

**City of Aberdeen
Department of Public Works**

November 01, 2022

TO: GENERAL PUBLIC

RE: CITY OF ABERDEEN APPROVED LIST OF SUPPLIERS AND MATERIALS
FOR WATER AND SEWER CONSTRUCTION

1. The Department of Public Works hereby issues an addendum dated November 1, 2022 to the Harford County Part 27, dated Nov 10, 2014 for "Approved List of Suppliers and Materials For Water and Sewer Construction".
2. The Department of Public Works also hereby issues addenda to various Harford County Standard Details to reflect the changes made by the aforementioned addendum to the "Approved List of Suppliers and Materials".
3. The Changes become effective on the date noted above and are applicable within the Aberdeen's Water Distribution and Sewer Collection System for all areas that the City provides services.
4. For additional information contact the Department of Public Works at 410-272-1600 x 217

Sincerely,

Kyle E. Torster, P.E.
Director of Public Works

Cc:
Planning and Zoning



Effective November 1, 2022

HARFORD COUNTY

DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER AND SEWER

City of Aberdeen Addendum November 1, 2022



APPROVED LIST OF SUPPLIERS AND MATERIALS FOR WATER AND SEWER CONSTRUCTION



Effective November 1, 2022



City of Aberdeen Department of Public Works Addendum to Harford County Approved List of Materials and Suppliers for Water and Sewer Construction

Effective November 1, 2022

DAVID R. CRAIG
HARFORD COUNTY EXECUTIVE



TIMOTHY F. WHITTIE, P.E.
DIRECTOR OF PUBLIC WORKS

MARY F. CHANCE
DIRECTOR OF ADMINISTRATION

JOEL V. CAUDILL, P.E.
DEPUTY DIRECTOR OF WATER & SEWER

HARFORD COUNTY GOVERNMENT

DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER AND SEWER

MEMORANDUM

DATE: November 10, 2014
TO: See Distribution List
FROM: *Mary F. Chance*
Mary F. Chance
Director of Administration
RE: Revisions to Parts 25, 26, 27 and the addition of new Part 28 to the Rules and Regulations

Three parts of the Rules and Regulations of the Division of Water and Sewer have recently been revised and a new part has been added. Through public advertisement, a hearing was held on October 24, 2014 to discuss the proposed changes. Part 25- Design Guidelines, Part 26- Standard Specifications and Part 27- Approved Materials List were revised. New Part 28- Approved Contractors/Vendors for Auxiliary Water and Sewer Construction and Testing was added. The revised pages of these sections are attached.

The changes to the Rules and Regulations became effective on the date noted above. Please replace the current pages with the attached sheets in your copy of the Rules and Regulations. If you prefer, the complete document may be obtained in CD form from the Division of Water and Sewer or downloaded from the Harford County website in the next several weeks.

Enclosure
DWI/hs

Cc: David R. Craig, Harford County Executive
Kathryn L. Hewitt, Harford County Treasurer
Margaret Hartka, Law Department
Timothy F. Whittie, P.E., Director of Public Works
Joel V. Caudill, P.E., Deputy Director of Water and Sewer
Jacqueline K. Ludwig, Chief of Water and Sewer Administration and Engineering
Darryl W. Ivins, Engineer, Division of Water and Sewer

Preserving Harford's Past; Promoting Harford's Future

MY DIRECT PHONE NUMBER IS 410-638-3300
3334 ABINGDON ROAD, ABINGDON, MARYLAND 21014 • Maryland Relay 711 • www.harfordcountymd.gov



City of Aberdeen Department of Public Works Addendum to Harford County Approved List of Materials and Suppliers for Water and Sewer Construction

Effective November 1, 2022



City of Aberdeen Department of Public Works Addendum to Harford County
Approved List of Materials and Suppliers for Water and Sewer Construction

Effective November 1, 2022

The following Approved List of Suppliers and Materials for Water and Sewer Construction apply to the operation of the Division of Water and Sewer and is Part 27 of the General Rules and Regulations that are promulgated in accordance with Section 807 of the Harford County Charter.



City of Aberdeen Department of Public Works Addendum to Harford County
Approved List of Materials and Suppliers for Water and Sewer Construction

Effective November 1, 2022



Effective November 1, 2022



**APPROVED LIST OF
SUPPLIERS AND MATERIALS
FOR
WATER AND SEWER CONSTRUCTION
PART 27**

HARFORD COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER AND SEWER

November 10, 2014

**City of Aberdeen Addendum
November 1, 2022**



Effective November 1, 2022



**HARFORD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER & SEWER**

GENERAL RULES AND REGULATIONS

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Effective November 1, 2022

PART 27 APPROVED LIST OF SUPPLIERS AND MATERIALS FOR WATER AND SEWER CONSTRUCTION

The Chief of Facilities shall maintain the approved materials list. The amendment of the list shall be the result of an evaluation and recommendation of a committee of operations, maintenance, and engineering staff of the Water & Sewer Division periodically designated by the Deputy Director of the Water & Sewer Division. The list shall be utilized by contractors, suppliers, designers, and County staff when identifying materials which have been approved for use in the County water and sewer systems. This list of approved materials shall be utilized in construction or maintenance when the project specifications do not contain enough detail to identify every item. This list of approved materials is to be used or referenced in designs unless a material not contained in the list is otherwise approved for use in a specification package.

The supplier of a material not on the list may request inclusion of a product by pursuing the following evaluation procedures:

1. Materials must be presented with a request for inclusion in the approved materials list. The request may initially be for an individual or limited number of projects.
2. Five (5) copies of fact sheets, specifications, laboratory test results, drawing and significant information on applicability of use of the product must be presented before a request will be considered.
3. Documentation of approval for use for the proposed application by other local, state or federal water and sewer operations and construction agencies must be presented.
4. Depending on the nature of the product, factory visits and on-site visits to locations where the material or product is being utilized in construction and/or operation may be required as part of the evaluation process.
5. If evaluation of the aforementioned information is acceptable, the product may be approved for use on a trial basis in a developer-funded or County capital project. NOTE: Large quantities or extensive use in the trial installation will normally not be allowed.
6. The County reserves the right to have the product tested by an independent agency to assure that it meets the minimum requirements established in the Standard Specifications. In the event that the product does not meet the minimum requirements, the manufacturer will be responsible for all associated cost including, but not limited to, the test performed and any additional testing by Harford County. Should the product not pass a retest, the product will be removed from the Approved Material List.
7. If the trial installation produces satisfactory results, then after an appropriate time for observation, the material or product may be utilized on a limited basis.
8. Pending continued satisfactory performance and evaluation during the trial installation and limited use periods, the material or product may be added to the list of approved suppliers.





Effective November 1, 2022

I. WATER MAIN CONSTRUCTION

- 1) **WATER PIPE, C900 POLYVINYL CHLORIDE***
*preferred water main material

North American Pipe; J.M. Eagle;
National Pipe & Plastic Diamond

Note:

Rubber Ring Slip Joint Only
3" or smaller – SDR-21-200 psi 4"-12"-
DR-14-200 psi

- 2) **WATER PIPE & FITTINGS, DUCTILE IRON (D.I.P)***
*water main material in approved instances

<u>Slip Joint</u>	<u>Restrained Joint</u>
U.S. Pipe & Fdy.	T.R. Flex Griffin
	Snap Lock
American	Flex Ring Super
McWane	Lock Atlantic
States	Field Lock
Clow	Foster Adapter

Special Thickness Class

Note:

3" – 6" Class 52
8" - 12" Class 52
14" & above Class 52

- 3) **WATER PIPE, CAST IRON (C.I.P.) Not Permitted.**

- 4) **WATER PIPE, WATER SERVICE (3/4", 1", 1'1/2", 2")**

Copper Tubing-Type K (All Sizes)

Halstead, Reading, Cerro, Mueller, Howell Metals,
Cambridge-Lee

*AWWA Approved PE Pipe Copper Tubing Sized
used in approved instances only

- 5) **FIRE HYDRANT, 5-1/4" VALVE OPENINGS -
MECHANICAL JOINT**

Mueller Centurion A-423 Kennedy
Guardian K-81-A

- 5a) **YARD HYDRANTS**

Murdock M-100, M-150, M-200
Kupferle Truflo Models

Note: Submit Shop Drawings for exceptions

- 6) **PAINT FOR FIRE HYDRANTS
"SCHOOL BUS YELLOW"**

Sherwin-Williams - Yellow #B54Y157
Coronado #COR80-151-1

- 7) **RESILIENT SEAT/WEDGE
VALVES MECHANICAL JOINT (Flanged For
Interior Use)**

Sizes Thru 30" (AWWA C-509-01)

Clow Series F-6100 (4"- 48")
Kennedy Kenseal (4"-12")
M&H Style 4067 (4"-12")
Mueller Series A-2360-20 (4"-12")
U.S. Pipe V&H – USP-0-20 (4"-12")

Sizes 4" - 12" (AWWA C-515)

American Flow Control 2500 series (4"-12")
Clow 2638 series (4"-12")
Kennedy KS-RW series (4"-12")
M&H 7000 series (4"-12") Mueller
A-2361 series (4"-12")
U.S. Pipe – AUSP1 series (4"-12")

Sizes 14" - 36" (AWWA C-515-02)

American Flow Control Series 2500 Clow
Series F-6100
Kennedy Kenseal
M&H Style 7571
Mueller Series A-2361-20
U.S. Pipe V&H – USP-1-20 (14"-48")

Sizes 24" and Above

Pre-approval required

Note:

1. Gearing required above 16"
2. 3"-36" Non-Rising Stem; 3"-16" OS&Y
3. Brass Test Plug
4. All valves are required to use 304 or 316 stainless bolts and nuts. The County may require 316 stainless fasteners to be used in lieu of 304 stainless in instances where it deems necessary.
5. All Valves Should be Clockwise to Close/ Counter-Clockwise to Open

- 8) **BUTTERFLY VALVES (24" & LARGER)
(Valve Shafts-Horizontal)**

Submit shop drawings



Effective November 1, 2022



Effective November 1, 2022

WATER MAIN CONSTRUCTION (cont.)

9) VALVE, COMBINATION AIR/VACUUM RELEASE

Duo Matic/Kenetic - Harford County Model

1" on Mains thru 12"

Apco (Valve & Primer) 143-C 142

Valmatic 201-C 101 Cla-Val Series 36 A.R.I. D-040

2" on Mains 14"-20" (Where Specified)

Apco 145-C 144 Valmatic 202-C 102

Cla-Val Series 36 A.R.I.

10) TAPPING SLEEVE ONLY (MECH. JOINT)

U.S. Pipe

M&H Valve 6" – 12"

Mueller 4"-24" H-615 (C.I., D.I.)

Tyler Pipe 4"-12" S-149 (for C.I.),

American Flow Control M.J. Sleeve - D.I. 4"-36"

Full Circle Stainless Steel Tapping Saddles

Note:

1. 304 or 316 S.S. nuts and bolts

2. Coating – Epoxy (fusion), E-coat

3. **Tapping on AC Pipe Prohibited**

11) FITTINGS-MECHANICAL JOINT CEMENT LINED OR EPOXY COAT - D.I. 3"- 48" (Flanged for Interior Use)

Star 3" – 48" Tyler Fdy – 36"

Tyler Fdy./Union Fdy (C.I. upon request) – 3"- 48"

Clow – 4" – 30" HarCo-PVC - Slip Joint with restraints

Union Fdy. (C.I. upon request) Sigma 3" – 48"

Note:

1. 48" Class 350 D.I (AWWA C-53)

2. M.J. Fittings to be Cement Lined

3. Flanged Fittings to be Epoxy Coated where available

4. Flanged to have 304 or 316 S.S. bolts w/brass nuts.

12) RETAINER GLAND DUCTILE IRON-WEDGED (For D.I.P. Only)

EBAA Iron Mega-A-Lug

Uni-Flange/Ford Wedge Action-Series 1400

Mueller Company-Aqua Grip (4"-12")

(Fire Hydrant and Valve Only)

Star Grip – 3000 series

Sigma – SLD – one lock

Tuf-Grip-Tyler-Union Foundry

Note: epoxy, nylon, mega-bond, e-coat, star bond.

13) PIPE COUPLING - FOR D.I.P., C-900, AC

Ford - Style FC 2"-24"

Smith-Blair - Style 441 2"-16"

Romac - Style 501

Hymax – 2000 2" – 16"

Hymax Grip / All Models

Mueller Maxi-Fit

Romac Alpha / All Models

Note:

1. All couplings to be coated w/epoxy, nylon, e-coat.

2. 304 or 316 S.S. nuts and bolts

3. Submit for approval all work on AC Pipe

14) VALVE BOX SCREW-TYPE 2-PIECE 36"- 48" (5-1/4") (3" Valves & Larger & Blow-off)

Bingham & Taylor #4905

Capital Foundry of Virginia, Inc. #564s

East Jordan #664-S

15) CURB-BOX LOCKING SCREWTYPE (4-1/4")

Bingham & Taylor #4905

Capital Foundry of Virginia, Inc. #NH-138-H-UP

16) METER VAULT / PIT (18", 24", 30")

Plastic Enclosures Only

(Concrete Pits & Slabs Not Permitted)

Brands Comparable to Mid-States, Bingham & Taylor, Oldcastle, etc.

Note:

No Bricks or Concrete Risers;

Plastic Risers Only

17) 18" METER FRAME & 12" or 15" COVER (18" frame with 15" opening preferred)

A.Y. McDonald:

Frame # 74MACF18; Single Hole Lid # 74MCL115T;

Bingham & Taylor:

Frame # CULF18018SP; Single Hole Lid IFL90301WS

Capital Foundry of Virginia, Inc:

Frame # MBX-3437-F; Single Hole Lid # MBX-347-C-H

Ford Meter Box Company:

Frame # FA32C; Single Hole Lid # C3L-T

Vestal 32-482





Effective November 1, 2022

WATER MAIN CONSTRUCTION (cont.)

