



nesbitt engineering, inc.

July 2019

Revised January 2020

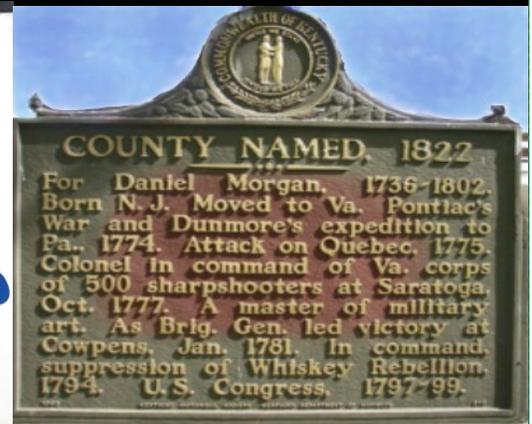
Revised to Final Engineering Report January 2021

MORGAN COUNTY WATER DISTRICT

West Liberty, Kentucky

Final Engineering Report

HWY 191 Waterline Replacement Project Phase 1



SUBMITTED TO:
Rural Development and Appalachian Regional
Commission

PREPARED BY:
Nesbitt Engineering, Inc.
227 N. Upper Street
Lexington, KY 40507-1016
859-233-3111



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Figure 1 – County Location Map

Appendix A – Construction Cost Based on Low Bid Received 12/17/2020 and Certified Bid Tabulation

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Executive Summary

The proposed Waterline Replacement Project addressed in the Preliminary Engineering Report (Revised 1/2020) was advertised and bids were received on December 17, 2020. There were four (4) bids received as shown in the attached Certified Bid Tabulation included in this report in Appendix A. The bids ranged from a low of \$702,759 to a high of \$1,524,450.

Nesbitt Engineering Inc. has had experience with the low bidder, Bear Traxx, Inc. and based on this experience, has recommended to the District (letter attached in Appendix A) that they see no reason that Bear Traxx should not be awarded the construction contract, contingent upon the concurrence of the funding agency.

The Opinion of Probable Project Cost has been calculated/updated based on this low bid and is included in Appendix A of this report. The opinion of probable Project Cost has also been calculated/updated and is included as Appendix B of this report.

In Summary, a Construction is recommended to be awarded to Bear Traxx, Inc. in the amount of \$702,759 upon concurrence of the Funding Agency.

Chapter 1 – General Introduction

Morgan County is located in the eastern part of Kentucky approximately 88 miles east of Lexington, 67 miles northwest of Pikeville, 63 miles north of Hazard and 24 miles southeast of Morehead Kentucky. Morgan County is bordered by Wolfe, Menifee, Rowan, Elliott, Johnson and Magoffin Counties (see Figure 1).

West Liberty is the County Seat of Morgan County and is a 4th class city. In 2015 it is estimated that of the total county population of 13,275, there were 3,330, or approximately 25% of the County population living in the city of West Liberty with the remaining 75% (approx. 10,000) people living in Morgan County.

Morgan County Water District was created in 1992 and is under the auspices of the KY PSC. They have approx. 2800 customers (residential and commercial and have the ability to provide water to 3 wholesale customers. The 2010 US Census population figure for Morgan County is 13,923. There are 4,860 households

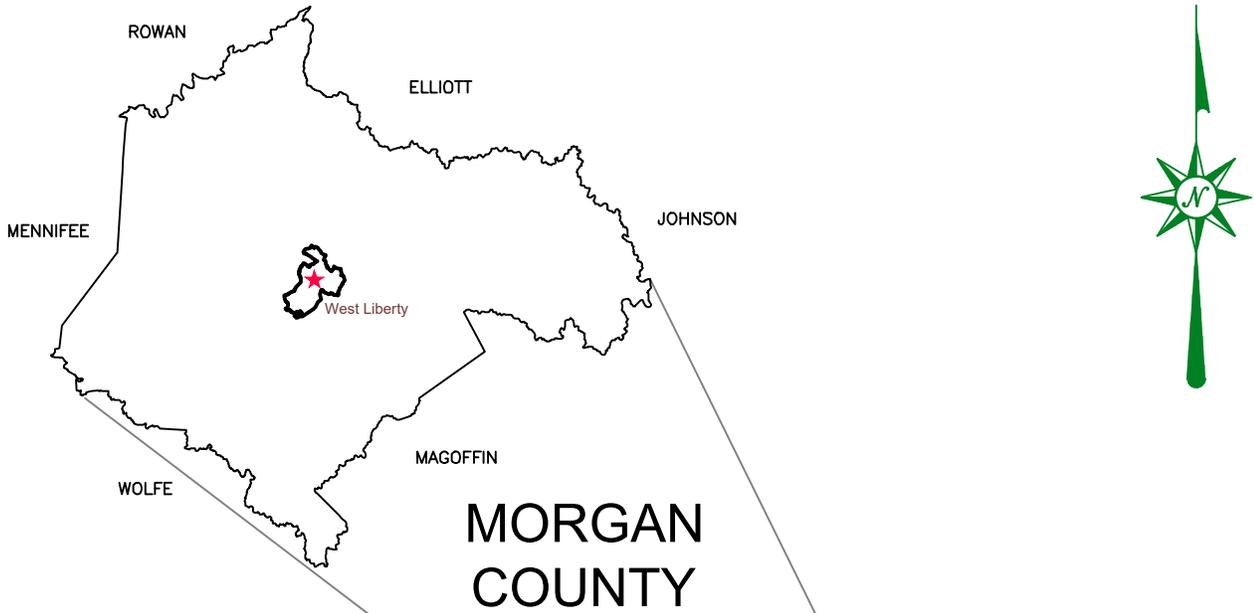
which equates to 2.86 persons per household.

This phase of the project will replace main lines, water meters and other items to assist in reducing the District's unaccounted for water, which is approx. 50%. Some of the oldest lines in the system along with lines of frequent repairs will be targeted. The major construction items are 12,725 LF of 6" PVC, 1,300 LF of 2' PVC, 5,500 LF of 4" PVC, 4,500 LF of 3" PVC and 600 LF of 2" PVC, replacement of meters, testing of meters, leak detection equipment, storage tank inspections and rehabbing a corroded chlorine room at the Hwy 437 Pump Station. A detailed listing of all items is provided in Appendix A (Opinion of Probable Construction Cost). The project will also install four flow measurement vaults to aid in future leak detection.

Funding for the Project is estimated to come from a **Rural Development (RD) grant (\$85,000) and loan (\$1,515,000) and an Appalachian Regional Commission (ARC) grant (\$800,000)**. This funding scenario and other items that the District must attain were identified in a **Letter of Conditions issued to the District by RD dated 7/17/2020**. A copy of this letter is included in Appendix B of this report.

Within this funding, there is \$1,200,000 targeted to pay off some existing KRWA Bonds.

LAST PLOTTED ON: 1/19/2021 BY: WHITE, JILL C. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-01 WATERLINE REPLACEMENT\01 PRELIM\FIGURE 1 AREA MAP.DWG



MORGAN COUNTY



MAP OF KENTUCKY



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PROPOSED WATERLINE REPLACEMENT
 EXISTING WATER DISTRIBUTION SYSTEM
 MORGAN COUNTY WATER DISTRICT

FIGURE 1 AREA MAP

drawn by:

JCW

job no.:

1191.01

date:

1-19-21

scale:

NOT TO SCALE

Chapter 2 – Project Planning Area

A. Location

This phase of the proposed project is located along KY 460 and 172 which are some of the older lines in the system. The meters to be replaced will also be the oldest. The project improvements are depicted on the included map (see Appendix “C”).

