

ARRO Consulting, Inc.  
321 N. Furnace Street  
Suite 200  
Birdsboro, PA 19508

September 30, 2022

**ADDENDUM NO. 1**

**CITY OF ABERDEEN  
CONTRACT 22-06  
Long Drive Waterline Extension  
ARRO Project No. 05233.24A**

In accordance with the requirements of the “Instructions to Bidders,” this Addendum shall be attached to and become a part of the Contract Documents for the above referenced project.

**Concerning the Contract Documents**

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This Addendum includes the following items:

- Prebid Meeting Sign-in Sheet
- Pre-bid Meeting Minutes
- 00300 Bid Form (revised)
- HC Water Detail W-15
- City of Aberdeen revised HC Specs
- Sheet SM-ES4 Long Dr Waterline ES Approved Plan (revised)

**BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPECIFIED PLACE ON THE BID FORM. THE ABSENCE OF THIS ACKNOWLEDGMENT WILL BE CAUSE FOR REJECTION OF THE BID.**

City of Aberdeen  
 Long Drive Waterline Extension Contract No. 22-06  
 Pre-bid Meeting Sign-in Sheet  
 September 29, 2022 at 2:00 PM

NAME	COMPANY	PHONE	EMAIL
Parley Hess, Project Manager	City of Aberdeen	410.297.4233	p_hess@aberdeennmd.gov
Shawn Brogan, Procurement Officer	City of Aberdeen	410.272.1600 x 223	s_brogan@aberdeennmd.gov
<del>Costa-Maistro, Associate Engineer</del>	<del>City of Aberdeen</del>	<del>410.272.1600 x 214</del>	<del>c_maistros@aberdeennmd.gov</del>
Jimmy Dennis, Project Manager	ARRO Consulting, Inc.	717.560.6014	jimmy.dennis@arroconsulting.com
Steven Luckenbill	BEI	610 823 4605	sluckenbill@brubacher.net
Shawn Blanchard	BEI	484-256-6039	Sblanchard@brubacher.net
Bob Tazac	DXI	443-243-2376	rtazac@divi.construction.com
Rodger Butkins	Comer	443-807-2056	rbutkins@comerconstruction.com
Phil Melnick	Temp Air	443-504-9835	pmelnick@tempaircompany.com
Lazaro Constanza	ECM Corporation	240-392-0561	lazaro@ecmcorporation.net
Mark Rhodes	Allan Myers	717-332-4090	mark.rhodes@allanmyers.com
Doug Coughlin	GARY & SON	410-808-8942	DCOUGHLIN@GARYNSON.COM
Peter Dacey	Civil Utility Const. Co.	443-504-7830	pdacey@yahoo.com
William G. LoApe	Frank J. Goettner	443-250-1392	william.loape@goettnerconstruction.com

PH  
 AB  
 AD

**City of Aberdeen**  
**Long Drive Waterline Extension Contract No. 22-06**  
**Thursday, September 29, 2022 @ 2:00 PM**  
**Held at City Hall in the 2<sup>nd</sup> Floor Conference Room**

**Pre-Bid Meeting Minutes**

1. Project generally comprises of providing the material and the installation of approximately 1,805 LF of 8” C900 PVC water main, fire hydrant, gate valves and restoration.
2. All bids must be received by the City at City Hall until 2:00 P.M., prevailing time, on Thursday, October 13, 2022 at which time they will be opened.
3. Envelopes containing the bid shall be sealed and addressed to Shawn Brogan. The envelope shall be clearly marked **“LONG DRIVE WATERLINE EXTENSION – BID NO. 22-06”**.
4. Questions on the bid document will be accepted until 5:00 PM prevailing time on Thursday, October 6, 2022. All questions outside of this meeting must be submitted to the Office of the Engineer at: [jimmy.dennis@arroconsulting.com](mailto:jimmy.dennis@arroconsulting.com) .
5. Each bid must be accompanied by bid security in the form of a bid bond, certified check, letter of credit or bank check for 5% of the bid total.
6. Bidders shall have a minimum of (5) years, (5) projects documented experience in this type work and project must be in excess of \$250,000 in order to be considered project experience.
7. Contract times; Substantial Completion – within 150 calendar days, Final Completion – within 180 calendar days. The amount of the Liquidated Damages is set at \$500.00 a calendar day.
8. The start date of the Contract will be a mutually agreed upon date between the City, Engineer and the selected contractor.
9. The bid form is a unit price bid with three (3) contingency items.
10. This project is funded with City of Aberdeen funds therefore Maryland Minimum Wage Rates are NOT required.
11. Payment will not be made for equipment stored on site but not incorporated into the work.
12. A preconstruction, progress, start-up and final walkthrough meetings are required throughout the construction period.

