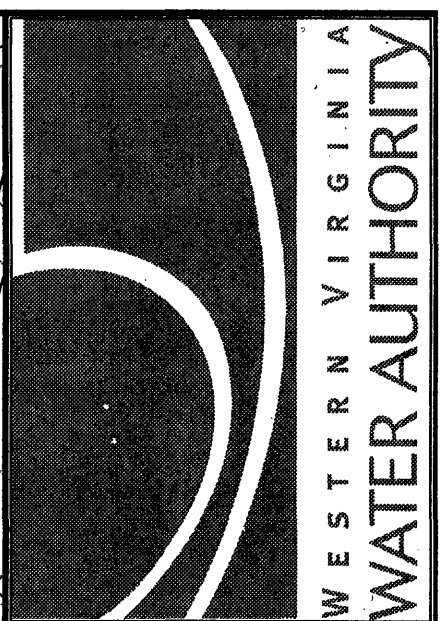
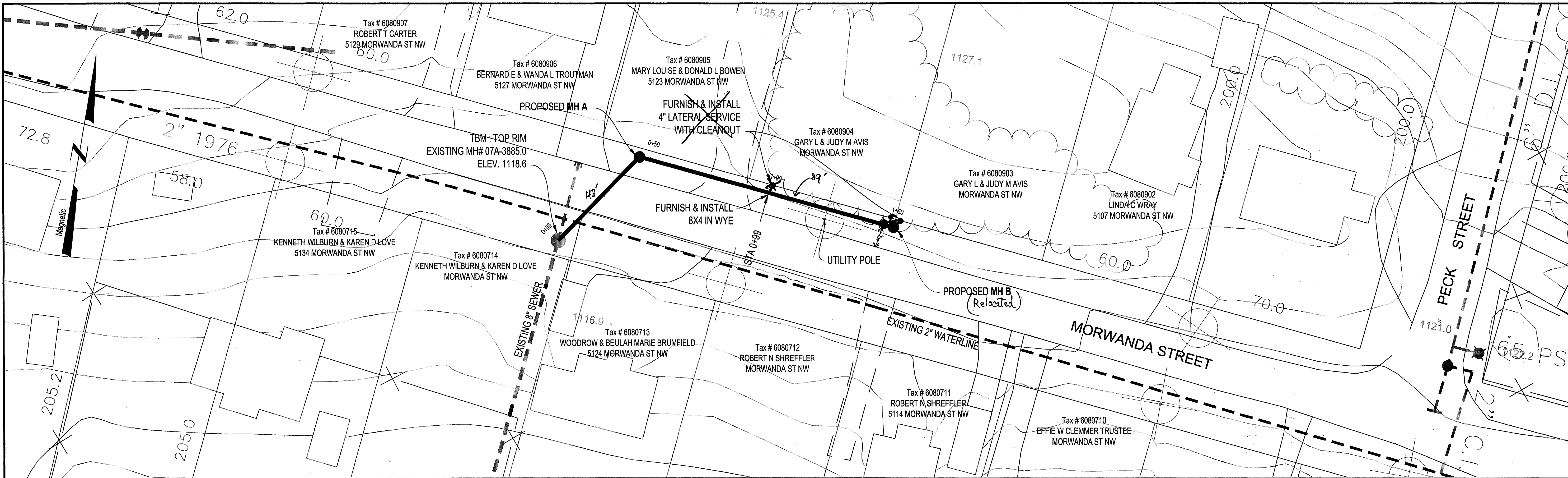
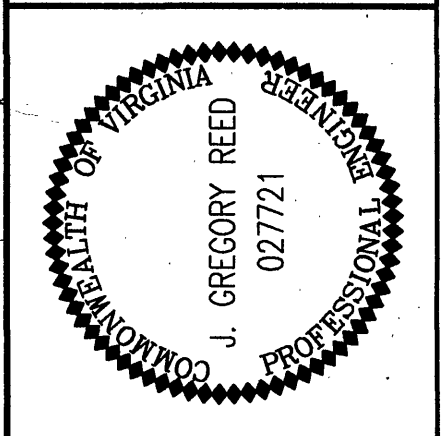