18) EXTENSION RING

18"x24"
Ford Ext 1
Vestal 32-04332-ER1824
A.Y. McDonald 74MX1
18"x30"
Ford Ext 3
Vestal 32-047ER1830
A.Y. McDonald 74MX1

**19) VALVE, METER, BACKFLOW VAULT,
PRE-CAST CONCRETE, LARGE**

**Mayer Brothers, Inc.; Terre-Hill; Atlantic Precast;
A.C. Miller/Fabcrete Pre- Piped Vault;
Horne Concrete; Gillespie**

**Note: Vault manufacturers not NPCA certified
may be permitted to supply vaults if other
requirements can be met. Contact the Division of
Water and Sewer Maintenance Section for details.**

**20) 4" FRAMES & COVERS FOR VALVE VAULTS
and AIR-RELEASE MANHOLES**

East Jordan Iron Works
E.A. Quirin Foundry
Neenah Foundry
24" Frame-1565-2001
Lid No-1565-5134
30" Frame-1568-2000
Lid No. 1568-5001

21) ALUMINUM METER VAULT DOORS (H-20 Loading)

BilCo
Syracuse Castings
Just-Set P.A. Insert (Har. Co. Spec.)

22) PRE-CAST VAULT TO PIPE LINE CONNECTOR

Atlantic Pre-Cast – A-Lock (<18° grade)
Z-Lock (<18° grade)
Terre-Hill Concrete Products – Dual Seal II
RX101 Water Stop
Hail Mary Rubber Company – Star Seal

**23) JOINT PROTECTOR
(Steel End Ring Concrete Pipe)**

Flex-Protex Pipe Ring Protectors
MarMac Mfg. Company

24) SERVICE SADDLE

Ford Style FC-202
Romac 202N
Smith-Blair 317 Nylon-Coated
Mueller DN2S or DE2S
JCM – 406
Power Seal-3417
a. Specify type of pipe when ordering.
b. All saddles to be epoxy, nylon, or high
density fusion plastic, E-Coat.
c. Pre-sized for PVC pipe.

25) INSIDE METER SETTING

**INSIDE METER SETTINGS NOT PERMITTED FOR
RESIDENTIAL USE WITHIN CITY OF ABERDEEN**

26) CORPORATION STOP, COMPRESSION JOINT

**Approved Sizes: 3/4" - 2"
Approved Brands: Ford, Mueller, McDonald**

All Corporation Stops must be:

- 1. CTS Compression Quick-Joint Style x AWWA
Taper Thread for use with approved saddle.
(direct tapping not permitted)**
- 2. Ball Style Corp (Key Corps not permitted)**

27) CURBSTOP, THREADED

**Approved Sizes: 3/4" - 2"
Approved Brands: Ford, Mueller, McDonald**

28) CURBSTOP, COMPRESSION JOINT

**Approved Sizes: 3/4" - 2"
Approved Brands: Ford, Mueller, McDonald
CTS Compression Quick-Joint Style Only**





Effective November 1, 2022

WATER MAIN CONSTRUCTION (cont.)

29) COUPLING, COPPER COMPRESSION JOINT

Approved Sizes: 3/4" - 2"
Approved Brands: Ford, Mueller, McDonald
CTS Compression Quick-Joint Style Only

30) Y-BRANCH COUPLING, COMPRESSION

To be used for approved instances only.
Shared services and twin connections are not
permitted within City of Aberdeen.

Approved Sizes: 2" x 1" x 1
Approved Brands: Ford, Mueller, McDonald
CTS Compression Quick-Joint Style Only

31) CATHODIC PROTECTIVE CAP NUT

(Oversized)
Protector Cap
Trumbull Industries
Mars Co.

32) DISMANTLING JOINT

Smith-Blair Series 975
Romac DJ-400
Uni-Flange
Note:
1. W/S.S. tie-rods and nuts, w/epoxy, nylon, or ecoat
coating.
2. 304 or 316 S.S. bolt w/brass nuts.

33) FLANGE PIPE/ADAPTOR

Flanged end spool piece to be used, Minimum
working pressure 200 psi

Hymax Models
Romac Models
EBAA-2100 Series
Uni-Flange Models

Note:
1. Pre-approved only.
2. Epoxy, nylon, e-coat coating.
3. 304 or 316 S.S. bolt w/brass nuts.

34) INLET YOKE ANGLE VALVE

Yoke Assemblies not permitted.
See Requirements for Meter Setters.

35) METER YOKE ASSEMBLY

Yoke Assemblies not permitted.
See Requirements for Meter Setters.

36) OUTLET YOKE DUAL CARTRIDGE CHECK VALVE

Yoke Assemblies not permitted.
See Requirements for Meter Setters.

37) EXPANSION CONNECTION

Expansion Connections not permitted.
See Requirements for Meter Setters.

38) YOKE GASKETS

Yoke Assemblies not permitted.
See Requirements for Meter Setters.

39) YOKE NUTS

Yoke Assemblies not permitted.
See Requirements for Meter Setters.

METER SETTER REQUIREMENT:

The City of Aberdeen requires meter sizes 3/4" - 1"
use an approved meter setter configured as follows:

-Ford (or Mueller Equivalent):
Coppersetter 70 & 80 Series or Resetter 40 Series

-Lockable Angle Ball Valve Inlet
-Angle Cartridge Dual Check Outlet,
-CTS Q-Joint Compression Inlet and Outlet

Cast Iron Yoke Assemblies and Expansion Connections
are not permitted within the City of Aberdeen.

Setter height should be based on appropriate bury
depth of service line.

All sizes should be based on size of meter and design
requirements of service customer.





Effective November 1, 2022

WATER MAIN CONSTRUCTION (cont.)

41) BALL VALVE BRASS

Approved Sizes: 3/4", 1", 1 1/2", 2"
Approved Brands: Ford; Mueller

42) LOCK-WING BALL VALVE BRASS

Approved Sizes: 3/4", 1", 1 1/2", 2"
Approved Brands: Ford; Mueller

43) DUST CAP

Niagara

44) BRASS PIPE – THREADED

All Manufacturers

45) OUTSIDE DOMESTIC WATER SERVICE COMPLETE (3/4")

See City of Aberdeen Standard Detail Addenda for approved configuration and material needed

46) OUTSIDE DOMESTIC WATER SERVICE COMPLETE (1")

See City of Aberdeen Standard Detail Addenda for approved configuration and material needed

47) WATER METERS

All Applications; All Sizes 3/4" – 12":

Neptune Mach-10 E-Coder R900i Ultrasonic Meter

Submit Shop Drawing for Any Exceptions

All sizes should be based on size of meter and design requirements of service customer.

48) WATER METERS FOR FIRE FLOW

All Applications; All Sizes 3/4" – 12":

Neptune Mach-10 E-Coder R900i Ultrasonic Meter

Submit Shop Drawing for Any Exceptions

All sizes should be based on size of meter and design requirements of service customer.

All fire systems shall be metered in entirety.

49) BACKFLOW PREVENTERS

Apollo Valves/Conbraco Industries, Inc.

Apollo Model DCLF4A 1/2" – 12"

Apollo Model RPLF4A

Apollo Model DCDALF4A 2 1/2" – 12"

Apollo Model RPDALF4A

Watkins

Zurn

2 1/2" – 12"

Note:

- 1. Retest and certification required before operational approval.**
- 2. All reduced pressure models require air gap funnel drain.**
- 3. All sizes should be based on size of meter and design requirements of service customer.**

50) AUTOMATIC FLUSHING SYSTEMS

Mueller Hydro-Guard HG-4 Cold Climate System

System must be installed with appropriately sized supply line and meter.

Discharge must be dechlorinated and connected properly to approved stormwater asset.

Submit Shop Drawing for Approval





Effective November 1, 2022

II. SEWER MAIN CONSTRUCTION

1) SEWER PIPE, POLYVINYL CHLORIDE (PVCSP)

North American Pipe
J.M. Eagle
National Pipe & Plastic
Diamond

Note:

4" thru 6" Class SDR-26 Heavy Wall
8" thru 15" Class SDR-35
18" thru 24" PS115 ASTM F679 and F1336

2) SEWER PIPE, DUCTILE IRON

Not Permitted Within the City of Aberdeen

3) FORCE MAIN SEWER PIPE

2"-3":
- Rubber Ring Slip Joint
- SDR 21, Class 200 PVC

3":
- **HDPE (D.I.P. Sized)**
- **PVC (Restrained Joint)**

4"-12"
- DR 14 - C-900 PVC
- **HDPE (D.I.P. Sized)**
- **PVC (Restrained Joint)**

Over 12"
- **HDPE (D.I.P. Sized)**
- **PVC (Restrained Joint)**

Note:

1. Refer to Water Main Materials for manufacturers.
2. **Ductile Iron Sewer Pipe is not permitted.**
3. **DR Rating based on Pressure**

3) MANHOLE, PRECAST CONCRETE

Atlantic Precast
Concrete Pipe & Products
Terre-Hill
Monarch Products Company, Inc.
Hanson Products
Advanced Drainage Structures

**Note: All precast sewer manholes must have
Dura-Plate 100 interior lining or other comparable
corrosion resistant product.**

4) MANHOLE, PRECAST CONCRETE

Atlantic Precast
Concrete Pipe & Products
Terre-Hill
Monarch Products Company, Inc.
Hanson Products
Advanced Drainage Structures

5) MANHOLE TO PIPE LINE CONNECTORS

(Grades >18% and <45%)
A-Lok - Z-Lok Products

6) MANHOLE TO PIPE LINE CONNECTORS

(<18%)
A-Lok - Atlantic Precast
Dual Seal II - Terre-Hill Concrete Products
Star-Seal (greater than 16")

7) BUILT IN-PLACE MANHOLE TO PIPE LINE CONNECTORS

A-Lok Field Kit - A-Lok Products
Z-Lok Field Kit - A-Lok Products
Note: 18% grade = 10.2°
19.5% grade = 11°

8) CORED MANHOLE GASKETS

A-Lok - A-Lok Products
Link-Seal - Thunderline Corp.
Z-Lok XP - A-Lok Products
Kor-N-Seal - National Pollution Control Systems, Inc.
Model S406-12APW
Note: All gaskets require two S.S. bands

9) PLUGS - SEWER (WING-NUT)

Cherne Industries Inc. - "Gripper"
R.C. Graham - "Hand-Tite"
Circle Gas Manufacturing





Effective November 1, 2022

SEWER MAIN CONSTRUCTION (cont.)

10) FITTINGS

G.P.K. Products, Inc.
Multi-Fitting-PVC (Thru 15")
Plastic-Trend-PVC

G.P.K. Products, Inc. 10"-27"
Fabricated 10"& Larger
Multi-Fitting-18"-36"
Freedom-10"-36"
Nyoplast-10"-36"
B&H Inc.-10"-15"

PVC 6"-8" Wye, 45° Bend Plastic Trends SDR-26
HarCo SDR-26
Multi-fitting – SDR-26
G.P.K. SDR-26

Fernco "Hulk" Coupling
GPK Products/Indiana Seal "Shearguard" Coupling

D.I.P. 6"-8" Wye, 45° Bend HarCo
Hersey Products, Inc.
Note (applies to Hersey ONLY):
1. Fusion, bonded epoxy, nylon, e-coat lining.
2. < 4" – Fusion bonded epoxy.
**3. All Ductile Fittings to be lines with
Protecto401 or Comparable Product
Interior double cement lined**

11) PLASTIC STEP

M.A. Industries, Inc.

12) SADDLE

Geneco Sealtite (Specify type pipe)
Romac "CB" (Any type pipe)
Note: To be epoxy, nylon, or E-coated.

13) MANHOLE FRAME & COVER

Capitol Foundry of Virginia, Inc.
Frame & Cover No. #VB-9*S

East Jordan Iron Works, Inc.
Frame Model No. 1565Z
Lid Model No. 1565A

Neenah Foundry Company
Frame Model No. 1976-0001
Lid Model No. 1976-0032

14) MANHOLE FRAME & COVER (STANDARD)

Capital Foundry of Virginia
Item No. MH-1676 HAR-SS-STR
Neenah Foundry Company
Frame Model No. 1565-2300
Lid Model No. 1565-5120
East Jordan Iron Works, Inc.
Frame Model No. 1545Z3
Cover Model No. 1544A

15) MANHOLE FRAME AND COVER (WATERTIGHT)

East Jordan Iron Works, Inc.
Frame Model No. 2060ZVHPT
Cover Model No. 2065AVHPT

Neenah Foundry Company
Model No. 0785-015

16) BRICK - SM GRADE

Redland Brick
Glen-Geary Brick Co.
Pine Hall Brick
Lawrenceville Brick
McAvoy Cobset Brick

**17) GRADE RINGS (6" MAXIMUM HEIGHT)
W/STEEL REINFORCEMENT**

Atlantic Pre-Cast
Terra-Hill Products
Cretex Pro-Rings

**18) MANHOLE PAINT FOR FRAME & COVER
(OFF-SITE)**

Day-Glo (Florescent Green Industrial Enamel)
DG215-18 (Signal Green)

**19) MANHOLE PAINT FOR FRAME & COVER
(OFF-SITE)**

(White Primer)
Coronado-Grip & Seal – 116-11 White

**20) ADAPTOR (FROM 6" HOUSE CONNECTION
TO CAST-IRON SOIL PIPE)**

Fernco "Hulk" Coupling
GPK Products/Indiana Seal "Shearguard"



Effective November 1, 2022



Effective November 1, 2022

SEWER MAIN CONSTRUCTION (cont.)

