RALEIGH P. SHEPHERD
ATTORNEY AT LAW
305 MAIN STREET
MANCHESTER, KENTUCKY 40962

TELEPHONE: (606) 599-0311 FAX: (606) 599-0344

RECEIVED
MAY 27 2020
PUBLIC SERVICE COMMISSION

May 21, 2020

Kentucky Public Service Commission (PSC)
Post Office Box 615
211 Sower Boulevard
Frankfort, KY 40602-0615

Re: Filing of Status Report of North Manchester Water Association
Case No. 2019-00457

To Whom It May Concern:

Attached please find the Notice of Filing of Status Report of NMWA pursuant to Commission Staff's Order entered April 15, 2020.

In accordance with 807 KAR 5:001, Section 8, I hereby certify and attest that the electronically filed documents are a true representation of the original document signed and executed by me as legal counsel of NMWA to be filed with the Commission.

Sincerely,

/s/ Raleigh P. Shepherd
Raleigh P. Shepherd, Esq.

RPS/es

RECEIVED

MAY 27 2020

PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

BRANDON AND TABITHA SWAFFORD	)	
	)	CASE NO.
COMPLAINANT	)	2019-00457
V.	)	
	)	
NORTH MANCHESTER WATER ASSOCIATION, INC.	)	
	)	
DEFENDANT	)	

NOTICE OF FILING OF STATUS REPORT OF NORTH MANCHESTER WATER ASSOCIATION (NMWA)

Comes NMWA, by and through its legal counsel, and pursuant to the Commission's Order dated April 15, 2020, hereby files a copy of the Status Report, dated May 20, 2020, prepared by Michael K. Maggard, Project Engineer, of Sisler-Maggard Engineering, PLLC, on behalf of NMWA.

ALL on this 21st day of May, 2020.

Respectfully Submitted,

/s/ Raleigh P. Shepherd
RALEIGH P. SHEPHERD
ATTORNEY AT LAW
305 MAIN STREET
MANCHESTER, KENTUCKY 40962
TELEPHONE: (606) 599-0311
FACSIMILE: (606) 599-0344
E-MAIL: shepherdlawoffice@icloud.com
ATTORNEY FOR NMWA

CERTIFICATE OF SERVICE

I hereby certify and attest that on this 21st day of MAY, 2020, a true and accurate copy of the foregoing response was served via first class mail to:

Brandon and Tabitha Swafford
2885 Upper Rader Road
Manchester, KY 40962

Steve Davis, President of NMWA
7362 North Highway 421
Manchester, KY 40962

and by electronically filing the original with:

Kentucky Public Service Commission (PSC)
Post Office Box 615
211 Sower Boulevard
Frankfort, KY 40602-0615

/s/ Raleigh P. Shepherd
RALEIGH P. SHEPHERD, ESQ.

SISLER-MAGGARD ENGINEERING, PLLC
220 EAST REYNOLDS ROAD, SUITE A3
LEXINGTON, KY 40517
(859) 271-2978
Fax (859) 271-5670
Email: sme@sislermaggard.com

May 20, 2020

North Manchester Water Association
7361North Highway 421
Manchester, KY 40962

Attn: Steve Davis, President

RE: Swafford PSC complaint – PSC Case # 2019-00457
Upper Rader Road
SME # 20002

Dear Mr. Davis:

Per your request, please find the following update for the Upper Rader waterline and pump station project:

The project has been approved by the KY DOW. See Attached.

The pipe material and appurtenances have been delivered to the site.

The pump station skid has been delivered to the site.

Due to the complexity of the pump station installation and time and manpower to install the line and appurtenances, the NMWA board agreed to take quotes for the installation of the project. These quotes are required to be into the office May 29, 2020 no later than 3:00 p.m. The quotes will be reviewed and acted upon at the next scheduled board meeting on Monday June 1, 2020. See attached.

If you have any questions, please call.

Sincerely,

Michael K. Maggard
Project Engineer
Enclosures

SISLER-MAGGARD ENGINEERING, PLLC
220 EAST REYNOLDS ROAD, SUITE A3
LEXINGTON, KY 40517
(859) 271-2978
Fax (859) 271-5670
Email: sme@sislermaggard.com

May 12, 2020

Utility Contractors

Ref: North Manchester Water Association
Upper Rader Water line and Booster Pump Station Quote
SME No. 20002 (a)

To whom it may concern:

Please find enclosed drawings and bid form for the proposed Upper Rader Water line and water booster station. We are accepting quotes for the installation of the waterline and water booster station. Material will be supplied by NMWA.

