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*"Protecting Public Health and the Environment"*

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General Counsel

August 13, 2020

Mr. Paul Hauch, P.E.  
Bureau Chief  
Department of Environmental Protection  
Division of Water Quality  
Municipal Finance and Construction Element  
Bureaus of Construction, Payments & Administration  
PO Box 420  
Trenton, NJ 08625

NOTE: Pages have been redacted or intentionally excluded by the EPA. Contact SRF\_AIS@epa.gov to request more detailed information if needed.

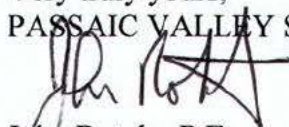
**RE: New Jersey Infrastructure Bank (NJIB)  
Standby Power Generation Facility Project  
NJEIT Project No.: S340689-23  
AIS Availability Waiver – Double Check Detector Assembly**


Dear Mr. Hauch, P.E.:

I hereby request a waiver of two Double Check Detector Assembly backflow preventers manufactured by Apollo Valves to be installed at the PVSC Standby Power Generation Facility construction site located in Newark, New Jersey. These backflow preventers are needed to protect the public water supply as part of the new water service dedicated to the project's on-site fire pump. The approximate cost estimate of these two backflow preventers is [REDACTED]. I have included a justification document from project's Engineer, Black & Veatch, Corp. for review considerations by the DEP and the Environmental Protection Agency.

Please contact the project's Engineer, Mr. Domenick Loschiavo, at [LoschiavoDA@bv.com](mailto:LoschiavoDA@bv.com) if you need any additional information regarding this waiver request.

Very truly yours,  
PASSAIC VALLEY SEWERAGE COMMISSION

  
John Rotolo, P.E.  
Chief Engineer

cc: Gregory Tramontozzi, PVSC  
John Bolcar, PVSC   
James McCarthy, PVSC  
Thomas Laustsen, PVSC  
Joe Frissora, AECOM+HDR JV  
Domenick Loschiavo, Black & Veatch

August 7, 2020

Mr. Paul Hauch  
Bureau Chief  
Department of Environmental Protection  
Division of Water Quality  
Municipal Finance and Construction Element  
Bureau of Construction, Payments & Administration  
PO Box 420  
Trenton, NJ 08625

Sent Via Email: Paul.Hauch@dep.nj.gov

Re: New Jersey Infrastructure Bank (NJIB)  
Standby Power Generation Facility Project  
NJEIT Project No.: S340689-23  
Passaic Valley Sewerage Commission  
AIS Availability Waiver – **Double Check Detector Assembly**

Dear Mr. Hauch:

This letter serves as a request on behalf of the Passaic Valley Sewerage Commission (“PVSC”) for an Availability Waiver of the American Iron and Steel (“AIS”) requirements for a component of the above referenced project. Specifically, we are herein requesting permission to utilize a 12-inch Double Check Detector Assembly (“DCDA”) backflow preventer as manufactured by Apollo Valves for the purpose of backflow prevention for the new fire water service at the proposed Standby Power Generation Facility (“SPGF”). The following information is included for your review and reference:

1. The referenced project is being constructed in Newark, New Jersey to provide PVSC reliable backup emergency power in the event of the loss of utility power. The project is part of PVSC’s FEMA Resiliency Program. The project requires a new water service dedicated for fire protection of the SPGF.
2. Project Specification Section 22 11 19 – Backflow Preventers specifies the DCDA body to be of stainless steel or ductile iron construction with interior and exterior epoxy coating. Flanges shall be flat faced with diameters and drilling conforming to ANSI/ASME B16.1, Class 125. The DCDA is also outfitted with an outside screw and yoke (“OS&Y”) ductile iron resilient-seated gate valve on each end of the device. Project P&ID I-6029 depicts the DCDA within the system.
3. Following our determination that the specified valve is not domestically sourced, and no domestic manufacturer of 12-inch DCDA’s with Underwriters Laboratories (“UL”) and

Factory Mutual (“FM”) labels exist, alternatives were explored. However, due to the flow requirements to supply adequate flow and pressure to the proposed new fire pump for the project, the valve could not be sized smaller than 12-inches. For these reasons, such alternatives have not been further pursued. The Building Code and National Fire Protection Association (“NFPA”) requires components be either UL and or FM listed.