21) PVC RISER PIPE – CLEANOUT (SDR-26 - HEAVY WALL SEWER)

J.M. Eagle
National Pipe & Plastic
Diamond
North American Pipe

22) SOIL PIPE (CAST-IRON HEAVY DUTY)

(Cleanout Riser 4")
Tyler
Charlotte

23) RETAINER GLAND-WEDGED (FOR D.I.P.)

Ebba Iron Meg-A-Lug
Uni-Flange/Ford Wedge Action Series 1400
Star Grip – 3000 Series
Sigma
Tuf-Grip-Tyler-Union Foundry
Note:
Coating - Epoxy, nylon, Mega-Bond, e-coat, star bond.

24) AIR & VACUUM VALVES

Apco
Val-Matic
Cla-Val
A.R.I. D-020, D-025
Note: As per shop drawing.

25) MASTIC ROPE SEAL (3/4")

K.T. Snyder – “Rubber-Nek”
Press Seal Gasket Corporation
Conseal

26) CLEANOUT - HUB & CAP

(Penella Style 4" & 6")

Penella Industries - PVC w/Magnet
Jumbo Manufacturing Company -
Cast Iron w/Gasket
Circle Gas Manufacturing Company -
Cast Iron w/Gas
K.T. Snyder - “Rubber-Nek”

27) STAINLESS STEEL MANHOLE INSERT W/RELIEF VALVE

Southwestern Packing & Seal Company
- S.S. Rainstopper
Parson Environmental Products, Inc.
- Stainless Steel Manhole Insert

28) MANHOLE INSERT W/ODOR CONTROL

Calgon “Sweet Street”
Parson Environmental Products, Inc.

29) MANHOLE EXTERIOR JOINT WRAP – 12”

Conseal – Con-Wrap CS-212
Press-Seal-EZ-Wrap
Cretex External X85 Seal





Effective November 1, 2022

III. WATER AND SEWER MAIN CONSTRUCTION

1) STEEL CASING PIPE

Approved after shop drawing submittal.

2) LINER PLATE

Approved after shop drawing submittal.

3) DETECTOR TAPE (3" Non-Metallic)

Lineguard
Allen Systems
Linetec
Empire Level

4) TRACER WIRE (7 Strand No. 8 w/.045 PE Wall Blue)

All Manufacturers

5) SOLDERLESS SPLIT BOTTOM CONNECTORS

Brass

6) SPLICING TAPE-UNDERGROUND

3M

7) BITUMINOUS COATING (Military Spec. C-18480)

All Manufacturers

8) COAL TAR EPOXY (16 Mil D.F.T. Min)

All Manufacturers

9) NON-SHRINK EPOXY GROUT

All Manufacturers

10) CATHODIC PROTECTIVE CAP NUTS (Oversized)

Protector Cap
Trumbull Industries
Mars Co.

11) REPAIR CLAMPS

2"- 12" One-Section

Ford Style FS1

4" - 15" Two-Section

Smith-Blair 262

Ford Style FS2

Romac Style SS2 Powerseal

Style 3122 AS

Hymax – Easy Max

16" and above Three-Section

Ford Style FS3

Smith-Blair Style 263 Romac

Style SS3 Powerseal Style

3123 AS

12) 2-1/2" TRACER TEST BOX W/TERMINAL BLOCK

Bingham & Taylor – P-200 Test

Copperhead/Snakepit

Note:

1. Blue lid for water. Green lid for sewer

2. Test location at fire hydrant

13) 5" TERMINAL BOARD (THREE TERMINALS) W/STANDARD 4-1/4" LOCKING CURB-BOX

Bingham & Taylor –

Note:

1. Blue lid for water. Green lid for sewer

14) INTERIOR MANHOLE COATING

Sentry Polymers, Inc.

Epoxy Vinyl Ester (Semstone 5301)

15) PIPE SUPPORT/SPACER FOR SLEEVE

PIPELINE Products, Inc.

J-Four-M33-s.s.

Raci-casing spacer

CCI Pipeline System C558

16) SLEEVE/CARRIER PIPE END SEAL

CCI Pipeline Systems

Model ESC

Model ESW



Effective November 1, 2022



Effective November 1, 2022

WATER AND SEWER MAIN CONSTRUCTION

NOTE:

*The classes or designations of pipe shown on this list are the classes that are normally used in water and sewer construction in Harford County.

However, it is possible that the Contract Documents, Special Provisions and/or Plans may specify a class or designation that is different and/or greater than that shown on the list. In the event of such a discrepancy, then the Contract Documents, Special Provisions and/or Plans shall govern.

**The Packer Head pipe procedure will not be used.



Effective November 1, 2022



IV. LOW PRESSURE SEWER CONSTRUCTION

1) PIPE HDPE

1 1/2" – 4" SDR-11 IPS EHMW PE3408
Performance Pipe Prod-Driscoplex 4300 Poly Pipe
Flying W
J.M. Eagle Charter Plastic

**2) PIPE-HDPE FITTING/TRANSITION PIECES - BUTT FUSION TYPE
(Pressure Rated to Match System Piping)**

<u>Molded 1 1/2" - 4"</u>	<u>D.I.P.</u>	<u>Brass 1 1/2" – 4"</u>
IPEX	HarCo	All Manuf.
Central Plastic		
Charter Plastic		
TEGG		
Agru		
Independent		

3) PIPE-PVC PIPE GASKETED - (SDR-21- 1 1/2"- 4")

<u>PVC</u>	<u>D.I.P.</u>	<u>Brass 1 1/2" – 4"</u>
National	HarCo	All Manuf.
Charlotte		
Crestline		
J.M. Eagle		
Diamond		
North American		

Note: PVC pipe fittings for main line – match pipe material.

4) BALL VALVE CURB STOP - W/FEMALE IPT END CONNECTION (OR PACK JOINT)

	<u>Manufacturer</u>	<u>Female IPT End</u>	<u>Pack Joint</u>
1 1/2"	Ford	B11-666	B77-666
	Mueller	B-20283+Size 6101	V-25226 6100-44
	McDonald		
2"	Ford	B11-777	B77-777 V-25226
	Mueller	B-20283+Size 6101	6100-44
	McDonald		

5) SEWAGE GRINDER PUMPING UNIT AND CONTROL PANEL

Environment/One Corporation
Submit for approval

6) VALVE KEY EXTENSION

Genco





Effective November 1, 2022

LOW PRESSURE SEWER CONSTRUCTION (cont.)

7) FITTINGS FOR LP 2-5-

D.I.P	Brass Ball Valve	Brass
HarCo	Ford	All Manufacturers
Hersey	Mueller	
	A.Y. McDonald	

Note:

D.I.P Fittings – Cement Lined

8) ROADWAY BOXES – VALVE - 5 ¼" (SCRW TYPE)

Bingham & Taylor 4905
Capital Foundry of Virginia, Inc. #564s
East Jordan 664-S

9) FIRE HOSE COUPLING W/ CAP - 2 ½"-BRASS NST THREAD

Potter-Roemer
Red Head/Dixon
Thompson Industrial

10) NIPPLE/RISER - D.I.P/BRASS 2"- 4" NPT THREAD

HarCo – D.I.P
Brass – All Manufacturers

11) CONCRETE VAULT - 24"

Mayer Brother, Inc.

12) TRACER WIRE

(7 Strand No. 8 w/.045 PE Wall Blue)
All Manufacturers

13) FRAME AND COVER - 24" - 24" X 4" – STANDARD SEWER

East Jordan
Campbell Fdy.
Neenah – Frame – NF-15652001
Lid-NF-15655134

14) R/S GATE VALVE – 3" AND GREATER

*See water main construction for approved manufacturers.

15) ADJUSTMENT RING – 24"

East Jordan Infra-Riser





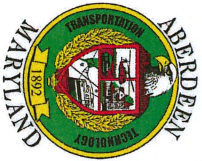
Effective November 1, 2022

SECTION V: CITY OF ABERDEEN **STANDARD DETAILS ADDENDA**

The following Standard Detail Plates shall supplement the corresponding Harford County Standard Detail Plates while reflecting approved materials and methods to be used within the City of Aberdeen.



Effective November 1, 2022



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

Kyle Jouts

STANDARD SERVICE CONNECTION
WITH METER PIT

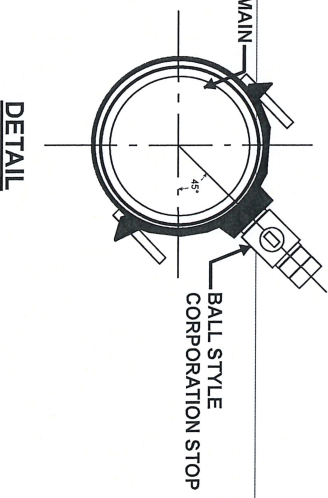
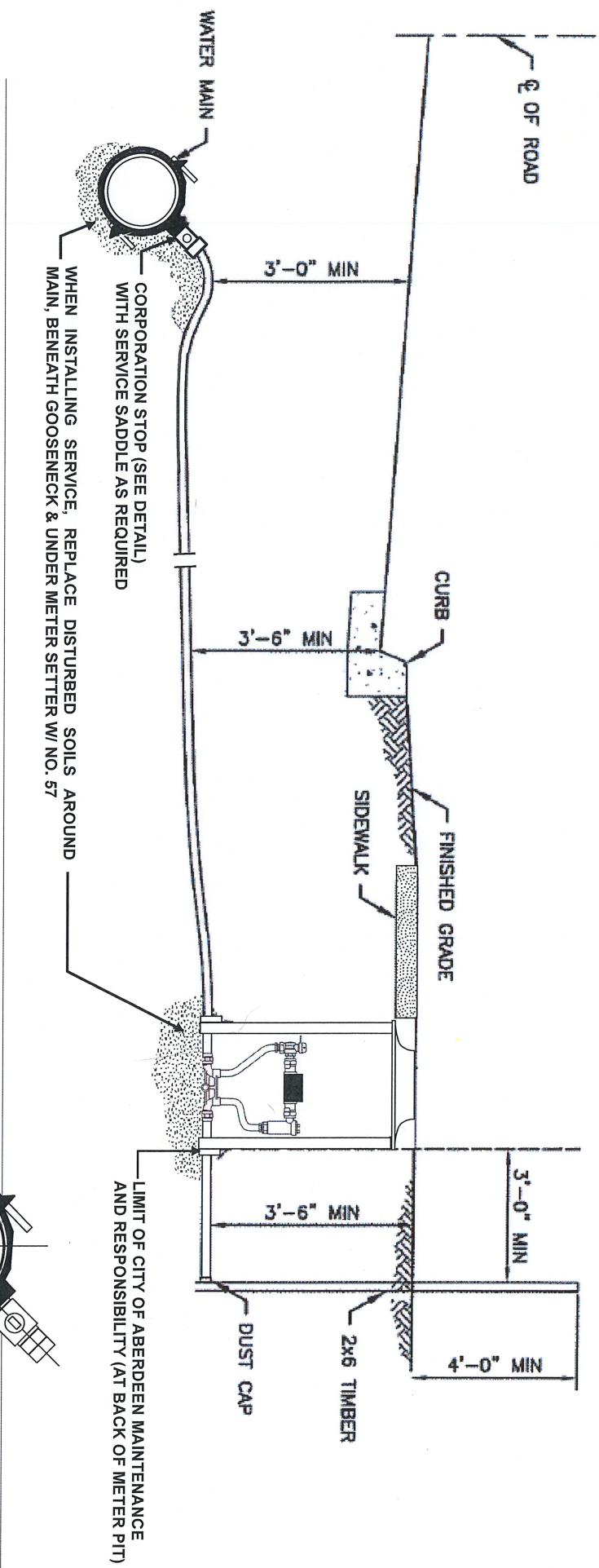
STANDARD WATER DETAILS

PLATE W-17

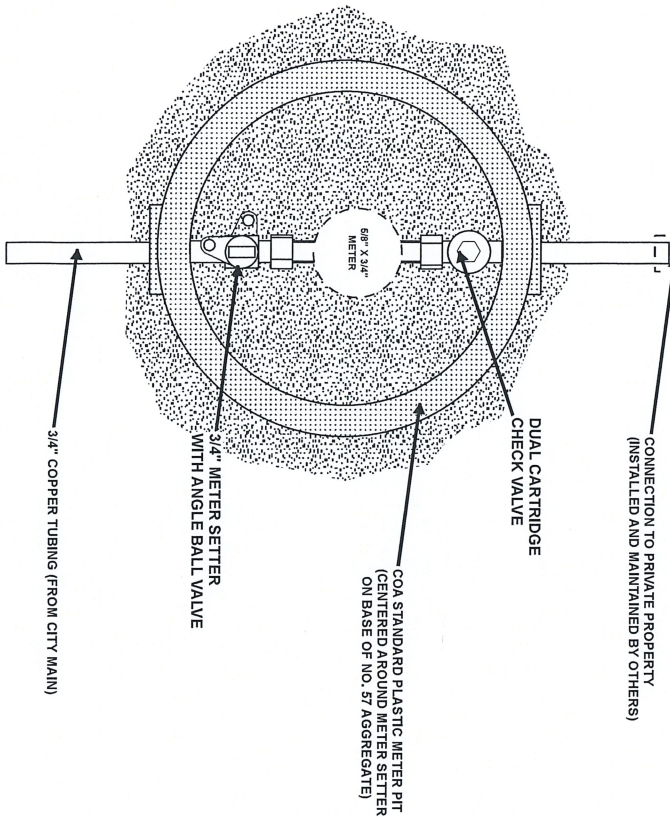
CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

- NOTES:**
1. MINIMUM PIPE SIZES ARE SPECIFIED
 2. ALL BRASS FITTINGS TO BE COMPRESSION TYPE ONLY
 3. DIRECT TAPPING OF MAINS IS NOT PERMITTED, APPROVED TAPPING SADDLE AND CORP MUST BE USED
 4. METER PIT SHALL NOT BE PLACED IN DRIVEWAYS, STEPS, OR SIDEWALKS
 5. SERVICE LINE FROM MAIN TO METER PIT SHALL BE ONE CONTINUOUS PIECE (NO JOINTS)
 6. THE LIMIT OF CITY OF ABERDEEN RESPONSIBILITY IS THE METER VAULT