Please provide us a quote no later than May 29, 2020 by 3:00 p.m.

Quotes can be mailed to the address listed above or emailed to mike@sislermaggard.com.

Work needs to be completed in 30 days or less and work is expected to commence the week of June 1, 2020.

The North Manchester Water Association reserves the right to reject and or accept quote from any and or all quotes.

If you have any questions, please don't hesitate to call.

Sincerely,

Michael K. Maggard

Michael K. Maggard
Project Engineer
MKM/ch

enclosures
cc/ NMWA

BID FORM
BOOSTER PUMP INSTALLATION AND WATERLINE RELOCATION

BIDDER'S PROPOSAL

Proposal of _____(hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as (a partnership, or a corporation, or an individual) _____, to **North Manchester Water Association** (hereinafter called "OWNER").

In compliance with the Advertisement for Bids, BIDDER hereby proposes to furnish all equipment, materials, and labor for the work required to construct the **Booster Pump Installation and Waterline Relocation** in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

Item No.	Item Description	Quantities	Units	Unit Cost	Total Cost
1	2" CL200 PVC Waterline (labor only)	800	L.F.		
2	1" CL250 HDPE service line (labor only)	50	L.F.		
3	2" Gate Valve (labor only)	3	EA.		
4	6" Blow-off Assembly (labor only)	1	EA.		
5	2" Blow-off Assembly (labor only)	1	EA.		
6	Water Booster Pump Station(labor Only)	1	L.S.		
7	Fiberglass Makers	4	EA.		
8	Tie to Ex. 8" PVC Waterline	1	EA.		
9	Reconnect existing water meters	4	EA.		
	Total Items 1 thru 9				

BIDDER agrees to perform all of the Work described in the Specifications and shown on the Plans for the bid price of:_____
_____ Dollars and _____ Cents ($_____). (Amount shall be shown in both words and figures. The Unit Price shall govern. The Owner will make corrections in extensions and additions to determine the Total Bid Amount for Award.

The quantities of each item on the bid, as finally ascertained at the close of the contract, will determine the total payments to accrue under the contract.

No bid will be considered unless all items **1 thru 9** in the Bid Schedule are priced, and only one contract will be awarded.

The bid will be awarded in the aggregate total of the Bid Schedule Section A plus Section B.
The above price shall include all labor, materials, overhead, profit, insurance, and other costs necessary to cover the finished work of the several kinds called for including incidentals not set out as specific bid items and in accordance with Basis for Payment (Section 01740 of Specifications). The price per foot for pipe installation includes all labor, materials, excavation backfill, clean-up, seeding, testing etc., for a finished product. Changes shall be processed in accordance with Article 14 of the General Conditions.

By submission of this Bid, the BIDDER certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid, with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this Contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within **30** consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of **$500.00 for** each consecutive calendar day thereafter as provided in Article 13 of the General Conditions.

Accompanying this Proposal is a certified check or standard Bid Bond in the sum of Dollars ($_____) in accordance with the Information for Bidders to the OWNER that the amount of the bid security deposited with this Bid fairly and reasonably represents the amount of damages the OWNER will suffer due to the failure of this BIDDER to fulfill his agreements as provided in this Proposal.
BIDDER acknowledges receipt of the following Addenda:

Addenda #1	Dated	Addenda #4	Dated
Addenda #2	Dated	Addenda #5	Dated
Addenda #3	Dated	Addenda #6	Dated

BIDDER agrees that the OWNER reserves the right to delete the whole or any part of the Project from the Contract.

BIDDER understands that the OWNER reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

BIDDER agrees that this Bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the actual date of bid opening.

Within ten (10) calendar days after receiving written notice of the acceptance of this Bid by the OWNER, the Bidder will execute and deliver to the OWNER six (6) copies of the Agreement and such other required Contract Documents.

