

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

GENERAL RULES AND REGULATIONS

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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.

I. WATER MAIN CONSTRUCTION

1) PIPE, DUCTILE IRON (D.I.P)

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

Special Thickness Class

Note:

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

2) PIPE, POLYVINYL CHLORIDE WATER

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

3) PIPE, CAST IRON (C.I.P.)

Not approved.

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

Copper Tubing-Type K (All Sizes)

Halstead
Reading
Cerro
Mueller Tubing Company
Howell Metals
Cambridge-Lee

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

M&H Reliant Style 929
Mueller Centurion A-423
Kennedy Guardian K-81-A
American B-84-B
Clow-Medallion-F-2545
U.S. Pipe Metropolitan 250 Model 94

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 – A USP1 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. 3"-16" OS&Y
4. Brass Test Plug
5. 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.

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

Submit shop drawings

WATER MAIN CONSTRUCTION

9) VALVE, COMBINATION AIR/VACUUM RELEASE

Duo Matic/Kenetic*

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.

*Kenetic-Harford County Model

10) TAPPING SLEEVE ONLY (MECH. JOINT)

U.S. Pipe

M&H Valve 6" – 12"

Mueller 4"-12" H-619(A.C.)

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

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

S-349 (for A.C.) 4" – 12"

American Flow Control M.J. Sleeve -

D.I. 4"-36"

14" and Greater For A/C Pipe (Pre-app. required)

JCM-414

Romac-FT425

Note:

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

2. Coating – Epoxy (fusion), E-coat

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

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 Epoxy Coated

3. Flanged Fittings to be Epoxy Coated where available

4. Flanged fittings to have 304/316 S.S. bolts w/brass nut.

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

EBA 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"

*Submit shop drawing for A.C above 10" for approval

Note:

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

2. 304/316 S.S. nut and bolts

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 SCREW- TYPE (4-1/4")

Bingham & Taylor #4903

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

16) METER VAULT (18", 24", 30") (Pre-Cast Concrete)

Mayer Brothers, Inc.

WATER MAIN CONSTRUCTION

17) 18" METER FRAME & COVER

A.Y. McDonald
Frame # 74MACF18
Single Hole Lid # 74MCL115T
Double Hole Lid # 74MCL115TT
Bingham & Taylor
Frame # CULF18018SP
Single Hole Lid # IFL90301WS
Double Hole Lid # IFL90322TRF
Capital Foundry of Virginia, Inc.
Frame # MBX-3437-F
Single Hole Lid # MBX-347-C-H
Double Hole Lid # MBX-3437-C-2H
Ford Meter Box Company
Frame # FA32C
Single Hole Lid # C3L-T
Double Hole Lid # C3L-TT
Vestal 32-482

18) EXTENSION RING

	<u>18"x24"</u>
Ford	Ext 1
Vestal	32-04332-ER1824
A.Y. McDonald	74MX1
	<u>18"X30"</u>
Ford	Ext 3
Vestal	32-047ER1830
A.Y. McDonald	74MX1

19) VALVE/METER VAULT, PRE-CAST CONCRETE, LARGE

Mayer Brothers, Inc.
Terre-Hill
Atlantic Precast
A.C. Miller/Fabcrete Pre- Piped Vault

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

Note: Plumbing Department Use Only

5/8" Meter #1 Handyhorn:
Ford #HH1-34G
McDonald 742-1----TT33
Mueller 200- 1412 (State Size)

3/4" Meter Kornerhorn:
Ford 02A-95277 w/2 ea. PJA4-44G
McDonald 741-3----PP55
w/2 ea. 74754 T (1" x 1-1/4")
Mueller 330-H1442----02 (State Size)

Sweat Joint
5/8" McDonald-743-1----SS33
3/4" N/A
5/8" Ford - #1 Copper Horn
3/4" N/A

WATER MAIN CONSTRUCTION

26) CORPORATION STOP, COMPRESSION JOINT

3/4"-2"

Ford FB-1000 Gripper Joint
Mueller B-25008 110 Compression
McDonald 74701Q Compression

27) CURBSTOP, THREADED

3/4"-2"