For the reasons presented above, we hereby request a waiver for the AIS requirements for the 12-inch DCDA. The Apollo Valve “DCDA2LF4A Series” backflow preventer has no current domestic equivalent and allows for a superior product. To our knowledge, no waiver requests for this product have been previously submitted to the United States Environmental Protection Agency (“EPA”).

The basis of waiver request is predicated upon the AIS requirements allowing for the submission of a waiver request if “iron and steel products are not produced in in the United States (“US”) in sufficient and reasonably available quantities and of a satisfactory quality”.

Accordingly, should you find the above information and enclosed documentation suitable, we kindly request that you forward this request to the appropriate party of the EPA for their review and approval.

Should you have any further questions regarding this matter, please do not hesitate to contact me at (646) 779-8340 or LoschiavoDA@bv.com.

Sincerely,

Domenick A. Loschiavo, P.E.  
Project Manager

cc: Rotolo\Bolcar\McCarthy, PVSC  
Frissora, HDR  
Robinson\Modi, B&V

Passaic Valley Sewerage Commission  
 Standby Power Generation Facility Project  
 Contract No.: B040

AIS Waiver

Item No.	Item Description	Value
1	Description of the Foreign and domestic construction materials	Backflow preventer valve body construction material is either ductile iron or carbon steel and are outfitted with ductile iron valves. The country of origin for the valve body is China.
2	Unit Measure	Each
3	Quantity	Two (2)
4	Price	Approximately [REDACTED]. Refer to email quotation from Conroy & Griese Sales included in Attachment 6. Conroy & Griese Sales is the supplier/distributor of Apollo Valves.
5	Time of Delivery or Availability	Delivery of the valves is approximately 10 – 12 weeks from approval.
6	Location of the Construction Project	Passaic Valley Sewerage Commission 600 Wilson Avenue Newark, NJ 07105
7	Name and Address of the Proposed Supplier	The valve manufacturer, Apollo Valves, is located at 701 Matthews-Mint Hill Road Matthews, NC 28105.
8	A detailed justification for the use of foreign construction materials	<p>The flow requirements of the system specifically require 12-inch Double Check Detector Assembly backflow preventers.</p> <p>The required fire flow is 2,500 gpm and the new water service feeding the fire pump is from a 16-inch main. As such, the DCDA needs to be rated for a 2,500 gpm flow. A 12-inch DCDA is the largest available on the market and any smaller DCDA is rated for less than 2500 gpm and cannot meet the flow and specified maximum pressure drop condition. The project specifications require the DCDA to be FM and UL listed.</p>

		<p>Attempts were made to locate a backflow preventer meeting the requirements as well as AIS requirements, however such valve was not found. The alternatives explored are:</p> <ul style="list-style-type: none"> <li>• Ames "Series 3000SS". Available in 12" size, but only has UL and FM approval up to 10"</li> <li>• Watt "774DCDA". Available in 12" size, but only has UL and FM approval up to 10"</li> <li>• Wilkins "Model 350DA". Available in 12" size, but only has UL and FM approval up to 10"</li> </ul> <p>Only the Apollo Valve meets the technical requirements of the project, but does not comply with AIS requirements.</p>
9	Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communication with the prime contractor	Attached is correspondence records between the Engineer (Black & Veatch) and Apollo Valve regarding the ability to supply AIS compliant valves. Also attached are catalog cutsheet of other Manufacturer valves highlighting their size limit to provide UL and FM labeled backflow preventers.
10	Project Schedule	The construction duration is anticipated to be 24 months. The commissioning of the fire pump, of which the backflow preventer is installed on the fire pump suction piping, is needed to prior to startup/testing/commissioning of the Standby Power Generation Facility. Thus, it is imperative that they be released and delivered in a timely manner.