BIDDER:_____

BY:_____

TYPED NAME:_____

TITLE:_____

(Seal - If bid is by a corporation)
ADDRESS:_____

DATE SIGNED:_____

PHONE NO.:_____

FAX NO.:_____

SUBCONTRACTORS – **BOOSTER PUMP INSTALLATION & WATERLINE RELOCATION**
Proposed subcontractors are listed below for each branch of work included in the proposed Contract. (All Subcontractors are subject to the approval of the Owner. Failure to submit a completed list may be cause for rejection of the Bid.)

BRANCH OF WORK:	NAME AND ADDRESS OF SUBCONTRACTOR:

MANUFACTURER'S LIST – **BOOSTER PUMP INSTALLATION & WATERLINE RELOCATION**
Following is a list of material that the Bidder proposed to use in the work of the proposed Contract. Failure to submit a completed list may be cause for rejection of the Bid.

NAME OF MANUFACTURER: DESCRIPTION OF MATERIAL:

(Add supplementary pages if necessary)

DOW/a

ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

May 8, 2020

Rose Lewis
North Manchester Water Association
7361 N US 421
Manchester, KY 40962

RE: BPS Installation and WL Relocation
Clay County, KY
North Manchester Water Association
AI #: 33860, APE20200001
PWSID #: 0260266-20-001

Dear Rose Lewis:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 800 LF of 2-inch PVC waterline and a duplex booster pump station capable of 8 GPM at 80 ft TDH. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

For the purpose of review, DOW will not approve lines less than 3-inches for distribution. When 2-inch lines are proposed for distribution they are approved on a case-by-case basis with the stipulations that such cannot be extended. Additionally, because this extension does not meet the 2.5 fps flushing velocity standard, it cannot be extended in the future without additional improvements.

If you have any questions concerning this project, please contact Mollye Malone at 502-782-0148.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH:MM
Enclosures
c: Sisler Maggard Eng
Clay County Health Department
Division of Plumbing

Distribution-Major Construction

North Manchester Water Association

Facility Requirements

Activity ID No.:APE20200001

PORT0000000006 (Booster Pump Installation and WL Relocation) duplex booster pump station capable of 8 gpm at 80 ft TDH:

Narrative Requirements:

Condition No.	Condition
T-1	Construction of this project shall not result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600. [401 KAR 8:100 Section 5]
T-2	The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet. [401 KAR 8:100 Section 4(3)]
T-3	A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation. [401 KAR 8:100 Section 4(2)]
T-4	During construction. a set of approved plans and specifications shall be available at the job site. Construction shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 3(1)]
T-5	Unless construction begins within two (2) years from the date of approval of the final plans and specifications. the approval shall expire. [401 KAR 8:100 Section 3(3)]
T-6	Upon completion of construction. a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 4(1)]
T-7	The system shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. [Recommended Standards for Water Works 8.2.1. Drinking Water General Design Criteria IV.1.a]
T-8	Pumping facilities shall be elevated to a minimum of three feet above the 100?year flood elevation. or three feet above the highest recorded flood elevation. whichever is higher. or protected to such elevations. [Recommended Standards for Water Works 6.1.1.a]
T-9	Pumping facilities shall be readily accessible at all times. [Recommended Standards for Water Works 6.1.1.b]
T-10	Pumping facilities shall be graded around the station so as to lead surface drainage away from the station. [Recommended Standards for Water Works 6.1.1.c]
T-11	Pumping facilities shall be protected to prevent vandalism and entrance by animals or unauthorized persons. [Recommended Standards for Water Works 6.1.1.d]
T-12	Raw and finished pump stations shall have adequate space for the installation of additional units if needed. and for the safe servicing of all equipment. [Recommended Standards for Water Works 6.2.a]
T-13	Raw and finished pump stations shall have floors that slope to a suitable drain. [Recommended Standards for Water Works 6.2.e]

PORT0000000006 (Booster Pump Installation and WL Relocation) duplex booster pump station capable of 8 gpm at 80 ft TDH:

Narrative Requirements:

Condition No.	Condition
T-14	Raw and finished pump stations shall provide a suitable outlet for drainage from pump glands without discharging onto the floor. [Recommended Standards for Water Works 6.2.f]
T-15	At least two pumping units shall be provided. With any pump out of service, the remaining pump or pumps shall be capable of providing the maximum pumping demand of the system. [Recommended Standards for Water Works 6.3]
T-16	Pumps shall have ample capacity to supply the peak demand against the required distribution system pressure without dangerous overloading. [Recommended Standards for Water Works 6.3.a]
T-17	Pumps shall be driven by prime movers able to meet the maximum horsepower condition of the pumps. [Recommended Standards for Water Works 6.3.b]
T-18	Pumps shall be provided with readily available spare parts and tools. [Recommended Standards for Water Works 6.3.c]
T-19	Pump stations shall have indicating, totalizing, and recording metering of the total water pumped. [Recommended Standards for Water Works 6.6.3]
T-20	Each pump shall have a standard pressure gauge on its discharge line. [Recommended Standards for Water Works 6.6.3.a]
T-21	Each pump shall have a compound gauge on its suction line. [Recommended Standards for Water Works 6.6.3.b]
T-22	Where two or more pumps are installed, provision shall be made for alternation. [Recommended Standards for Water Works 6.6.5]
T-23	Provisions shall be made to prevent energizing the pump motor in the event of a backspin cycle. [Recommended Standards for Water Works 6.6.5]
T-24	Electrical controls shall be located above grade. [Recommended Standards for Water Works 6.6.5]
T-25	Equipment shall be provided or other arrangements made to prevent surge pressures from activating controls which switch on pumps or activate other equipment outside the normal design cycle of operation. [Recommended Standards for Water Works 6.6.5]
T-26	Pump stations shall have a power supply provided from at least two independent sources or a standby or an auxiliary source. [Recommended Standards for Water Works 6.6.6]

PORT0000000006 (Booster Pump Installation and WL Relocation) duplex booster pump station capable of 8 gpm at 80 ft TDH:

Narrative Requirements:

Condition No.	Condition
T-27	If standby power is provided by onsite generators or engines. the fuel storage and fuel line must be designed to protect the water supply from contamination. [Recommended Standards for Water Works 6.6.6]
T-28	All lubricants which come into contact with the potable water shall be certified for conformance to ANSI/NSF Standard 60. [Recommended Standards for Water Works 6.6.8]
T-29	Booster pumps stations shall have a bypass available. [Recommended Standards for Water Works 6.4.e]
T-30	Each booster pumping station shall contain not less than two pumps with capacities such that peak demand can be satisfied with the largest pump out of service. [Recommended Standards for Water Works 6.4.1]
T-31	All booster pumping stations shall be fitted with a flow rate indicating and totalizer meter. [Recommended Standards for Water Works 6.4.2]
T-32	Inline booster pumps shall be accessible for servicing and repairs. [Recommended Standards for Water Works 6.4.3]
T-33	Each pump must have an isolation valve on the intake and discharge side of the pump to permit satisfactory operation, maintenance and repair of the equipment. [Recommended Standards for Water Works 6.6.1]
T-34	Each pump shall have a positive?acting check valve on the discharge side between the pump and the shut?off valve. [Recommended Standards for Water Works 6.6.1]
T-35	Pump station piping shall be designed so that the friction losses will be minimized. not be subject to contamination. have watertight joints. be protected against surge or water hammer with suitable restraints when necessary. and be such that each pump has an individual suction line or the lines shall be manifolded that they will insure similar hydraulic and operating conditions. [Recommended Standards for Water Works 6.6.2]
T-36	Booster pumps taking suction from storage tanks shall be provided adequate net positive suction head. [Recommended Standards for Water Works 6.4.b]
T-37	Booster pumps shall controlled so that automatic shutoff or low pressure controllers maintain at least 20 psi in the suction line under all operating conditions. [Recommended Standards for Water Works 6.4.c]
T-38	Booster pumps taking suction from ground storage tanks shall be equipped with automatic shutoffs or low pressure controllers. [Recommended Standards for Water Works 6.4.c]

PORT0000000006 (Booster Pump Installation and WL Relocation) duplex booster pump station capable of 8 gpm at 80 ft TDH:

Narrative Requirements:

Condition No.	Condition
T-39	All automatic pump stations should be provided with automatic signaling apparatus which will report when the station is out of service. [Recommended Standards for Water Works 6.5]
T-40	All remote controlled stations shall be electrically operated and controlled and shall have signaling apparatus of proven performance. [Recommended Standards for Water Works 6.5]
T-41	Raw and finished pump stations shall have a floor elevation of at least six inches above finished grade. [Recommended Standards for Water Works 6.2.c]

PORT0000000007 (Booster Pump Installation and WL Relocation) 800 LF of 2-inch PVC WLE:

Narrative Requirements:

Condition No.	Condition
T-1	Construction of this project shall not result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600. [401 KAR 8:100 Section 5]
T-2	The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet. [401 KAR 8:100 Section 4(3)]
T-3	A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation. [401 KAR 8:100 Section 4(2)]
T-4	During construction, a set of approved plans and specifications shall be available at the job site. Construction shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 3(1)]
T-5	Unless construction begins within two (2) years from the date of approval of the final plans and specifications, the approval shall expire. [401 KAR 8:100 Section 3(3)]
T-6	Upon completion of construction, a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 4(1)]
T-7	The system shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. [Recommended Standards for Water Works 8.2.1, Drinking Water General Design Criteria IV.1.a]
T-8	Water lines should be hydraulically capable of a flow velocity of 2.5 ft/s while maintaining a pressure of at least 20 psi. [Drinking Water General Design Criteria IV.1.b]
T-9	The normal working pressure in the distribution system at the service connection shall not be less than 30 psi under peak demand flow conditions. Peak demand is defined as the maximum customer water usage rate, expressed in gallons per minute (gpm), in the pressure zone of interest during a 24 hour (diurnal) time period. [Drinking Water General Design Criteria IV.1.d]
T-10	When static pressure exceeds 150 psi, pressure reducing devices shall be provided on mains or as part of the meter setting on individual service lines in the distribution system. [Drinking Water General Design Criteria IV.1.c]
T-11	The minimum size of water main in the distribution system where fire protection is not to be provided should be a minimum of three (3) inch diameter. Any departure from minimum requirements shall be justified by hydraulic analysis and future water use, and can be considered only in special circumstances. [Recommended Standards for Water Works 8.2.2, Drinking Water General Design Criteria IV.2.b]

PORT0000000007 (Booster Pump Installation and WL Relocation) 800 LF of 2-inch PVC WLE:

Narrative Requirements:

Condition No.	Condition
T-12	Water mains not designed to carry fire-flows shall not have fire hydrants connected to them. [Recommended Standards for Water Works 8.4.1.b]
T-13	Flushing devices should be sized to provide flows which will give a velocity of at least 2.5 feet per second in the water main being flushed. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-14	No flushing device shall be directly connected to any sewer. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-15	Pipe shall be constructed to a depth providing a minimum cover of 30 inches to top of pipe. [Drinking Water General Design Criteria IV.3.a]
T-16	Water mains shall be covered with sufficient earth or other insulation to prevent freezing. [Recommended Standards for Water Works 8.7]
T-17	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe. [Recommended Standards for Water Works 8.7]
T-18	Water line installation shall incorporate the provisions of the AWWA standards and/or manufacturer's recommended installation procedures. [Recommended Standards for Water Works 8.7]
T-19	All materials used for the rehabilitation of water mains shall meet ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-20	Packing and jointing materials used in the joints of pipe shall meet the standards of AWWA and the reviewing authority. [Recommended Standards for Water Works 8.1]
T-21	All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.7]
T-22	All materials including pipe, fittings, valves and fire hydrants shall conform to the latest standards issued by the ASTM, AWWA and ANSI/NSF, where such standards exist, and be acceptable to the Division of Water. [Recommended Standards for Water Works 8.1]
T-23	Water mains which have been used previously for conveying potable water may be reused provided they meet the above standards and have been restored practically to their original condition. [Recommended Standards for Water Works 8.1]

PORT0000000007 (Booster Pump Installation and WL Relocation) 800 LF of 2-inch PVC WLE:

Narrative Requirements:

Condition No.	Condition
T-24	Manufacturer approved transition joints shall be used between dissimilar piping materials. [Recommended Standards for Water Works 8.1]
T-25	The minimum size of water main which provides for fire protection and serving fire hydrants shall be six?inch diameter. [Recommended Standards for Water Works 8.2. Drinking Water General Design Criteria IV.2.a]
T-26	Pipes and pipe fittings containing more than 8% lead shall not be used. All products shall comply with ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-27	Gaskets containing lead shall not be used. Repairs to lead?joint pipe shall be made using alternative methods. [Recommended Standards for Water Works 8.1]
T-28	Pipe materials shall be selected to protect against both internal and external pipe corrosion. [Recommended Standards for Water Works 8.1]
T-29	Dead end mains shall be equipped with a means to provide adequate flushing. [Recommended Standards for Water Works 8.2]
T-30	The hydrant lead shall be a minimum of six inches in diameter. Auxiliary valves shall be installed on all hydrant leads. [Recommended Standards for Water Works 8.4.3]
T-31	A sufficient number of valves shall be provided on water mains to minimize inconvenience and sanitary hazards during repairs. [Recommended Standards for Water Works 8.3]
T-32	Wherever possible. chambers. pits or manholes containing valves. blow?offs. meters. or other such appurtenances to a distribution system. shall not be located in areas subject to flooding or in areas of high groundwater. Such chambers or pits should drain to the ground surface. or to absorption pits underground. The chambers. pits and manholes shall not connect directly to any storm drain or sanitary sewer. Blow?offs shall not connect directly to any storm drain or sanitary sewer. [Recommended Standards for Water Works 8.6]
T-33	At high points in water mains where air can accumulate provisions shall be made to remove the air by means of air relief valves. [Recommended Standards for Water Works 8.5.1]
T-34	Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur. [Recommended Standards for Water Works 8.5.1]
T-35	The open end of an air relief pipe from automatic valves shall be extended to at least one foot above grade and provided with a screened. downward?facing elbow. [Recommended Standards for Water Works 8.5.2.c]

PORT0000000007 (Booster Pump Installation and WL Relocation) 800 LF of 2-inch PVC WLE:

Narrative Requirements:

Condition No.	Condition
T-36	Discharge piping from air relief valves shall not connect directly to any storm drain. storm sewer. or sanitary sewer. [Recommended Standards for Water Works 8.5.2.d]
T-37	Water pipe shall be constructed with a lateral separation of 10 feet or more from any gravity sanitary or combined sewer measured edge to edge where practical. If not practical a variance may be requested to allow the water pipe to be installed closer to the gravity sanitary or combined sewer provided the water pipe is laid in a separate trench or undisturbed shelf located on one side of the sewer with the bottom of the pipe at least 18 inches above the top of the gravity sanitary or combined sewer pipe. [Drinking Water General Design Criteria IV.3.b]
T-38	Water lines crossing sanitary. combined or storm sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sanitary. combined or storm sewer with preference to the water main located above the sanitary. combined or storm sewer. [Drinking Water General Design Criteria IV.3.c]
T-39	At crossings. one full length of water pipe shall be located so both joints will be as far from the sewer as possible. [Recommended Standards for Water Works 8.8.3.b]
T-40	There shall be no connection between the distribution system and any pipes. pumps. hydrants. or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system. [Recommended Standards for Water Works 8.10.1]
T-41	Water utilities shall have a cross connection program conforming to 401 KAR 8. [Recommended Standards for Water Works 8.10.1]
T-42	Installed pipe shall be pressure tested and leakage tested in accordance with the appropriate AWWA Standards. [Recommended Standards for Water Works 8.7.6]
T-43	New. cleaned and repaired water mains shall be disinfected in accordance with AWWA Standard C651. The specifications shall include detailed procedures for the adequate flushing. disinfection. and microbiological testing of all water mains. In an emergency or unusual situation. the disinfection procedure shall be discussed with the Division of Water. [Recommended Standards for Water Works 8.7.7]
T-44	A minimum cover of five feet shall be provided over pipe crossing underwater. [Recommended Standards for Water Works 8.9.2]
T-45	Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair: the valves shall be easily accessible. and not subject to flooding for pipes crossing underwater. [Recommended Standards for Water Works 8.9.2.b]
T-46	Permanent taps or other provisions to allow insertion of a small meter to determine leakage and obtain water samples on each side of the valve closest to the supply source for pipes crossing. [Recommended Standards for Water Works 8.9.2.c]