- WATER SERVICES FOR TOWNHOUSES AND SINGLE FAMILY LOTS**
- 1" COPPER TUBING FOR SINGLE HOUSE CONNECTIONS (TWIN HOUSE CONNECTIONS NOT PERMITTED)
 - 1" COPPER TUBING SHALL BE USED UNLESS OTHERWISE SPECIFIED BY FIRE PROTECTION REQUIREMENTS

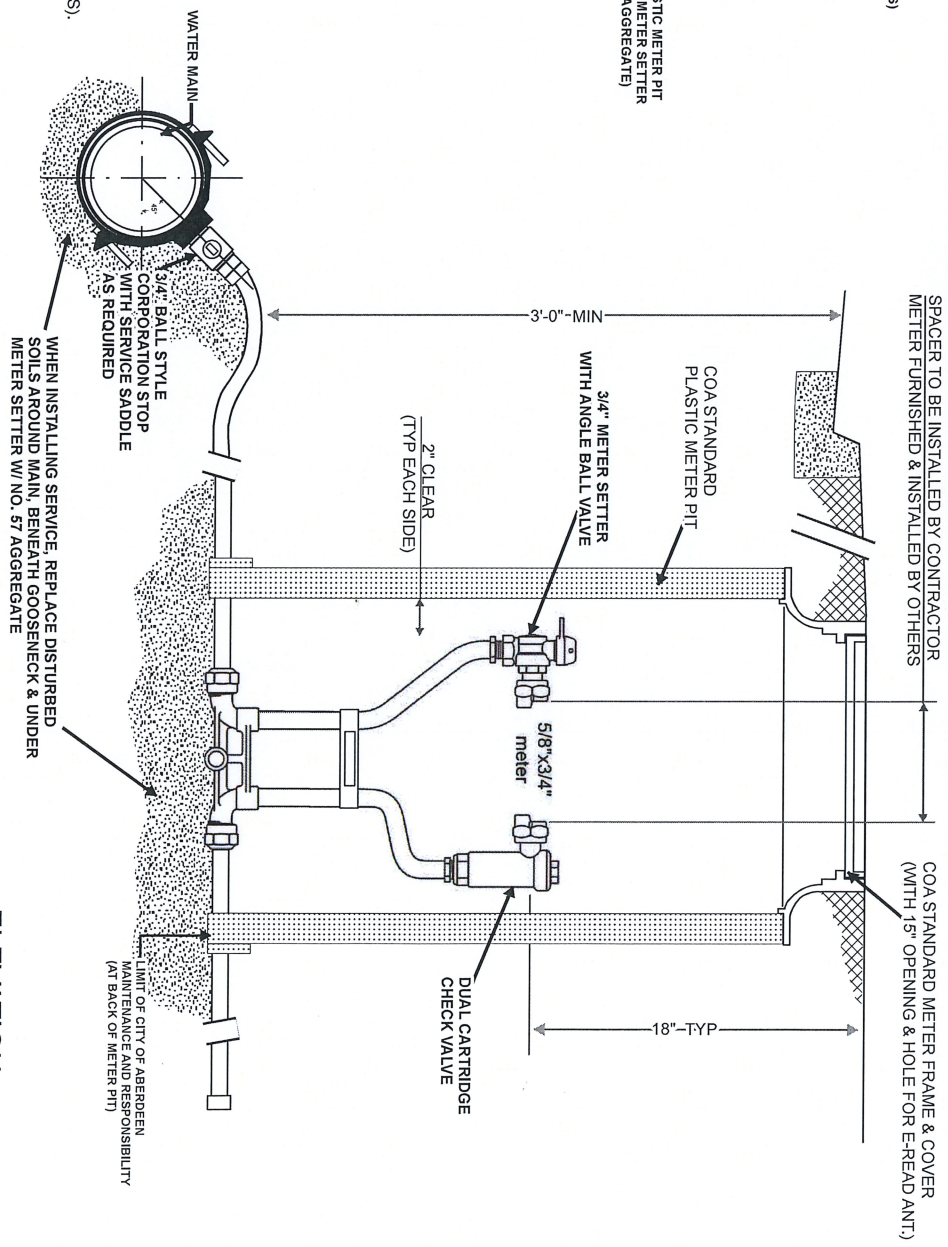


DETAIL



PLAN

- NOTES:**
1. ALL FITTINGS TO BE COMPRESSION FITTINGS.
 2. SERVICE LINE FROM MAIN TO METER SHALL BE ONE CONTINUOUS PIECE (NO JOINTS).
 3. PROVIDE 3'-6" COVER OVER SERVICE LINE EXCEPT WHERE SHOWN OTHERWISE.
 4. METER PITS SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS OR STEPS.
 5. THE LIMIT OF CITY OF ABERDEEN RESPONSIBILITY IS AT THE BACK OF THE METER PIT.
 6. SPRINKLER SYSTEM REQUIREMENTS DETERMINED BY FIRE PROTECTION PROFESSIONAL.



ELEVATION

STANDARD WATER DETAILS

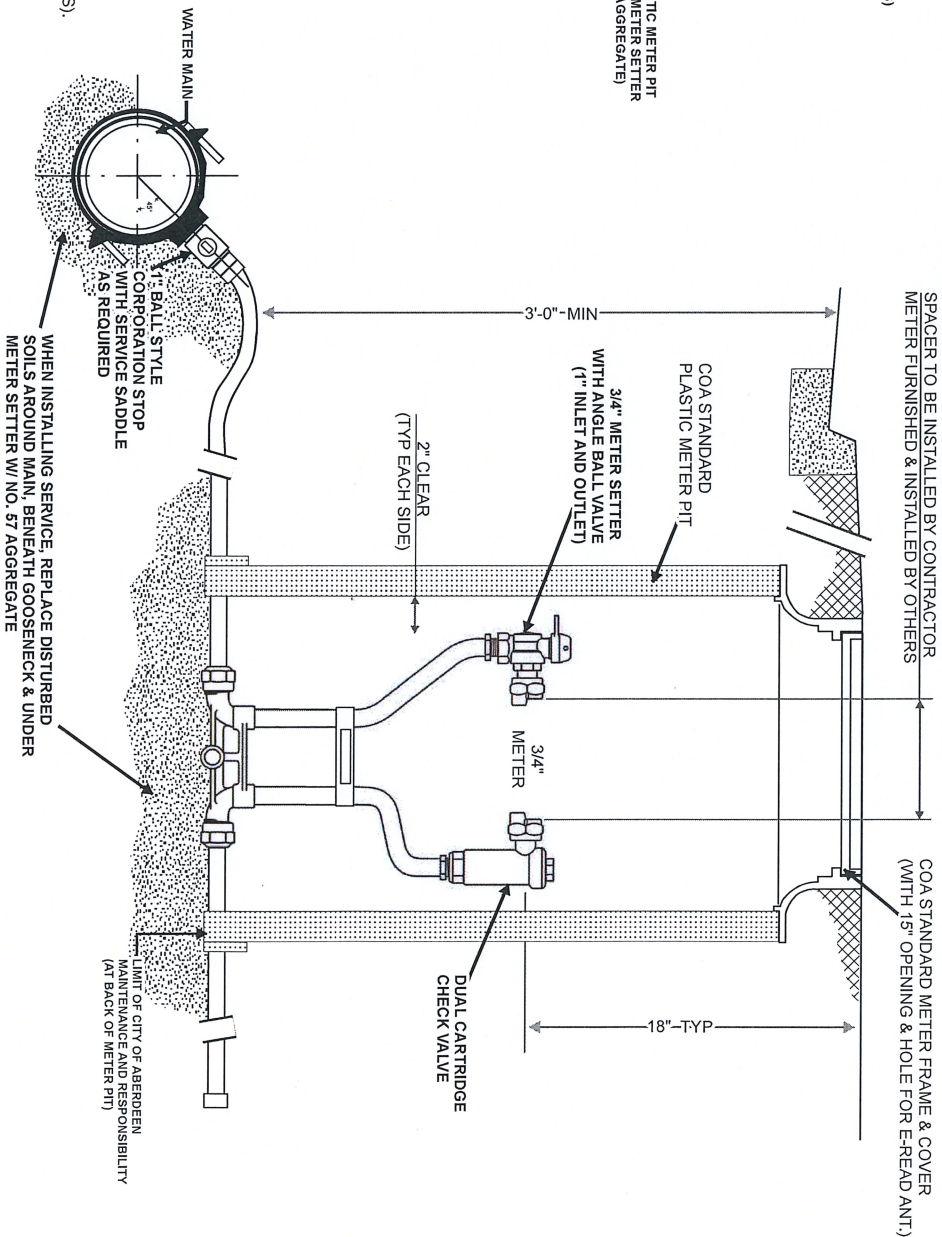
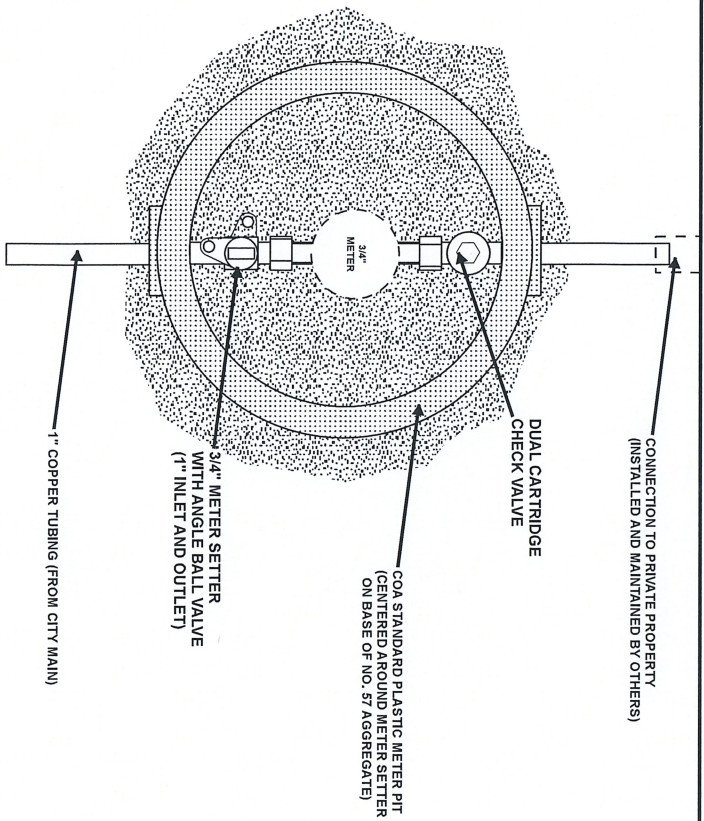
OUTSIDE SETTING
3/4" SUPPLY WITH 5/8"x3/4" METER
(DOMESTIC SERVICE WITHOUT SPRINKLER SERVICE)



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

Ryle Jovels

CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS
PLATE W-18



NOTES:

1. ALL FITTINGS TO BE COMPRESSION FITTINGS.
2. SERVICE LINE FROM MAIN TO METER SHALL BE ONE CONTINUOUS PIECE (NO JOINTS).
3. PROVIDE 3'-6" COVER OVER SERVICE LINE EXCEPT WHERE SHOWN OTHERWISE.
4. METER PITS SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS OR STEPS.
5. THE LIMIT OF CITY OF ABERDEEN RESPONSIBILITY IS AT THE BACK OF THE METER PIT.
6. SPRINKLER SYSTEM REQUIREMENTS DETERMINED BY FIRE PROTECTION PROFESSIONAL.

STANDARD WATER DETAILS

OUTSIDE SETTING
1" SUPPLY WITH 3/4" METER
(DOMESTIC SERVICE WITH SPRINKLER SERVICE)

