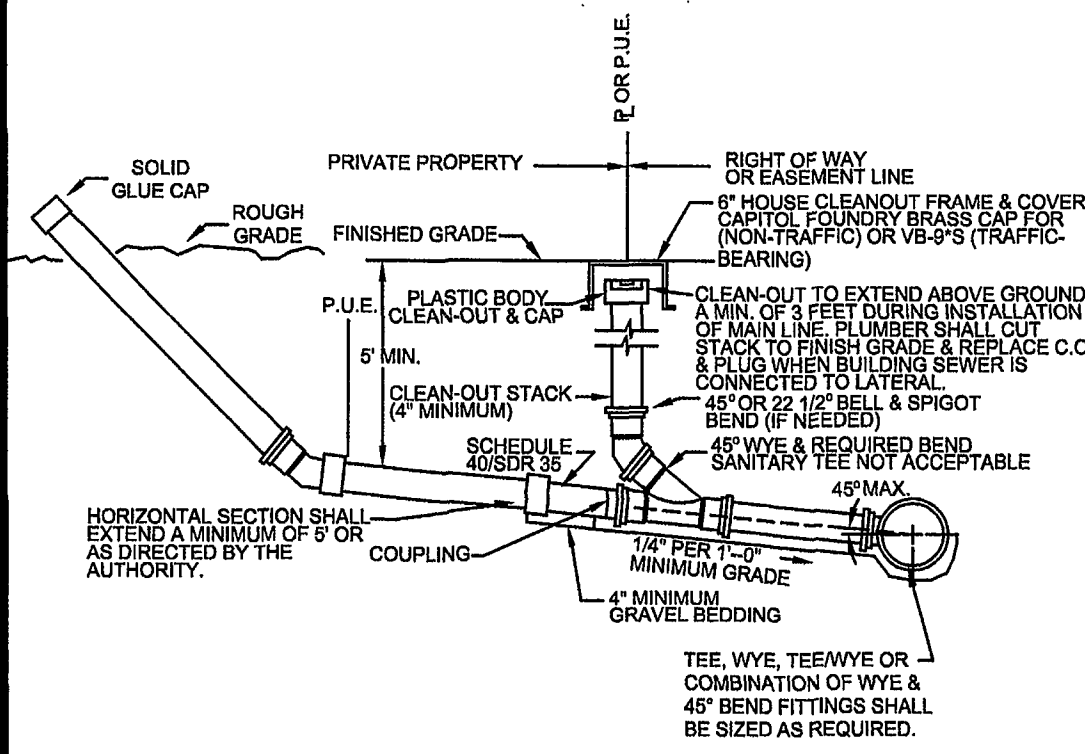
REVISION DATE		
07/01/04		
03/01/06		

4' STANDARD MANHOLE
FOR PIPE 15"
OR SMALLER

S-01

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 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 SEWER 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. FLOWLINE AT CLEANOUT WYE SHALL BE A MINIMUM OF THREE FEET (3') BELOW LOWEST SERVED FINISHED FLOOR.