## Section 22 11 19 - BACKFLOW PREVENTERS

### PART 1 - GENERAL

#### 1.1 SCOPE

- A. This section covers the furnishing of backflow preventers and associated appurtenances, as indicated herein.
- B. Piping, pipe supports, insulation, and accessories which are not an integral part of the backflow preventers or are not specified herein are covered in other sections.

#### 1.2 GENERAL

- A. General Equipment Stipulations:
  - 1. The General Equipment Stipulations shall apply to all equipment and materials provided under this section. If requirements in this specification differ from those in the General Equipment Stipulations, the requirements specified herein shall take precedence.
- B. Identification:
  - 1. Equipment specified herein shall be identified in accordance with the Equipment and Valve Identification section.

#### 1.3 SUBMITTALS

- A. Drawings and Data:
  - 1. Complete fabrication and assembly drawings, together with detailed specifications and data covering materials, parts, devices, and accessories forming a part of the equipment furnished, shall be submitted in accordance with the Submittals Procedures section. The data and specifications for each unit shall include, but shall not be limited to the following:
    - a. Name of manufacturer.
    - b. Type and model.
    - c. Construction materials and finishes.
    - d. Net weight.
    - e. Unit dimensions.
    - f. Performance curves indicating flow capacity versus pressure drop.
- B. Operations and Maintenance Data and Manuals:
  - 1. Adequate operation and maintenance information shall be supplied as required in the Submittals Procedures section. Operation and maintenance manuals shall be submitted in

accordance with the Submittals Procedures section. The operation and maintenance manuals shall be in addition to any instructions or parts lists packed with or attached to the equipment when delivered.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Shipping shall be in accordance with the Product Delivery Requirements section. Handling and Storage shall be in accordance with the Product Storage and Handling Requirements section.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE AND DESIGN REQUIREMENTS

- A. Backflow preventers shall be designed to meet the requirements as indicated herein.

#### 2.2 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers and specific products are listed in the Design and Construction paragraph.

#### 2.3 DESIGN AND CONSTRUCTION

- A. Backflow prevention device type shall be as indicated herein.
- B. Double Check Detector Assembly Backflow Preventers
  1. Double Check Detector Assembly (DCDA) backflow preventer assembly shall consist of a mainline double check valve with a Type 2 bypass consisting of a lead free single check valve and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm while the mainline second check remains closed. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure.
  2. DCDA backflow preventers shall comply with ASSE Standard 1048, CSA B64.5, Factory Mutual (FM) and Underwriters Laboratories (UL) requirements and shall be suitable for horizontal installation. Backflow preventers shall comply with the requirements of ANSI/NSF 61 and NSF/ANSI 372.
  3. The pressure drop across the assembly shall be documented by an independent laboratory.
  4. DCDA backflow preventers shall be provided with:
    - a. Stainless steel or ductile iron bodies with epoxy-coated interior and exterior,

- b. Flanged, outside screw and yoke (OS&Y) ductile iron resilient-seated gate valve on each end of the device. Valves shall open by turning operating stem counterclockwise (left).
    - c. Flange diameter and drilling shall conform to ANSI/ASME B16.1, Class 125.
  - 5. DCDA shall have a maximum working pressure of 175 psi, capable of withstanding a hydrostatic test pressure of 350 psi with an operating temperature range between 33°F and 140°F.
  - 6. DCDA backflow preventers shall be Apollo “DCDA2LF4A Series” or approved equal.
- C. Hose Connection Vacuum Breakers:
- 1. Hose connection vacuum breakers shall be provided with 3/4 inch hose thread ends, brass or bronze bodies, stainless steel stem, rubber seat, and rubber disc. Hose connection vacuum breakers shall be of tamper-resistant design to prevent removal, manual drain feature, and shall comply with ASSE Standard 1011 requirements. Hose connection vacuum breakers shall be Febco “Series 731,” Watts Regulator Company “Series 8” or Wilkins “Model BFP 8.”