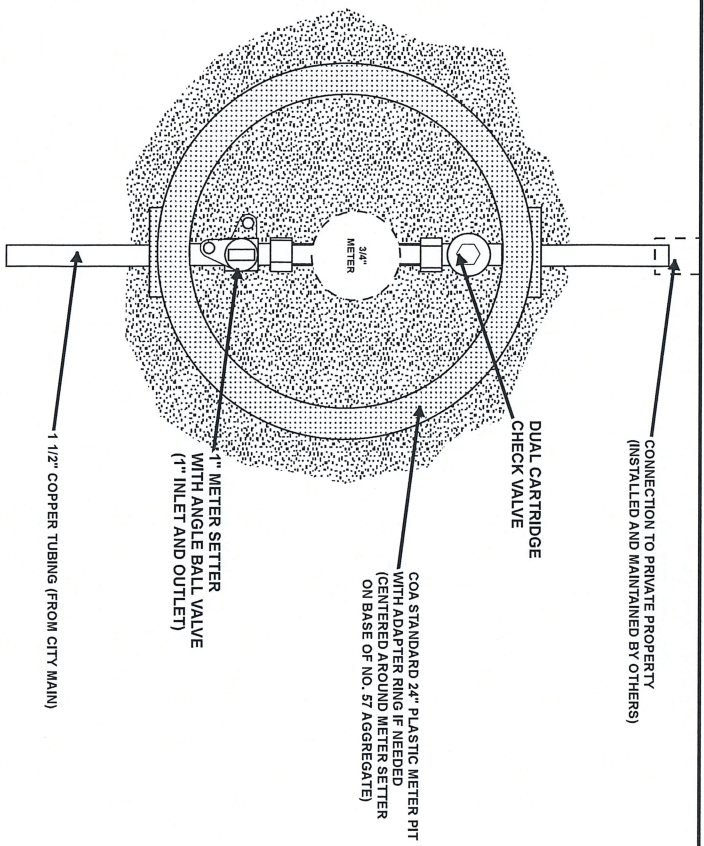


CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

Rye Joux

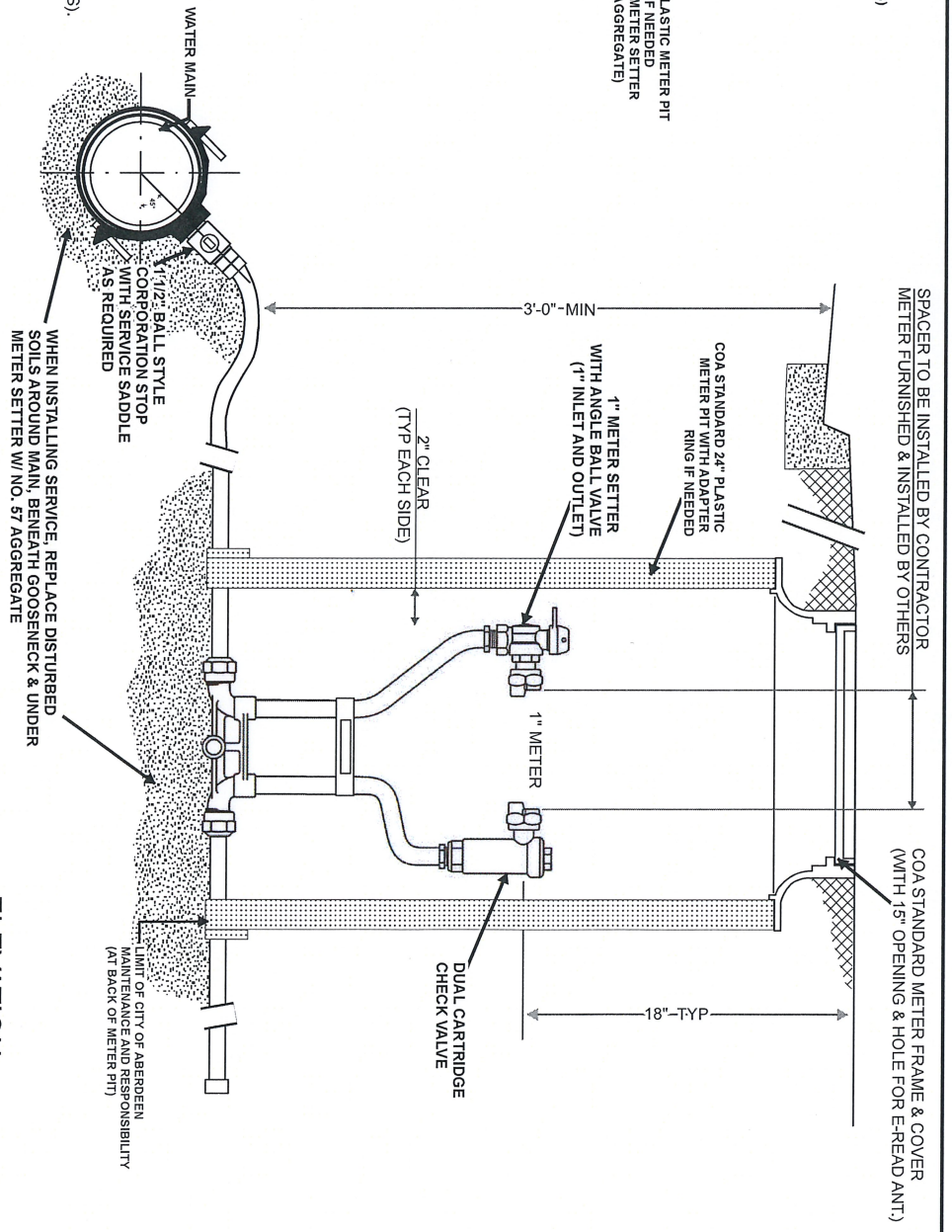
CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

PLATE **W-19**



PLAN

- NOTES:**
1. ALL FITTINGS TO BE COMPRESSION FITTINGS.
 2. SERVICE LINE FROM MAIN TO METER SHALL BE ONE CONTINUOUS PIECE (NO JOINTS).
 3. PROVIDE 3'-6" COVER OVER SERVICE LINE EXCEPT WHERE SHOWN OTHERWISE.
 4. METER PITS SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS OR STEPS.
 5. THE LIMIT OF CITY OF ABERDEEN RESPONSIBILITY IS AT THE BACK OF THE METER PIT.
 6. SPRINKLER SYSTEM REQUIREMENTS DETERMINED BY FIRE PROTECTION PROFESSIONAL.



ELEVATION

STANDARD WATER DETAILS

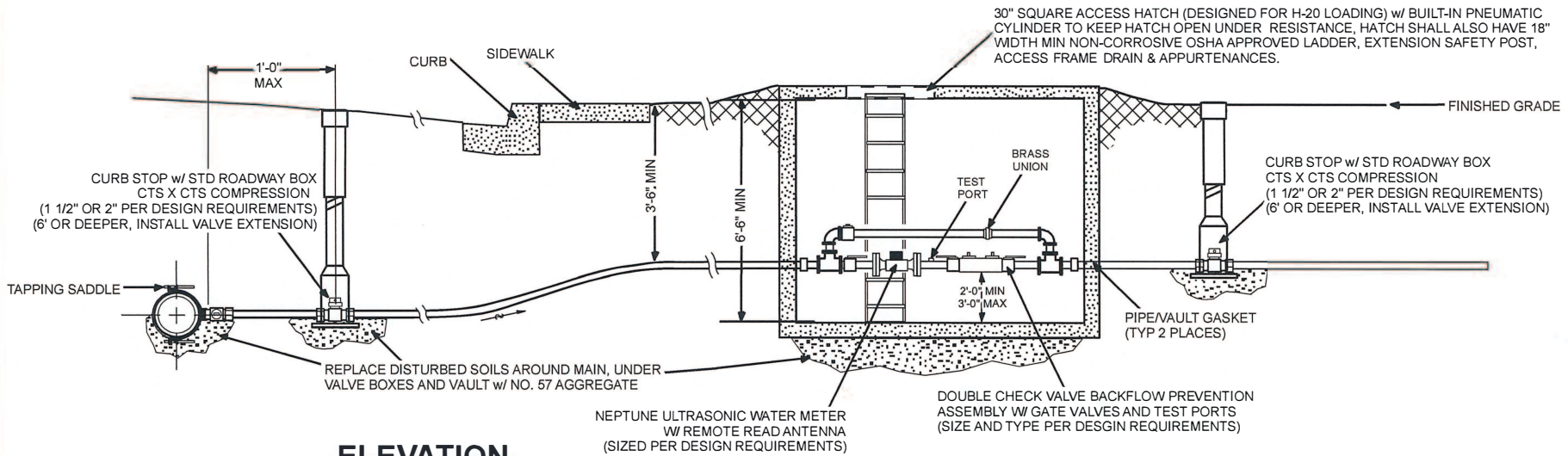
OUTSIDE SETTING
1 1/2" SUPPLY WITH 1" METER
(DOMESTIC SERVICE WITH SPRINKLER SERVICE)

CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

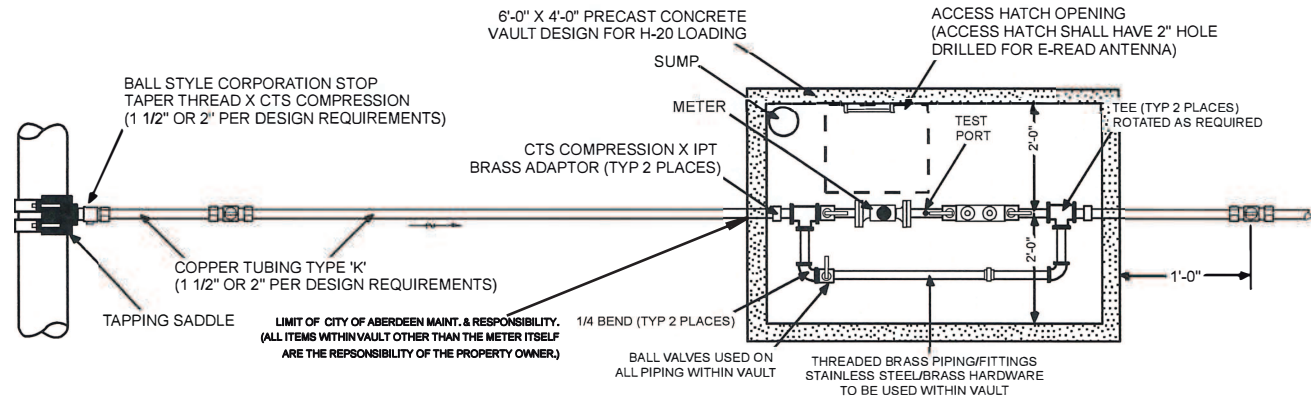
Be Jones

CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

PLATE **W-22**



ELEVATION



PLAN

NOTES:

1. PERMANENT BRICK, CONCRETE OR APPROVED PRECAST PIPE SUPPORTS (NOT SHOWN) TO BE PLACED UNDER ALL FLANGED FITTINGS AND AS DIRECTED BY THE CITY OR COUNTY.
2. ALL FITTINGS AND PIPE WITHIN VAULT SHALL BE BRASS WITH APPROPRIATE ADAPTORS
3. SET VAULT ON A LEVELING COURSE OF AASHTO M43 SIZE 57 AGGREGATE
4. PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
5. SIMILAR DESIGN OF PIPING AND EQUIPMENT FOR COMMERCIAL INTERIOR BUILDING INSTALLATIONS.
6. TYPE 'K' COPPER TUBING SHALL BE CONTINUOUS BETWEEN MAIN, VALVE AND VAULT, ETC. USING SPECIFICALLY ORDERED MAXIMUM AVAILABLE LENGTHS.
7. SUMP SHALL HAVE AN 8" MINIMUM DIAMETER AND A 4" MINIMUM DEPTH.
8. SOLDERED COPPER JOINTS ARE PROHIBITED.
9. PRIOR TO ORDERING THE METER, VAULT AND BACKFLOW PREVENTER, THE CONTRACTOR SHALL MEET WITH CITY AND COUNTY PERSONNEL TO DISCUSS INSTALLATION REQUIREMENTS.
10. THE EXTERIOR OF THE CONCRETE VAULT SHALL HAVE A FACTORY APPLIED BITUMINOUS COATING.



**CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS**

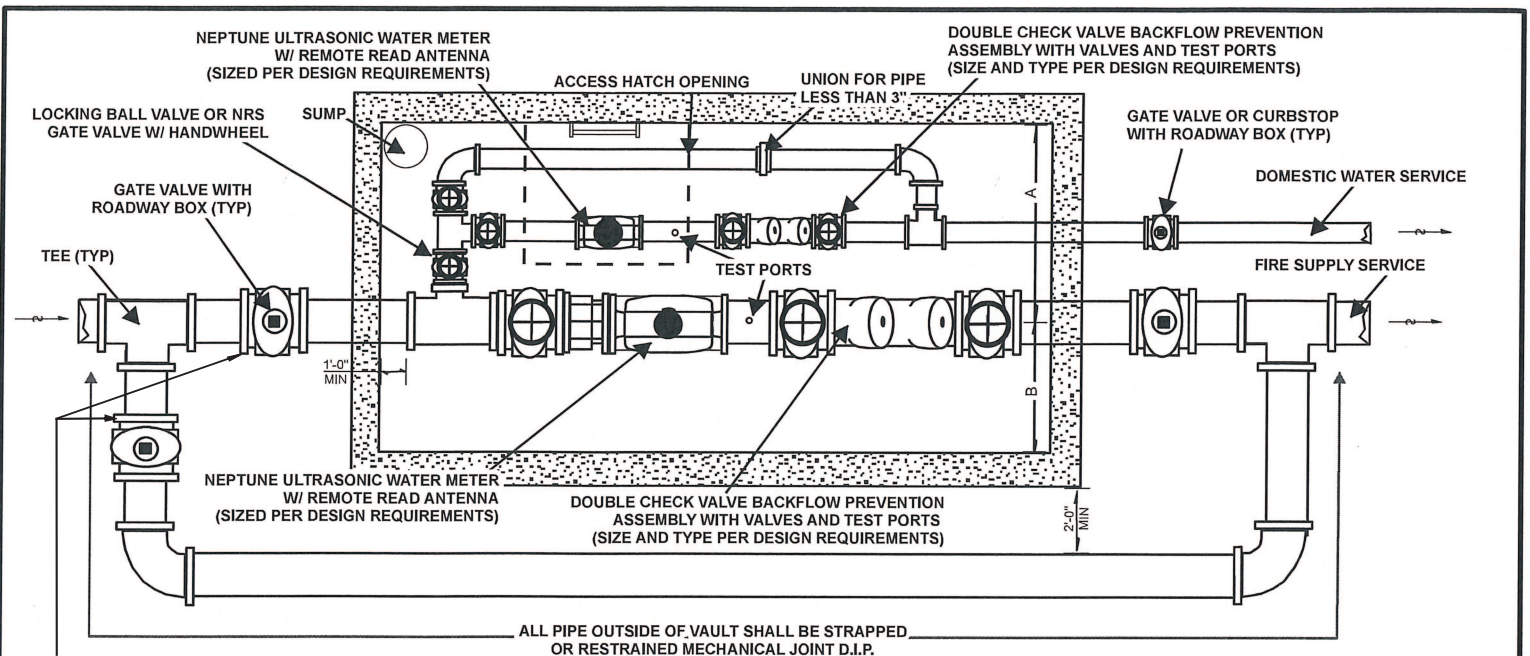
Kyle Jostes

STANDARD WATER DETAILS

**OUTSIDE SETTING
1 1/2" AND 2" METERED SERVICE**

**CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS**

PLATE W-23

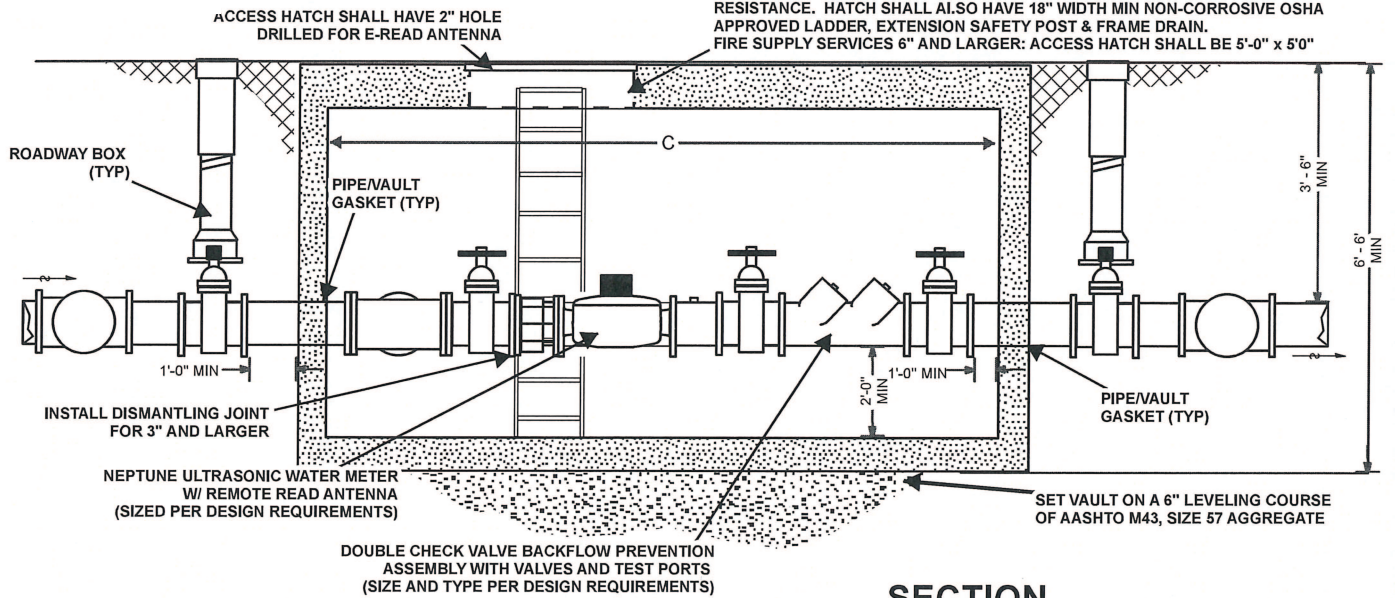


PLAN

LIMIT OF CITY OF ABERDEEN MAINT. & RESPONSIBILITY. (ALL ITEMS WITHIN VAULT OTHER THAN THE METER ITSELF ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.)

ALL PIPE OUTSIDE OF VAULT SHALL BE STRAPPED OR RESTRAINED MECHANICAL JOINT D.I.P.

FOR FIRE SUPPLY SERVICE LESS THAN 6": PROVIDE 4'-0" x 4'-0" ACCESS HATCH w/H-20 LOAD DESIGN, w/BUILT IN PNEUMATIC CYLINDER TO KEEP HATCH OPEN UNDER RESISTANCE. HATCH SHALL ALSO HAVE 18" WIDTH MIN NON-CORROSIVE OSHA APPROVED LADDER, EXTENSION SAFETY POST & FRAME DRAIN. FIRE SUPPLY SERVICES 6" AND LARGER: ACCESS HATCH SHALL BE 5'-0" x 5'-0"

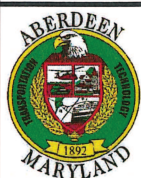


SECTION

NOTES:

1. PERMANENT BRICK, CONCRETE OR APPROVED PRECAST PIPE SUPPORTS (NOT SHOWN) TO BE PLACED UNDER ALL FLANGED FITTINGS AND AS DIRECTED BY CITY AND COUNTY.
2. LOADS: LL = AASHTO H-20, D.L = EARTH @ 110 LBS PER CU FT AND 42 LBS PER CU FT EQUIVALENT FLUID PRESSURE. CONCRETE AND REINFORCING SHALL CONFORM TO STANDARD SPECIFICATIONS.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
4. FOR INTERIOR COMMERCIAL INSTALLATION, A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY MAY BE REQUIRED.
5. ALL PIPE WITHIN THE VAULT SHALL BE FLANGED. FLANGES AND METERS SHALL RECEIVE STAINLESS STEEL BOLTS AND BRASS NUTS.
6. ALL FITTINGS TO BE BRASS OR DUCTILE IRON.
7. SUMP SHALL HAVE AN 8" MIN DIA AND A 4" MIN DEPTH.
8. PRIOR TO ORDERING THE METER AND BACKFLOW PREVENTER, THE CONTRACTOR SHALL MEET WITH CITY AND COUNTY PERSONNEL TO DISCUSS THE INSTALLATION REQUIREMENTS.
- 9.

FIRE SERVICE BACKFLOW PREVENTER SIZE	A	B	C
3"	72	24	96
4"	73	31	108
6"	74	34	126
8"	78	36	138
10"	78	36	156



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

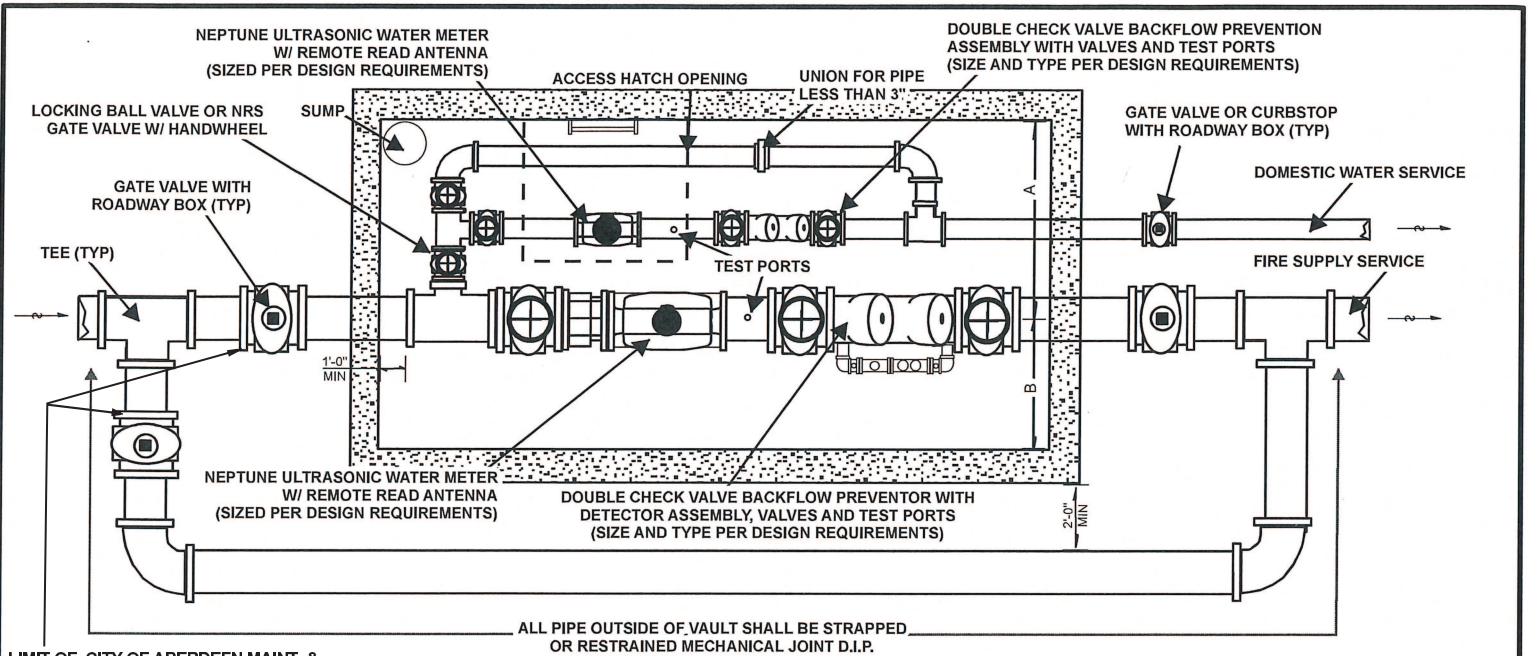
Kyle Josts

STANDARD WATER DETAILS

OPEN SYSTEM
DOMESTIC WATER SERVICE
WITH FIRE SUPPLY

CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

PLATE **W-24a**

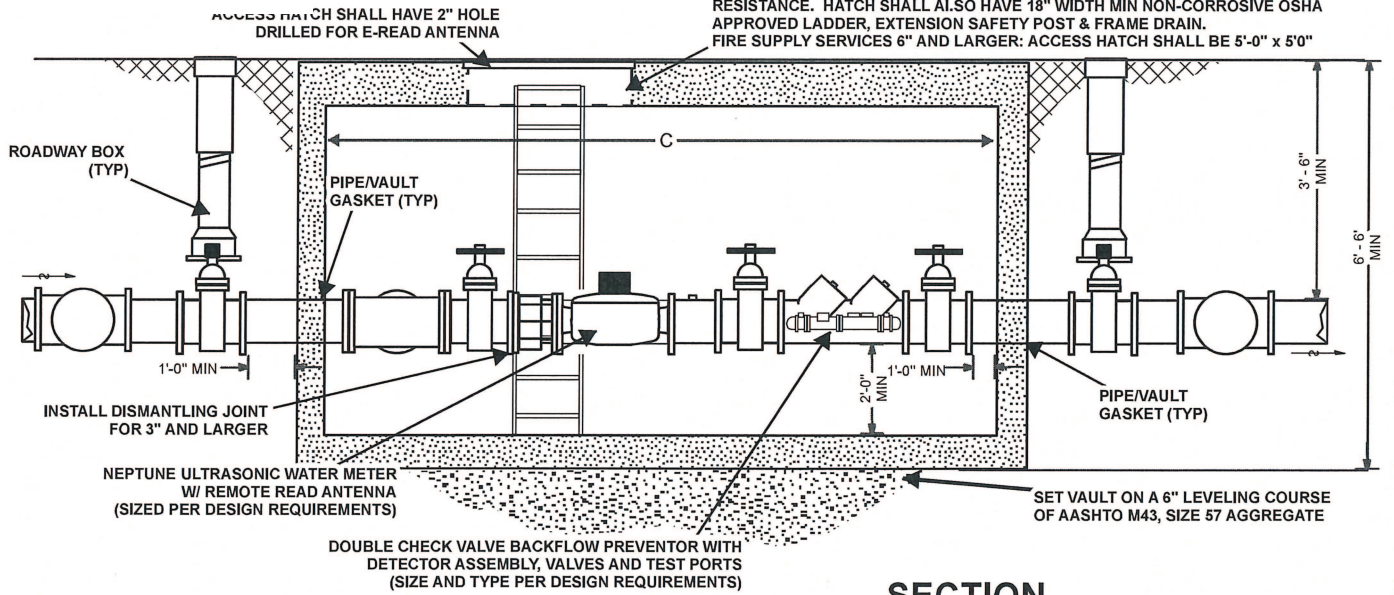


PLAN

LIMIT OF CITY OF ABERDEEN MAINT. & RESPONSIBILITY. (ALL ITEMS WITHIN VAULT OTHER THAN THE METER ITSELF ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.)

ALL PIPE OUTSIDE OF VAULT SHALL BE STRAPPED OR RESTRAINED MECHANICAL JOINT D.I.P.

FOR FIRE SUPPLY SERVICE LESS THAN 6": PROVIDE 4'-0" x 4'-0" ACCESS HATCH w/H-20 LOAD DESIGN, w/BUILT IN PNEUMATIC CYLINDER TO KEEP HATCH OPEN UNDER RESISTANCE. HATCH SHALL ALSO HAVE 18" WIDTH MIN NON-CORROSIVE OSHA APPROVED LADDER, EXTENSION SAFETY POST & FRAME DRAIN. FIRE SUPPLY SERVICES 6" AND LARGER: ACCESS HATCH SHALL BE 5'-0" x 5'-0"

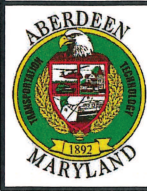


SECTION

NOTES:

1. PERMANENT BRICK, CONCRETE OR APPROVED PRECAST PIPE SUPPORTS (NOT SHOWN) TO BE PLACED UNDER ALL FLANGED FITTINGS AND AS DIRECTED BY CITY AND COUNTY.
2. LOADS: LL = AASHTO H-20, D.L = EARTH @ 110 LBS PER CU FT AND 42 LBS PER CU FT EQUIVALENT FLUID PRESSURE. CONCRETE AND REINFORCING SHALL CONFORM TO STANDARD SPECIFICATIONS.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
4. FOR INTERIOR COMMERCIAL INSTALLATION, A REDUCED PRESSURE DETECTOR BACKFLOW PREVENTION ASSEMBLY MAY BE REQUIRED.
5. ALL PIPE WITHIN THE VAULT SHALL BE FLANGED. FLANGES AND METERS SHALL RECEIVE STAINLESS STEEL BOLTS AND BRASS NUTS.
6. ALL FITTINGS TO BE BRASS OR DUCTILE IRON.
7. SUMP SHALL HAVE AN 8" MIN DIA AND A 4" MIN DEPTH.
8. PRIOR TO ORDERING THE METER AND BACKFLOW PREVENTER, THE CONTRACTOR SHALL MEET WITH CITY AND COUNTY PERSONNEL TO DISCUSS THE INSTALLATION REQUIREMENTS.
9. THE EXTERIOR OF THE CONCRETE VAULT SHALL HAVE A FACTORY APPLIED BITUMINOUS COATING.