Ford B-11 Series
Mueller B-20283
McDonald 76101

28) CURBSTOP, COMPRESSION JOINT

Ford B-44 Series Gripper Joint
Mueller B-25209N 110 Compression
McDonald 76100Q Compression

29) COUPLING, COPPER COMPRESSION JOINT

Ford C-44 Series Gripper Joint
Mueller H-15403N 110 Compression
McDonald 74758Q Compression

30) Y-BRANCH COUPLING, COMPRESSION

Ford: 1" x 3/4" x 3/4" Y-44-243G Gripper Joint
1 1/2" x 1" x 1" Y-44-264G

*Mueller: H-15343N 110 Compression

*A.Y. McDonald:708YSQ Compression

*Specify size.

31) CATHODIC PROTECTIVE CAP NUT (Oversized)

Protector Cap
Trumbull Industries
Mars Co.

32) DISMANTLING JOINT

Smith-Blair Series 975
Romac DJ-400

Note:

1. W/S.S. tie-rods and nuts, w/epoxy, nylon, or e-coat coating.
2. 304/316 S.S. bolt w/brass nut.

33) FLANGE PIPE/ADAPTOR

Flanged end spool piece to be used, Minimum working pressure 200 psi
Hymax
EBBA-2100 Series

Note:

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

WATER MAIN CONSTRUCTION

34) INLET YOKE ANGLE VALVE

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	AV94-313WG	AV94-324WG	AV91-444W w/C84-46G
Mueller	*H-14273N	*H-14278N w/H-15928N	B24278N W/H15428N
A.Y. McDonald	74602YQ	74604Y w/4753Q	74644BY w/4753Q

*Specify size of service.

35) METER YOKE ASSEMBLY

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	Y501	Y503	Y504
Mueller	H-5010	H-5030	H-5040
A.Y. McDonald	14-1	14-3	14-4

*Epoxy, E-Coat, etc.

36) OUTLET YOKE DUAL CARTRIDGE CHECK VALVE

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	HHCA94-313	HHCA91-323 w/C84-34G	HHCA91-444 w/C84-46G
Mueller	*H-14466-A	*H-14464-A w/H-15428	*H-14464-A w/H-15428
A.Y. McDonald	712-3YT23	*712-3YE33 w/4753Q	*712-3YE44 w/4753Q

*Specify size of service.

37) EXPANSION CONNECTION

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	EC-1	EC-23	EC-4
Mueller	---	---	---
A.Y. McDonald	714-1E	714-2E	714-4E

38) YOKE GASKETS

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	GT112	GT118	GT123
Mueller	500844	500845	311335
A.Y. McDonald	14-1G	14-2G	14-4G

39) YOKE NUTS

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	YLN-1	YLN-23	YLN-4
Mueller	509326	509316	526268
A.Y. McDonald	14-1N	14-2N	14-4N

40) THREADED BRASS FITTINGS

All Manufacturers

WATER MAIN CONSTRUCTION

41) BALL VALVE BRASS

	<u>3/4"</u>	<u>1"</u>	<u>1 1/2"</u>	<u>2"</u>
Ford	B-11-333	B-11-444	B-11-666	B-11-777
Mueller	20283+Size	20283+Size	20283+Size	20283+Size
A.Y. McDonald	76101+Size	76101+Size	76101+Size	76101+Size

42) LOCK-WING BALL VALVE BRASS

	<u>3/4"</u>	<u>1"</u>	<u>1 1/2"</u>	<u>2"</u>
Ford	B-11-333-W	B-11-444-W	B-11-666-W	B-11-777-W
Mueller	20200-W+Size	20200-W+Size	20200-W+Size	20200-W+Size
A.Y. McDonald	76101WW+Size	76101WW+Size	76101WW+Size	76101WW+Size

43) DUST CAP

Niagara

44) BRASS PIPE – THREADED

All Manufacturers

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

See Standard Detail for material needed

46) OUTSIDE DOMESTIC WATER SERVICE COMPLETE (1")

See Standard Detail for material needed.

