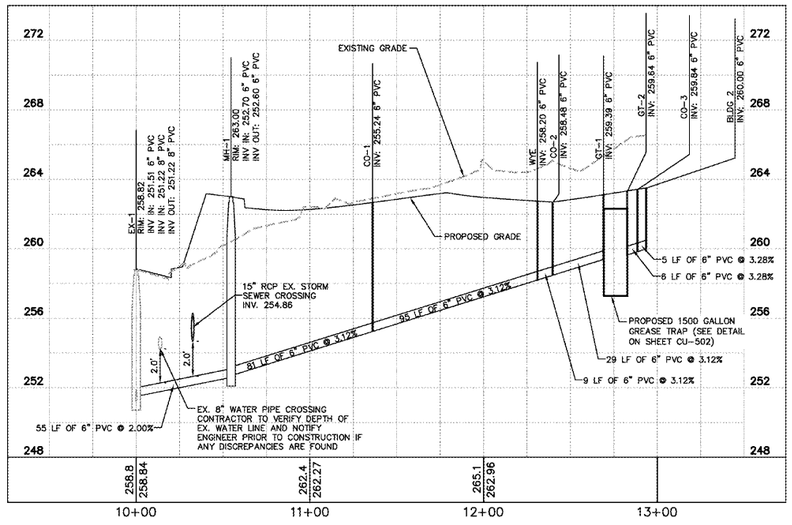
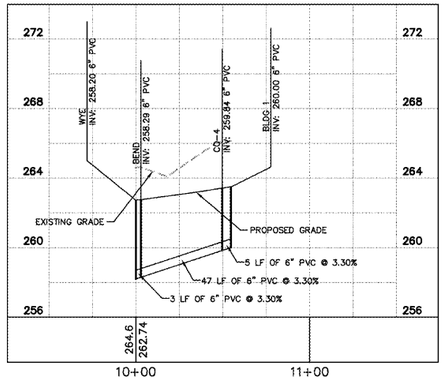
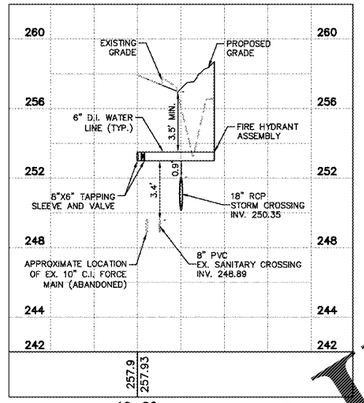
SANITARY PROFILE: EX-1 TO BLDG 2



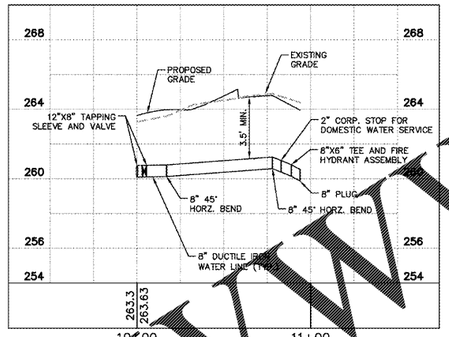
SANITARY PROFILE: WYE TO BLDG 1



WATER PROFILE: TAPPING SLEEVE TO HYDRANT



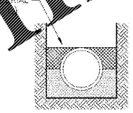
WATER PROFILE: TAPPING SLEEVE TO PLUG



GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL
VERTICAL
8
4
2
0

COUNTY OF HENRICO
DEPARTMENT OF PUBLIC UTILITIES

NO.	DESCRIPTION	EXISTING CONDITION
1	OIL WATER SEPARATOR REVISIONS	11/07/18 RRP
2	OIL WATER SEPARATOR REVISIONS	01/02/19 RRP
3	UNDERGROUND PIPE CONNECTION REVISIONS	01/03/19 RRP
4	PHASE II E&S REVISIONS	01/14/19 RRP
5	BID SET REVISIONS	01/17/19 RRP



NOTES:

1. "SELECT MATERIAL" IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, FOREIGN MATERIAL AND FROZEN EARTH.
2. GRANULAR MATERIALS ARE DEFINED PER AASHTO SOIL CLASSIFICATION SYSTEM (ASTM D3282) OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487), WITH THE EXCEPTION THAT GRAVEL BEDDING/BACKFILL ADJACENT TO THE PIPE IS LIMITED TO 2" MAXIMUM PARTICLE SIZE PER ANSI/AWWA C600.