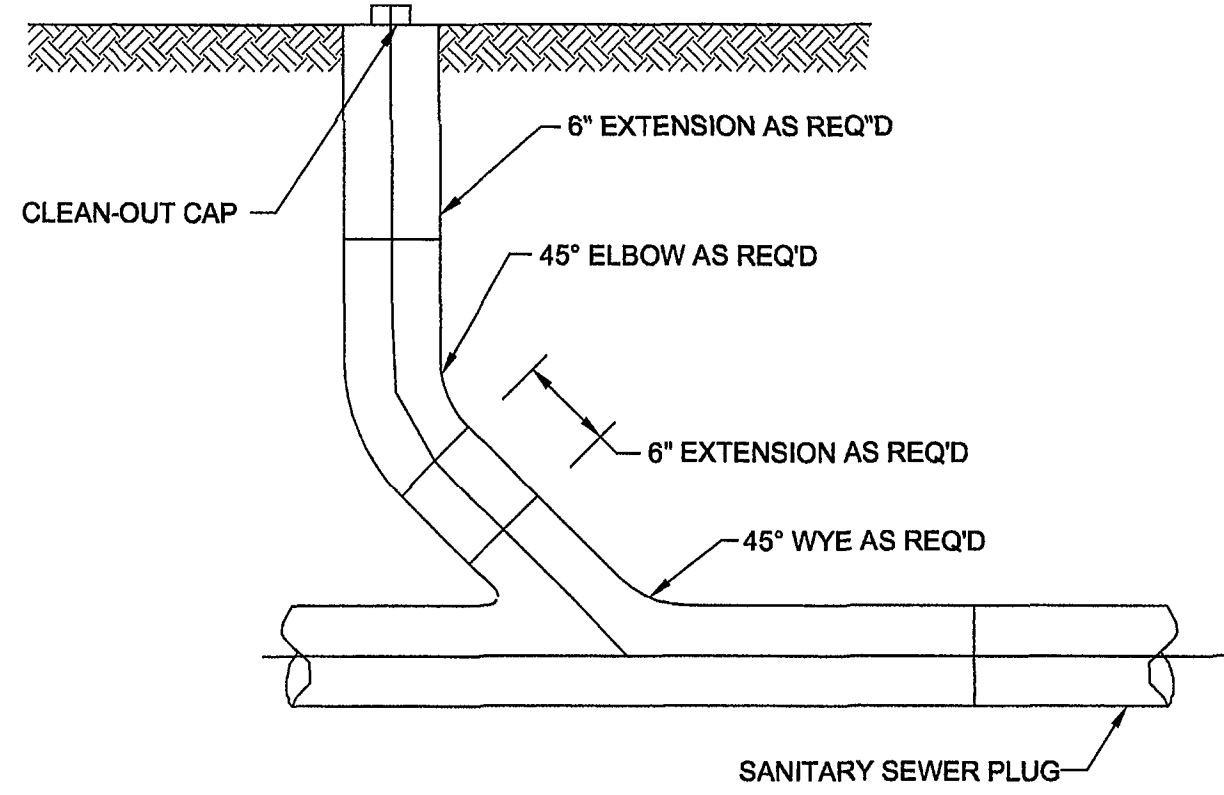


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE		
07/01/04		
03/01/06		

SANITARY SEWER LATERAL

