

VARIES

2-2 1/2" NOZZLES

AVK MODEL 2780, AFC MODEL MK 75, OR APPROVED EQUIVALENT.

1-4 1/2" PUMPER NOZZLE

1'-6" TO 2'-0" ABOVE GRADE

2'X2'X4" CONCRETE PAD

CUT SLOPE

FILL SLOPE

3' MIN. COVER

7 CU. FT. GRAVEL

CONTINUOUS SECTION OF PIPE

3/4" DIA. "CORTEN" THREADED ROD AND NUTS.

APPROVED M.J. GLAND RESTRAINT—(i.e. MEGALUGS, GRIP RINGS OR UNI-FLANGE) MAY BE SUBSTITUTED FOR CONCRETE THRUST BLOCKS.

CONCRETE BASE AND THRUST BLOCK AGAINST UNDISTURBED SOIL; CONCRETE SHALL NOT COVER HYDRANT DRAIN.

NOTE: COMPLETE FIRE HYDRANT ASSEMBLY INCLUDES BRANCH PIPE, FITTINGS, GATE VALVE AND BOX, CONCRETE BASE, AND THRUST BLOCKS OR M.J. GLAND RESTRAINT.

VALVE BOX OUTSIDE PAVEMENT OR VALVE VAULT UNDER PAVEMENT

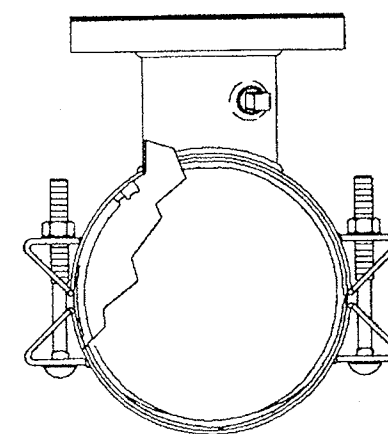
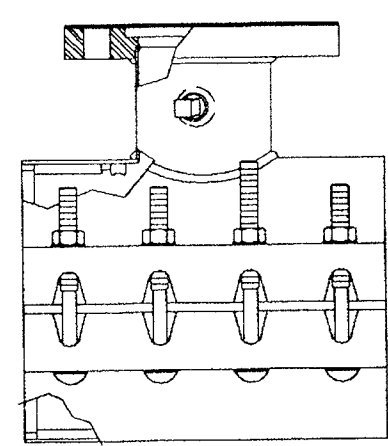
STANDARD INSTALLATION INCLUDES FOSTER ADAPTER OR APPROVED EQUAL.