B. Environmental Resources Present

The project area shall be existing road right of ways or easements (previously disturbed areas). There are no known Environmental Resources Present that will be affected or impacted by this project.

C. Population Trends

This project is located in Morgan County, Kentucky, according to the 2010 US Census figures, Morgan County had a population of 13,275 persons, with 75% living outside of the County Seat of West Liberty. A slight decrease is projected for the county thru 2040.

D. Community Engagement

There has not been any Community Engagement related to this project, it is considered a maintenance project for the District’s existing customers.

Chapter 3 – Existing Facilities

A. History

The District serves 2,800 households and commercial buildings with potable water. They also have 3 master meters to provide wholesale water to the cities of Campton, Paintsville and Frenchburg. The District does not have a water treatment plant, so all of the water they sell is purchased. Their supplier is the Cane Run Water Association.

The existing facilities include approximately 356 miles of various size waterlines, 6 active pump stations and 7 water storage tanks. Most of the water distribution system was installed from the time the District was created in 1992 to 2010. There are some lines that are close to 30 years old. Extensions occurred periodically. The pump stations and tanks were installed as the system grew to meet the demand.

B. Condition of Existing Facilities

Existing facilities are aging and have exceeded the end of their life cycle. Water leaks are common, and efforts have been made to make repairs as needed. This project is an example of those efforts, by replacing the oldest waterlines in the system and those lines known to have frequent repairs.

C. Financial Status of any Existing Facilities

The Water District strives to operate all water infrastructure in a financially solvent manner. Audits are performed on an annual basis by an outside consultant to evaluate financial resources for daily operation and known maintenance expenses of the system. Due to failing infrastructure, the District finds it difficult to maintain adequate funds in reserve for unexpected operation and maintenance expenses. New water lines and meters will have a positive impact on eliminating some of the lost water and will help the financial stability of the District.

Chapter 4 – Need for Project

A. Health, Sanitation, and Security

Waterline breaks are common in aging systems, these increase the risk of contamination and require notification to the customer of a boil water advisory.

B. System O&M

Operation and maintenance of the District's water distribution system will continue to be provided by the existing, certified and licensed staff of the District. The District water system operates within the regulatory requirements of the Kentucky Division of Water and the KY Public Service Commission.

C. Growth

Population projections available from the University of Louisville (UL) State Data Center (SDC) indicate a future decline in the population of Morgan County. Recent improvements to KY highways in the county have provided improved traffic flow in and through the county. These improvements are anticipated to promote residential growth or at least slow the population decline.

There is also a State Prison, Eastern KY Correctional Complex/Facility, located in West Liberty, which as a major place of employment will then to moderate and stabilize out migration from Morgan County.

Chapter 5 – Alternatives Considered

Alternatives considered:

- (1) replacing some of the waterlines,
- (2) continue repairing waterlines as needed,
- (3) deleting leaking waterlines from the system and reducing the number of customers served
- (4) do nothing

Chapter 6 – Selection of an Alternative

Replacing some of the waterlines and some of the meters is the most desirable alternative. The use of modern pipe and system mapping will make the system more operator friendly. Removing the waterlines from the system is not an alternative to be considered, due to existing customers that are served through these waterlines. Repairing leaking waterlines as needed is costly and in most cases waterline locations are unknown and leaks cannot be detected. Some valves are not operable to aid in repairing these lines. Doing nothing only increases the amount of cost for the purchased water.

Chapter 7 – Proposed Project / Project Cost / Financing

A. Proposed Project

The **Morgan County Water District’s Waterline Replacement Project-Phase 1** will include the replacement of 12,725 LF of 6" PVC, 1,300 LF of 2" PVC, approx..360 new water meters and other items as shown in Appendix A (Opinion of Probable Construction Cost). The project will also install four leak monitoring vaults to aid in leak detection, install some flush hydrants and have a water meter test bench provided. The chlorine room at the KY 437 PS needs to be rehabilitated due to excessive corrosion due to the chlorine gas.

B. Project Schedule

The proposed project schedule is as follows:

Project Funding Commitment	March 2020
Begin Design & Environmental Review	March 2020
Complete Bid Documents	June 2020
Obtain Construction Permit	July 2020
Approval to Advertise for Bids	November 2020
Open Bids	December 2020
Award Construction Contract	March 2021
Begin Construction	April 2021
Complete Construction	October 2021

C. Approvals and Permit Requirements

This project will require engineering permits from the Division of Water. A permit from the Kentucky Transportation Cabinet will be necessary. Permits for construction in the floodplain or along a stream may have to be obtained.

D. Opinion of Probable Cost

The Opinion of Estimated Construction Costs for this project is provided in Appendix “A” Base Bid Schedule received on 12/17/2020. An Opinion of Probable Project Cost is provided in Appendix “B”. Potential funding sources are also shown in Appendix “B”.

Chapter 8 – Conclusions & Recommendations

The **Morgan Co. Water District’s Waterline Replacement Project – Phase 1** will enable the MCWD to continue to offer safe, clean and reliable water to its customers. The proposed improvements should also aid in reducing the amount of unaccounted for water, which would in turn boost the District’s bottom line. Therefore, we recommend alternative #1 replacing some waterlines, some meters, etc.

Appendix “A” – Opinion of Probable Construction Cost

Lowest Base Bid received on 12/17/2020 from Bear Traxx, Inc.

Certified Bid Tabulation signed by Project Manager (4 contractors bids)

Morgan County Water District
 Waterline Replacement Project Phase 1 - Old KY 172

Base Bid Schedule

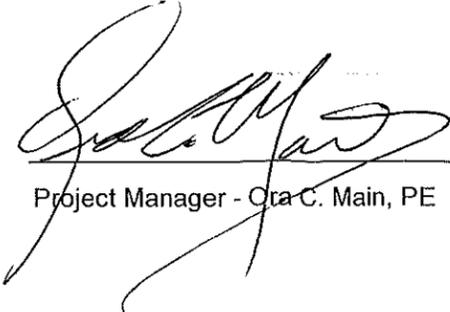
Item No.	Description	Unit	Quantity	Unit Cost	Total Cost
1	6" DR 17 PVC Waterline	LF	12,725	20.04	\$ 255,009.00
2	2" DR 17 PVC Waterline	LF	1,300	20.00	\$ 26,000.00
3	6" Gate Valve and box	EA	6	1,050.00	\$ 6,300.00
4	2" Gate Valve and box	EA	3	600.00	\$ 1,800.00
5	5/8" x 3/4" Sensus SR2 Water Meters (cast iron bottoms) transmitter and meter box (installed)	EA	28	975.00	\$ 27,300.00
6	5/8" x 3/4" Sensus SR2 Water Meters w/ipv (cast iron bot.) transmitter and meter box (installed)	EA	31	1,000.00	\$ 31,000.00
7	5/8" x 3/4" Sensus SR2 Water Meters (cast iron bottoms) transmitter and meter box (furnished)	EA	300	600.00	\$ 180,000.00
8	Flushing Hydrants	EA	4	5,200.00	\$ 20,800.00
9	3/4" Polyethylene Pipe	LF	800	6.25	5,000.00
10	1" Polyethylene Pipe	LF	200	6.25	1,250.00
11	2" HDPE Encasement Pipe - Push or Bore & Jack	LF	400	12.00	4,800.00
12	Combination Air Relief Valve and box	EA	3	3,500.00	\$ 10,500.00
13	Rehabilitation of KY 437 PS Chlorine Room	LS	1	19,000.00	19,000.00
14	Water meter test bench ^{Ford} Series 500 (furnished & installed at MCWD Off. Build.)	LS	1	62,000.00	62,000.00
15	Flow metering equipment - Dynasonic	LS	1	17,000.00	17,000.00
16	Leak Detection Unit Enclosure	EA	5	7,000.00	\$ 35,000.00
Total Base Bid (Items # 1 - 16) (numbers)					\$ 702,759.00
Total Base Bid (Items # 1 - 16) (Words) Seven hundred Two Thousand Seven hundred Fifty Nine dollars					
Contractor <i>Bear Traxx INC</i>		Signature <i>Dwight Keeton</i>		Date <i>12-16-20</i>	