S-08

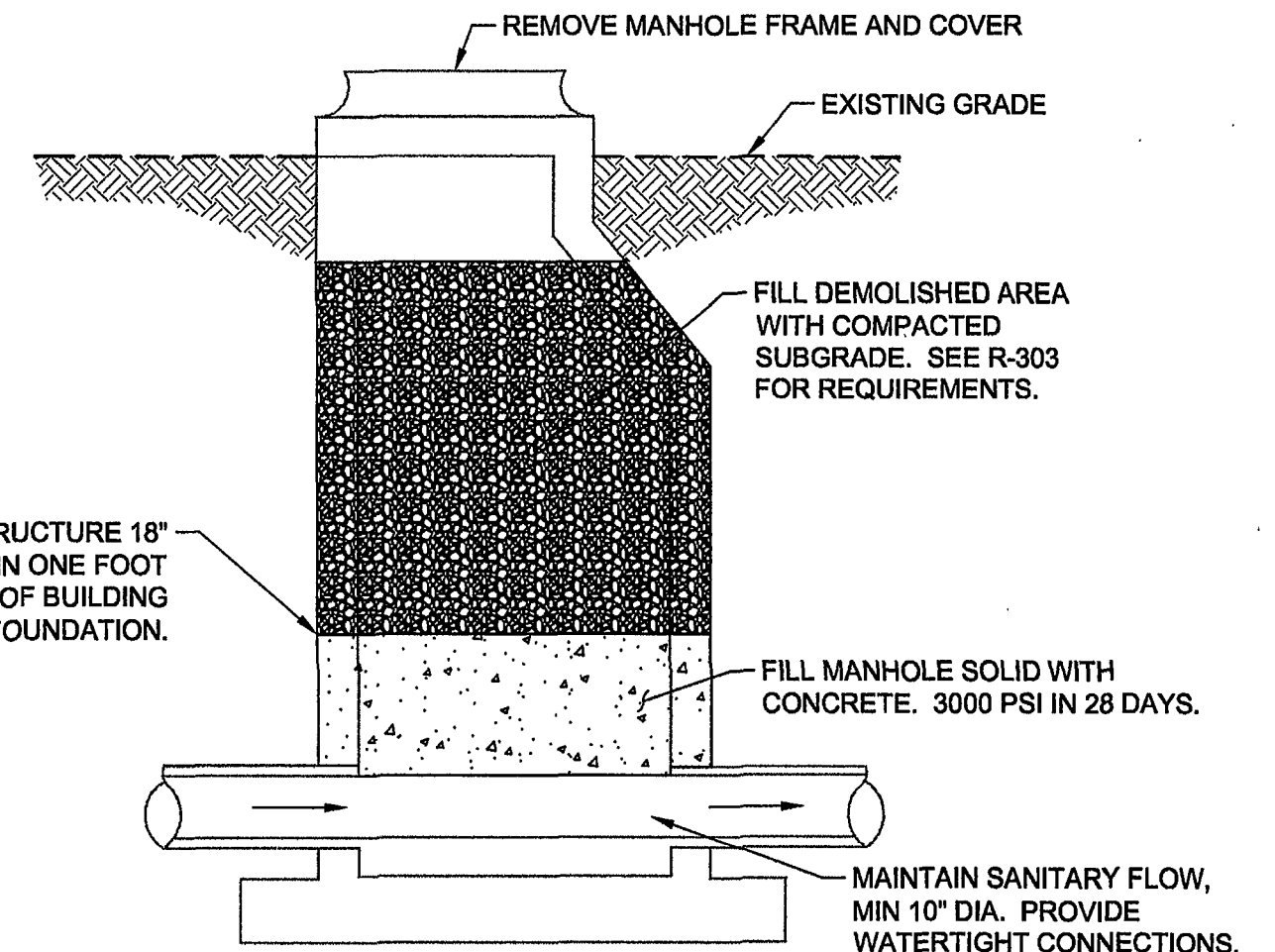


SANITARY CLEAN-OUT DETAIL

NTS

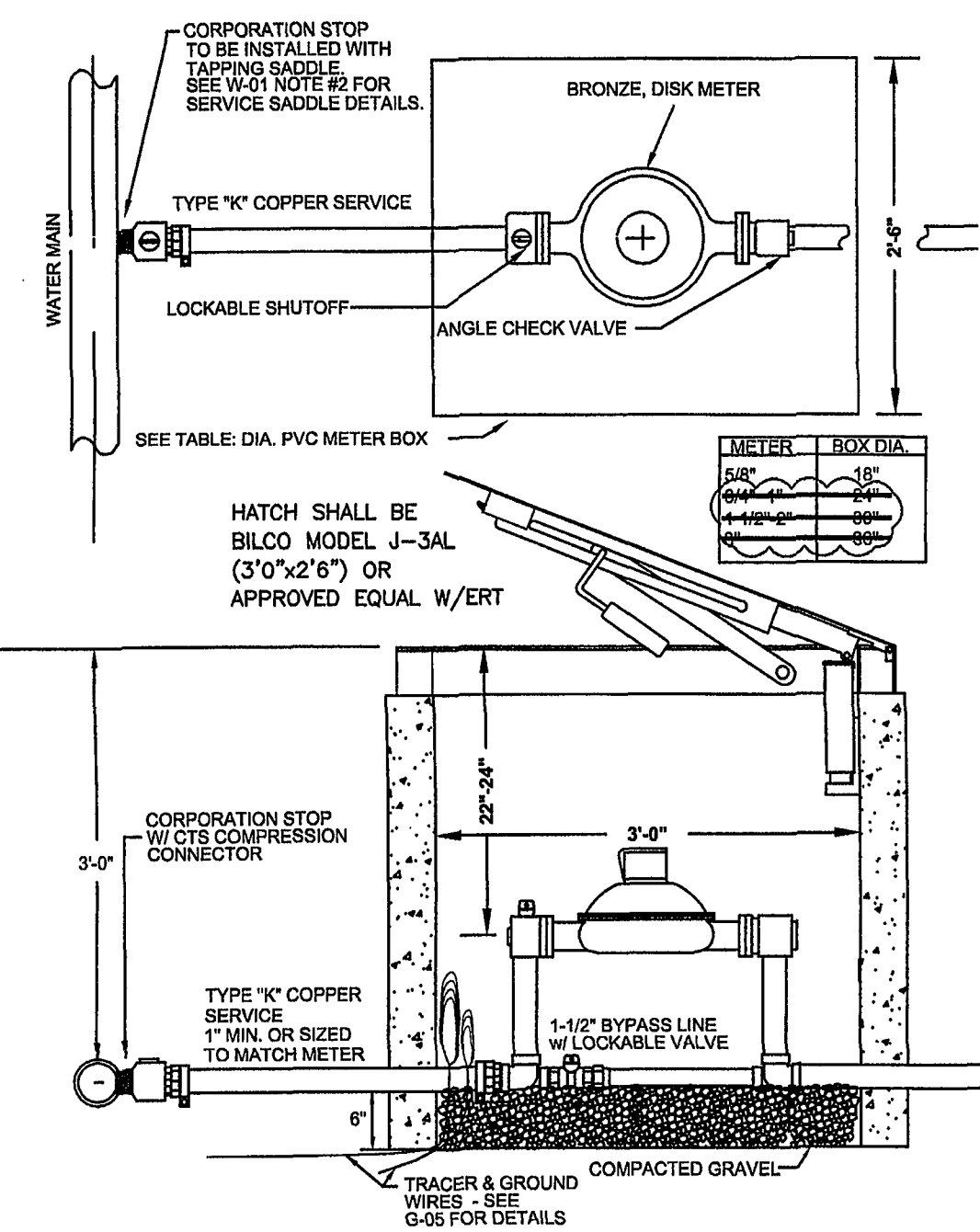
NOTE:

1. CLEAN-OUTS SHALL BE LOCATED AT ALL BENDS OR AS DIRECTED BY THE ENGINEER.



SANITARY SEWER MANHOLE CAP DETAIL

NTS
(ALTERNATE 1 ONLY)