CONCRETE THRUST BLOCK

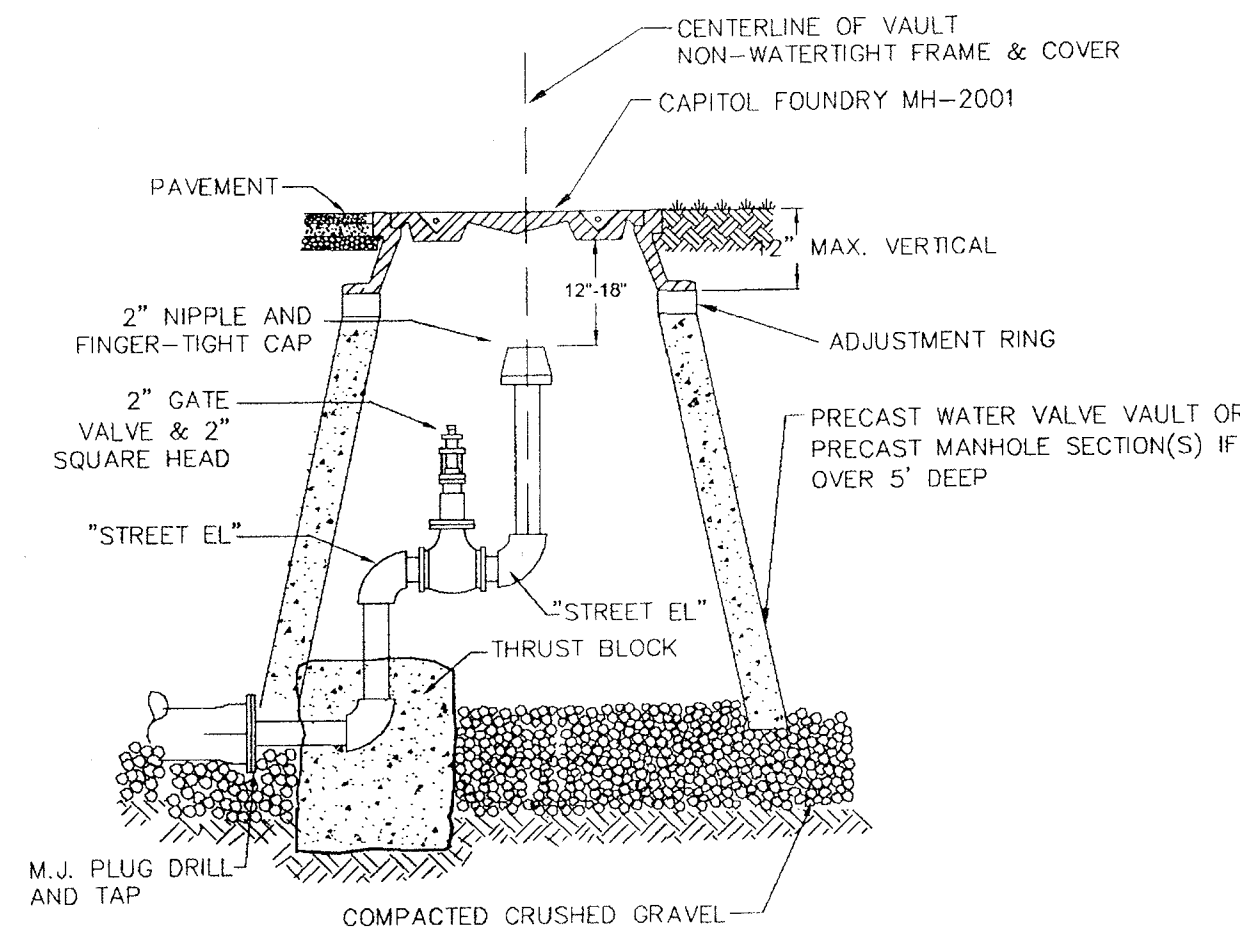
M.J. FITTINGS SHALL NOT BE ENGAGED IN CONCRETE

A cross-sectional diagram of a wellhead assembly. It shows a central circular structure with four rectangular spacers (spiders) arranged radially. The outermost layer is labeled 'ENCASEMENT PIPE'. Inside this is a 'CARRIER PIPE'. The spacers are labeled 'CASING SPACER (SPIDER)'. The central opening is labeled 'POLYETHYLENE RUNNER'.

NOTE: A 1" DRAIN WILL BE REQUIRED ON THE LOWER END OF THE CASING IF THE CASING ENDS ARE SEALED WITH MORTAR AND BRICK.



