



KENVIRONS

Case No. 2018-00066

REVISED PRELIMINARY ENGINEERING REPORT

FOR THE

WOOD CREEK WATER DISTRICT

**ELZA ROAD AND BINDER SUBDIVISION
PRESSURE SEWER EXTENSION**

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COMMISSION**

PREPARED BY

KENVIRONS, INC.
452 VERSAILLES ROAD
FRANKFORT, KY 40601

PROJECT NO. 2016087

REVISED: NOVEMBER 2016

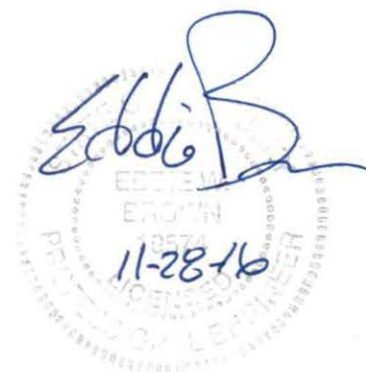


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INTRODUCTION

Wood Creek Water District (WCWD), founded in 1969, is a water utility system whose purpose is to establish, develop, and operate a water supply and distribution system for its members and customers in the central portion of Laurel County, Kentucky. Wood Creek Water District began offering wastewater utility operations in 2001 and has slowly began to bring in more customers.

The WCWD collects its wastewater and transfers it for treatment through the London Utility Commission's wastewater treatment plant. The primary connection source to transfer wastewater for the WCWD is a city manhole located at the intersection of KY 9006 and KY 472. Upgrades to this system will include a new lift station and two sewer line extensions. The Pittsburg lift station was constructed in 2000 and has performed well, but it is not capable of supporting the growth in the area. The purpose of this report is to outline the replacement of the existing lift station, 300 underperforming individual grinder pumps, and the installation of approximately 2,300 Linear Feet (L.F.) of 2" PVC sewer line along Elza Road, 3,300 L.F. of 2" PVC sewer line through Binder subdivision, and 4,500 L.F. of 4" PVC sewer line along KY 1225 to Elza Road. This project will be a key step in supporting the growth of the WCWD system.

PROJECT PLANNING

A. Location

Laurel County sits at the heart of the Daniel Boone National Forest in eastern Kentucky. London is the county seat of Laurel County and is near the geographic center of the county. This project is located in the central region of Laurel County. The new Pittsburg lift station project site is located at the corner of KY 1225 and Pittsburg School Road in the city of Pittsburg, just north of the existing lift station site. The extension along Elza Road is located approximately 1 mile northeast of Pittsburg. The extension to Binder subdivision is located approximately 2 miles west of Interstate 75 along KY 80.

As stated previously, Wood Creek Water District is a water and wastewater utility system. The purpose of the district is to establish, develop, and operate a water supply and distribution system and wastewater collection system for its members and the customers in the central portion of Laurel County. Since the inception of WCWD, there has been a steady rise in demand for wastewater collection for areas in proximity to the system. This project will help the WCWD support this increase in demand.

B. Environmental Resources Present

The proposed project is located in the central portion of Laurel County. According to the *Soil Survey of Laurel and Rockcastle Counties, Kentucky*, prepared by the USDA Soil Conservation Service, the major natural resources in the area are coal, timber and saltpeter. Most of the saltpeter mines were located in adjoining Rockcastle County, and large amounts of saltpeter were mined during the war of 1812. However, the saltpeter industry is now dormant. The mining and timber industry have also taken a sharp decline in recent years. The most important and prominent environmental resource in the area is the soil. Soil supports farming, which is the largest industry in the area. However, the area is growing and adding additional jobs and industries and will need the support of this project in order to collect wastewater from these new homes and industries.

C. Population Trends

The population of Laurel County according to the 2013 United States Census Bureau was 59,563. Wood Creek Water District services 1,049 households or roughly 2,532 people as well as 186 commercial users. This is about 4 percent of the Laurel County population. The population of Laurel County has seen a growth in population over the past 20 years, at a rate of about 1.1 percent per year. Assuming this same trend continues, the current service provided by Wood Creek Water District will not be able to withstand the growth. This project will allow central Laurel County to grow at its current rate and provide users sufficient wastewater service.