ENGINEERING SERVICES
601 SOUTH JEFFERSON STREET
SUITE 300
ROANOKE, VIRGINIA 24011
PHONE: (540) 853-5641

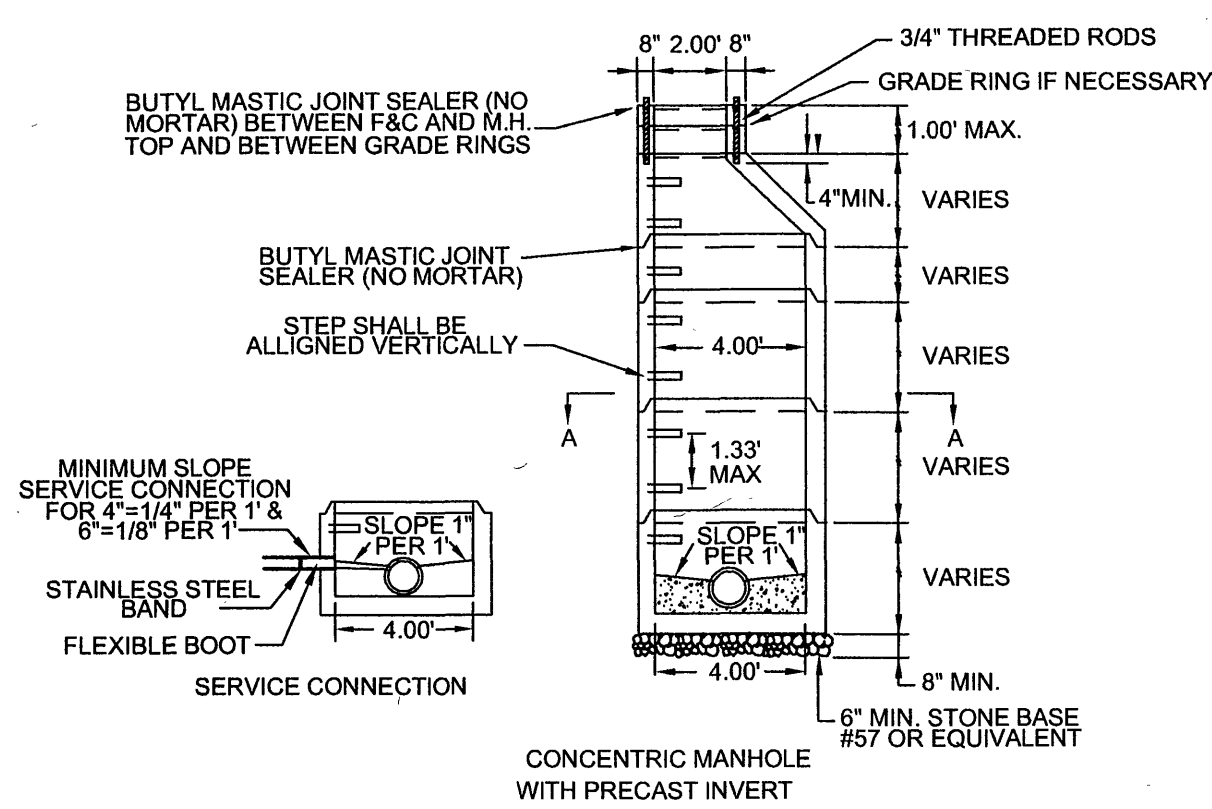
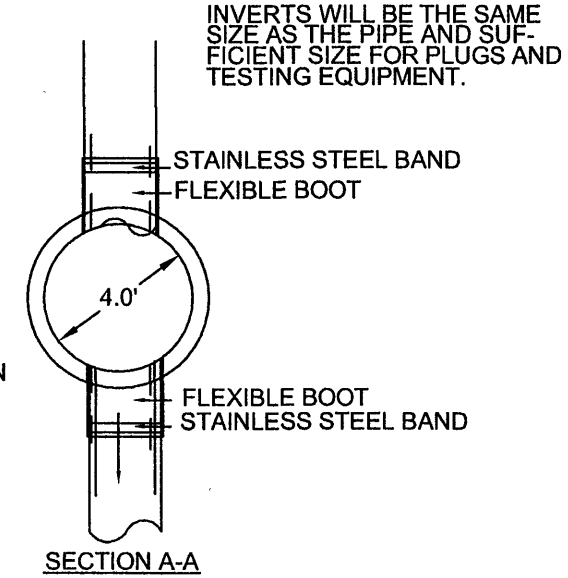


**MORWANDA ST., NW
PROPOSED SEWER EXTENSION**
AS-BUILT
01/12/2006

Designed By: JAD
Drawn By: JAD
Checked By: JGR
Date: 01/03/06
Scale: HOR. 1 IN. = 20 FT.
VERT. 1 IN. = 10 FT.
Plan #:
Sheet: 1 OF 1

NOTES:

1. ALL MANHOLE FRAMES AND COVERS SHALL BE EAST JORDAN IRON WORKS, INC. WATERTIGHT MANHOLE FRAME MODEL #1045Z, WATERTIGHT COVER MODEL #1040AGS AND BOLT-DOWN MANHOLE COVER MODEL #1040CLGS, 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 ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE.