- ## TAPPING SLEEVE AND VALVE



- ## BLOWOFF ASSEMBLY

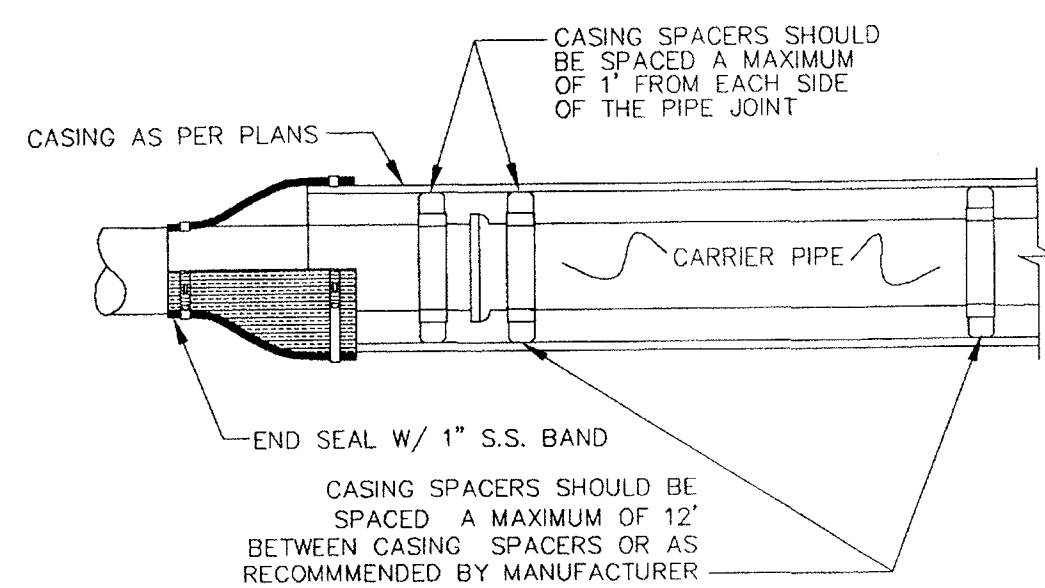
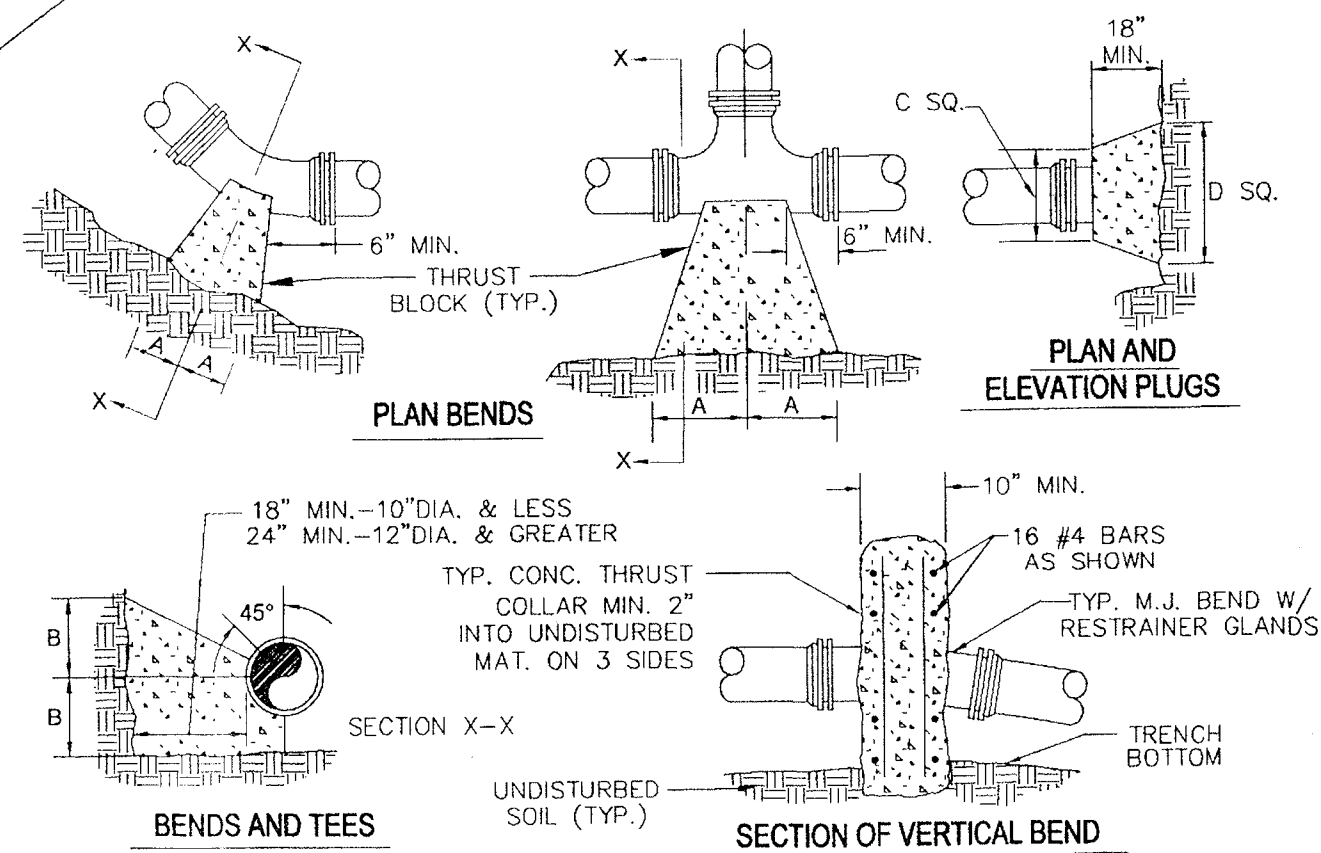