Certified Bid Tabulation
Morgan County Water District
Waterline Replacement Project Phase 1 - Old KY 172

Base Bid Schedule		Ranking		Bear Traxx, Inc.		BP Pipeline		Fredrick and May Construction Company, Inc.		Jones Contracting, LLC	
				1		2		3		4	
Item No.	Description	Unit	Quantity	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
1	6" DR 17 PVC Waterline	LF	12,725	\$ 20.04	\$ 255,009.00	\$ 20.00	\$ 254,500.00	\$ 32.00	\$ 407,200.00	\$ 22.00	\$ 279,950.00
2	2" DR 17 PVC Waterline	LF	1,300	\$ 20.00	\$ 26,000.00	\$ 10.00	\$ 13,000.00	\$ 21.10	\$ 27,430.00	\$ 13.00	\$ 16,900.00
3	6" Gate Valve and box	EA	6	\$ 1,050.00	\$ 6,300.00	\$ 1,500.00	\$ 9,000.00	\$ 1,100.00	\$ 6,600.00	\$ 1,850.00	\$ 11,100.00
4	2" Gate Valve and box	EA	3	\$ 600.00	\$ 1,800.00	\$ 1,000.00	\$ 3,000.00	\$ 900.00	\$ 2,700.00	\$ 1,150.00	\$ 3,450.00
5	5/8" x 3/4" Senus SR2 Water Meters (cast iron bottoms) transmitter and meter box (installed)	EA	28	\$ 975.00	\$ 27,300.00	\$ 1,200.00	\$ 33,600.00	\$ 1,000.00	\$ 28,000.00	\$ 2,100.00	\$ 58,800.00
6	5/8" x 3/4" Senus SR2 Water Meters w/priv (cast iron bot.) transmitter and meter box (installed)	EA	31	\$ 1,000.00	\$ 31,000.00	\$ 1,500.00	\$ 46,500.00	\$ 1,500.00	\$ 46,500.00	\$ 2,450.00	\$ 75,950.00
7	5/8" x 3/4" Senus SR2 Water Meters (cast iron bottoms) transmitter and meter box (furnished)	EA	300	\$ 600.00	\$ 180,000.00	\$ 630.00	\$ 189,000.00	\$ 595.00	\$ 88,500.00	\$ 850.00	\$ 255,000.00
8	Flushing Hydrants	EA	4	\$ 5,200.00	\$ 20,800.00	\$ 6,000.00	\$ 24,000.00	\$ 4,200.00	\$ 16,800.00	\$ 5,400.00	\$ 21,600.00
9	3/4" Polyethylene Pipe	LF	800	\$ 6.25	\$ 5,000.00	\$ 10.00	\$ 8,000.00	\$ 11.00	\$ 8,800.00	\$ 9.50	\$ 7,600.00
10	1" Polyethylene Pipe	LF	200	\$ 6.25	\$ 1,250.00	\$ 10.00	\$ 2,000.00	\$ 12.00	\$ 2,400.00	\$ 11.50	\$ 2,300.00
11	2" HDPE Encasement Pipe - Push or Bore & Jack	LF	400	\$ 12.00	\$ 4,800.00	\$ 20.00	\$ 8,000.00	\$ 34.00	\$ 13,600.00	\$ 26.00	\$ 10,400.00
12	Combination Air Relief Valve and box	EA	3	\$ 3,500.00	\$ 10,500.00	\$ 4,000.00	\$ 12,000.00	\$ 5,500.00	\$ 16,500.00	\$ 5,100.00	\$ 15,300.00
13	Rehabilitation of KY 437 PS Chlorine Room	LS	1	\$ 19,000.00	\$ 19,000.00	\$ 60,000.00	\$ 60,000.00	\$ 225,000.00	\$ 225,000.00	\$ 610,000.00	\$ 610,000.00
14	Water meter test bench Mars Series 500 (furnished & installed at MCWD Off. Build.)	LS	1	\$ 62,000.00	\$ 62,000.00	\$ 95,000.00	\$ 95,000.00	\$ 180,000.00	\$ 180,000.00	\$ 71,000.00	\$ 71,000.00
15	Flow metering equipment - Dynasonic	LS	1	\$ 17,000.00	\$ 17,000.00	\$ 22,000.00	\$ 22,000.00	\$ 24,900.00	\$ 24,900.00	\$ 17,600.00	\$ 17,600.00
16	Leak Detection Unit Enclosure	EA	5	\$ 7,000.00	\$ 35,000.00	\$ 9,000.00	\$ 45,000.00	\$ 10,000.00	\$ 50,000.00	\$ 13,500.00	\$ 67,500.00
Total Base Bid (Items # 1 - 16) (numbers)					\$ 702,759.00		\$ 824,600.00		\$ 1,144,930.00		\$ 1,524,450.00

Note: Highlighted/italized numbers represent a mathematical error that has been corrected based on proposed unit cost pricing.

I hereby certify that the above tabulation accurately represents bids received, publicly opened and read on Facebook Live for Waterline Replacement Project Phase 1- Old KY 172 December 17, 2020 at 1:30 PM local time.


Project Manager - Ora C. Main, PE

12/18/2020
Date signed

Appendix “B” – Opinion of Probable Project & Funding Sources

Opinion of Probable Project Cost

Rural Development Letter of Conditions (Funding Sources)

Morgan County Water District

Appendix B - Opinion of Probable Project Cost Waterline Replacement Project (Low Bid Received 12/17/2020)

Total Estimated Opinion of Probable Construction Cost After Bidding	\$ 702,759.00
Estimated Opinion of Other Project Related Costs	
Legal and Administrative	\$20,000.00
Engineering	
Preliminary Engineering	\$ 5,000.00
Design	\$66,000.00
Contract Admin.	\$17,000.00
Resident Observation	\$53,000.00
Permits (DOW, KTC, etc.)	\$5,000.00
Other Engineering (Easements, Survey, Reports, etc.)	\$10,000.00
Develop Hydraulic Model and Overall Map of Distribution System	\$25,000.00
Interest	\$20,000.00
Project Contingencies	\$296,241.00
KRWA Refinance	\$1,200,000.00
Total Estimated Opinion of Probable Project and Construction Costs =	\$ 2,400,000.00

Possible Funding Sources	
Appalachian Regional Commission (Grant)	\$ 800,000
Rural Development Grant	\$ 85,000
Rural Development Loan	\$ 1,515,000
Total Project Funds	\$ 2,400,000



nesbitt engineering, inc.
providing proven solutions since 1976

227 North Upper Street
Lexington, KY 40507-1016



July 17, 2020

Linda Bradley, Chairperson
Morgan County Water District
1009 Hwy 172
West Liberty, Kentucky 41472

SUBJECT: Recipient Name: Morgan County Water District
Project Name: Waterline Replacement Project

Dear Chairperson Bradley:

This letter establishes conditions that must be understood and agreed to by you before further consideration may be given to the application. The loan and grant will be administered on behalf of the Rural Utilities Service (RUS) by the State and Area office staff of USDA Rural Development. Any changes in project cost, source of funds, scope of services or any other significant changes in the project or applicant must be reported to and approved by USDA Rural Development, by written amendment to this letter. Any changes not approved by Rural Development shall be cause for discontinuing processing of the application. It should also be understood that Rural Development is under no obligation to provide additional funds to meet an overrun in construction costs.