47) WATER METERS

<u>5/8"</u> (As per Yearly Bid) Badger Model 25 Hersey Products Model 430 Sensus iPerl	<u>3"</u> [Application Varies] Hersey Products, Inc. (MVR Model 350) Elster Amco EVOQ4
<u>3/4"</u> (As per Yearly Bid) Badger Model 35 Hersey Products Model 442 Sensus iPerl	<u>4"-6"</u> [Application Varies] Hersey Products, Inc. (MVR 650, MVR 1200) Elster Amco EVOQ4
<u>1"</u> (As per Yearly Bid) - [Application Varies] Badger Model 70 Hersey Products Model MVR-50 Sensus iPerl	<u>6"-12"</u> [Application Varies] Elster Amco EVOQ4
<u>1-1/2"</u> (As per Yearly Bid) - [Application Varies] Badger Model 120 Hersey Products MVR-100 Elster Amco EVOQ4	
<u>2"</u> [Application Varies] Hersey Products, Inc. (MVR Model 160) Elster Amco EVOQ4	

WATER MAIN CONSTRUCTION

48) WATER METERS FOR FIRE FLOW

- 5/8" - N/A
- 3/4" - Hersey Meter Co. – FSMVR-30, Sensus iPerl
- 1" - Hersey Meter Co. – FSMVR-50, Sensus iPerl

- 1 1/2" - Hersey Meter Co. – FSMVR-100, Elster EVOQ4
- 2" - Hersey Meter Co. – FSMVR-160, Elster EVOQ4
- 3"-12" Elster Amco EVOQ4

49) BACKFLOW PREVENTERS

Apollo Valves/Conbraco Industries, Inc.

Apollo Model DCLF4A	1/2" – 12"
Apollo Model RPLF4A	3/4" – 12"
Apollo Model DCDALF4A	2 1/2" – 12"
Apollo Model RPDALF4A	2 1/2" – 12"

Note:

1. Retest and certification required before operational approval.
2. All reduced pressure models require air gap funnel drain.

II. SEWER MAIN CONSTRUCTION

1) 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) PIPE, DUCTILE IRON

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

Special Thickness Class

Note:

3" thru 6"	Class 52 min
8" thru 12"	Class 52 min
14" & above	Class 52 min
Double Cement Lined	

3) FORCE MAIN SEWER PIPE

2"-3"	- Rubber Ring Slip Joint - SDR 21, Class 200 PVC
3"	- D.I.P. Class 52
4"-12"	- DR 14 - C-900 PVC - D.I.P. - Class 52
Over 12"	- D.I.P. - Class 52

Note:

1. Refer to Water Main Materials for approved manufacturers
2. All D.I.P. is to be special thickness class.
3. Double cement Lining.

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

SEWER MAIN CONSTRUCTION

10) FITTINGS

Molded 4"-8"
HarCo-PVC
Multi-Fitting-PVC
(Thru 15")
Plastic-Trend-PVC
G.P.K. Products, Inc.

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

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

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.
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) LAMPHOLE 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

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
Calder
IND Seal

SEWER MAIN CONSTRUCTION

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

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

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

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

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.

LOW PRESSURE SEWER CONSTRUCTION

IV. LOW PRESSURE SEWER CONSTRUCTION

1) PIPE HDPE

1 ½" – 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 ½" - 4"</u>	<u>D.I.P.</u>	<u>Brass 1 ½" – 4"</u>
IPEX	HarCo	All Manuf.
Central Plastic		
Charter Plastic		
TEGG		
Agru		
Independent		

3) PIPE-PVC PIPE GASKETED - (SDR-21- 1 ½"- 4")

<u>PVC</u>	<u>D.I.P.</u>	<u>Brass 1 ½" – 4"</u>
National	HarCo	All Manuf.
Charlotte		
Crestline		
J.M. Eagle		
Diamond		
North American Pipe		

Note:

1. 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 ½"	Ford	B11-666	B77-666
	Mueller	B-20283+Size	V-25226
	McDonald	6101	6100-44
2"	Ford	B11-777	B77-777
	Mueller	B-20283+Size	V-25226
	McDonald	6101	6100-44

5) SEWAGE GRINDER PUMPING UNIT AND CONTROL PANEL

Environment/One Corporation

6) VALVE KEY EXTENSION

Genco

LOW PRESSURE SEWER CONSTRUCTION

7) FITTINGS FOR LP 2-5-

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

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