REVISIONS	DUCTILE IRON PIPE TRENCH BEDDING	DRWG. NO.
06/20/2014		D-730

Kimley»Horn
1700 WILLOW LAWN DR., SUITE 270, RICHMOND, VA 23230
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COMMONWEALTH OF VIRGINIA
RYAN R. PERKINS
Lic. No. 046585
11/09/2018
PROFESSIONAL ENGINEER

KHA PROJECT 113160005
DATE 11/09/2018
SCALE AS SHOWN
DESIGNED BY KRW
DRAWN BY KRW
CHECKED BY RRP

WAWA AT PARHAM AND THREE CHOPT

PREPARED FOR REBKEE CO.

HENRICO COUNTY VIRGINIA

UTILITY DETAILS AND PROFILES

SHEET NUMBER CU-501

POD# 2018-00101 & 00196

Fire Lane Guideline

- The establishment of fire lanes allows the Division of Fire access to a building. The need for such designation arises from building design, complex layout, and the possibility of vehicles parking in needed access way in case of an emergency. With this in mind, the projected need and final decision of the Fire Marshal, or his designee, may vary between occupancies and/or locations. These specifications are primarily for occupancies with curb and sidewalk adjacent to the building. Other building arrangements may require different guidelines to establish and maintain fire lanes.
- **Legislative Authorization**: **In accordance with §503.3 of the Statewide Fire Prevention Code, adopted by reference by the Board of Supervisors on January 11, 1995, authorization was granted to establish fire lanes.**
- **Guidelines for Fire Lane Designation**: The Fire Chief, or his duly authorized designee requires the owner, lessee, or occupant of any private or public traffic way to provide and maintain regulatory signs and/or pavement markings of an approved type to notify operators of motor vehicles of the boundaries of fire lanes and the restrictions related thereto. These fire lanes shall be at least twenty (20) feet in width, and the route of these fire lanes shall be marked with posted signs. A combination of curb markings, and/or pavement markings may be used with the approval of the fire official.
- **Specifications**: A single sign mounted on a single post with a double directional arrow. These signs shall be posted no more than fifty (50) feet from the beginning or end of a fire lane and at intervals of one hundred (100) feet or less. All signs are to be mounted seven (7) feet from bottom of the sign to top of the grade. All signs are to be installed on a forty-five (45) degree angle to the movement of traffic, regardless of a one-way lane. Where signs are not practical, the Fire Marshal's Office may approve "No Parking" and "Fire Lane" to be painted on the pavement at intervals of one hundred (100) feet or less using yellow reflective paint.
- When dictated by the Fire Marshal, the one hundred (100) feet sign posting interval may be decreased due to site characteristics.
- The Fire Marshal's Office may also require that yellow reflective paint four (4) inches wide be placed along either the edge of the gutter pan or the edge of pavement, or on the curbs, thereby designating the boundaries of the fire lane.

Fire Lane Sign

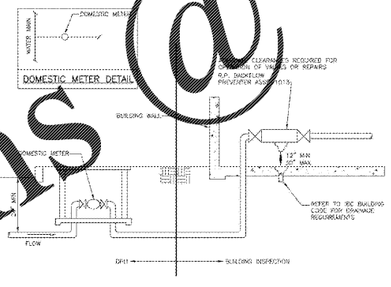
Sign Dimension is 12" wide x 24" tall

Aluminum sign with reflective vinyl applied

Red and white with arrow outlined in black

Corners are cut at a 1.5" radius

COUNTY OF HENRICO
DEPARTMENT OF PUBLIC UTILITIES

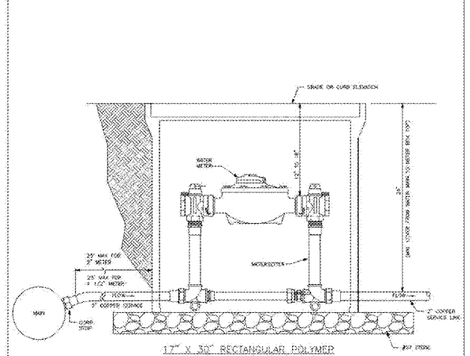


PROCEDURE FOR DOMESTIC METERS WHEN BACKFLOW PREVENTION IS REQUIRED:

1. SUBMIT PLANS TO DEPARTMENT OF PUBLIC UTILITIES (DPU) SEALED AND SIGNED BY A PROFESSIONAL ENGINEER FOR APPROVAL.
2. APPLY FOR A PLUMBING PERMIT FROM COUNTY OF HENRICO, DEPARTMENT OF BUILDING INSPECTIONS.
3. INSTALL PIPING AND BACKFLOW PREVENTER, INCLUDING BRASS MALE TEST COCK ADAPTERS- (45 STRAIGHT HOSE ADAPTER FITTINGS, 1/4" SAE, 45 FLARE TUBE x 1/4" NPT, FOR CONNECTION TO TEST DEVICE. BACKFLOW PREVENTION DEVICES WILL BE INSTALLED AT THE WATER SERVICE CONNECTION AFTER THE DOMESTIC METER. REFER TO APPROVED DPU PLANS FOR TYPICAL INSTALLATION DETAILS. NO TAP-INS WILL BE PERMITTED FOR ANY PURPOSE BETWEEN POMESTIC METER AND BACKFLOW DEVICE.
4. METER BOX AND YOKE IN ACCORDANCE WITH COUNTY OF HENRICO DPU STANDARDS TO BE INSTALLED BY THE CONTRACTOR. THE DOMESTIC METER WILL BE INSTALLED BY THE COUNTY OF HENRICO, DPU.
5. CALL THE BACKFLOW TECHNICIAN AT 727-8709 FOR INSPECTION OF THE BACKFLOW PREVENTER. INSPECTION AND APPROVAL ARE REQUIRED BEFORE THE DOMESTIC METER WILL BE INSTALLED.
6. CALL BUILDING INSPECTIONS AT 501-4368 FOR INSPECTION OF ALL PIPING AND PLUMBING WORK DOWNSTREAM OF THE DOMESTIC METER.
7. OWNER TO PAY BASIS CONNECTION FEE AT DPU PUBLIC INFORMATION OFFICE. FEE MUST BE PAID FOR THE DOMESTIC METER BEFORE THE METER CAN BE INSTALLED. CALL 501-4383 FOR DETAILS.
8. THE BACKFLOW PREVENTION ASSEMBLY'S SHUTOFF VALVES SHALL BE THE ONES APPROVE BY THE MANUFACTURER FOR THAT BACKFLOW PREVENTION ASSEMBLY.
9. REDUCED PRESSURE ZONE BACKFLOW PREVENTER SHALL HAVE A MINIMUM CLEARANCE OF 24" FROM WALL TO TEST COCK ADAPTERS AND ALL OTHER CLEARANCES SHALL BE A MINIMUM OF 12".

REVISIONS	TYPICAL IN-BUILDING INSTALLATION REDUCED PRESSURE BACKFLOW PREVENTER MAIN LINE DEVICE WITH DOMESTIC METER	DRWG. NO.
06/20/2014		D-405

COUNTY OF HENRICO
DEPARTMENT OF PUBLIC UTILITIES



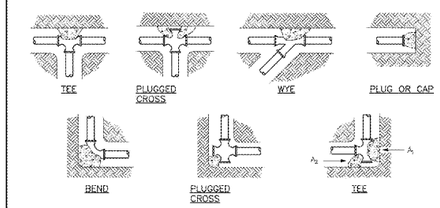
17" X 30" RECTANGULAR POLYMER CONCRETE METER BOX SIMILAR TO OLDCASTLE H-SERIES 1730 OR HIGHLINE PRODUCTS ULTRA SERIES MODEL PHA173024H POLYMER CONCRETE BOX & LID

NOTES:

1. ALL WATER METERS TO BE FURNISHED & INSTALLED BY THE COUNTY.
2. ALL METERSETTERS PROVIDED FOR 1-1/2" & 2" METERS SHALL HAVE REMOVABLE PACK JOINTS SUITABLE FOR COPPER PIPE.
3. ALL METERSETTERS SHALL HAVE SADDLE NUTS, PADLOCK WINGS, AND SHALL BE SIMILAR TO FORD OR MUELLER.
4. BYPASS SHALL NOT BE PROVIDED.

REVISIONS	1 1/2" AND 2" METER SETTING WITH CORPORATION STOP	DRWG. NO.
06/20/2014		D-534

COUNTY OF HENRICO
DEPARTMENT OF PUBLIC UTILITIES



NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.

BEARING AREA OF THRUST BLOCKS IN SQ. FT.

PIPING SIZE	TEE, WYE, PLUG OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED CR RUN A_1	TEE PLUGGED CR RUN A_2	45° BEND	22 1/2° BEND	11 1/4° BEND
6	2.1	3.0	4.3	3.0	2.0	1.0	----
8	3.8	5.3	7.6	5.4	3.6	2.0	2.0
10	5.9	8.4	11.8	8.4	4.9	2.4	2.0
12	8.5	12.0	17.0	12.0	8.8	3.4	3.0
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.4	7.5	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

NOTES:

1. ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 200 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 3,500 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:

   BEARING AREA = (TEST PRESSURE/2000) X (3500/SOIL BEARING STRESS) X (TABLE VALUE)

SIZE OF FITTING	MIN. C.I. → CONC. FOR BLOCKING
3" – 8"	1'
10" – 12"	1'-6"
16" – 24"	2'

2. CONCRETE SHALL BE A-3 (3000 PSI) MEETING REQUIREMENTS OF ASTM C94.

REVISIONS	THRUST BLOCKING DETAILS	DRWG. NO.
06/20/2014		D-700