EXISTING FACILITIES

A. Location Map

The current Pittsburg lift station is located at the intersection of KY 1225 and Pittsburg School Road in Laurel County. The lift station is situated on the northeast corner of the intersection and currently sends a majority of WCWD's wastewater through a transmission main onto London Utility Commission's wastewater treatment plant. The existing lift station is starting to show signs of weakness with the growing population and amount of customers being added to the sewer system. Therefore, a new lift station with greater capacity is recommended at this location. The new lift station will be located on the same property, slightly north of the existing lift station. The existing station will not be demolished, but instead serve as additional storage space, if needed. The current site location is depicted in Figure 1 in the appendix.

B. History

The existing Pittsburg lift station was originally constructed in 2000. Approximately 93 percent of the wastewater collected by the Wood Creek Water District sewer collection system passes through the Pittsburg lift station. This lift station is vital to the wastewater system. Throughout the history of the pump service record, there have been instances of operating out of range. These problems will be addressed with this project.

C. Condition of Existing Facilities

While Pittsburg lift station has performed well in the past, it is not capable of supporting the growth in the area. The lift station was constructed in 2000 and is starting to show signs of weakness and has reached the end of its usable life.

All customers in the sewer system have individual grinder pumps associated with their connection. A total of approximately 1,200 of these pumps are being utilized and have become substantially weakened by age and usage.

Based on previous studies, approximately 93 percent of the wastewater produced by WCWD passes through Pittsburg lift station. With that assumption, using data gathered in 2015, the accumulated wastewater that passed through the Pittsburg lift station and the adjoining manhole was:

Annual: 78,489,383 Gallons
Daily Average: 213,718 Gallons per Day (GPD)
Daily Average during Maximum Month (July): 272,392 GPD
Maximum Day (7/15/15): 721,632 GPD

The pumps at the Pittsburg lift station generally pump at the rate of 500 gallons per minute (GPM). At this pumping rate, the approximate duration of pump operation during 2015 was:

Annual Average Day: 7 hours (30% of capacity)
Maximum Month Average Day: 9 hours (38% of capacity)
Maximum Day: 24 hours (100% of capacity)

D. Financial Status of Existing Facilities

The financial status of the existing facility is summarized in budget sheets located in the back of the appendix. The attachment labeled *EXISTING OPERATING BUDGET FOR YEAR ENDING 2015* outlines the status of the current facility. These sheets show the income generated by the facility and current operation and maintenance costs. The utility has accrued no existing debts as of this date.

NEED FOR PROJECT

A. Health, Sanitation, and Security

This project will replace an existing lift station and extend existing sewer lines by approximately 10,000 L.F. to accommodate new customers. The current lift station and septic systems are outdated and have reached the end of their usable life. Since these septic tanks are prone to flooding and leaking, this creates a health and sanitation risk to these homeowners and customers. This project will allow for the abandonment of these items and provide customers with new components, ensuring that there is no health or sanitation hazard due to failing septic tanks.

B. Aging Infrastructure

The existing Pittsburg lift station has been in place since 2000 and the existing, individual septic systems have also reached the end of their usable life. Over time, the capacity of the system has weakened the existing pumps, causing the lift station to be less efficient. This condition requires the lift station to have to work out of its designed range. The existing septic tanks were acceptable at the time of installation, however they have aged and are becoming problematic for city residents. This project will replace the diminished lift station and numerous septic tanks with an extended pressure sewer collection network.

C. Reasonable Growth

A detailed computer-based hydraulic model has been developed and updated over several years for Wood Creek Water District. This installation of new sewer lines and the replacement of the existing Pittsburg lift station would allow for the area of central Laurel County to accommodate future growth.

To predict the future usage based upon past growth rates, data was obtained and analyzed from the WCWD. The data shows annual volumes collected by the WCWD from 2011 until 2015. The data was plotted to develop a baseline and show a trend for how wastewater collection has grown in the area since 2011. To predict future demand, the graph was expanded using linear regression in order to show the collection demand for upcoming years. This graph, along with the information used to create it is shown in the appendix in Figure 2 and Table 1 respectively. The graph was extended to the year 2030 to provide a trend for increasing demand. According to the graph, the demand will be approximately 440,500 gallons per day by 2030, with 410,000 gallons per day passing through Pittsburg lift station. With the current pump rating and condition of this system, the existing lift station will be able to sustain future growth. Although it can sustain this growth, the lift station is already operating out of its efficiency range on maximum collection days and will be in service for 30 years by the end of this growth analysis,

so it is recommended that the lift station be upgraded now to save on operation and maintenance costs in the future.