FIRE SERVICE BACKFLOW PREVENTER SIZE	A	B	C
3"	72	24	96
4"	73	31	108
6"	74	34	126
8"	78	36	138
10"	78	36	156



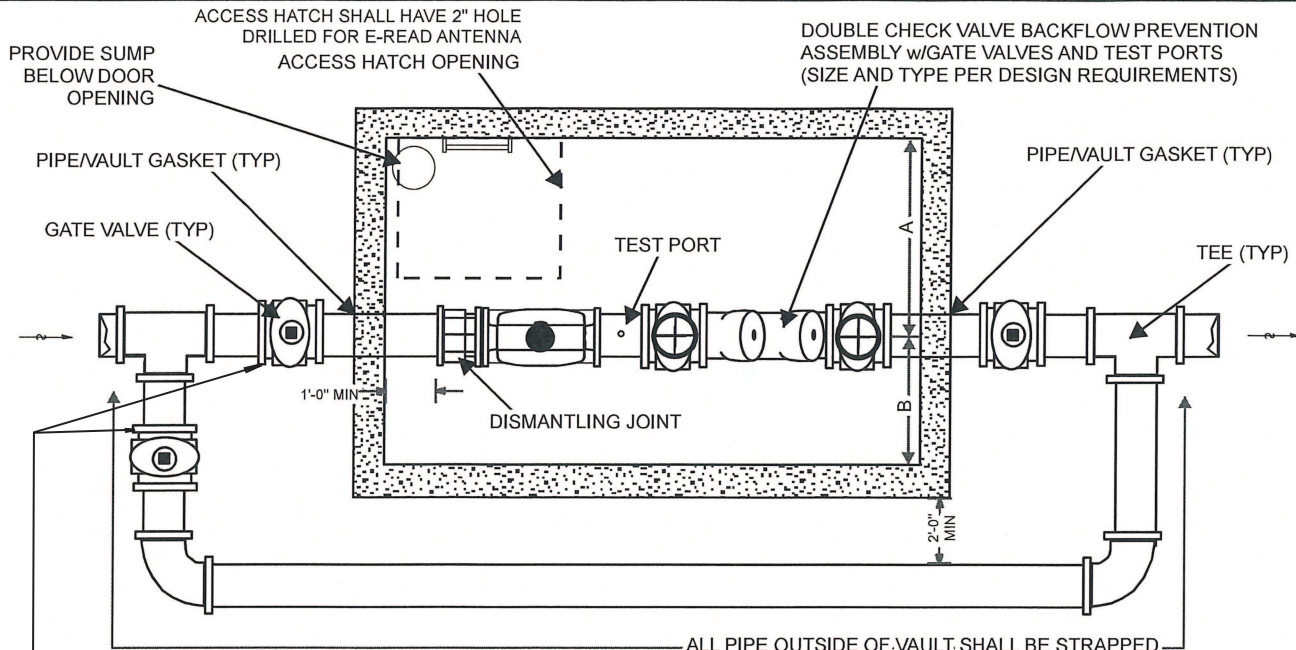
CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS
Kyle Joubert

STANDARD WATER DETAILS

**CLOSED SYSTEM
DOMESTIC WATER SERVICE
WITH FIRE SUPPLY**

**CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS**

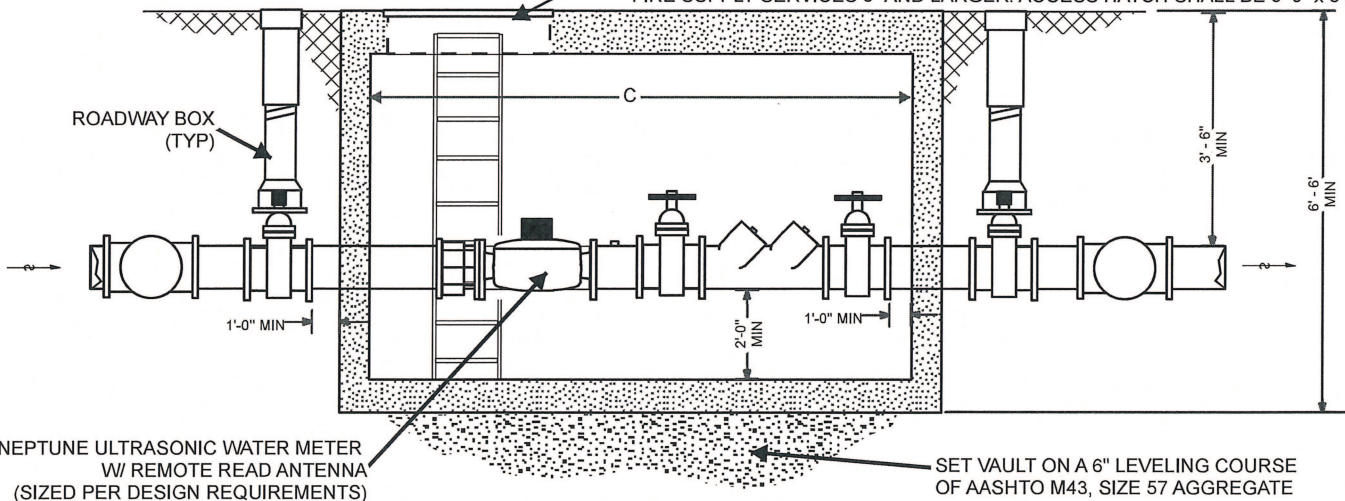
PLATE W-24b



PLAN

LIMIT OF CITY OF ABERDEEN MAINT. & RESPONSIBILITY. (ALL ITEMS WITHIN VAULT OTHER THAN THE METER ITSELF ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.)

FOR FIRE SUPPLY SERVICE LESS THAN 6": PROVIDE 4'-0" x 4'-0" ACCESS HATCH w/H-20 LOAD DESIGN, w/BUILT IN PNEUMATIC CYLINDER TO KEEP HATCH OPEN UNDER RESISTANCE. HATCH SHALL ALSO HAVE 18" WIDTH MIN NON-CORROSIVE OSHA APPROVED LADDER, EXTENSION SAFETY POST & FRAME DRAIN.
 FIRE SUPPLY SERVICES 6" AND LARGER: ACCESS HATCH SHALL BE 5'-0" x 5'-0"



SECTION

NOTES:

- PERMANENT BRICK, CONCRETE OR APPROVED PRECAST PIPE SUPPORTS (NOT SHOWN) TO BE PLACED UNDER ALL FLANGED FITTINGS AND AS DIRECTED BY CITY AND COUNTY.
- LOADS: LL = AASHTO H-20, D.L = EARTH @ 110 LBS PER CU FT AND 42 LBS PER CU FT EQUIVALENT FLUID PRESSURE. CONCRETE AND REINFORCING SHALL CONFORM TO STANDARD SPECIFICATIONS.
- PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
- FOR INTERIOR COMMERCIAL INSTALLATION, A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY MAY BE REQUIRED.
- ALL PIPE WITHIN THE VAULT SHALL BE FLANGED.
- ALL FLANGES AND METERS SHALL RECEIVE STAINLESS STEEL BOLTS AND BRASS NUTS.
- SUMP SHALL HAVE AN 8" MIN DIA AND A 4" MIN DEPTH.
- PRIOR TO ORDERING THE METER AND BACKFLOW PREVENTER, THE CONTRACTOR SHALL MEET WITH CITY AND COUNTY PERSONNEL TO DISCUSS THE INSTALLATION REQUIREMENTS.
- THE EXTERIOR OF THE CONCRETE VAULT SHALL HAVE A FACTORY APPLIED BITUMINOUS COATING.

BACKFLOW PREVENTER SIZE	A	B	C
3"	48	30	108
4"	47	37	120
6"	56	40	144
8"	60	42	168
10"	66	42	192
12"	66	42	192



**CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS**

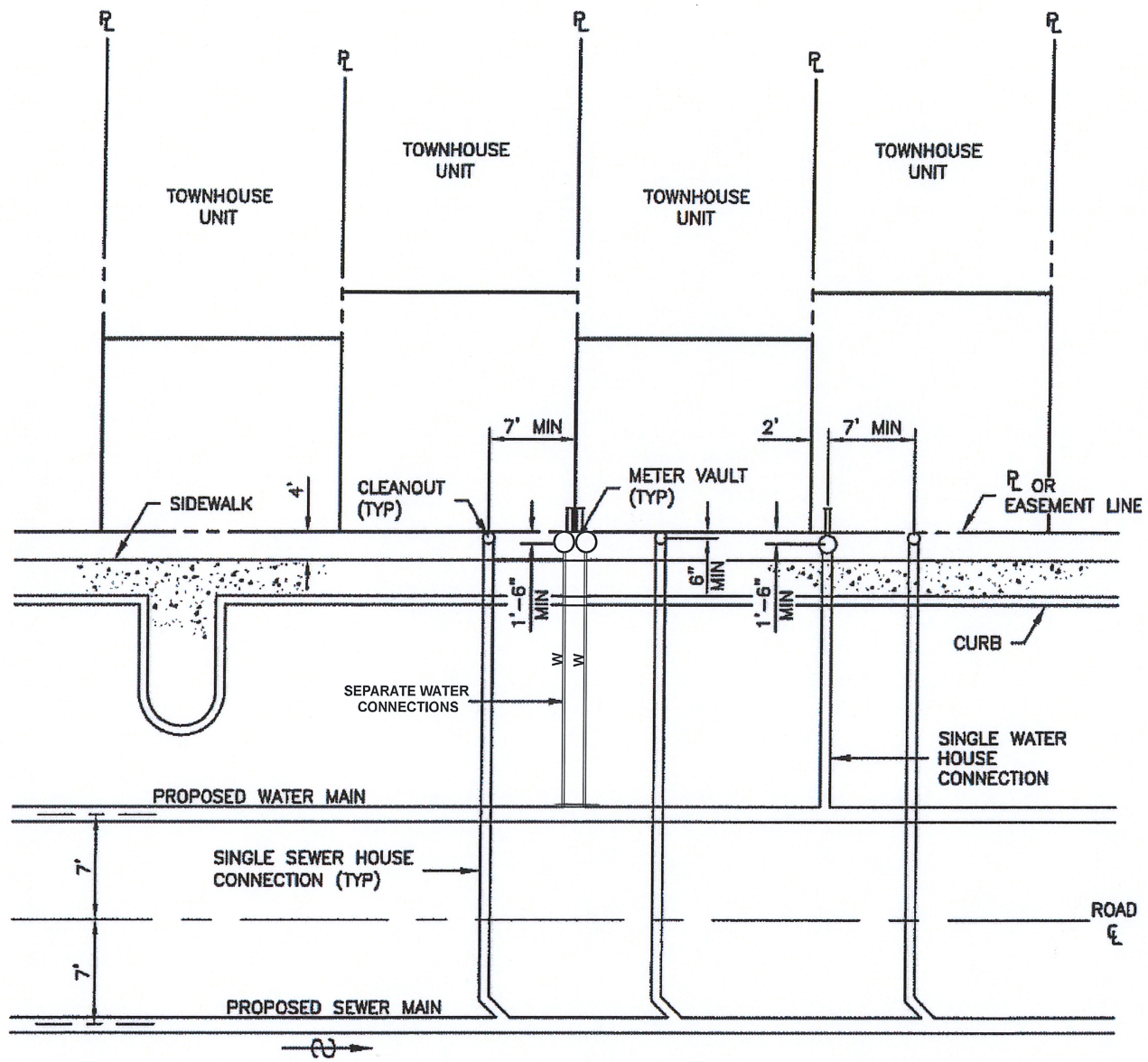
Kyle Jorsts

STANDARD WATER DETAILS

**STANDARD INSTALLATION FOR
3" THRU 10" COMBINED
FIRE AND DOMESTIC SERVICE**

**CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS**

PLATE W-25



NOT TO SCALE

NOTES:

1. METERS TO BE SUPPLIED WITH INDIVIDUAL SERVICE LINES
2. TWIN CONNECTIONS & SHARED SERVICES NOT PERMITTED BY CITY OF ABERDEEN
3. IN TOWNHOUSE UNITS WITHOUT PERPENDICULAR PARKING, AN ADDITIONAL TWO (2) FOOT DRAINAGE AND UTILITY EASEMENT IS REQUIRED. METER VAULTS AND CLEANOUTS SHALL BE LOCATED AS SHOWN ON G-2.
4. PLACE UTILITIES ON LOW SIDE OF LOT.
5. MINIMUM SEPARATION BETWEEN WATER AND SEWER SERVICES IS SEVEN (7) FEET.
6. METER PITS AND CLEANOUTS SHALL NOT BE LOCATED IN SIDEWALKS OR STEPS.



