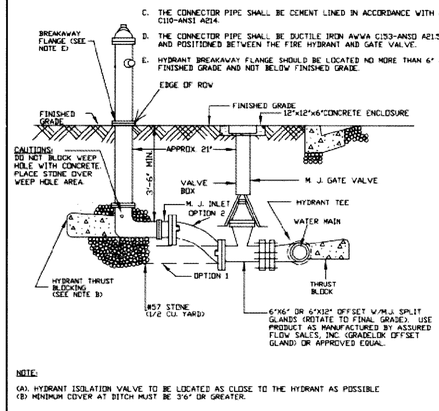
PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES

OPTION 1: IF GRADE ADJUSTMENT IS NOT REQUIRED:
A. CONNECTOR PIPE MAY BE APPROVED D.I. OR P.V.C. PIPE.
B. ALL JOINTS FROM HYDRANT TEE TO HYDRANT ARE TO BE RESTRAINED WITH APPROVED JOINT RESTRAINT DEVICES AND THRUST BLOCKING BEHIND THE HYDRANT

OPTION 2: IF GRADE ADJUSTMENT IS REQUIRED:
A. THE CONNECTOR PIPE SHALL BE OF THE OFFSET DESIGN SO THAT THE FIRE HYDRANT CAN BE ADJUSTED TO ENSURE PLACEMENT AT THE PROPER GRADE. WHEN THE CONNECTOR PIPE IS THE OFFSET DESIGN IT SHALL HAVE AN ANCHORING FEATURE AT BOTH ENDS SO THAT WHEN USED WITH M.J. SPLIT GLANDS A RESTRAINED JOINT IS PROVIDED.
B. ALL JOINTS FROM HYDRANT TEE TO HYDRANT ARE TO BE RESTRAINED WITH APPROVED JOINT RESTRAINT DEVICES AND THRUST BLOCKING BEHIND THE HYDRANT

C. THE CONNECTOR PIPE SHALL BE CEMENT LINED IN ACCORDANCE WITH AWWA C10-AMSI A21.4.
D. THE CONNECTOR PIPE SHALL BE DUCTILE IRON AWWA C153-ANSO A21.53 AND POSITIONED BETWEEN THE FIRE HYDRANT AND GATE VALVE.
E. HYDRANT BREAKAWAY FLANGE SHOULD BE LOCATED NO MORE THAN 6" ABOVE FINISHED GRADE AND NOT BELOW FINISHED GRADE.

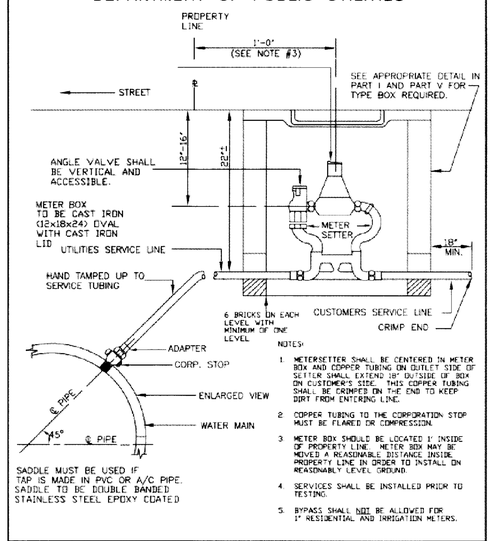


NOTE:
(A). HYDRANT ISOLATION VALVE TO BE LOCATED AS CLOSE TO THE HYDRANT AS POSSIBLE
(B) MINIMUM COVER AT DITCH MUST BE 3'6" OR GREATER.

