

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

April 17, 2020

Mike D Sanford  
Lake Village Water Association  
801 Pleasant Hill Dr  
Burgin, KY 40310

RE: Contract 14 Distribution System  
Improvements  
Mercer County, KY  
Lake Village Water Association  
AI #: 34028, APE20200002  
PWSID #: 0840587-20-002

Dear Mike Sanford:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE water line. 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.

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

Sincerely,

A handwritten signature in black ink, appearing to read "T. Humphries", written over a horizontal line.

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

TH:MM  
Enclosures

c: Strand Associates Inc  
Mercer County Health Department  
Division of Plumbing



**Distribution-Major Construction**  
Lake Village Water Association  
Facility Requirements

Activity ID No.:APE20200002

Page 1 of 5

**PORT000000017 (Contract 14 - Distribution System Improvements) 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE WLR:**

**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]

**Distribution-Major Construction**  
Lake Village Water Association  
Facility Requirements

Activity ID No.:APE20200002

**PORT0000000017 (Contract 14 - Distribution System Improvements) 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE WLR:**

**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 ANS/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 ANS/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]

**Distribution-Major Construction**  
Lake Village Water Association  
Facility Requirements

Activity ID No.:APE20200002

Page 3 of 5

**PORT0000000017 (Contract 14 - Distribution System Improvements) 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE WLR:**

**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]

**Distribution-Major Construction**  
Lake Village Water Association  
Facility Requirements

Activity ID No.:APE20200002

Page 4 of 5

**PORT0000000017 (Contract 14 - Distribution System Improvements) 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE WLR:**

**Narrative Requirements:**

Condition No.	Condition
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]
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]

**Distribution-Major Construction**  
Lake Village Water Association  
Facility Requirements

Activity ID No.:APE20200002

Page 5 of 5

**PORT0000000017 (Contract 14 - Distribution System Improvements) 40,660 LF of 8-inch, 1,309 LF of 6-inch, 6,160 LF of 4-inch, and 7,228 LF of 3-inch PVC and 223 LF 8-inch and 288 LF of 4-inch HDPE WLR:**

**Narrative Requirements:**

Condition No.	Condition
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]



Strand Associates, Inc.®  
651 Perimeter Drive, Suite 220  
Lexington, KY 40517  
(P) 859.225.8500  
www.strand.com

November 23, 2022

Mr. Terry Humphries  
Kentucky Division of Water  
300 Sower Boulevard  
Frankfort, KY 40601

Re: Contract No. 14 Distribution System Improvements  
Lake Village Water Association (LVWA), Kentucky

Dear Mr. Humphries:

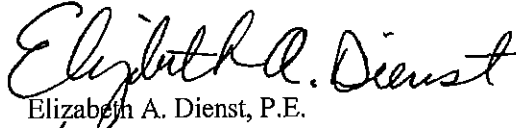
Strand Associates, Inc.® is requesting an extension to the Kentucky Division of Water plan approval (originally approved April 17, 2020) for Contract No. 14 Distribution System Improvements for LVWA. The I.D. numbers are as follows: AI#:34028, APE20200002, PWSID#: 0840587-20-002. There are no changes to the project design. It was originally bid on February 11, 2021 and received no bidders. This project was bid a second time on March 25, 2021, and received two bids that had \$1 million difference. These complications were due to COVID supply chain issues with pipe. The LVWA has obtained additional funding and is ready to bid the project again, if a plan approval extension can be granted.

If you have any questions, please call 859-225-8500.

Thank you for your consideration.

Sincerely,

STRAND ASSOCIATES, INC.®

  
Elizabeth A. Dienst, P.E.

✓ c: Mike Sanford, LVWA

**RE: Emailing: Contract 14 Distribution System Improvements Approval.pdf**

Dienst, Liz <Liz.Dienst@strand.com>

Wed 12/14/2022 10:27 AM

To: Humphries, Terry (EEC) <Terry.Humphries@ky.gov>

Cc: mike lakevillagewater.org <mike@lakevillagewater.org>

Thanks so much! We will proceed!

Liz

-----Original Message-----

From: Humphries, Terry (EEC) <Terry.Humphries@ky.gov>

Sent: Wednesday, December 14, 2022 10:22 AM

To: Dienst, Liz <Liz.Dienst@strand.com>

Cc: Mike Sanford (mike@lakevillagewater.org) <mike@lakevillagewater.org>

Subject: RE: Emailing: Contract 14 Distribution System Improvements Approval.pdf

[EXTERNAL EMAIL]: Verify sender before opening links or attachments.

Liz,

Thank you so much for the email. I've had the request sitting on my desk and hadn't had a chance to look at it. Please consider this email an approval to extend the construction approval for 15 months beyond the expiration of the original approval (New expiration July 17, 2023). All other requirements of the original approval will continue to apply. If you have any questions on this, please let me know. Thanks again.

Terry Humphries, P.E.  
Supervisor, Engineering Section  
Water Infrastructure Branch  
KY Division of Water  
300 Sower Blvd, 3rd Floor  
Frankfort, KY 40601  
(502)782-6983

-----Original Message-----

From: Dienst, Liz <Liz.Dienst@strand.com>

Sent: Tuesday, December 13, 2022 4:39 PM

To: Humphries, Terry (EEC) <Terry.Humphries@ky.gov>

Cc: Mike Sanford (mike@lakevillagewater.org) <mike@lakevillagewater.org>

Subject: RE: Emailing: Contract 14 Distribution System Improvements Approval.pdf

**\*\*CAUTION\*\*** PDF attachments may contain links to malicious sites. Please contact the COT Service Desk [ServiceCorrespondence@ky.gov](mailto:ServiceCorrespondence@ky.gov) <<mailto:ServiceCorrespondence@ky.gov>> for any assistance.

---

Hi Terry-