13. The selected contractor will need to submit shop drawings to the Office of the Engineer for their review and approval.
14. Working hours are 7:00 AM to 5:00 PM Monday through Friday. Any request to deviate from this will need to be made in writing to the City through the Office of the Engineer.
15. The selected contractor will need to coordinate work through the Office of the Engineer. Shutdowns of existing service will need to be scheduled a minimum of seven days prior to the scheduled shutdown.
16. The City has an MTA Utility Permit for this work to connect to the existing 8” pipe carrier inside the 48” casing pipe. We will need to notify MTA with the selected contractor information and schedule prior to the start of this project.
17. Special Requirement: The selected contractor shall inspect and pre-test the existing 8” DICL carrier pipe inside the 48” casing pipe under I-95 first. This testing shall be witnessed by the Office of the Engineer. If deficiencies or issues are found they shall be documented, the Engineer will notify the City for corrective action.
18. The selected contractor will need to create “red-line as-constructed” drawings and submit them to them to the Office of the Engineer for review and approval prior to Final Completion.
19. Contract closeout documents, are required prior to final payment.
20. The selected contractor will need to provide to the Office of the Engineer a video or photographs of the construction area prior to the start of work.
21. The selected contractor will need to provide temporary lavatory facilities for the working crew.
22. The selected contractor will need to provide their own “laydown/storage” area.
23. The selected contractor will need to find a location to dispose of excavated material that cannot be utilized for the trench backfill in the lawn/field areas also trenches are to be backfilled with aggregate in paved or stoned areas.

**Questions received through 9/26/22:**

- 1) **Question:** The 2 existing RCPs at Sta 19+00 are called out to “remain in-place” on the preliminary set of drawings, but are called out to be removed in the E&S plans as well as the specs. Please confirm which is correct.  
**Response:** *The two (2) 24” stormwater pipes in the area of Sta 19+00 are to remain in place.*

- 2) **Question:** The E&S plans show 4" SDR35 gravity drain line, a cleanout, a below grade flushing systems with dichlorination, and more at Sta 0+00, but these items are not on the waterline drawings or in the spec. Please confirm whether these are to be included in this project, or not.

**Response:** *The 4" SDR 35 Gravity Drain Line with Tracer Wire, 4" Cleanout and Below Grade Flushing System with Dichlorination as shown on the E&S Plan has been removed from this project.*

- 3) **Question:** Items 110 and 120 – please confirm which type of aggregate and concrete are to be priced for each, respectively.

**Response:** *Miscellaneous aggregate shall be Crusher Run Aggregate CR-6, Size 3; miscellaneous concrete shall be 3000 psi compressive strength.*

- 4) **Question:** What type of stone is to be used when restoring the gravel lot from roughly Sta 0+10 to Sta 4+15?

**Response:** *the aggregate to restore the gravel drive/parking area from approximately Sta 0+10 to 04+15 shall be Crusher Run Aggregate CR-6.*

### **Comments by the City:**

1. The City is flexible with the start date on this project however, they will hold the 150 calendar days for substantial completion and 180 calendar days for final completion.
2. Positive slope must be maintained towards the air release valves. This may require some slightly deeper pipe depth than shown on the plan.
3. The existing pipe in the casing under I-95 must be visually inspected at each end and pressure tested first by the selected contractor and witnessed by the City or their agent.
4. ARRO will be the sole point of contact throughout this project. All correspondence, questions, payment applications, etc. must go through ARRO. If anyone other than ARRO provides direction, do not proceed without confirming with ARRO.
5. If necessary, the City will mow the current right-of-way area prior to the start of construction after a start date is set.
6. The City will allow working hours from 7:00 AM to 7:00 PM on the east side of I-95 and on the west side of I-95 unless there are conflicts with events at the stadium.
7. The pipe must be installed laterally as shown in the plan, staying within the shown right-of-way areas.