DATE JAN. 2008 / REVISIONS	TYPICAL FIRE HYDRANT DETAIL	DRWG. NO. FIR-2

1 TYPICAL FIRE HYDRANT DETAIL
No Scale

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES

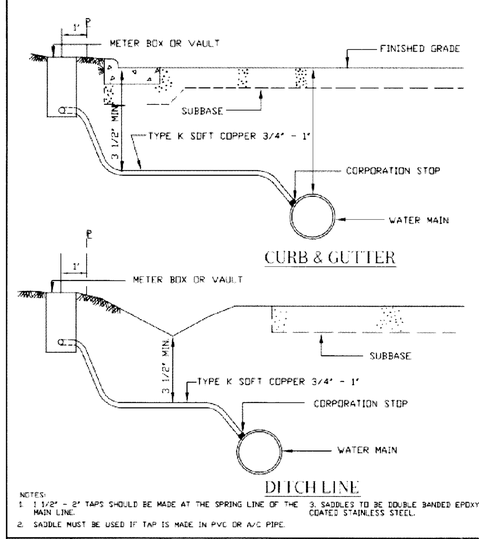


NOTES:
1. METERSETTER SHALL BE CENTERED IN METER BOX AND COPPER TUBING ON OUTLET SIDE OF SETTER SHALL EXTEND 18" OUTSIDE OF BOX ON CUSTOMER'S SIDE. THIS COPPER TUBING SHALL BE CRIMPED ON THE END TO KEEP DIRT FROM ENTERING LINE.
2. COPPER TUBING TO THE CORPORATION STOP MUST BE FLARED OR COMPRESSION.
3. METER BOX SHOULD BE LOCATED 1' INSIDE OF PROPERTY LINE. METER BOX MAY BE MOVED A REASONABLE DISTANCE INSIDE PROPERTY LINE IN ORDER TO INSTALL ON REASONABLY LEVEL GROUND.
4. SERVICES SHALL BE INSTALLED PRIOR TO TESTING.
5. BYPASS SHALL NOT BE ALLOWED FOR 1" RESIDENTIAL AND IRRIGATION METERS.

DATE JAN. 2008 / REVISIONS	TYPICAL WATER METER CONNECTION FOR 3/4" SERVICE (5/8" METERS)	DRWG. NO. MET-1

2 TYPICAL WATER METER CONNECTION
No Scale

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES

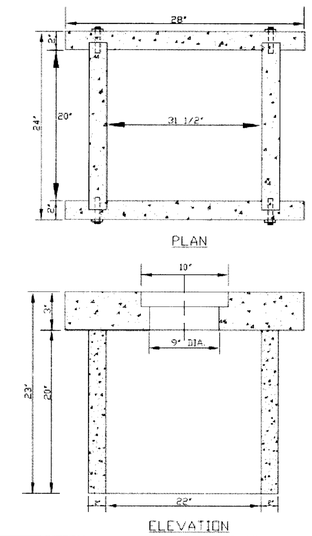


NOTES:
1. 1 1/2" - 2" TAPS SHOULD BE MADE AT THE SPRING LINE OF THE MAIN LINE.
2. SADDLE MUST BE USED IF TAP IS MADE IN PVC OR A/C PIPE.
3. SADDLES TO BE DOUBLE BANDED EPOXY COATED STAINLESS STEEL.

DATE JAN. 2008 / REVISIONS	WATER SERVICE INSTALLATION DETAIL	DRWG. NO. MET-2

3 WATER SERVICE INSTALLATION DETAIL
No Scale

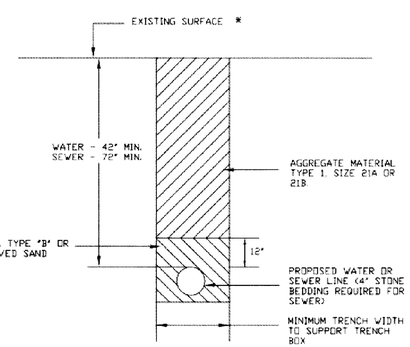
PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES



DATE JAN. 2008 / REVISIONS	1" KNOCK DOWN METER BOX	DRWG. NO. MET-3

4 1" KNOCK DOWN METER BOX
No Scale

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES
VDOT APPROVED

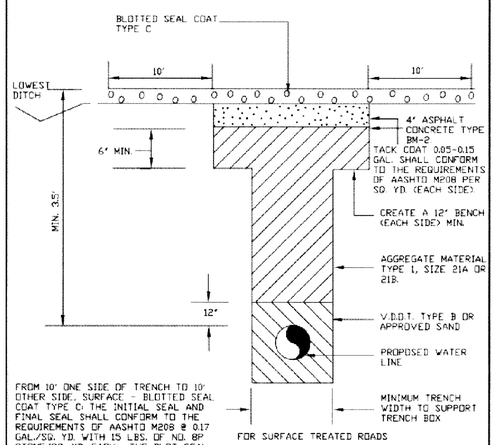


* NOTE: CAPPING DONE ON SHOULDERS, GRAVEL AND DIRT ROADS.

DATE JAN. 2008 / REVISIONS	TYPICAL SECTION FOR REPAIR OF "PRIMARY" ROADWAY SHOULDERS OR OTHER UNPAVED TRAVELED AREAS FOR WATER & SEWER LINE CROSSINGS	DRWG. NO. PAV-1

5 TYPICAL SECTION FOR REPAIR ROADWAY SHOULDERS WATER & SEWER LINE CROSSINGS
No Scale

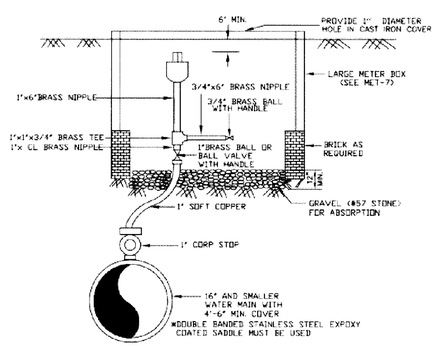
PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES
VDOT APPROVED