This letter is not to be considered as loan or grant approval or as a representation as to the availability of funds. The docket may be completed on the basis of a RUS loan not to exceed \$1,515,000; a RUS grant not to exceed \$85,000 and an Appalachian Regional Commission (ARC) Grant of \$800,000. There will be no applicant contribution.

If Rural Development makes the loan, the interest rate will be the lower of the rate in effect at the time of loan approval or the rate in effect at the time of loan closing, unless the applicant otherwise chooses. The loan will be considered approved on the date a signed copy of Form RD 1940-1, "Request for Obligation of Funds," is mailed to you.

Please complete and return the attached Form RD 1942-46, "Letter of Intent to Meet Conditions," if you desire that further consideration be given to your application.

The "Letter of Intent to Meet Conditions" must be executed within three weeks from the date of this letter or it becomes invalid unless a time extension is granted by Rural Development.

If the conditions set forth in this letter are not met within 240 days from the date hereof, Rural Development reserves the right to discontinue the processing of the application. In signing Form RD 1942-46, "Letter of Intent to Meet Conditions," you are agreeing to complete the following as expeditiously as possible:

Rural Development • Kentucky State Office
771 Corporate Drive, Suite 200, Lexington, Kentucky 40502
Voice (859) 224-7300 • Fax (855) 661-8335 • TTY (859) 224-7422

USDA is an equal opportunity provider, employer and lender.

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form (PDF), found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.

1. Number of Users and Their Contribution:

There shall be 2,819 water users, of which all are existing. The Area Director will review and authenticate the number of users prior to advertising for construction bids.

2. Grant Agreement:

Attached is a copy of RUS Bulletin 1780-12, "Water and Waste System Grant Agreement," for your review. You will be required to execute a completed form at the time of grant closing.

3. Drug-Free Work Place:

#59
Prior to grant closing, the District will be required to execute **Form AD-1049**, "Certification Regarding Drug-Free Workplace Requirements (Grants) Alternative I - For Grantees Other Than Individuals."

4. Repayment Period:

The loan will be scheduled for repayment over a period not to exceed 40 years from the date of the Bond. Principal payment will not be deferred. Payments will be in accordance with applicable KRS, which requires interest to be paid semi-annually (January and July) and principal will be due on or before the first of January. Rural Development may require the District to adopt a supplemental payment agreement providing for monthly payments of principal and interest so long as the bond is held or insured by RUS. Monthly payments will be approximate amortized installments.

5. Recommended Repayment Method:

Payments on this loan shall be made using the Preauthorized Debit (PAD) payment method. This procedure eliminates the need for paper checks and ensures timely receipt of RD loan payments. To initiate PAD payments, Form RD 3550-28, "Authorization Agreement for Preauthorized Payments," should be signed by the District to authorize the electronic withdrawal of funds from your designated bank account on the exact installment payment due date. The Area Director will furnish the necessary forms and further guidance on the PAD procedure.

6. Reserve Accounts:

Reserves must be properly budgeted to maintain the financial viability of any operation. Reserves are important to fund unanticipated emergency maintenance, pay for repairs, and assist with debt service should the need arise.

The District will be required to deposit \$395 per month into a "Funded Debt Reserve Account" until the account reaches \$47,400. The deposits are to be resumed any time the account falls below the \$47,400.

The required monthly deposits to the Reserve Account and required Reserve Account levels are in addition to the requirements of the District's prior bond ordinances.

The monthly deposits to the Reserve Account are required to commence with the first month of the first full fiscal year after the facility becomes operational.

The District also needs to fund an account for short-lived assets by depositing a sum of \$3,500 monthly into the account. The funds in the short-lived asset account may be used by the District as needed to replace or add short-lived assets in the District's utility systems.

7. Security Requirements:

A pledge of gross revenue(s) will be provided in the Bond Ordinance. Bonds shall rank on a parity with existing bonds, if possible.

If this is not possible, the bond will be subordinate and junior to the existing bonds, in which case the District will be required to abrogate its right to issue additional bonds ranking on a parity with the existing bonds, so long as any unpaid indebtedness remains on this bond issue.

Additional security requirements are contained in [RUS Bulletin 1780-12, "Water and Waste System Grant Agreement," and RUS Bulletin 1780-28, "Loan Resolution Security Agreement," which also serves as an assignment of income.] A draft of all security instruments must be reviewed and concurred in by the Agency prior to advertising for bids. The Loan Resolution must be duly adopted and executed prior to loan closing. The Grant Agreement must be fully executed prior to the first disbursement of grant funds.

8. Land Rights and Real Property:

The District will be required to furnish satisfactory title, easements, etc., necessary to install, maintain and operate the facility to serve the intended users. The pipelines will be on private rights-of-way where feasible. Easements and options are to be secured prior to advertising for construction bids.

9. Organization:

The District will be legally organized under applicable KRS, which will permit them to perform this service, borrow, or repay money.

The District must maintain a current registration of their Dun and Bradstreet Data Universal Numbering System (DUNS) number in SAM.gov (System for Award Management) in order to receive federal loan and/or grant financial assistance. This registration must be updated/renewed at least annually.

10. Business Operations:

The District will be required to operate the system under a well-established set of resolutions, rules and regulations. A budget must be established annually and adopted by the District after review by Rural Development. At no later than loan pre-closing, the District will be required to furnish a prior approved management plan to include, as a minimum, provisions for management, maintenance, meter reading, miscellaneous services, billing, collecting, delayed payment penalties, disconnect/reconnect fees, bookkeeping, making and delivering required reports and audits.

11. Conflict of Interest Policy:

Prior to obligation of funds, you will certify in writing that your organization has in place an up-to-date written policy on conflict of interest. The policy will include, at a minimum: (1) a requirement for those with a conflict/potential conflict to disclose the conflict/potential conflict, (2) a prohibition of interested members of the applicant's governing body from voting on any matter in which there is a conflict, and (3) a description of the specific process by which the governing body will manage identified or potential conflicts.

You must also submit a disclosure of planned or potential transactions related to the use of Federal funds that may constitute or present the appearance of personal or organizational conflict of interest. Sample conflict of interest policies may be found at the National Council of Nonprofits website, <https://www.councilofnonprofits.org/tools-resources/conflict-of-interest>, or in Internal Revenue Service Form 1023, Appendix A, "Sample Conflict of Interest Policy," at <http://www.irs.gov/pub/irs-pdf/i1023.pdf>. Though these examples reference non-profit corporations, the requirement applies to all types of Agency borrowers.

Disclosure must be in the form of a written letter signed and dated by the applicant's official. A negative disclosure of the same format is required if no conflicts are anticipated. Assistance in developing a conflict of interest policy is available through Agency-contracted technical assistance providers if desired.

12. Accounts, Records and Audits:

The District will be required to maintain adequate records and accounts and submit annual budgets and year-end reports (annual audits)/statistical and financial reports, quarterly and annually, in accordance with subsection 1780.47 of RUS Instruction 1780.

The District shall be required to submit a copy of its audit agreement for review and concurrence by Rural Development prior to pre-closing the loan.

13. Accomplish Audits for Years in Which Federal Financial Assistance is Received:

The type of financial information that must be submitted is specified below:

Audits – An annual audit under the Single Audit Act is required if you expend \$750,000 or more in Federal financial assistance per fiscal year. The total Federal funds expended from all sources shall be used to determine Federal financial assistance expended. Expenditures of interim financing are considered Federal expenditures.