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

NOTES:

1. ALL WORK SHALL CONFORM TO WESTERN VIRGINIA WATER AUTHORITY DESIGN & CONSTRUCTION STANDARDS LATEST EDITION.
2. CONTRACTOR RESPONSIBLE FOR ACQUIRING CITY OF ROANOKE RIGHT OF WAY EXCAVATION PERMIT.

LEGEND

- EXISTING SANITARY SEWER
- EXISTING WATERLINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER EASEMENT
- PROPERTY LINE
- X- EXISTING FENCELINE

Pressure Tested 11/2/06 - all passed
Vacuum " 11/2/06 - all passed

2 cleanouts going into 1 6" pipe
(serving both lots) going into MHB
(see Detail S-11)

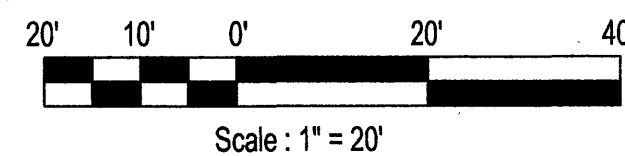
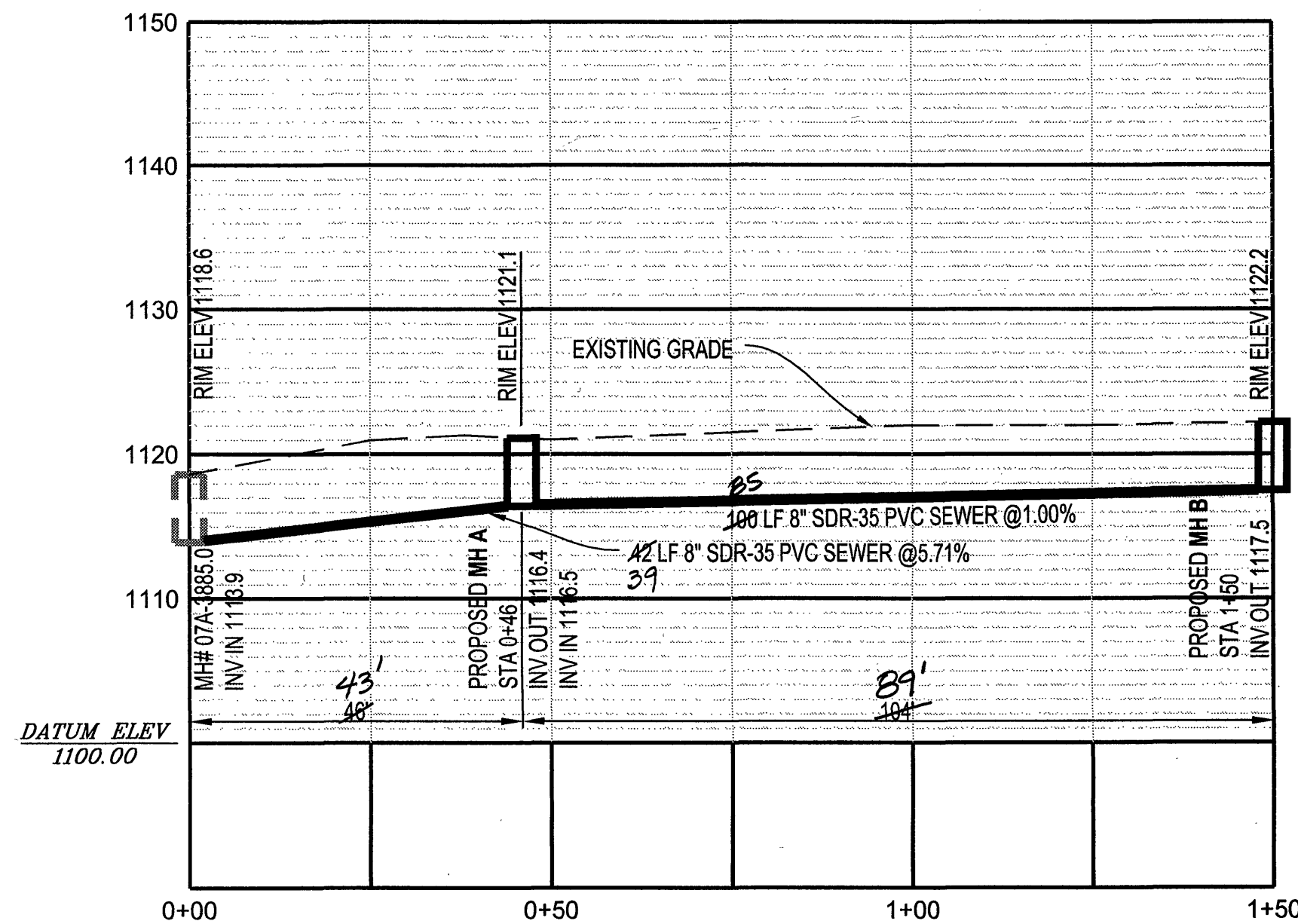
Ex. MH → MHA 43'
MHA → MHB 89'