### **Questions from the meeting:**

1. Can DICL pipe be utilized at either end of the casing pipe under I-95 until the 45-degree bend at standard bury depth?  
*Yes, DICL pipe can be utilized at these two (2) locations.*
2. Can you provide direction for the air release vault cover?  
*See the attached Harford County Water Detail W-15. Use “WATER MAIN VALVE VAULT” lettering option.*
3. Will the City perform construction stakeout?  
*No, the selected contractor must perform construction stakeout. ARRO will provide necessary data.*
4. Will control points be provided?  
*Survey was performed, control points will be provided.*
5. Will an access agreement be needed from the Residences of Summerlin?  
*No, Nonpareil Road and Long Drive are both City streets.*
6. The General Notes on Plan Sheet 1 refer to “City of Aberdeen Specifications”, where can these be found?  
*City of Aberdeen approved list of suppliers and materials is attached to this document and can be found on their website at:  
[https://www.aberdeenmd.gov/sites/g/files/vyhlif4101/f/pages/2018-11-16\\_dpw\\_w-s\\_approved\\_list\\_of\\_supplies\\_and\\_materials\\_0.pdf](https://www.aberdeenmd.gov/sites/g/files/vyhlif4101/f/pages/2018-11-16_dpw_w-s_approved_list_of_supplies_and_materials_0.pdf)*
7. Is the contractor responsible for compaction testing?  
*No, the City will pay for the compaction testing.*
8. Who will determine if material is unsuitable for backfill?  
*The City or their agent will provide determination on material suitability for backfill.*
9. Can clearing and grubbing material remain on site?  
*Yes, however, it must be shredded and spread over the area owned by the City.*
10. Can “red-line, as-constructed” plans be submitted in PDF format?  
*Yes, however, CADD plans will also be accepted.*
11. Since the E&S plan differs from the “Bid” plan set, which set is to be followed for construction?  
*The “Bid” set of plans shall be followed for construction. The E&S plan is shown for E&S controls only.*
12. Does the City have record plan of the sanitary sewer installed within this same right-of-way?

If the City has record plan of this sanitary sewer, they will make them available and upload them to their website.

13. On the E&S Plan, should the “Filter Log” around the stormwater basin on the stadium side of I-95 be in the basin not on top as shown?

No, the “Filter Log” needs to be placed inside the “Limit of Disturbance” on the top of the stormwater basin as shown on the approved plan.

Also, while reviewing we noticed that on Sheet SM-ES4 the Filter Log should be moved to the down slope side of the trench. Therefore Sheet SM-ES4 has been revised and will now be part of this Addendum.

**DOCUMENT 00300**

**BID FORM (revised)**

BIDDER (Name and Address):

PROJECT IDENTIFICATION:

**LONG DRIVE WATERLINE EXTENSION  
CONTRACT NO. 22-06**

CONTRACT IDENTIFICATION:

**GENERAL CONSTRUCTION**

THIS BID IS SUBMITTED TO:

**CITY OF ABERDEEN**  
60 North Parke Street  
P.O. Box 70  
Aberdeen, MD 21001

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform and furnish all Work as specified or indicated in the Bidding Documents for the Contract Price and within the Contract Time(s) and in accordance with the other terms and conditions of the Bidding Documents.

2. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for a period of 60 days from the date of Bid opening unless award is delayed by a required approval from a governmental agency, the sale of bonds, or the award of a grant or grants, in which event the Bids shall remain open for a period of 120 days from the date of Bid opening. Thirty-day extensions of the date for the award may be made by the mutual written consent of the Owner and the apparent Successful Bidder. Bidder agrees, if required by Owner prior to and as a condition of Contract award, to execute and sign any documents related to financing of the Project. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Documents within the number of days stated in the Owner's Notice of Intent to Award.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

3.1 Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
_____	_____
_____	_____
_____	_____
_____	_____



- 3.2. Bidder has visited the site and has become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work;
- 3.3. Bidder is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- 3.4. Bidder has carefully studied any available reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Paragraph SC-4.02 of the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions. Bidder acknowledges that any such reports and drawings are not Bidding Documents or Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Bidding Documents and Contract Documents.
- 3.5. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Bidding Documents and Contract Documents.
- 3.6. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Bidding Documents and Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents and Contract Documents.
- 3.7. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Bidding Documents and Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- 3.8. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or

indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

4. Bidder will complete the Work for the following lump sum and unit prices. Refer to Section 01025 for description of pay items.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Bid Unit Price (\$)</u>	<u>Extended Price In Figures (\$)</u>
1.	Furnish and Install Erosion and Sediment Controls.	LS			\$ _____
2.	Furnish and Install 8" C-900 Water Main.	LF	1,805	\$ _____	\$ _____
3.	Furnish and Install Fire Hydrant Assembly.	EA	1	\$ _____	\$ _____
4.	Furnish and Install 8" Gate Valve and Box.	EA	10	\$ _____	\$ _____
5.	Furnish and Install 2" Air Release Valve and Manhole.	EA	2	\$ _____	\$ _____
6.	Furnish and Install DICL Fittings:				
6.a	8" – 8"x8"x8" Tee.	EA	2	\$ _____	\$ _____
6.b	8" – 11.25° Bend.	EA	1	\$ _____	\$ _____
6.c	8" – 22.5° Bend.	EA	5	\$ _____	\$ _____
6.d	8" – 45° Bend.	EA	15	\$ _____	\$ _____
6.e	8" – 90° Bend.	EA	1	\$ _____	\$ _____
6.f	8" – Solid Sleeve.	EA	3	\$ _____	\$ _____
7.	Culvert Crossing.	LS			\$ _____
8.	Permanent Site Restoration.	LS			\$ _____
9.	Pre-inspection and Testing of I-95 Carrier Pipe.	LS			\$ _____
10.	Miscellaneous Unclassified Excavation (Contingency Item).	CY	50	\$ _____	\$ _____
11.	Miscellaneous Aggregate Backfill (Contingency Item).	CY	50	\$ _____	\$ _____
12.	Miscellaneous Concrete (Contingency Item).	CY	10	\$ _____	\$ _____

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Bid Unit Price (\$)</u>	<u>Extended Price In Figures (\$)</u>
13.	Furnish and Install 8" DICL Water Main either end of the casing pipe under I-95.	LF	40		
	(Optional Item)			ADD \$ _____	\$ _____
				DEDUCT \$ _____	\$ _____

**Items 10, 11, and 12 are Contingency Items; payment will not be approved without Engineer's prior written authorization.**

Quantities given above for "Contingency Items" are not guaranteed. Final payment will be based on actual quantities. Any difference between estimated and final quantities, increases in market value of Products and services, or complexity of Work will not be considered reason for increase of unit price.

Total of Items 1 through 12 BID PRICE (Figures): \_\_\_\_\_

Total of Items 1 through 12 BID PRICE (Words): \_\_\_\_\_

5. Bidder agrees that the Work will be substantially complete on or before the dates or within the number of calendar days indicated in the Agreement.

Bidder accepts the provisions of the Agreement as to liquidated and other damages in the event of failure to complete the Work on time.

6. The following documents are attached to and made a condition of this Bid:

6.1 Required Bid Security in the form of \_\_\_\_\_.

6.2 Experience Questionnaire; Document 00400.

6.3 List of Proposed Subcontractors; Document 00450.

6.4 Maryland Certificate of Registration may be submitted with the Bid, or prior to and as a condition of award of the Contract.

7. Communications concerning this Bid will be addressed to (Bidder's Contact Person):

Phone: ( ) \_\_\_\_\_

Fax: ( ) \_\_\_\_\_

Company Email Address: \_\_\_\_\_

8. The terms used in this Bid are defined and have the meanings assigned to them in the General Conditions, as may be amended by the Supplementary Conditions, included as part of the Bidding Documents.

9. Bidder acknowledges that the Bid Price is based on Products and methods described and named in the Drawings and Specifications.

10. Bidder certifies that (s)he visited the site on \_\_\_\_\_, \_\_\_\_\_, 2022.

INTENDING TO BE LEGALLY BOUND, the undersigned submits the forgoing Bid this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

**(If Bidder is an Individual)**

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Individual

Trading and doing business as:

\_\_\_\_\_  
Name of Business

\_\_\_\_\_  
Address of Business

**(If Bidder is a Limited Liability Company – All Members Must Sign)**

\_\_\_\_\_  
Name of Company

\_\_\_\_\_  
Address of Company

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Member

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Member

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Member

**(If Bidder is a Partnership - All General Partners Must Sign)**

	_____
	Name of Partnership
	_____
	Address of Partnership
_____	_____
Signature of Witness	Signature of Partner
_____	_____
Signature of Witness	Signature of Partner
_____	_____
Signature of Witness	Signature of Partner

**(If Bidder is a Corporation)**

Attest:

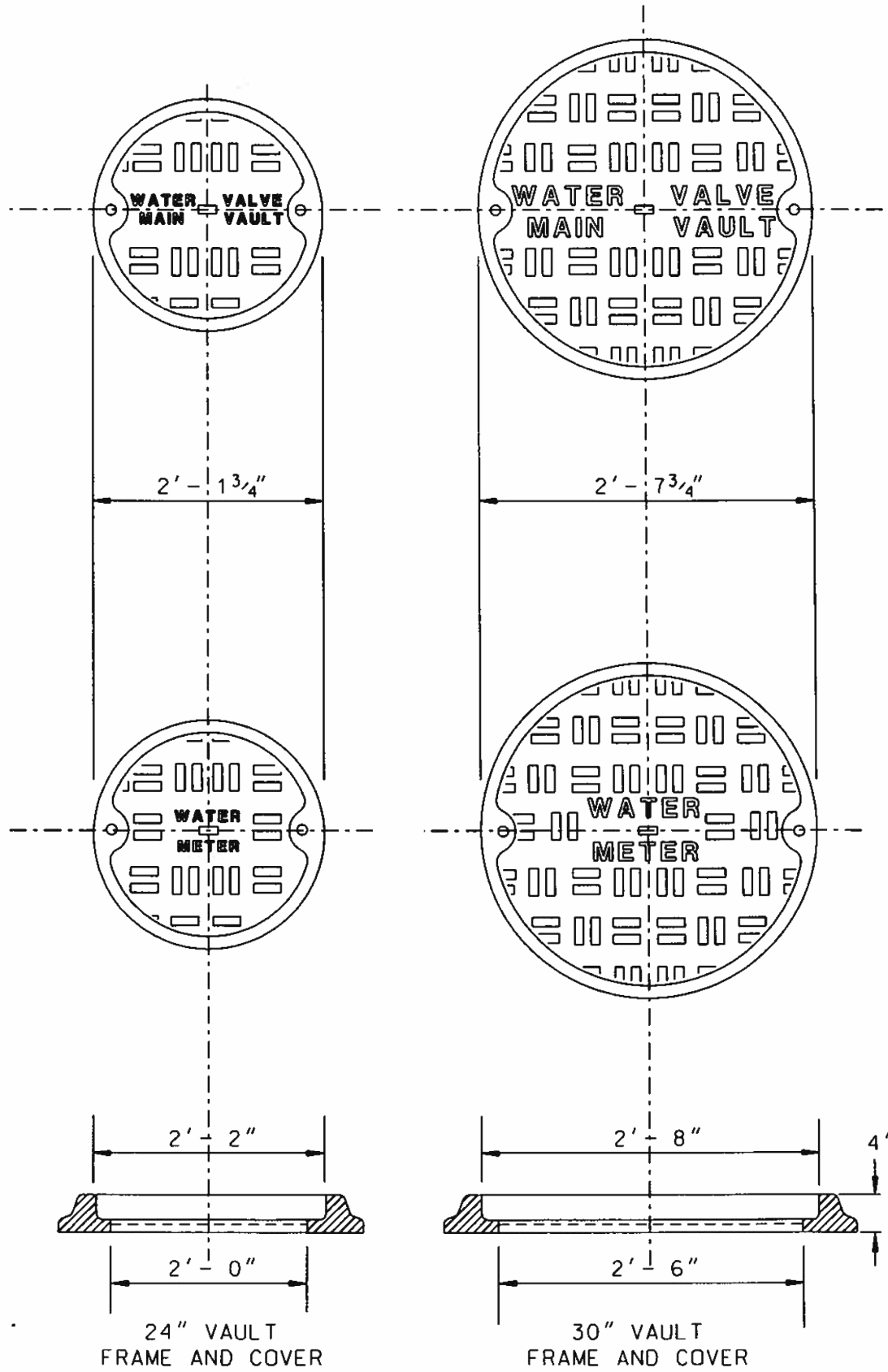
	_____
	Name of Corporation
_____	_____
Signature of Secretary or Assistant Secretary	Address of Principal Office
(Corporate Seal)	_____
	State of Incorporation
	_____
	Signature of President or Vice President

Type or print name below each signature.

State here the names and addresses of all partners, if a partnership, or of three principal officers, if a corporation.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**END OF BID FORM**



24" VAULT  
FRAME AND COVER

30" VAULT  
FRAME AND COVER



HARFORD COUNTY, MD  
DEPARTMENT OF  
PUBLIC WORKS

*William B. Cooper*

STANDARD WATER DETAILS

STANDARD FRAMES  
AND COVERS

ISSUED 7/1/98  
REVISED  
REISSUED 3/15/09

PLATE W-15



November 16, 2018

TO: GENERAL PUBLIC

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

1. The Department of Public Works issues an addendum dated November 16, 2018 to the Harford County Part 27, dated Nov 10, 2014 for "Approved List of Suppliers and Materials For Water and Sewer Construction." 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.
2. For additional information contact the Department of Public Works at 410-272-1600 x 217

Sincerely,

A handwritten signature in black ink that reads "Kyle Torster". The signature is written in a cursive, slightly slanted style.