All audits are to be performed in accordance with 2 CFR Part 200, as adopted by USDA through 2 CFR Part 400. Further guidance on preparing an acceptable audit can be obtained from the Agency. It is not intended that audits required by this part be separate and apart from audits performed in accordance with State and local laws. To the extent feasible, the audit work should be done in conjunction with those audits. The audit must be prepared by an independent licensed Certified Public Accountant, or a State or Federal auditor if allowed by State law, and must be submitted within 9 months of your fiscal year end.

14. Insurance and Bonding:

The following insurance and bonding will be required:

- A. Adequate Liability and Property Damage Insurance including vehicular coverage, if applicable, must be obtained and maintained by the District. The District should obtain amounts of coverage as recommended by its attorney, consulting engineer and/or insurance provider.
- B. Worker's Compensation - The District will carry worker's compensation insurance for employees in accordance with applicable state laws.
- C. Fidelity Bond - The District will provide Fidelity Bond Coverage for all persons who have access to funds. Coverage may be provided either for all individual positions or persons, or through "blanket" coverage providing protection for all appropriate employees and/or officials. The amount of coverage required for all RUS loans is \$190,000.
- D. Real Property Insurance - The District will obtain and maintain adequate fire and extended coverage on all structures including major items of equipment or machinery located in the structures. The amounts of coverage should be based on recommendations obtained by the District from its attorney, consulting engineer and/or insurance provider. Subsurface lift stations do not have to be covered except for the value of electrical and pumping equipment therein.
- E. Flood Insurance - The District will obtain and maintain adequate coverage on any facilities located in special flood and mudslide prone areas.

15. Planning and Performing Development:

- A. The engineer should not be authorized to commence work on final plans and specifications until a determination has been made that the project can be planned and constructed within the estimated cost shown in paragraph "28" of this letter. The engineer may then proceed to develop final plans and specifications to be completed no later than 210 days from this date, and prepare bid documents. The Area Director is prepared to furnish the necessary guide to follow so as to keep the project plans and documents within our guidelines and requirements. The project must be constructed by the design/bid/build method of construction. The project should not be advertised for construction bids until all easements and enforceable options have been obtained, and total funds are committed or available for the project.
- B. The following documents will be submitted to Rural Development for review and must be concurred in by Rural Development prior to advertisement for construction bids:
 - 1. Final plans, specifications and bid documents.
 - 2. Applicant's letter on efforts to encourage small business and minority-owned business participation.
 - 3. Legal Service Agreements.
 - 4. Engineering Agreements.

Revision in these documents will be subject to Rural Development concurrence. Any agreements, contracts, etc. not reviewed and approved by Rural Development will not be eligible for payment from project funds or revenues from facilities financed by this Agency.

Prior to receipt of an authorization to advertise for construction bids, the District will obtain advance clearance from Bond Counsel and/or Local Counsel regarding compliance with KRS 424 pertaining to publishing of the advertisement for construction bids in local newspapers and the period of time the notice is required to be published.

16. Bid Tabulation:

Immediately after bid opening, you must provide the Agency with the bid tabulation and your engineer's evaluation of bids and recommendations for contract awards. If the Agency agrees that the construction bids received are acceptable, adequate funds are available to cover the total project costs, and all the requirements of this letter have been satisfied, the Agency will authorize you to issue the Notice of Award.

- A. Cost Overruns – If bids are higher than expected, or if unexpected construction problems are encountered, you must utilize all options to reduce cost overruns. Negotiations, redesign, use of bidding alternatives, rebidding or other means will be considered prior to commitment of subsequent funding by the Agency. Any requests for subsequent funding to cover cost overruns will be contingent on the availability of funds.

Cost overruns exceeding 20% of the development cost at time of loan or grant approval or where the scope of the original purpose has changed will compete for funds with all other applications on hand as of that date.

- B. Excess Funds – If bids are lower than anticipated at time of obligation, excess funds must be de-obligate prior to start of construction except in the cases addressed in this paragraph. In cases where the original PER for the project included items that were not bid, or were bid as an alternate, the State Office official may modify the project to fully utilize obligated funds for those items. Amendments to the PER, ER, and letter of conditions may be needed for any work not included in the original project scope. In all cases, prior to start of construction, excess funds will be de-obligated, with grant funds being de-obligated first. Excess funds do not include contingency funds as described in this letter.

17. Contract Documents, Final Plans, and Specifications:

- A. The contract documents must consist of the EJCDC construction contract documents as indicated in RUS Bulletin 1780-26 or other Agency-approved forms of agreement.
- B. The contract documents, final plans, and specifications must comply with RUS Instruction 1780, Subpart C – Planning, Designing, Bidding, Contracting, Constructing and Inspections, and must be submitted to the Agency for concurrence prior to advertising for bids along with an updated cost estimate. The Agency may require another updated cost estimate if a significant amount of time elapses between the original submission and advertising for bids.

C. The use of any procurement method other than competitive sealed bids must be requested in writing and approved by the Agency.

18. Contract Review:

Your attorney will certify that the executed contract documents, including performance and payment, if required, are adequate and that the persons executing these documents have been properly authorized to do so in accordance with RUS Instruction 1780.61 (b).

19. Civil Rights & Equal Opportunity:

You should be aware of and will be required to comply with other federal statute requirements including but not limited to:

A. Section 504 of the Rehabilitation Act of 1973:

Under Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), no handicapped individual in the United States shall, solely by reason of their handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Rural Development financial assistance.

B. Civil Rights Act of 1964:

All borrowers are subject to, and facilities must be operated in accordance with, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and Subpart E of Part 1901 of this Title, particularly as it relates to conducting and reporting of compliance reviews.

Instruments of conveyance for loans and/or grants subject to the Act must contain the covenant required by paragraph 1901.202(e) of this Title.

C. The Americans with Disabilities Act (ADA) of 1990:

This Act (42 U.S.C. 12101 et seq.) prohibits discrimination on the basis of disability in employment, state and local government services, public transportation, public accommodations, facilities, and telecommunications. Title II of the Act applies to facilities operated by state and local public entities that provide services, programs, and activities. Title III of the Act applies to facilities owned, leased, or operated by private entities that accommodate the public.

D. Age Discrimination Act of 1975:

This Act (42 U.S.C. 6101 et seq.) provides that no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

E. Limited English Proficiency (LEP) under Executive Order 13166:

LEP statutes and authorities prohibit exclusion from participation in, denial of benefits of, and discrimination under Federally-assisted and/or conducted programs on the ground of race, color, or national origin. Title VI of the Civil Rights Act of 1964 covers program access for LEP persons. LEP persons are individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English. These individuals may be entitled to language assistance, free of charge. You must take reasonable steps to ensure that LEP persons receive the language assistance necessary to have meaningful access to USDA programs, services, and information your organization provides.

These protections are pursuant to Executive Order 13166 entitled, "Improving Access to Services by Persons with Limited English Proficiency" and further affirmed in the USDA Departmental Regulation 4330-005, "Prohibition Against National Origin Discrimination Affecting Persons with Limited English Proficiency in Programs and Activities Conducted by USDA."

Agency financial programs must be extended without regard to race, color, religion, sex, national origin, marital status, age, or physical or mental handicap. You must display posters (provided by the Agency) informing users of these requirements, and the Agency will monitor your compliance with these requirements during compliance reviews.

20. Closing Instructions:

The Office of General Counsel, our Regional Attorney, will be required to write closing instructions in connection with this loan. Conditions listed therein must be met by the District.

21. Compliance with Special Laws and Regulations:

The District will be required to conform to any and all state and local laws and regulations affecting this type project.

22. Treatment Plant and System Operator:

The District is reminded that the water system operator must have an Operator's Certificate issued by the State.