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

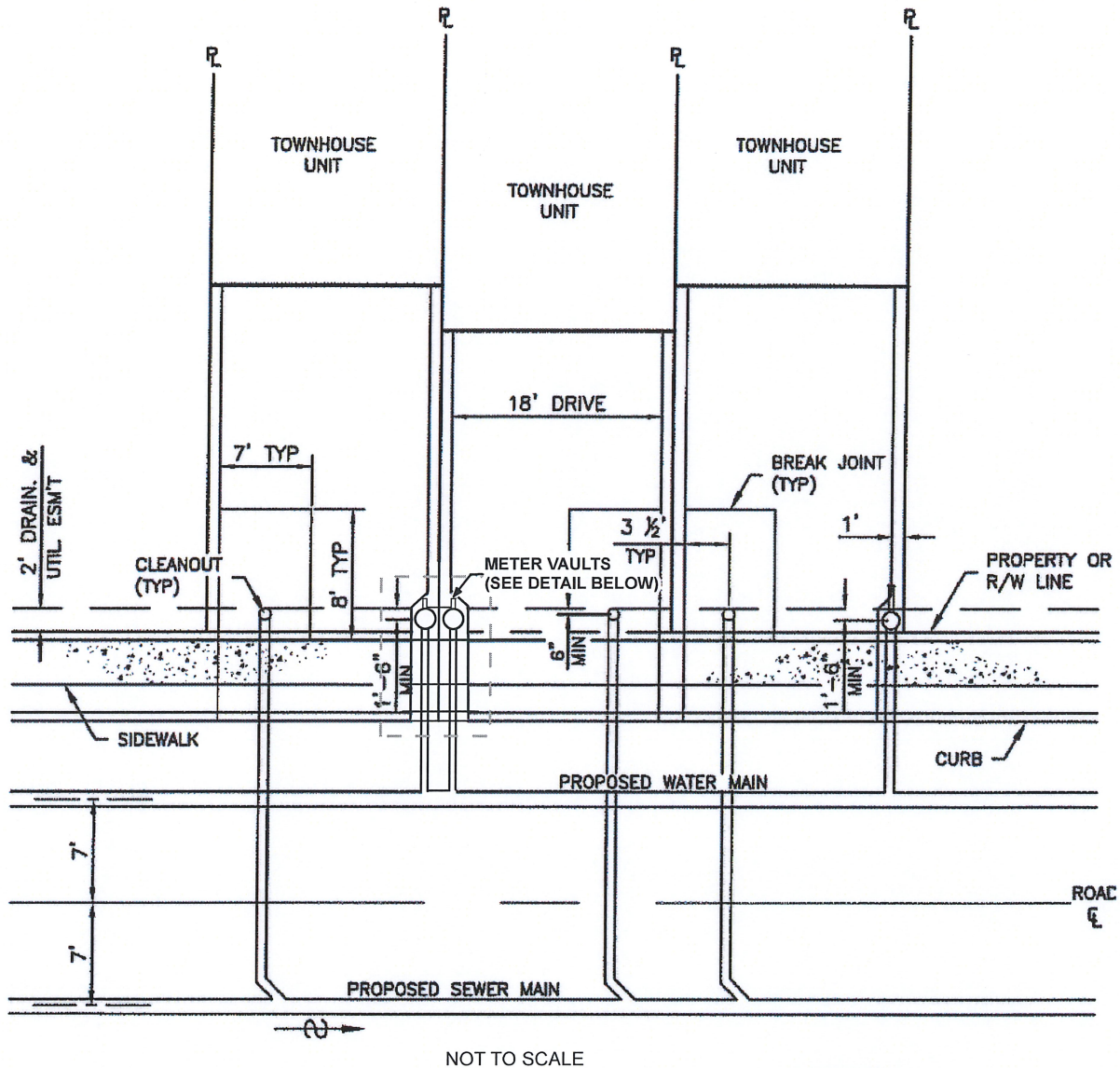
Kyle Jouts

STANDARD WATER DETAILS

WATER AND SEWER SERVICES
FOR TOWNHOUSE LOTS

CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

PLATE G-3

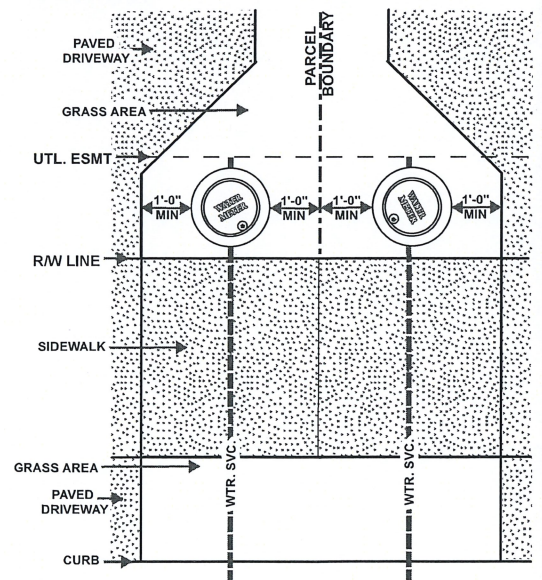


NOT TO SCALE

NOTES:

1. METER VAULTS SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS OR STEPS. DRIVEWAYS SHALL BE TAPERED AS REQUIRED.
2. METER VAULTS MUST BE ONE (1) FOOT FROM PROPERTY LINE AND ONE (1) FOOT FROM PAVED SURFACES. (SEE DETAIL)
3. METERS TO BE SUPPLIED WITH INDIVIDUAL SERVICE LINES WITH SEPARATE ENCLOSURES. TWIN CONNECTIONS AND SHARED SERVICES NOT PERMITTED IN CITY OF ABERDEEN.
4. ALL CLEANOUTS SHALL USE TRAFFIC BEARING FRAME & COVER PER STD DETAIL S-28.
5. MINIMUM SEPARATION BETWEEN WATER AND SEWER SERVICES IS SEVEN (7) FEET.

DETAIL



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

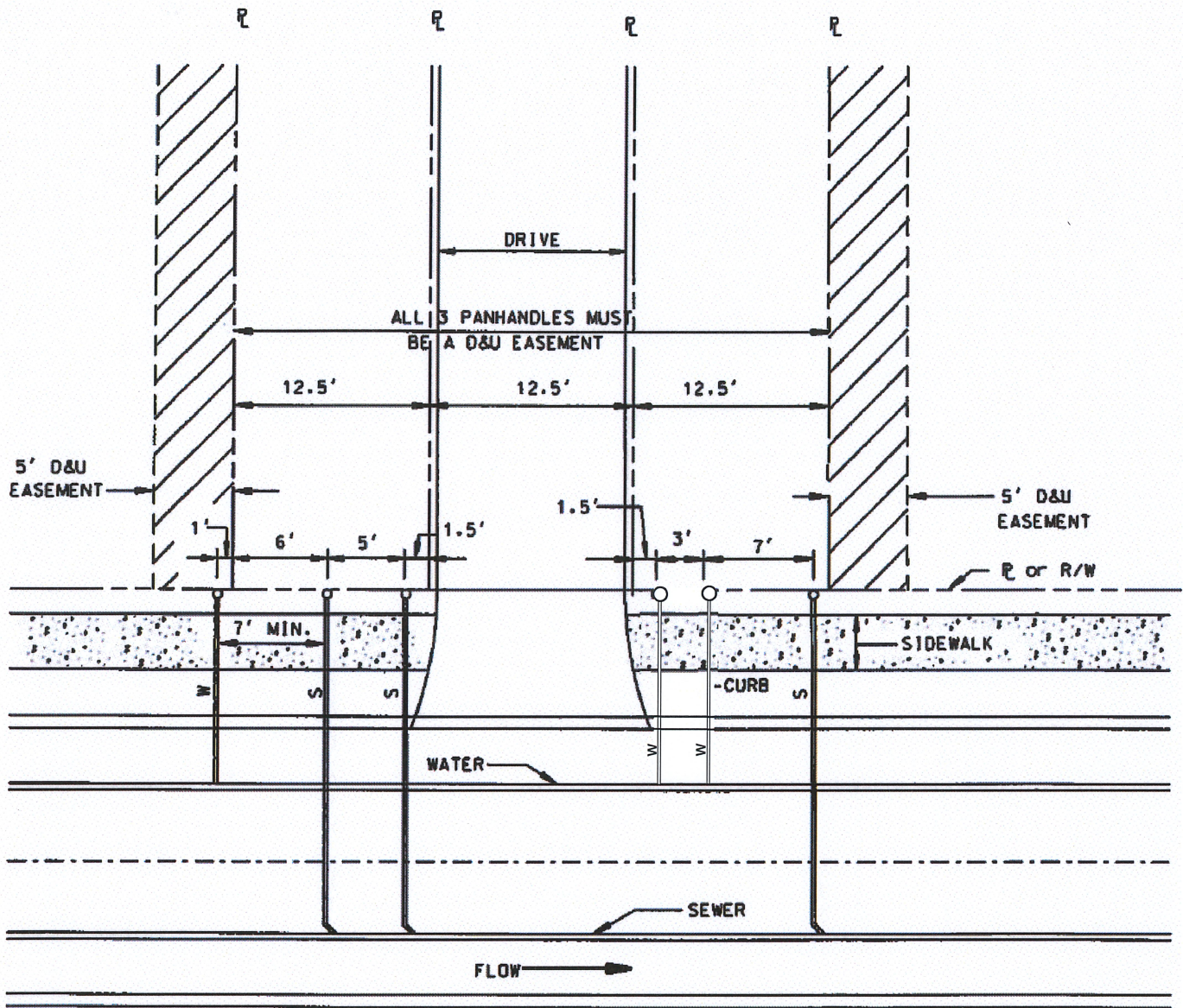
Kyle Jorsts

STANDARD WATER DETAILS

**WATER AND SEWER SERVICES
FOR TOWNHOUSE LOTS WITH
7' OR LESS BETWEEN DRIVEWAYS**

**CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS**

PLATE **G-3a**



3 PANHANDLE LOTS

NOT TO SCALE

NOTES:

1. METERS TO BE SUPPLIED WITH INDIVIDUAL SERVICE LINES
2. TWIN CONNECTIONS & SHARED SERVICES NOT PERMITTED BY CITY OF ABERDEEN



CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS

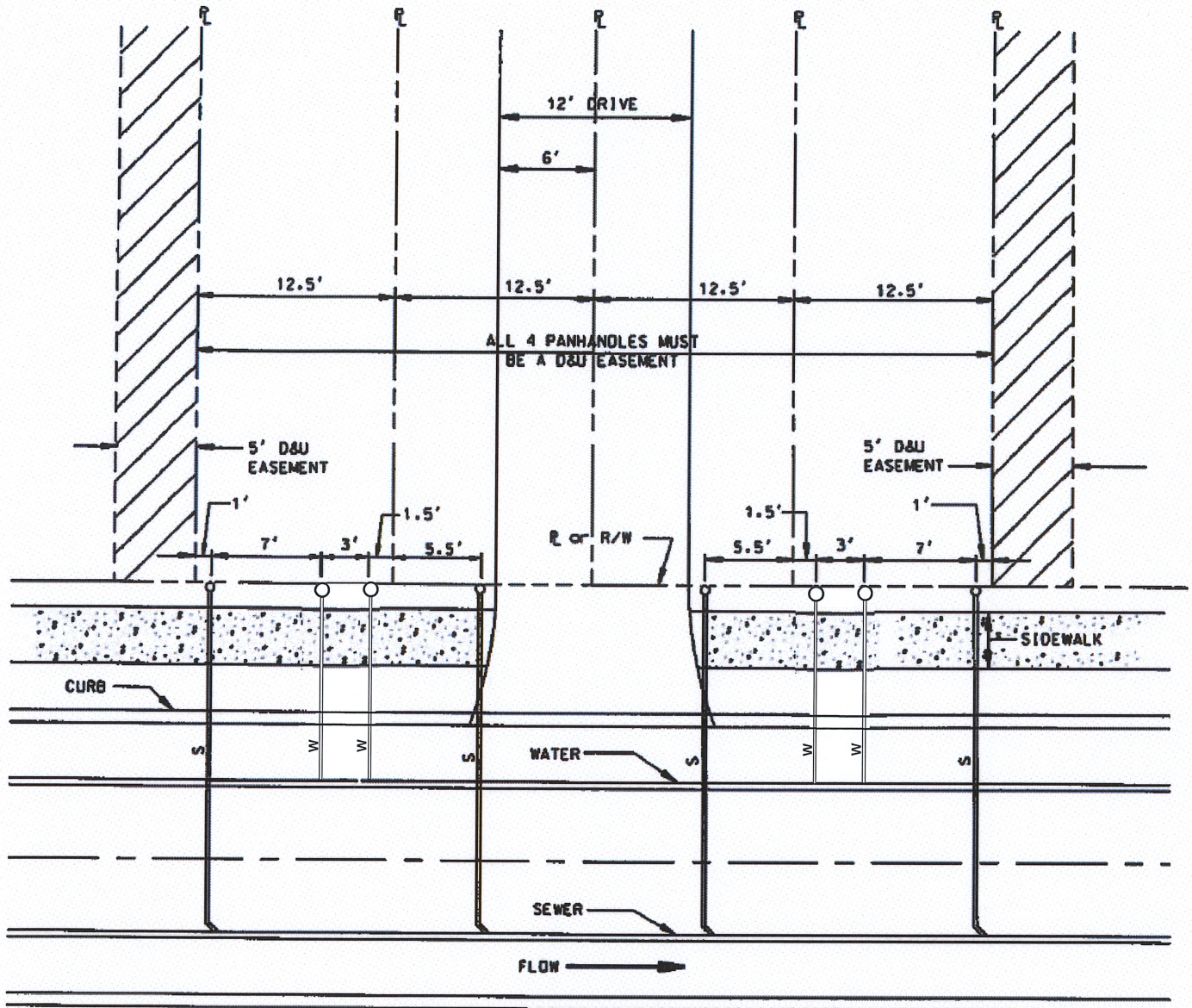
Kyle Torster

STANDARD WATER DETAILS

WATER AND SEWER SERVICES
FOR THREE PANHANDLE LOTS

CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS

PLATE **G-5**



4 PANHANDLE LOTS

NOT TO SCALE

NOTES:

1. METERS TO BE SUPPLIED WITH INDIVIDUAL SERVICE LINES
2. TWIN CONNECTIONS & SHARED SERVICES NOT PERMITTED BY CITY OF ABERDEEN



**CITY OF ABERDEEN
DEPARTMENT OF PUBLIC WORKS**

Kyle Jorsts

STANDARD WATER DETAILS

**WATER AND SEWER SERVICES
FOR FOUR PANHANDLE LOTS**

**CITY OF ABERDEEN
ADDENDUM TO
HARFORD COUNTY
STANDARD DETAILS**

PLATE G-6