ALTERNATIVES CONSIDERED

A. Description

After consulting with the client, and discussing multiple alternatives, there were three alternatives that were ultimately to be considered. There are two technically feasible and one technically infeasible alternatives to be considered. The options considered to be technically feasible are the replacement plan outlined in this report (replacing the Pittsburg lift station, and installing new pressure sewer lines), or to replace the Pittsburg lift station and install new gravity sewer lines with new lift stations to connect these extensions to the pressure sewer system. The one other alternative that could be chosen is not technical in nature, but is an option the client is facing. This option is to continue the current practice of repairing leaks, which has been a substantial cost for the client due in part to both the intense labor needed for repair as well as increasing the health risks. It also does not allow for the community to grow and maximize its potential. Since the last option is technically infeasible, only the first options of system rehabilitation will be analyzed. Following the evaluation, one of the alternatives will be recommended to the client.

B. Design Criteria

Both designs must be able to supply the current customer load of approximately 1,100, with the ability to withstand growth. The current average daily supply of wastewater is approximately 230,000 gallons per day. With a future growth analysis showing that the daily volume of wastewater will nearly double to approximately 440,000 gallons per day in 2030, the design criteria will be that the lift station will have to deliver at least 500,000 gallons per day, preferably 600,000 gallons per day. The lift station will be designed to at least the standards of the 2014 edition Recommended Standards for Wastewater (10 State Standards). The wastewater line components of the project will be designed using computer based hydraulic modeling software, and the design criteria will be governed by the 10 State Standards. No matter which alternative is chosen, the project will need to fulfill the needs of the client by gathering wastewater in the quantity required to sustain growth, all while remaining within the budget of the client.

C. Map

Figures 3 and 4 in the Appendix show the location and layout for the Pittsburg lift station replacement portion of Alternative #1 and the location of the new sewer lines. Figures 5 and 6 in the Appendix show the layout for Alternative #2. This system would implement gravity sewer extensions in the proposed locations with

proposed lift stations built to connect the new lines to the pressure sewer system already in place.

D. Environmental Impacts

The environmental components that were assessed for both alternatives were if the projects were located in a floodplain, and how did the proposed alternatives affect the Endangered Species Act. After an evaluation of floodplain maps from the Federal Emergency Management Agency (FEMA), it was determined that neither alternative would be located within the 100-year flood boundary. After performing a search of the U.S. Fish and Wildlife Environmental Conservation Online System to locate endangered species in the project area, the following species were listed as having possible habitat in the area: Bald Eagle, Cumberland bean clam, Cumberland elktoe clam, Fluted kidneyshell clam, Blackside dace fish, White fringeless orchid, Virginia spiraea plant, Indiana bat, Gray bat, and Northern Long-Eared bat. Since the project will not be working near a waterway, the fish and clam species listed will not be a concern. Alternative #1 (Pittsburg lift station replacement and new pressure sewer line installation) is not anticipated to impact any trees or wooded areas, where the previously listed bird, bat, and flowering plant species would be located. Alternative #2 (Pittsburg lift station replacement and new gravity sewer installation) is also not anticipated to impact any trees or wooded areas, where the previously listed bird, bat, and flowering plant species would be located.

E. Land Requirements

The land where the lift station is to be constructed is already owned by Wood Creek Water District so no land acquisition will be needed for the Pittsburg lift station. The sewer line extension will be on public right-of-way and in order to proceed with the project, an encroachment permit from the County and Kentucky Department of Highways will need to be obtained.

F. Sustainability Considerations

For sustainability considerations, both alternatives would utilize transducer primary level sensing/pump operation control with a float switch back-up in the lift station. This will ensure that the pumps operate only when necessary to discharge the wastewater in an efficient and consistent manner. The pumps will operate singly and additively as required to reduce electricity consumption.

G. Cost Estimates

Figure 7 in the Appendix shows the following breakdown of costs associated with the project if Alternative #1 (replacing the Pittsburg lift station and new pressure sewer lines) is chosen. The primary costs considered were legal fees, engineering fees, project construction, contingency, and the anticipated annual O&M costs.

Figure 8 in the Appendix shows the following breakdown of costs associated with the project if Alternative #2 (replacing the Pittsburg lift station, installing gravity sewer lines with lift stations to connect to pressure sewer) is chosen. The primary costs considered were legal fees, engineering fees, project construction, contingency, and the anticipated annual O&M costs.