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

Cc:  
Planning and Zoning





# HARFORD COUNTY

CITY OF ABERDEEN ADDENDUM

DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER AND SEWER



APPROVED LIST OF  
SUPPLIERS AND MATERIALS  
FOR  
WATER AND SEWER  
CONSTRUCTION

November 10, 2014

Reissued CoA Addendum November 16, 2018



**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  
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](http://www.harfordcountymd.gov)

November 10, 2014

Reissued CoA Addendum November 16, 2018



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.





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

**City of Aberdeen Addendum\***

HARFORD COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER AND SEWER

**November 10, 2014**

**\*November 16, 2018**





**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**

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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 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

**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  
AWWA Approved PE Pipe  
Copper Tubing Sized

**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

**5a) YARD HYDRANTS**

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

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. 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.
6. All Valves Should be Clockwise to Close/  
Counter-Clockwise to Open

**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"

**Full Circle Stainless Steel Tapping  
Saddles**

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

JCM-414

Romac-FT425

Note:

1. 304 or 316 S.S. nuts and bolts
2. Coating – Epoxy (fusion), E-coat

### 11) FITTINGS-MECHANICAL JOINT- CEMENT LINED OR EPOXY COATED - 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 fittings to have 304 or 316 S.S. bolts w/brass nuts.

### 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"

**Hymax Grip / All Models**

**Mueller Maxi-Fit**

**Romac Alpha / All Models**

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

Note:

1. All couplings to be coated w/epoxy, nylon, e-coat.
2. 304 or 316 S.S. nuts 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)- Plastic Enclosures Only**

Mayer Brothers, Inc.

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

**Note: No Bricks or Concrete Risers; Plastic Risers Only**



## WATER MAIN CONSTRUCTION

### 26) CORPORATION STOP, COMPRESSION JOINT

3/4"-2"

Ford ~~FB-1000 Gripper Joint~~ Compression Q Fitting

Mueller ~~B-25008-110~~ Compression Q Fitting

McDonald ~~74701Q~~ Compression Q Fitting

### 27) CURBSTOP, THREADED

3/4"-2"

Ford ~~B-11 Series~~ Compression Q Fitting

Mueller ~~B-20283~~ Compression Q Fitting

McDonald ~~76101~~ Compression Q Fitting

### 28) CURBSTOP, COMPRESSION JOINT

Ford ~~B-44 Series Gripper Joint~~ Compression Q Fitting

Mueller ~~B-25209N-110~~ Compression Q Fitting

McDonald ~~76100Q~~ Compression Q Fitting

### 29) COUPLING, COPPER COMPRESSION JOINT

Ford ~~C-44 Series Gripper Joint~~ Compression Q Fitting

Mueller ~~H-15403N-110~~ Compression Q Fitting

McDonald ~~74758Q~~ Compression Q Fitting

### 30) Y-BRANCH COUPLING, COMPRESSION

Ford: 1" x 3/4" x 3/4" Y-44-243G ~~Gripper Joint-~~  
Compression Q Fitting, 1½" x 1" x 1" Y-44-264G  
Compression Q Fitting

\*Mueller: ~~H-15343N~~ 110 Compression Q Fitting

\*A.Y. McDonald: ~~7087SQ~~ Compression Q Fitting

\*Specify Size

### 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 e-coat 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

EBAA-2100 Series

Uni-Flange

Note:

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

## WATER MAIN CONSTRUCTION

### 34) INLET YOKE ANGLE VALVE: Note 1

	<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: Note 1

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	<del>Y501</del>	<del>Y503</del>	<del>Y504</del>
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: Note 1

	<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: Note 1

	<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: Note 1

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

### 39) YOKE NUTS: Note 1

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

**Note: 1 Items 34 thru 39: METER SETTERS ONLY, No Cast Iron Yoke Style Setters, No Expansion Style Connections, Ford 'Coppersetter 70 & 80 Series & Resetter 40 Series' styles only (or Mueller Equivalent) with Lockable Angle Ball Valve Inlet and Angle Cartridge Dual Check Outlet, CTS Compression 'Q Fittings' . Appropriate height should be based on bury depth of service line, sizes should be based on size of meter and requirements of service customer, Submit Shop Drawings for Approval**