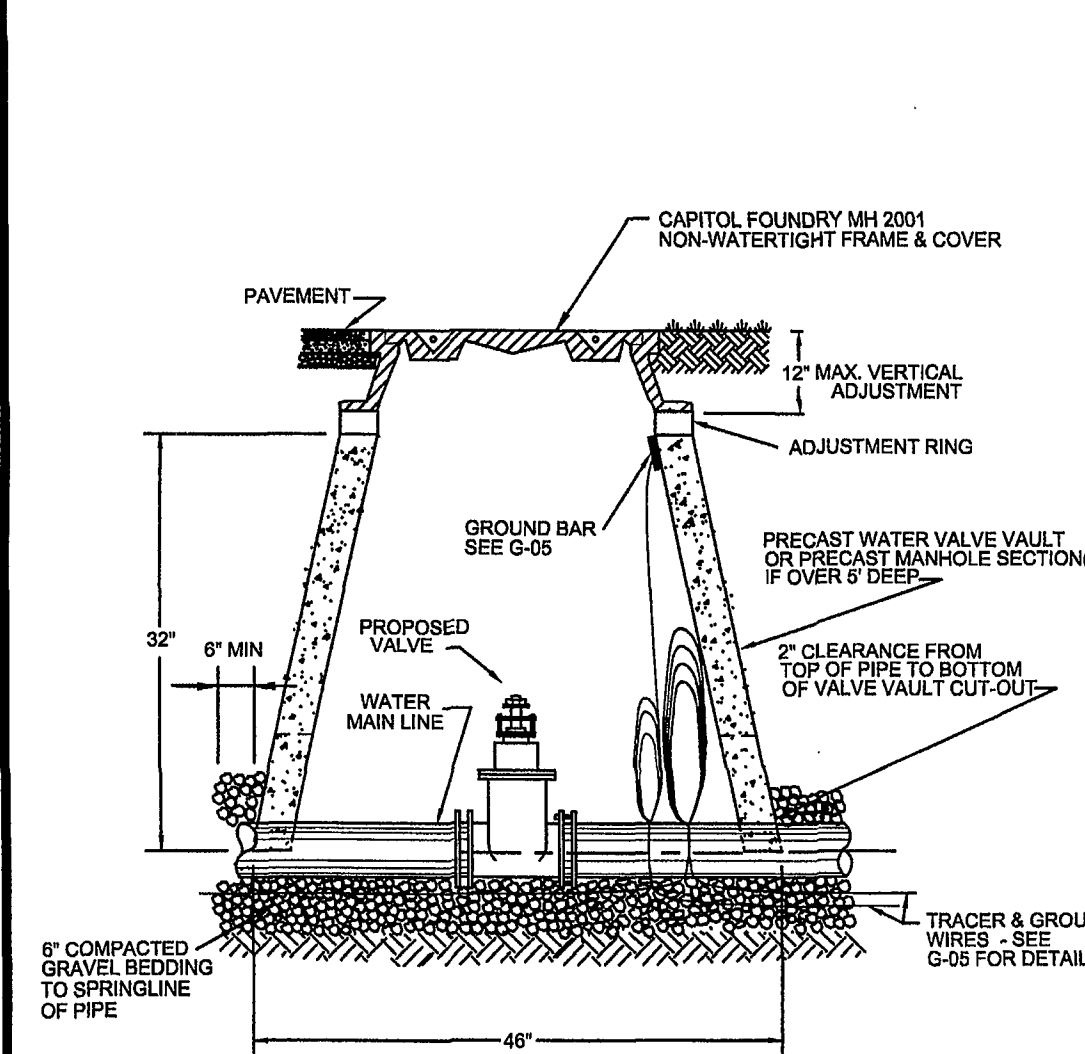
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE		
07/01/04		
03/01/06		

COMMERCIAL
WATER SERVICE

W-05

NOTE: CONTRACTOR SHALL COORDINATE WITH WWA FOR PROPER SIZING OF METER AND WATERLINE.