23. Prior to Pre-Closing the Loan, the District Will Be Required to Adopt:

- A. Form RUS Bulletin 1780-27, "Loan Resolution (Public Bodies)."
- # 62 B. Form RD 400-1, "Equal Opportunity Agreement."
- # 63 C. Form RD 400-4, "Assurance Agreement."
- D. Form AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction."

- # 6A
- E. Form RD 1910-11, "Applicant Certification Federal Collection Policies for Consumer or Commercial Debts."
 - F. RD Instruction 1940-Q, Exhibit A-1, "Certification for Contracts, Grants and Loans."
 - G. RUS Bulletin 1780-22, "Eligibility Certification."

24. Refinancing and Graduation Requirements:

The District is reminded that if at any time it shall appear to the Government that the District is able to refinance the amount of the RUS indebtedness then outstanding, in whole or in part, by obtaining a loan from commercial sources at reasonable rates and terms, upon the request of the Government, the District will apply for and accept such loan in sufficient amount to repay the Government.

25. Commercial Interim Financing:

The District will be required to use commercial interim financing for the project during construction for the RUS loan portion of the financing, if available at reasonable rates and terms.

Before the loan is closed, the District will be required to provide Rural Development with statements from the contractor, engineer and attorneys that they have been paid to date in accordance with their contract or other agreements and, in the case of the contractor, that he has paid his suppliers and sub-contractors.

26. Disbursement of Project Funds:

A construction account for the purpose of disbursement of project funds (RUS) will be established by the District prior to start of construction. The position of officials entrusted with the receipt and disbursement of RUS project funds will be covered by a "Fidelity Bond," with USDA Rural Development as Co-Obligee, in the amount of construction funds on hand at any one time during the construction phase.

For each "construction account" as established, if the amount of RUS loan and grant funds plus any applicant contributions or funds from other sources to be deposited into the account are expected to exceed \$250,000 at any time, the financial institution will secure the amount in excess of \$250,000 by pledging collateral with the Federal Reserve Bank in an amount not less than the excess in accordance with 7 CFR, 1902.7(a).

Agency funds will be disbursed into the construction account through an electronic transfer system. The borrower should complete Form SF-3881, "Electronic Funds Transfer Payment Enrollment Form," for each account where funds will be electronically received. The completed form(s) must be received by Rural Development at least thirty (30) days prior to the first advance of funds.

Monthly audits of the District's construction account records shall be made by Rural Development.

Borrowers receiving federal loan and/or grant funds by EFT will have funds directly deposited to a specified account at a financial institution with funds being available to the recipient on the date of payment.

Any applicant contribution will be the first funds expended, followed by other funding sources. Interim financing or Agency loan funds will be expended after all other funding sources unless an agreement is reached with all other funding sources on how funds are to be disbursed prior to start of construction or loan closing, whichever occurs first. Interim financing funds or Agency loan funds must be used prior to the use of Agency grant funds. The Grant funds must not be disbursed prior to loan funds except as specified in RUS Instruction 1780.45 (d). In the unlikely event the Agency mistakenly disburses funds, the funds will be remitted back to the Agency electronically.

During construction, the District shall disburse project funds in a manner consistent with subsection 1780.76 (e) of RUS Instruction 1780. Form RD 1924-18, "Partial Payment Estimate," or similar form approved by Rural Development, shall be used for the purpose of documenting periodic construction estimates, and shall be submitted to Rural Development for review and acceptance. Prior to disbursement of funds by the District, the District Council shall review and approve each payment estimate. All bills and vouchers must be approved by Rural Development prior to payment by the District. Form RD 440-11, "Estimate of Funds Needed for 30-Day Period Commencing _____," will be prepared by the District and submitted to Rural Development in order that a periodic advance of federal cash may be requested.

27. Disbursement of Grant Funds:

The RUS funds will be advanced as they are needed in the amount(s) necessary to cover the RUS proportionate share of obligations due and payable by the District.

Grant funds are to be deposited in an interest bearing account in accordance with 2 CFR part 200 and interest in excess of \$500 per year remitted to the Agency. The funds should be disbursed by the recipient immediately upon receipt and there should be little interest accrual on the Federal funds. Recipients shall maintain advances of Federal funds in interest-bearing account, unless:

- a. The recipient receives less than \$120,000 in Federal awards per year.
- b. The best reasonably available interest-bearing account would not be expected to earn interest in excess of \$500 per year on Federal cash balances.
- c. The depository would require an average or minimum balance so high that it would not be feasible within the expected Federal and non-Federal cash resources.
- d. A foreign government or banking system prohibits or precludes interest-bearing accounts.

28. Project Budget:

Estimated expenditures are as follows:

Project Costs:

Development	\$ 859,000
Legal and Administrative	20,000
Engineering Fees	141,000
Interest	20,000
KRWA Refinance	1,200,000
Other (Permits, etc.)	40,000
Contingencies	<u>120,000</u>
TOTAL PROJECT COST	\$2,400,000

Project Funding:

RUS Loan	\$1,515,000
RUS Grant	85,000
ARC Grant	<u>800,000</u>
TOTAL FUNDING	\$2,400,000

Any changes in funding sources following obligation of Agency funds must be reported to the processing official. Project feasibility and funding will be reassessed if there is a significant change in project costs after bids are received. If actual project costs exceed the project cost estimates, an additional contribution by the Owner may be necessary. Prior to advertisement for construction bids, you must provide evidence of applicant contributions and approval of other funding sources. This evidence should include a copy of the commitment letter. Agency funds will not be used to pre-finance funds committed to the project from other sources.

Obligated loan or grant funds not needed to complete the proposed project will be de-obligated prior to start of construction. Any reduction will be applied to grant funds first. An amended letter of conditions will be issued for any changes to the total project budget.

29. Commitment of Other Project Funds:

This Letter of Conditions is issued contingent upon a firm commitment being in effect prior to advertising for construction bids for the ARC grant in the amount of \$800,000.

30. Construction Completion Timeframe:

All projects are required to be completed and all funds disbursed within five years of obligation. If funds are not disbursed within five years of obligation, you must submit a written waiver request with adequate justification of extenuating circumstances beyond your control for an extension of time. Any additional requests for waivers beyond the initial extension will be submitted through the State Office to the Assistant Administrator for concurrence decision.

31. Use of Remaining Project Funds:

The applicant contribution shall be considered as the first funds expended. After providing for all authorized costs, any remaining project funds will be considered to be RUS grant funds and refunded in proportion to participation in the project. If the amount of unused project funds exceeds the grants, that part would be RUS loan funds.

32. Proposed Operating Budget:

You will be required to submit to Rural Development a copy of your proposed annual operating budget that supports the proposed loan repayment prior to this agency giving you written authorization to proceed with the bidding phase. The operating budget should be based on a typical year cash flow, subject to completion of this project in the first full year of operation. Form RD 442-7, "Operating Budget," or similar form may be utilized for this purpose.

33. Rates and Charges:

Rates and charges for facilities and services rendered by the District must be at least adequate to meet cost of maintaining, repairing and operating the water system and meeting required principal and interest payments and the required deposits to debt service and/or depreciation reserve.

Water rates will be at least:

First 2,000 gallons @ \$28.00 - Minimum Bill.
All Over 2,000 gallons @ \$11.50 – per 1,000 gallons.

34. Water Purchase Contract:

The District will submit a Water Purchase Contract for approval by Rural Development before advertising for construction bids. If the contract is not on Form RD 442-30, "Water Purchase Contract," the contract will require approval by our Regional Attorney. The contract must meet the requirements of subsection 1780.62 of RUS Instruction 1780, which includes there must be 40 years left on the term of the water purchase contract. The contract term must match the term of the loan.