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

3/4" - 1": Neptune Mach 10 E-Coder R900i Meter  
 1.5" - 12": Master Meter Octave Meters with Neptune R900i Box  
 Submit Shop Drawings for any exceptions

## 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~~

**3/4", 1": Neptune Mach 10 E-Coder R900i**

~~1 1/2" - Hersey Meter Co. - FSMVR-100, Elster EVOQ4~~

~~2" - Hersey Meter Co. - FSMVR-160, Elster EVOQ4~~

~~3"-12" Elster Amco EVOQ4~~

**1.5" - 12": Master Meter Octave Meters with Neptune R900i Box**

**Submit Shop Drawings**

### **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"

**Watkins** **1/2" - 12"**

**Zurn** **1/2" - 12"**

Note:

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

### **50) AUTOMATIC FLUSHING & MONITORING SYSTEMS**

1. Mueller Hydro-Guard or Equivalent

## 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 - Not Permitted in the City of Aberdeen

<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 Super
Clow	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"	- <del>D.I.P. Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>
4"-12"	- DR 14 - C-900 PVC - <del>D.I.P. - Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>
Over 12"	- <del>D.I.P. - Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>

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. **DR Rating based on Pressure**

### 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

3. All Ductile Fittings to be lines with  
Protecto401 or Comparable Product

### **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

Calder

IND Seal

Fernco Sheerguard

GPK Products/Indiana 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  
Cretex External X85 Seal

### **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  
**FS1 Style Full Circle**

##### 16" and above Three-Section

Ford Style FS3  
Smith-Blair Style 263 Romac  
Style SS3 Powerseal Style  
3123 AS  
**FS1 Style Full Circle**

#### **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

## **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

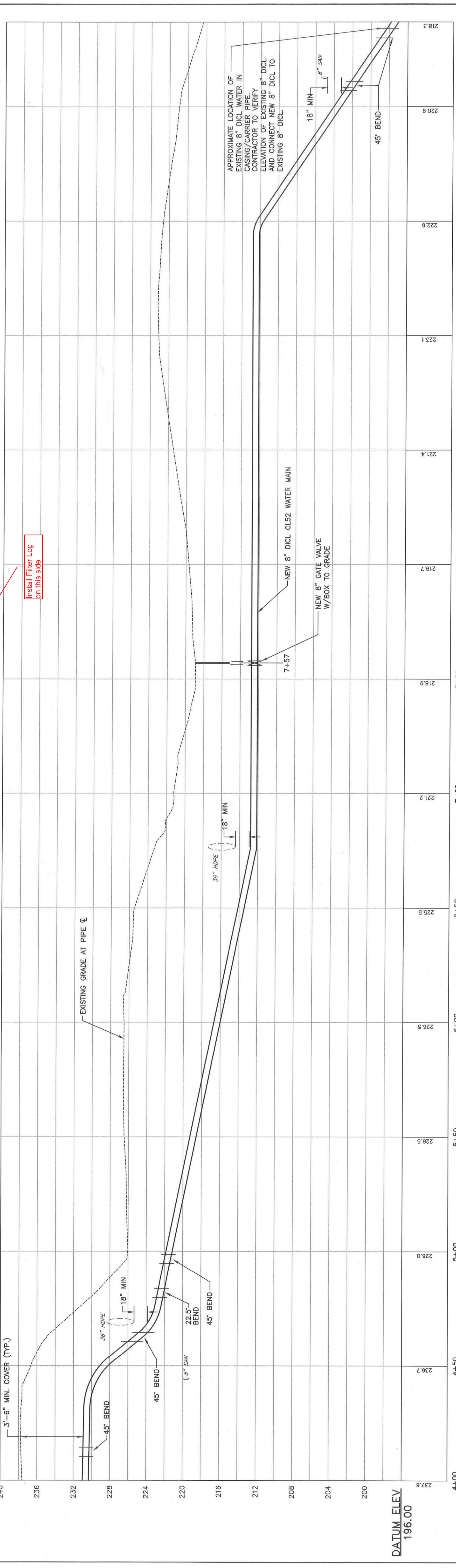
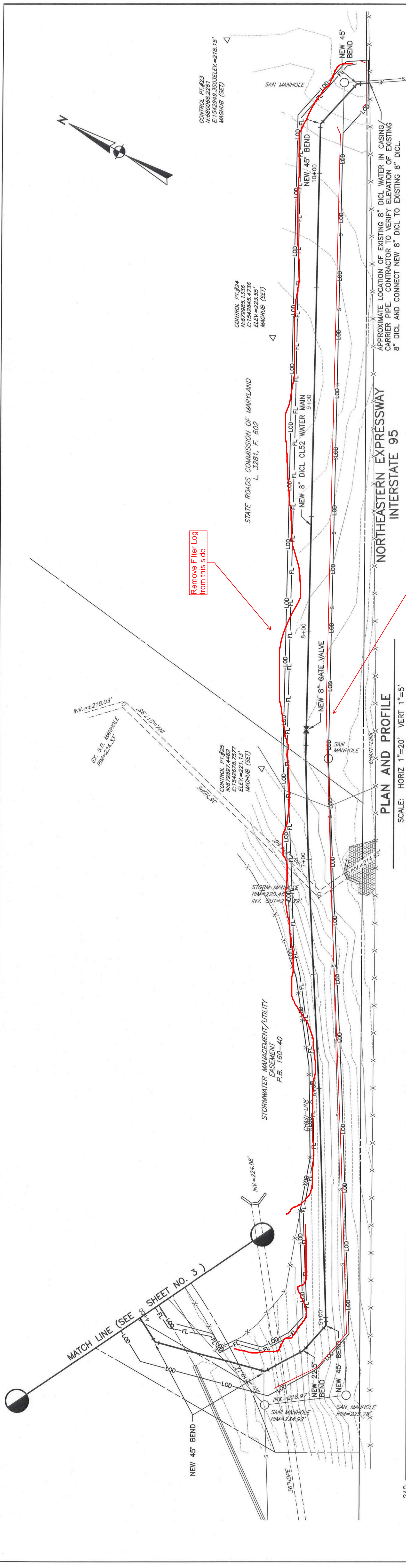
### 14) R/S GATE VALVE – 3" AND GREATER