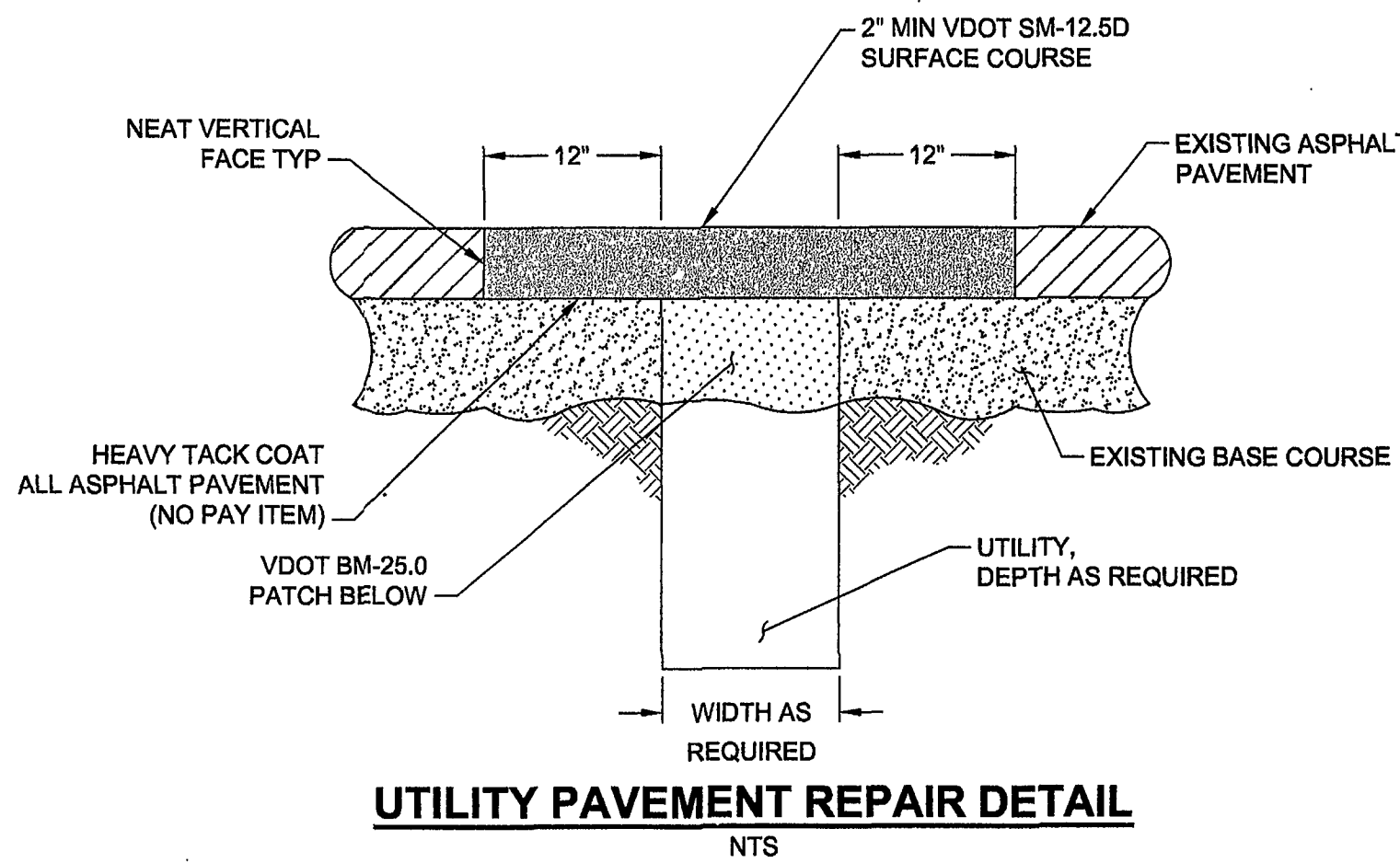


WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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03/01/06		