35. Vulnerability Assessment/Emergency Response Plan (VA/ERP):

The Agency requires all financed water and wastewater systems to have a VA/ERP in place. Borrowers with existing systems must provide a certification that a VA/ERP has been completed prior to advertising for bids. The documents are not submitted to the Agency for VA/ERP requirements throughout the life of the loan.

36. Floodplain Construction:

The District will be required to pass and adopt a Resolution or amend its By-Laws whereby the District will deny any water service to any future customer wishing to build on or develop property located within a designated floodplain.

If a customer or developer requests service for construction in a designated floodplain, the customer or developer must provide evidence and a justification for approval by the District and Rural Development officials that there are no other alternatives to construction or development within the designated floodplain. The community must be a participant in the National Flood Insurance Program (NFIP) and the customer or developer must obtain the required permits prior to the tap on restrictions being waived.

37. Division of Water (DOW) Health & Sanitary Certification:

The Median Household Income (MHI) for the District's service area qualifies this project for the poverty interest rate. A certification from the Division of Water stating this project will remove a health or sanitary problem will be required. This certification must be obtained prior to loan pre-closing.

38. Mitigation Measures:

- A. The project shall be in compliance with all requirements noted in the Governor's Office for Local Development letter dated September 12, 2019, from Ms. Lee Nalley.
- B. Any excavation by Contractor that uncovers a historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted until RD can consult with the State Historical Preservation Officer and issue further directions.
- C. The design and construction shall be in compliance with all local, state and federal environmental statutes, regulations and executive orders applicable to the project.
- D. Best Management Practices shall be incorporated into the project design, construction, and maintenance.

39. System for Award Management:

You will be required to maintain a Dun and Bradstreet Data Universal Numbering System (DUNS) number and maintain an active registration in the System for Award Management (SAM) database. Renewal can be done on-line at: <http://sam.gov>.

This registration must be renewed and revalidated every twelve (12) months for as long as there are Agency funds to be expended.

To ensure the information is current, accurate and complete, and to prevent the SAM account expiration, the review and updates must be performed within 365 days of the activation date, commonly referred to as the expiration date. The registration process may take up to 10 business days. (See 2 CFR Part 25 and the "Help" section at <http://sam.gov>).

40. Prepayment and Extra Payments:

Prepayments of scheduled installments, or any portion thereof, may be made at any time at the option of borrower, with no penalty.

Security instruments, including bonding documents, must contain the following language regarding extra payments, unless prohibited by State statute:

Prepayments of scheduled installments, or any portion thereof, may be made at any time at the option of the borrower. Refunds, extra payments and loan proceeds obtained from outside sources for the purpose of paying down the Agency debt, shall, after payment of interest, be applied to the installments last to become due under this note and shall not affect the obligation of borrower to pay the remaining installments as scheduled in your security instruments.

41. Security/Operational Inspections:

The Agency will inspect the facility and conduct a review of your operations and records management system and conflict of interest policy every three years for the life of the loan. You must participate in these inspections and provide the required information.

42. American Iron & Steel:

Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) applies a new American Iron and Steel requirement:

- (1) No Federal funds made available for this fiscal year for the rural water, waste water, waste disposal, and solid waste management programs authorized by the Consolidated Farm and Rural Development Act (7 U.S.C. 1926 et seq.) shall be used for a project for the construction, alteration, maintenance, or repair of a public water or wastewater system unless all of the iron and steel products used in the project are produced in the United States.
- (2) The term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
- (3) The requirement shall not apply in any case or category of cases in which the Secretary of Agriculture (in this section referred to as the "Secretary") or the designee of the Secretary finds that— a. applying the requirement would be inconsistent with the public interest; b. iron and steel products are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or c. inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

43. Final Approval Conditions:

Final approval of this assistance will depend on your willingness, with the assistance of all your co-workers, to meet the conditions of this letter in an orderly and systematic manner. Then too, final approval will depend on funds being available.

If you desire to proceed with your application, the Area Director will allot a reasonable portion of time to provide guidance in application processing.

Sincerely,



HILDA GAY LEGG
State Director

Enclosures

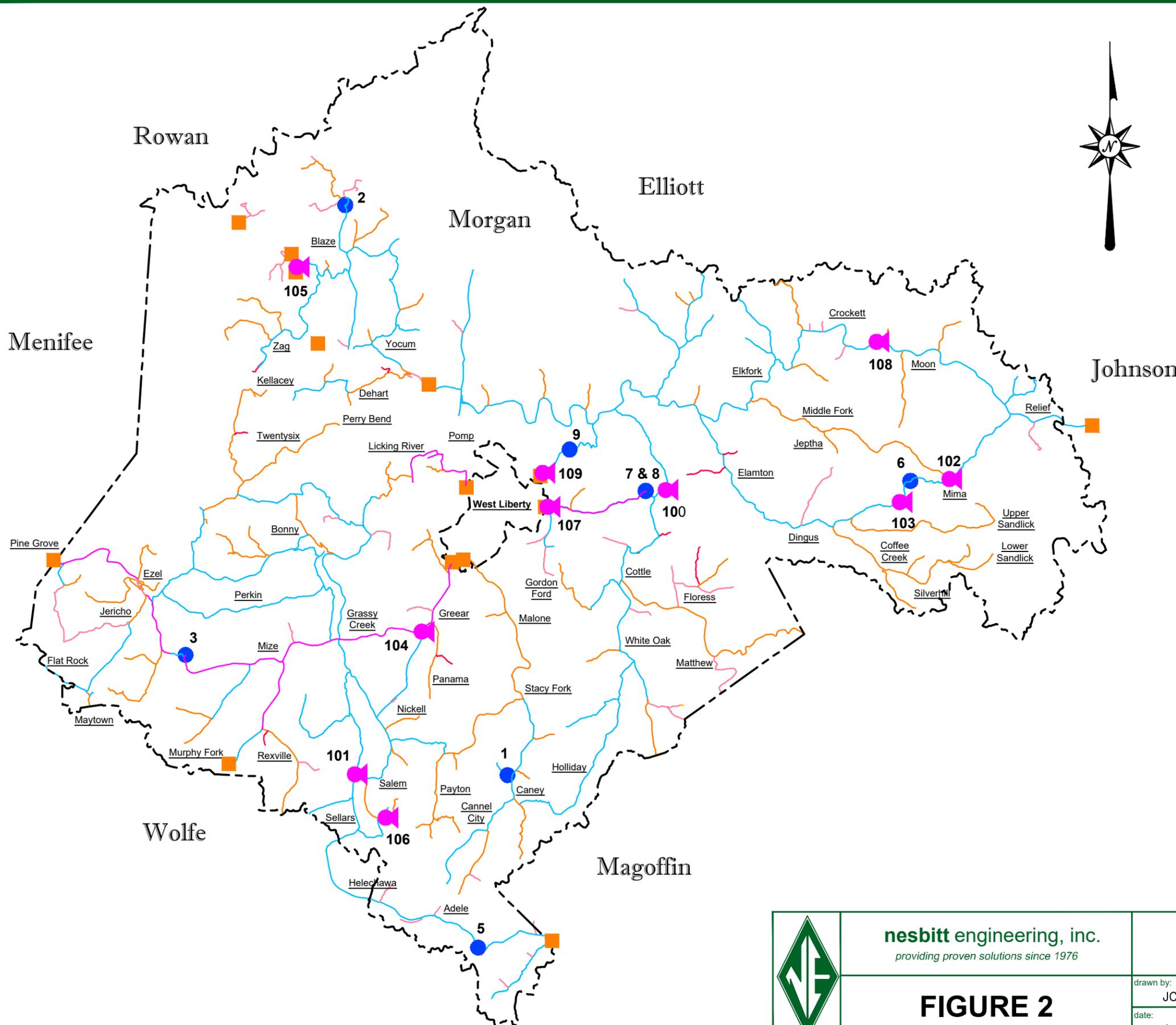
cc: Field Specialist – Morehead, Kentucky
Field Director – Morehead, Kentucky
Gateway ADD – Morehead, Kentucky
Nesbitt Engineering – Lexington, Kentucky
Myles Holbrook – West Liberty, Kentucky
Randy Jones – Louisville, Kentucky
PSC – ATTN: Talina Mathews – Frankfort, Kentucky