Ex. MH: new invert depth: 4'6"
MHA Depth: 3'3"
MHB Depth: 3'8"

Lateral, CO is 5'6" out of MHB
Lat. 2 CO is 13' out of MHB

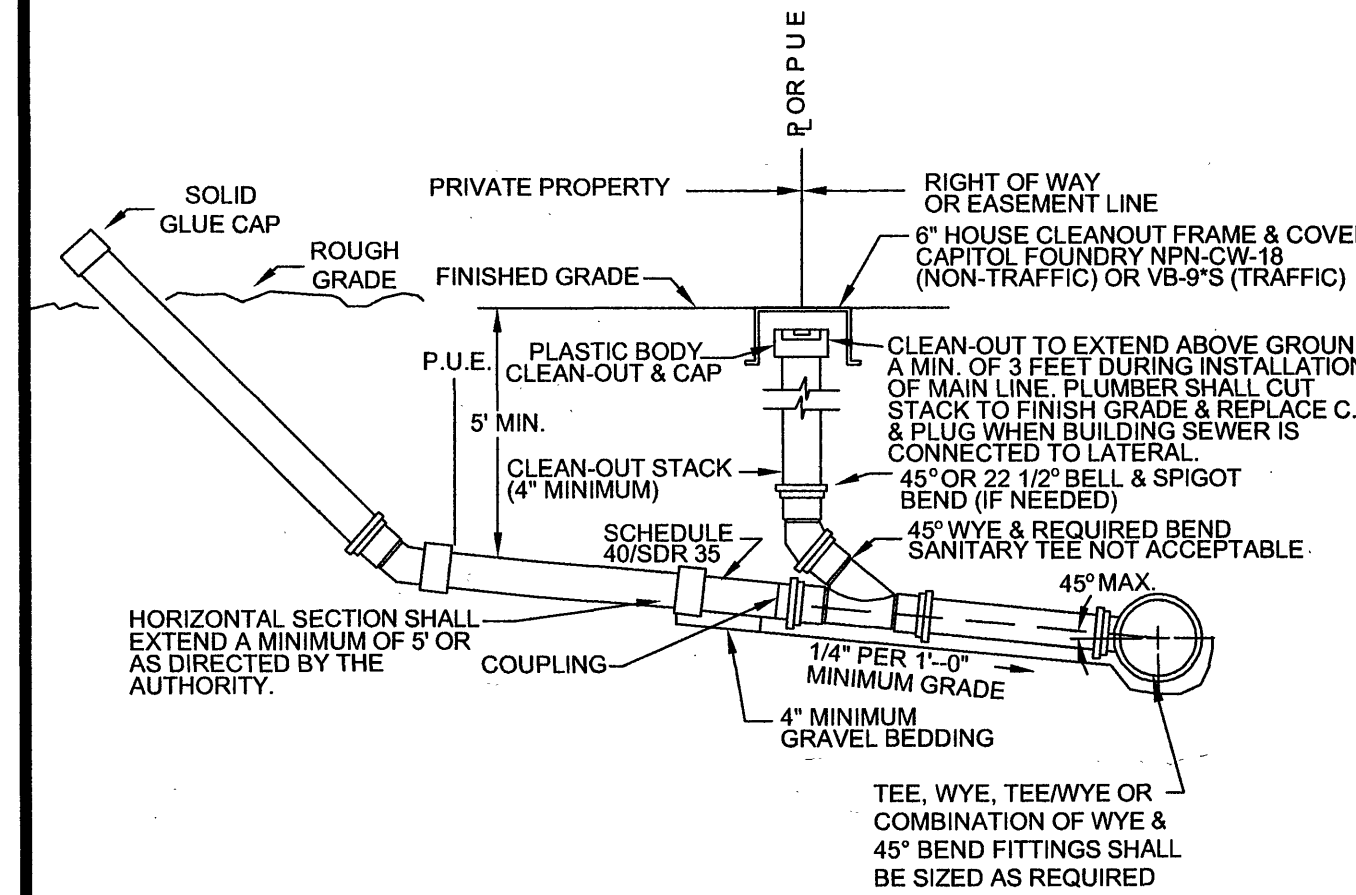
MHB is moved back toward
MHA ~ 11' to separate
from water meter.

East Jordan frame & covers used,
8" SDR-35 PVC pipe used.



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.



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

WWA ID# 6KQKGG