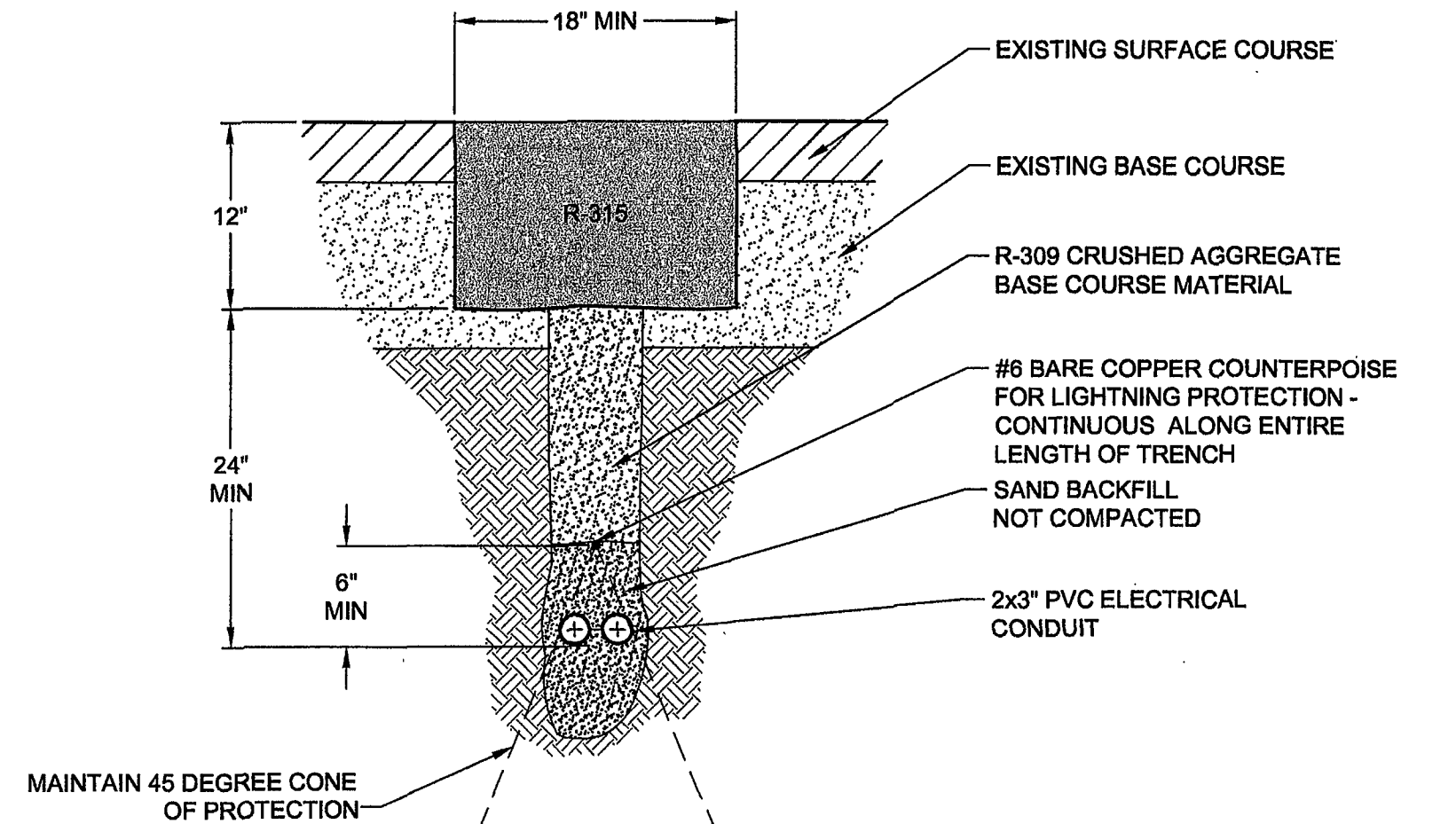
WATER LINE VALVE
INSTALLATION

W-08



UTILITY PAVEMENT REPAIR DETAIL

NTS



TRENCH CUT THROUGH EXISTING PAVEMENT DETAIL

NTS

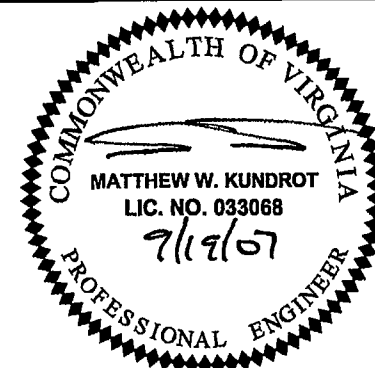
NOTES:

1. DO NOT ROUTE DIFFERENT VOLTAGE CLASSIFICATION CABLES IN THE SAME CONDUIT.
2. #6 BARE COUNTERPOISE WITH 3/4" X 10" COPPER-CLAD GROUND ROD INSTALLED AT MAXIMUM 400' SPACING. GROUND RODS SHALL ALSO BE USED TO TERMINATE COUNTERPOISE AT DUCT ENDS AND TERMINATION OF TRENCH. (NO SEPARATE PAY ITEM).



**DELTA AIRPORT
CONSULTANTS, INC.**

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CONSTRUCT HANGARS	AIP NO.	NON-AIP	JOB NO.
			VA 07007
MISCELLANEOUS DETAILS	DRAWN BY:	PJW	SHEET
	DESIGNED BY:	JKB	11
			OF
			13
ROANOKE REGIONAL AIRPORT	SCALE:	NONE	DATE:
			JUNE 2007



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NO.	CITY COMMENTS	REVISIONS	BY	APP.	DATE
7	CITY COMMENTS 9/18/07		TSE	JKB	9/19/07