SELECTION OF AN ALTERNATIVE

A. Life Cycle Cost Analysis

A life cycle cost analysis plays a crucial role in the selection of alternatives that impact both pending and future costs. It compares the initial investment options and identifies the least cost alternatives over an extended period. Tables 2.1 and 2.2 in the Appendix show the Life Cycle Cost Analysis for the project alternatives, as well as the values for assumptions like planning period and discount rate that were made when performing the calculations. As one can see from both tables, Alternative #1 has the lower net present value of the two alternatives and will be most cost effective in the long term.

B. Non-Monetary Factors

There were no non-monetary factors that influenced these alternatives. There are two technically feasible alternative being considered, and there were no other foreseeable non-monetary factors that would play a role in this project if either of the project alternatives were chosen.

PROPOSED PROJECT

A. Preliminary Project Design

It is upon recommendation of the project engineer that Alternative #1 (Pittsburg lift station replacement and new pressure sewer line installation) be constructed. Based upon current conditions, client budget, environmental impacts, and future forecasting, Alternative #1 will be most effective in meeting the needs of the client. Since this is a wastewater/reuse project, the following items need to be addressed:

Collection System Layout: One of the extensions of new sewer line will take place along KY1225 and Elza Road, located approximately 1 mile northeast of Pittsburg. The other extension will be placed along Gail Avenue through Binder subdivision located approximately 2 miles west of Interstate 75 along KY80. Approximately 4,500 L.F. of new 4" PVC sewer line along KY1225, and 2,300 L.F. and 3,300 L.F. of new 2" PVC sewer line along Elza Road and Gail Avenue through Binder subdivision respectfully will be placed during this project to accommodate new wastewater customers. These extended lines will allow the new customers to

abandon their aging septic systems. Refer to Figures 3 and 4 which show the proposed layout of the system.

Treatment: WCWD does not operate a water treatment plant. The wastewater that is collected in WCWD flows to a city manhole where London Utility Commission collects WCWD's wastewater to treat at their own wastewater treatment plant. The capacity of the London Utility Commission treatment plant is 15 MGD, and has plenty of capacity to accommodate the volumes collected by WCWD.

Pumping Stations: The lift station is the primary focus of this project. The existing Pittsburg lift station has been in service for many years (2000), and has reached the end of its effective life. The new lift station will contain new pumps, piping, controls and all appurtenances. The new lift station will utilize transducer primary level sensing/pump operation control which will allow for precise control of flow while saving on electrical costs due to their high degree of controllability. In total, the new lift station will allow the WCWD to meet the supply from its current users, and meet the growth demands for upcoming years. Refer to Figure 4 in the appendix which shows the location of the proposed lift station. Along with the replacement of the Pittsburg lift station, 300 individual grinder pumps will replace existing deteriorating grinder pumps in the wastewater collection system. A total of 1,200 grinder pumps are currently in the system, with a plan in place to replace the remaining pumps within the next 10 years.

B. Project Schedule

Exhibit 1 shown on the following page contains the proposed dates for the major project components. The list is not exhaustive of all project tasks and dates shown are tentative.

Exhibit 1	
Estimated Project Schedule	
Wood Creek Water District	
Category	Estimated Date
Environmental Review Submittal	January 1, 2017
Bid Opening	June 1, 2017
Construction Start	August 1, 2017
Construction Completion	November 28, 2017

C. Permit Requirements

Exhibit 2 shown below is a tentative list of permits and approvals that will need to be obtained before project construction can begin. This list is preliminary and is subject to change following the review process of the required agencies.

Exhibit 2	
Permits & Approvals Needed	
Wood Creek Water District	
Agency	Permit or Approval
KY Department of Highways	Encroachment Permit
KY Department of Highways	Permanent Easement

D. Sustainability Considerations

The sustainable practice that this project is proposing is to utilize transducer primary level sensing/pump operation control with a float switch back-up in the lift station. This will ensure that the pumps operate only when necessary to discharge the wastewater in an efficient and consistent manner. The pumps will operate singly and additively as required to reduce electricity consumption. In addition, all concrete exposed to wastewater or gases will be provided with an admix waterproofing additive to enhance the life of the concrete.

E. Total Project Cost Estimate

Exhibit 3 shown on the following page below is the Engineer's Opinion of Probable Cost for the recommended alternative as described above. Any remaining funds once the original project has been substantially completed will be used to purchase miscellaneous pipe materials and new grinder pumps.