Appendix “C” – Project Maps

Existing District Facilities Area Map – Figure 2

Proposed Improvements Map – Figure 3

DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-01 WATERLINE REPLACEMENT\01 PRELIM\FER\FIGURE 2 EXISTING WATER DISTRIBUTION SYSTEM.DWG



Morgan County Water District				
Number	Feature	Name	Capacity	Year Constructed
1	Tank	Hwy 191	175,000	1992
2	Tank	Ditney Ridge Hwy 1002	100,000	2004
3	Tank	Ezel Tank	150,000	1995
4	Tank	Hwy 172 (Abandoned)	110,000	1996
5	Tank	Hwy 134	100,000	2009
6	Tank	Smith Creek Tank	50,000	2007
7	Tank	Spaws Creek Tank #1	157,000	2002
8	Tank	Spaws Creek Tank #2	200,000	2014
9	Tank	Hwy 172 (Abandoned)		
100	Pump Station	Cow Branch (Abandoned)		
101	Pump Station	Hwy 205		
102	Pump Station	Hwy 437		
103	Pump Station	Hwy 437 (Abandoned)		
104	Pump Station	Hwy 460		
105	Pump Station	Hwy 519		
106	Pump Station	Perkins Cemetery		
107	Pump Station	Spaws Creek		
108	Pump Station	Split Wood (Abandoned)		
109	Pump Station	Hwy 172 (Abandoned)		

EXISTING FINISH WATERLINES

- 8" (pink line)
- 6" (blue line)
- 4" (orange line)
- 3" (light pink line)
- 2" OR LESS (red line)

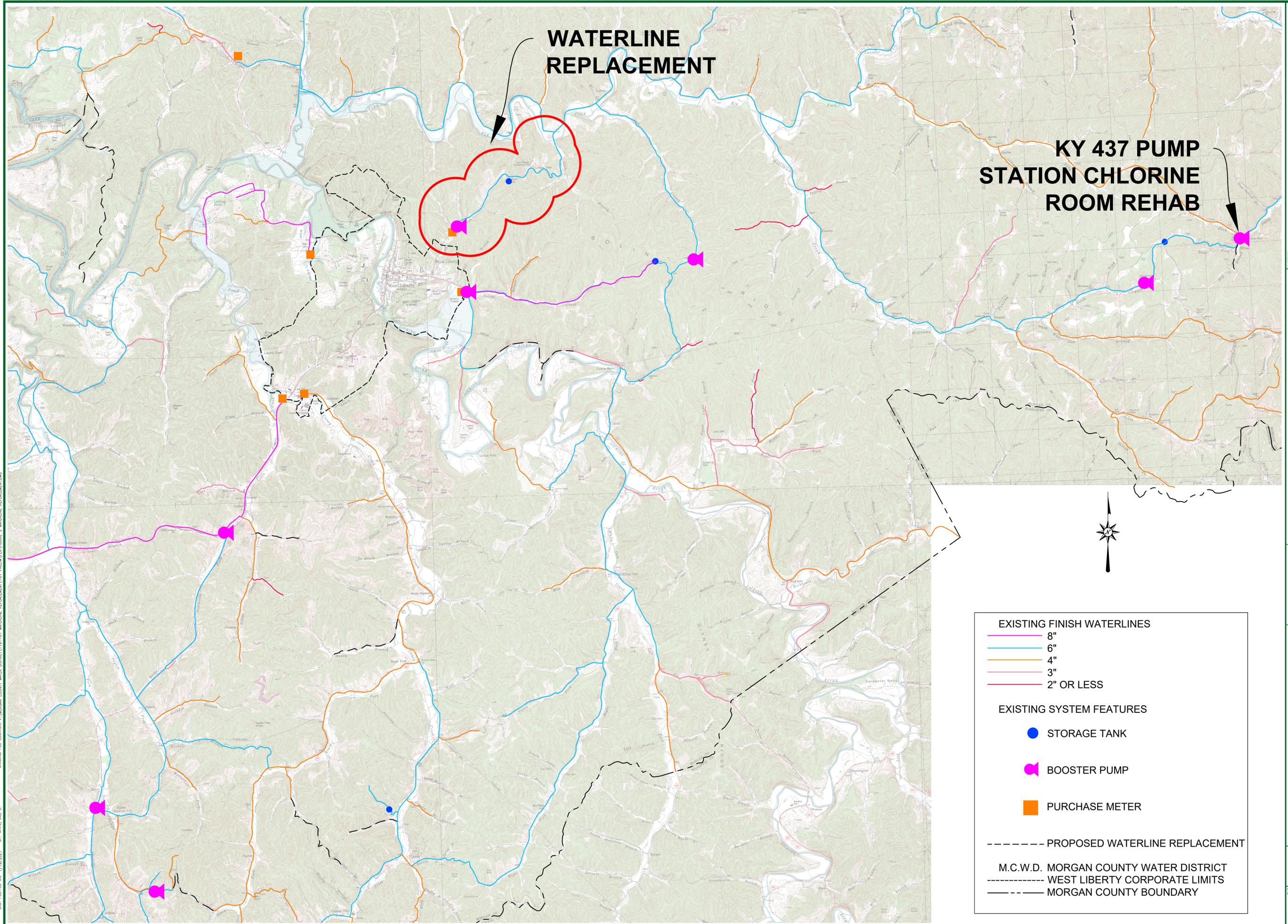
EXISTING SYSTEM FEATURES

- STORAGE TANK (blue circle)
- BOOSTER PUMP (pink square)
- PURCHASE METER (orange square)

--- WEST LIBERTY CORPORATE LIMITS
 - - - MORGAN COUNTY BOUNDARY

	nesbitt engineering, inc. <i>providing proven solutions since 1976</i>		EXISTING WATER DISTRIBUTION SYSTEM MORGAN COUNTY WATER DISTRICT MORGAN COUNTY, KENTUCKY	
	FIGURE 2		drawn by: JCW	job no.: 1191.01
			date: 1-19-21	scale: NOT TO SCALE

LAST PLOTTED ON: 1/19/2021 BY: BWTE, ALL C. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-01 WATERLINE REPLACEMENT\01 PRELIM\FIGURE 3 WATERLINE REPLACEMENT.DWG



EXISTING FINISH WATERLINES

- 8" (magenta line)
- 6" (blue line)
- 4" (orange line)
- 3" (red line)
- 2" OR LESS (pink line)

EXISTING SYSTEM FEATURES

- STORAGE TANK (blue circle)
- BOOSTER PUMP (magenta circle)
- PURCHASE METER (orange square)

----- PROPOSED WATERLINE REPLACEMENT

M.C.W.D. MORGAN COUNTY WATER DISTRICT
 ----- WEST LIBERTY CORPORATE LIMITS
 ----- MORGAN COUNTY BOUNDARY



MORGAN COUNTY WATER DISTRICT
408 PRESTONSBURG STREET
WEST LIBERTY, KENTUCKY 41472
MORGAN COUNTY

WATERLINE REPLACEMENT

nesbitt engineering, inc.
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
WATERLINE REPLACEMENT PROJECT PHASE 1

drawn by: JCW
date: 11/9/01
scale: NOT TO SCALE



FIGURE 3