\*See water main construction for approved manufacturers.

### 15) ADJUSTMENT RING – 24"

East Jordan Infra-Riser





**LEGEND**

- STRAW BALE DIKE
- 18" DIA. FILTER LOG
- LIMIT OF DISTURBANCE
- 0.84 ACRES (36409 SQ. FT.)
- WETLANDS
- SLOPES 15% OR GREATER

**SCALE**

HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 5'

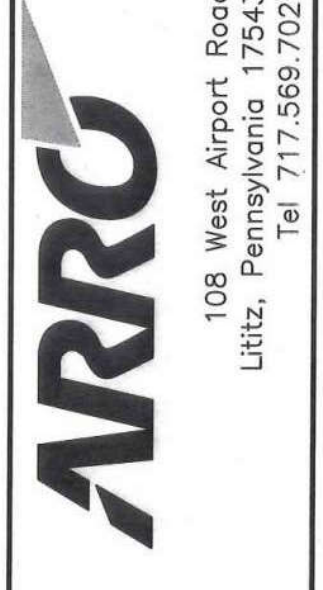
**APPROXIMATE LOCATION OF EXISTING 8" DICL WATER IN CASING OR SERVICE PIPE. CONTRACTOR TO VERIFY ELEVATION OF EXISTING 8" DICL AND CONNECT NEW 8" DICL TO EXISTING 8" DICL.**

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE PROFESSIONAL ENGINEERING AND SURVEYING ACT, 344588, EXPIRATION DATE: 6/25/2021.



Eng. Name: 0523324-502 TANK AND TRANSMISSION MAIN.DWG Plotted: 9/14/2021 9:22 AM

NO.	DATE	BY	APP.	DESCRIPTION
1	7/26/18	BTP	J.D.	60% SUBMISSION TO CLIENT
2	12/19/19	BTP	J.D.	90% SUBMISSION TO CLIENT (SPLIT CONTRACTS)
3	9/14/21	BTP	J.D.	SUBMISSION TO HARFORD SOIL CONSERVATION DISTRICT



CITY OF ABERDEEN DEPARTMENT OF PUBLIC WORKS  
 ABERDEEN, MARYLAND  
 ZONE 3  
 SECONDARY SUPPLY MAIN

EROSION AND SEDIMENT CONTROL  
 PLAN AND PROFILE  
 STA 4+00 TO STA 10+37

JOB NO. SM-ES4  
 ARRO PROJECT NO. 05233.24A  
 DATE SEPTEMBER 2021  
 SHEET NO. 4 OF 8