Exhibit 3	
Total Project Cost Estimate	
Wood Creek Water District	
Category	Cost Associated
Legal	\$12,500
Land & Rights	\$5,000
Planning	\$62,000
Engineering Fees (Design)	\$83,750
Engineering Fees (Inspection)	\$53,680
Construction	\$936,800
Contingency	\$93,680
Miscellaneous	\$32,000
Total Project Cost	\$1,279,410

F. Annual Operating Budget

Exhibit 4 shown below is a summarized version of the *EXISTING OPERATING BUDGET FOR YEAR ENDING 2015* which is shown in the appendix.

Exhibit 4	
Annual Operation & Maintenance Cost	
Wood Creek Water District	
Category	Cost Associated
Purchase Water and Power	\$ 26,056
Administration and General	\$ 10,684
Sewer Maintenance and Treatment	\$ 388,687
Total O&M Cost	\$ 425,427

CONCLUSIONS AND RECOMMENDATIONS

It is the conclusion and recommendation of this report that the Wood Creek Water District implement the proposed project as described herein in the Proposed Project section of this report. It is further recommended that WCWD proceed with its applications for federal assistance to fund the project.

An evaluation of the Water District's current revenue, the proposed project's capital and operating and maintenance costs was conducted to determine the project's impact on the sewer rates. These budget sheets are attached in the appendix for a more detailed review. Based on the information contained in an Independent Auditors' Report and Financial Statement for the Years Ended December 31, 2015 and 2014 for Wood Creek Water District and the funding scenario outlined in the budget sheets in the Appendix, user rates will not need to be increased to finance the proposed project.

A Summary Addendum to Preliminary Engineering Report will be completed at a later date. The Summary Addendum outlines the project's feasibility.

APPENDIX

Table 1		
Volume History (gal) 2011-2015		
Year	Annual	Average Daily
2011	60,814,814	166,472
2012	83,904,702	229,281
2013	92,079,517	251,444
2014	83,976,760	230,059
2015	84,604,435	230,475

Table 2.1		
Alternative #1		
Elza Rd. and Binder Subdivision Pressure Sewer Extension		
Life Cycle Cost Analysis		
Capital Expense		\$1,279,410
Annual O&M		
	Purchased Water & Power	26,056
	Administration & General	10,684
	Sewer Maintenance & Treatment	388,687
	Total O & M Cost	\$425,427
	USPW Factor	x 17.69
	Present Worth; Annual O&M	\$7,525,804
Salvage Value		
	Existing Facilities	\$5,148,000
	Proposed Improvements	562,080
	Total Salvage Value	\$5,710,080
	SPPW Factor	x 0.79
	Present Worth; Salvage	\$4,510,963
Net Present Value:		\$4,294,250

Table 2.2			
Alternative #2			
Elza Rd. and Binder Subdivision Gravity Sewer Extension			
Life Cycle Cost Analysis			
Capital Expense			\$2,940,890
Annual O&M			
	Purchased Water & Power	26,056	
	Administration & General	10,684	
	Sewer Maintenance & Treatment	388,687	
	Total O & M Cost	\$425,427	
	USPW Factor	x 17.69	
	Present Worth; Annual O&M		\$7,525,804
Salvage Value			
	Existing Facilities	\$5,148,000	
	Proposed Improvements	1,383,300	
	Total Salvage Value	\$6,531,300	
	SPPW Factor	x 0.79	
	Present Worth; Salvage		\$5,159,727
Net Present Value:			\$5,306,967

Notes and Equations:

Interest Rate (i) = 1.2%

Planning Period (n) = 20 years

$$\text{Uniform Series Present Worth Factor (USPW)} = \frac{((1+i)^n - 1)}{(i(1+i)^n)}$$

$$\text{Example USPW} = \frac{((1+.012)^{20} - 1)}{(.012(1+.012)^{20})} = 17.69$$