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Materials furnished under this section will be installed in accordance with the Valve Installation section.
- B. Contractor shall modify bypass meter fittings in the field to accommodate the City of Newark Water Department’s meter. The interior diameter of Water Department’s meter coupling is 5/8”. Water Department will furnish and install meter.

End of Section



<b>Backflow Preventer Schedule</b>							
<b>Device Number</b>	<b>Location</b>	<b>Size</b>	<b>Max Flow</b>	<b>Max Pressure Drop at Max Flow</b>	<b>Normal Flow</b>	<b>Max Pressure Drop at Normal Flow</b>	<b>Type (1)</b>
		<b>in.</b>	<b>gpm</b>	<b>psi</b>	<b>gpm</b>	<b>psi</b>	
BPVLV-168300001	Wilson Ave Water Service	12	3,000	9	2,500	6.5	DCDA
BPVLV-168300002	Doremus Ave Water Service	12	3,000	9	2,500	6.5	DCDA

Notes:

(1) Abbreviation for backflow preventer type:

RPZ: Reduced Pressure Zone  
 DCDA: Double Check Detector Assembly

REVISIONS

REV	ZONE	BY	DATE	DESCRIPTION

**BLACK & VEATCH**  
489 Fifth Ave NY, NY 10017; COA No. 24GA27981200

**CDM Smith**  
110 Fieldcrest Avenue #8  
Edison, NJ 08837  
Tel: (732) 225-7000  
COA No. 24GA28020200

KEYPLAN

ALL DIMENSIONS, EQUIPMENT, DEVICES AND LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR. NOTIFY P.V.S.C. OF ANY ERRORS, CONFLICTS, AMBIGUITIES OR DISCREPANCIES IN THE CONTRACT DRAWINGS OR SPECIFICATIONS BEFORE PROCEEDING WITH CONTRACT.

ALL DIMENSIONS SHALL BE AS NOTED IN WORDS OR NUMBERS ON THE CONTRACT DRAWINGS (SUBJECT TO VERIFICATION BY CONTRACTOR AS NOTED ABOVE). DO NOT SCALE DRAWING TO DETERMINE DIMENSIONS.

THESE CONTRACT DRAWINGS CONTAIN DATA INTENDED SPECIFICALLY FOR THE NOTED PROJECT. THEY ARE NOT INTENDED FOR USE ON EXTENSIONS OF THIS PROJECT OR FOR ON ANY OTHER PROJECT.

THE COPYING AND/OR MODIFICATION OF THIS DOCUMENT OR ANY PORTION THEREOF WITHOUT THE WRITTEN PERMISSION OF P.V.S.C. IS PROHIBITED.

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**PASSAIC VALLEY SEWERAGE COMMISSION**  
600 WILSON AVE.  
NEWARK, NEW JERSEY 07105

"Protecting Public Health and the Environment"

STANDBY POWER GENERATION FACILITY  
NEWARK, NEW JERSEY

POWER GENERATION BUILDING

PIPING & INSTRUMENT DIAGRAM  
WATER SUPPLY

DESIGNED BY: WSB

DRAWN BY: RCH

CHECKED BY:

APPROVED BY:

DAVID MODI  
MECHANICAL ENGINEER

DATE

N.J. Professional Engineer Lic. No. 24GE05333600

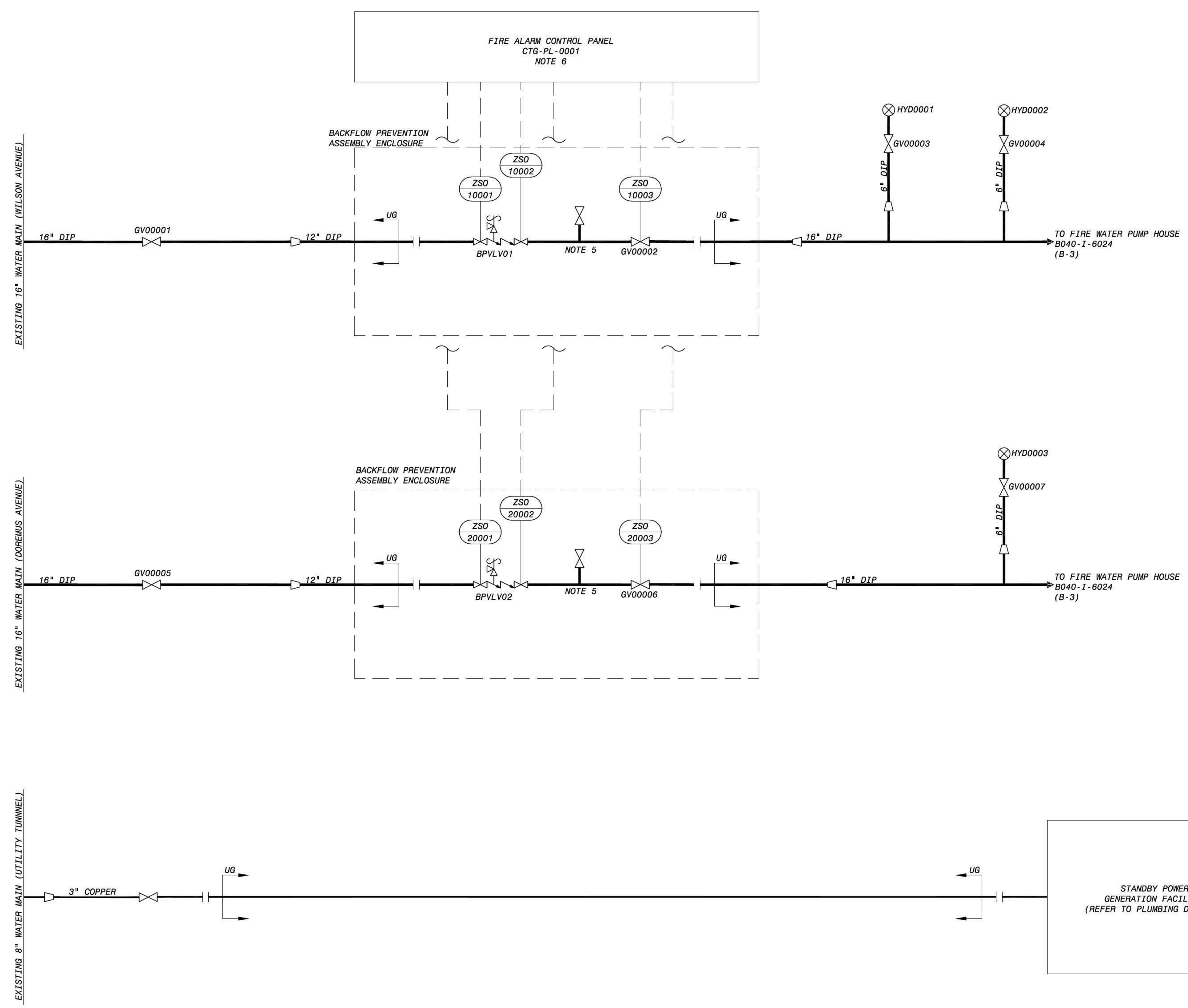
Date: 6/9/20

Scale: NONE SHEET 1 OF 1

CONTRACT No: B040 COST CENTER: 6310-2685

DWG No: I-6029 REV. A

- NOTES:
- EQUIPMENT ASSET IDENTIFICATION LOOP NUMBER IS 1683X.
  - SYSTEM CODE IS XXX, UNLESS NOTED OTHERWISE.
  - GATE VALVES SHALL OPEN COUNTERCLOCKWISE.
  - HYDRANTS SHALL MEET CITY OF NEWARK WATER DEPARTMENT STANDARDS AND REQUIREMENTS.
  - TAP PIPE WITH 2" CORPORATION STOP.
  - FIRE ALARM CONTROL PANEL IS SPECIFIED IN THE FIRE SUPPRESSION AND ALARM SYSTEMS SECTION 21 13 00.



PRELIMINARY - NOT FOR CONSTRUCTION

\* THIS IS A COMPUTER GENERATED DRAWING  
DO NOT MAKE CHANGES MANUALLY

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