DATE Jan. 2008 / REVISIONS	TYPICAL SECTION FOR REPAIR OF OPEN CUT AFTER PLACEMENT OF WATER LINE (APPLIES TO CROSSINGS ONLY NOT PARALLEL INSTALLATION)	DRWG. NO. PAV-6

6 TYPICAL SECTION FOR REPAIR OF OPEN CUT
No Scale

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES



NOTE:
1. IT IS THE RESPONSIBILITY OF THE DESIGN ENGINEER TO DESIGN THE PUBLIC WATER SYSTEM TO MINIMIZE THE NUMBER OF AIR RELEASE VALVES BY ELIMINATING HIGH POINTS WHERE REASONABLY FEASIBLE AND TO PROPERLY SIZE THE AIR RELEASE VALVE TAKING INTO CONSIDERATION ALL THE DESIGN FACTORS, AND KEEPING IN MIND THAT A 1" AIR RELEASE VALVE FOR 16" WATER LINES IS DESIRABLE. ORIFICE SIZE SHALL BE NOTED ON PLANS.
2. ALL COPPER FITTINGS WILL BE FLARE OR COMPRESSION TYPE.
3. SADDLE MUST BE USED. THE JOINT OF PIPE WITH AIR RELEASE MUST BE D.I.
4. WHERE THE AIR RELEASE VALVE IS REMOTE FROM THE WATER LINE THERE MUST BE CONTINUOUS RISE IN THE COPPER SUPPLY LINE TO THE AIR RELEASE VALVE AND NO TRAP SHALL BE PERMITTED.
5. AIR RELEASE VALVE TO BE PLACED WHERE NOT SUBJECT TO FLOODING.

DATE JAN. 2008 / REVISIONS	1" RELEASE VALVE	DRWG. NO. WAT-1

7 1" RELEASE VALVE
No Scale

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES

CARRIER PIPE DIA.	CASING PIPE DIAMETER	MINIMUM WALL THICKNESS: CRITERIA WITHIN RAILROAD RIGHT OF WAY — RCP, WITH PROTECTIVE COATING	CRITERIA WITHIN RAILROAD RIGHT OF WAY — STEEL WITH PROTECTIVE COATING	CRITERIA WITHIN VDOT RIGHT OF WAY — P.C.P.	CRITERIA WITHIN VDOT RIGHT OF WAY — STEEL
6"	16"	3.0"	0.281"	3.0"	0.250"
8"	20"	3.0"	0.375"	3.0"	0.250"
10"	20"	3.0"	0.375"	3.0"	0.250"
12"	24"	3.5"	0.375"	3.5"	0.250"
15"	24"	3.5"	0.375"	3.5"	0.250"
16"	24"	3.5"	0.375"	3.5"	0.250"
18"	30"	4.0"	0.500"	4.0"	0.375"
20"	30"	4.0"	0.500"	4.0"	0.375"
21"	30"	4.0"	0.500"	4.0"	0.375"
24"	36"	4.5"	0.563"	4.5"	0.375"
30"	42"	5.0"	0.625"	5.0"	0.500"
33"	42"	5.0"	0.625"	5.0"	0.500"
36"	48"	5.5"	0.688"	5.5"	0.500"
42"	54"	6.0"	0.781"	6.0"	0.500"

REINFORCED CONCRETE CASING PIPE SHALL BE ASTM C-76, CLASS III.
STEEL CASING PIPE SHALL BE ASTM 1-139, GRADE B.

NOTES:
A. Slopes through bores shall not be based on minimum grade unless it is the only slope available.
B. Increasing thickness of casing must be considered where bore lengths exceed 125'.
C. When using steel casing, a minimum of .375" thickness is required where ground cover over pipe exceed 15'.
D. Contractor shall make an effort to bore in the appropriate direction based on existing soil conditions. Engineer must show location and size of bore pit; and location and size of permanent and construction easement.
E. Where restraining devices are required for the carrier pipe, the casing pipe shall be increased as necessary.
F. RCP will only be used when required by permitting agency.

DATE JAN. 2008 / REVISIONS	CASING PIPE REQUIREMENTS	DRWG. NO. CAS-1

8 CASING PIPE REQUIREMENTS
No Scale

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QUALITY ASSURANCE : STUART LITTLE
PROJECT MANAGER : CHRIS THOMPSON
PROJECT NO. : 10106
SCALE : AS SHOWN

COMMONWEALTH OF VIRGINIA
Stuart G. Little
Lic. No. 39974
04/7/14
PROFESSIONAL ENGINEER

DATE : APRIL 7, 2014

REVISION BLOCK

DATE	DESCRIPTION
-	-

MWC DEVELOPMENT, LLC
P.O. BOX 694
PRINCE GEORGE, VA 23875
CONTACT: KRIS CUTLER

TINSLEY CHARTER SUBDIVISION - SECTIONS 6, 7 AND 8

UTILITY DETAILS

SHEET NO.
C6.5