TABLE OF FITTING SIZES VERT. = 1.5												
PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE PLUG	TEE BRANCH	REDUCER (NOTE 2)	VERT. 45°	VERT. 22 1/2°	VERT. 11 1/4°	
6"	D.I.	28'	12'	6'	3'	38'	34'	20'	23'	11'	5'	
8"	D.I.	37'	15'	7'	4'	51'	47'	21'	30'	15'	7'	
10"	D.I.	45'	19'	9'	4'	61'	57'	20'	37'	18'	9'	
12"	D.I.	53'	22'	11'	5'	73'	69'	38'	43'	21'	10'	
6"	PVC	30'	12'	6'	3'	56'	38'	29'	35'	17'	8'	
8"	PVC	40'	16'	8'	4'	74'	56'	31'	46'	22'	11'	
10"	PVC	47'	20'	9'	5'	89'	82'	30'	56'	27'	13'	
12"	PVC	56'	23'	11'	6'	106'	88'	56'	66'	32'	16'	

- # THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS



- 200 psi PRESSURE =
2000 psf BEARING =
1.5 FACTOR OF
SAFETY =

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	18"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	13"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	30"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	24"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	16"	20"	20"	36"
24"	32"	42"	62"	30"	44"	22"	22"	16"	62"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

THRUST BLOCK CONSTRUCTION

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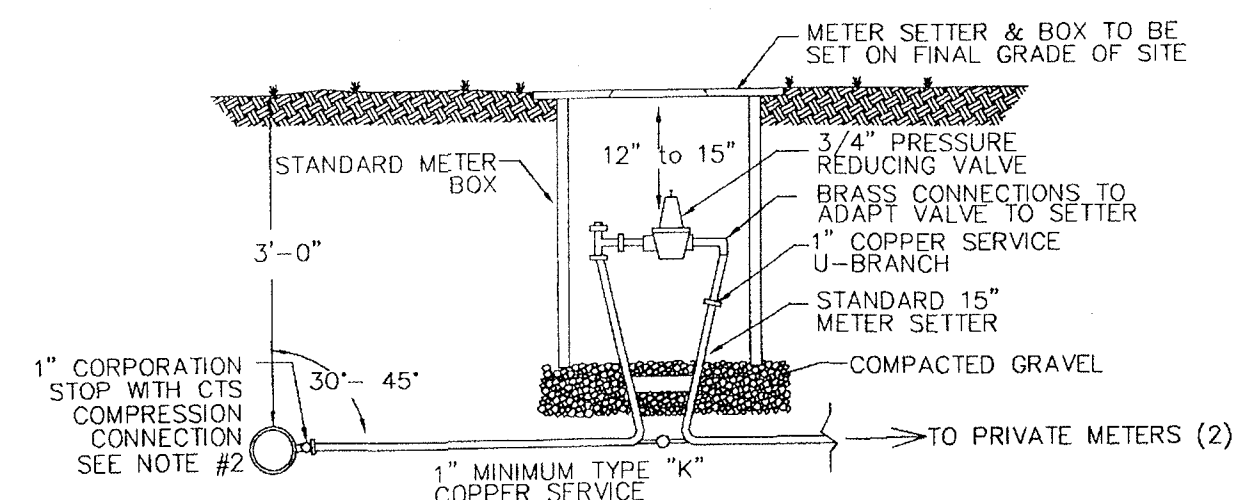
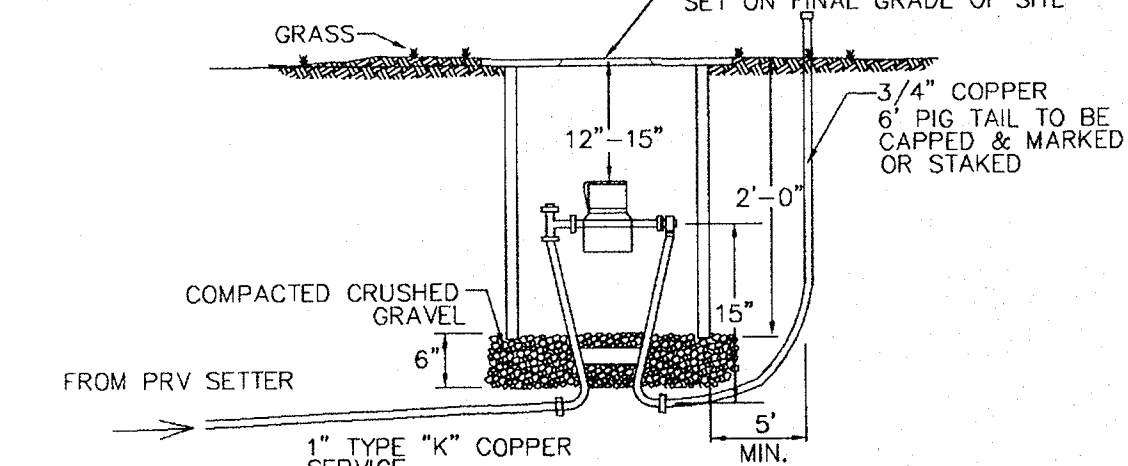


Diagram illustrating a Private Property Right-of-Way Easement. The diagram shows a horizontal easement line crossing a vertical property line. On the left side (Right-of-Way), a pipe with a lockable shutoff (TYP.) is shown. On the right side (Private Property), a pipe with a check valve (TYP.) is shown. The easement line is labeled "PRIVATE PROPERTY" and "RIGHT-OF-WAY OR EASEMENT LINE". A note indicates the pipe diameter is "18\" DIA." and the length is "12\"-18\" NOTE #4". Arrows indicate flow from the PRV setter.



WHERE EARTH BACKFILL IS USED, TRENCH SHALL BE LEFT SLIGHTLY MOUND TO ALLOW FOR SETTLEMENT; SEED IN ACCORD WITH THE STANDARD SEWER SPECIFICATIONS.

PROPOSED GRADE

UNDISTURBED EARTH

TRENCH BACKFILL SHALL BE NATIVE EXCAVATED MATERIAL EXCEPT WHERE GRANULAR BACKFILL IS REQUIRED.

3'-0" MIN. COVER

TRACER WIRE (GREEN COATED NO. 12 COPPER WIRE)

WATERLINE

6" MIN.

STD # 10'S CRUSHED GRAVEL (IN ROCK) COMPACTED SEEDABLE NATIVE SOIL (IN SOIL)

4" MIN. IN SOIL
6" MIN. IN ROCK

TRENCH WALL

ACS DESIGN

2203 Peters Creek Road, NW
Roanoke, Virginia 24017
Phone: 540 562 2345
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Email: info@acsdesignllc.com
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WATERLINE 700/800/FORCE MAIN SEWER 2

THE ESTATE LOTS

PLANNED COMMERCIAL DEVELOPMENT

LAKEWATCH PLANTATION

GILLS CREEK MAGISTERIAL DISTRICT

FRANKLIN COUNTY, VIRGINIA

DRAWN BY: DME

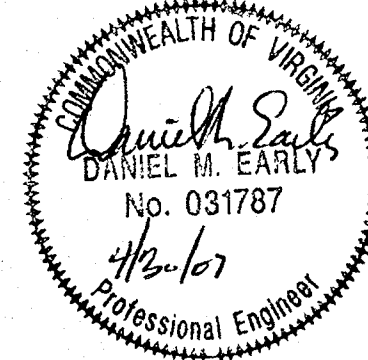
DESIGNED BY: CEK

CHECKED BY: DME

DATE: 12/28/06

SCALE: NOT TO SCALE

RECEIVED APRIL 30 2007



SHEET No.

8 OF 10

WATERLINE DETAILS

JOB No. 05076