$$\text{Single Payment Present Worth Factor (SPPW)} = (1+i)^{-n}$$

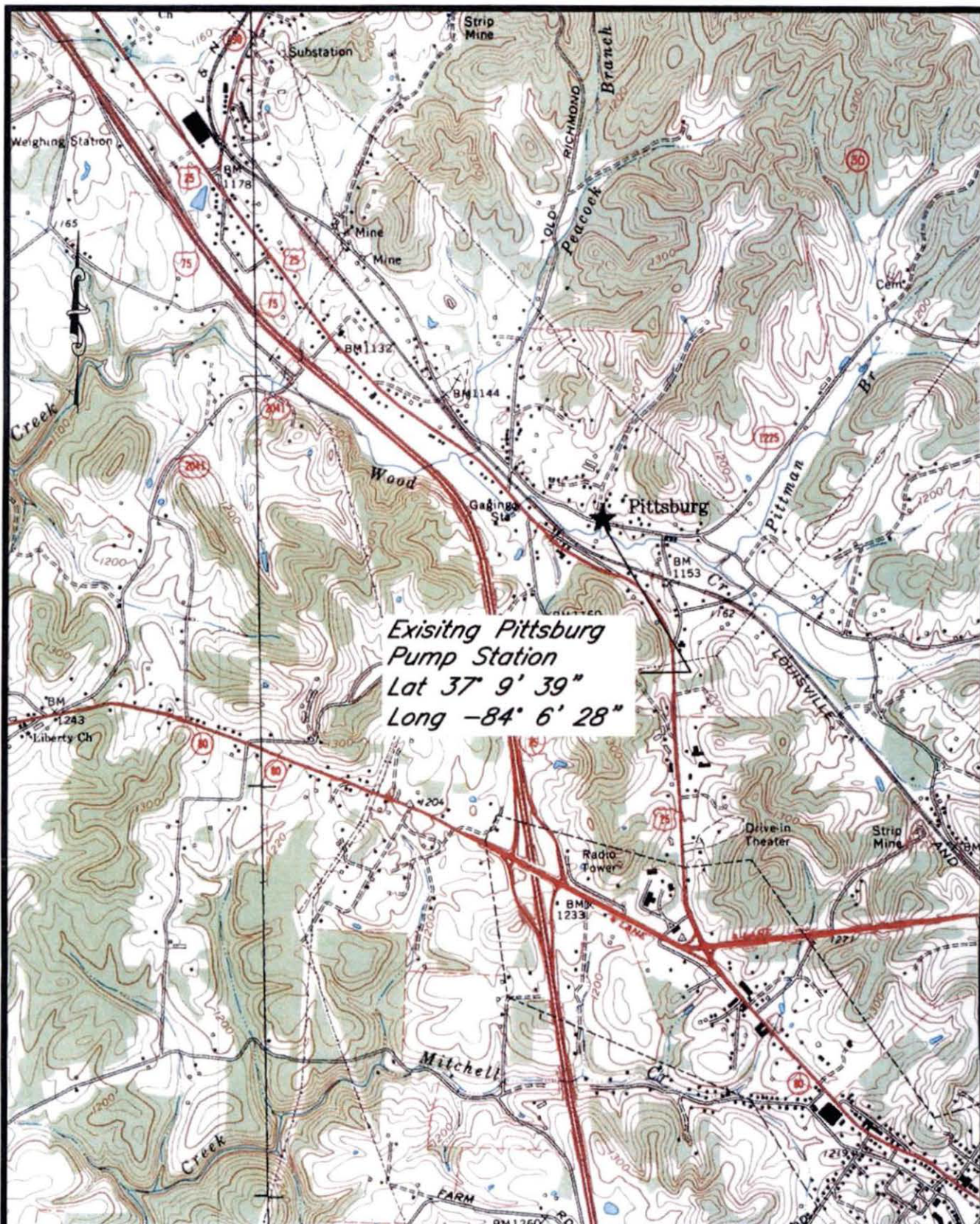
$$\text{Example SPPW} = (1+.012)^{-20} = 0.79$$

$$\text{Net Present Value} = \text{Capital} + (\text{USPW} * \text{Total O\&M}) - (\text{SPPW} * \text{Total Salvage Value})$$

Salvage Value; Existing Facilities – Straight Line Depreciation value from utility's financial statement

Salvage Value; Proposed Improvements – Straight Line Depreciation of construction cost from PER. Assumed life of 50 years, depreciated over 20 years

FIGURE 1



LONDON, KY QUADRANGLE



KENVIRONS, INC.
FRANKFORT, KENTUCKY

Project:
Checked By: EWB
Date: April 2016
Scale: 1"=2000'

WOOD CREEK WATER DISTRICT
EXISTING LIFT STATION SITE
LAUREL COUNTY, KENTUCKY

FIGURE 2

Wood Creek Water District Future Growth Analysis

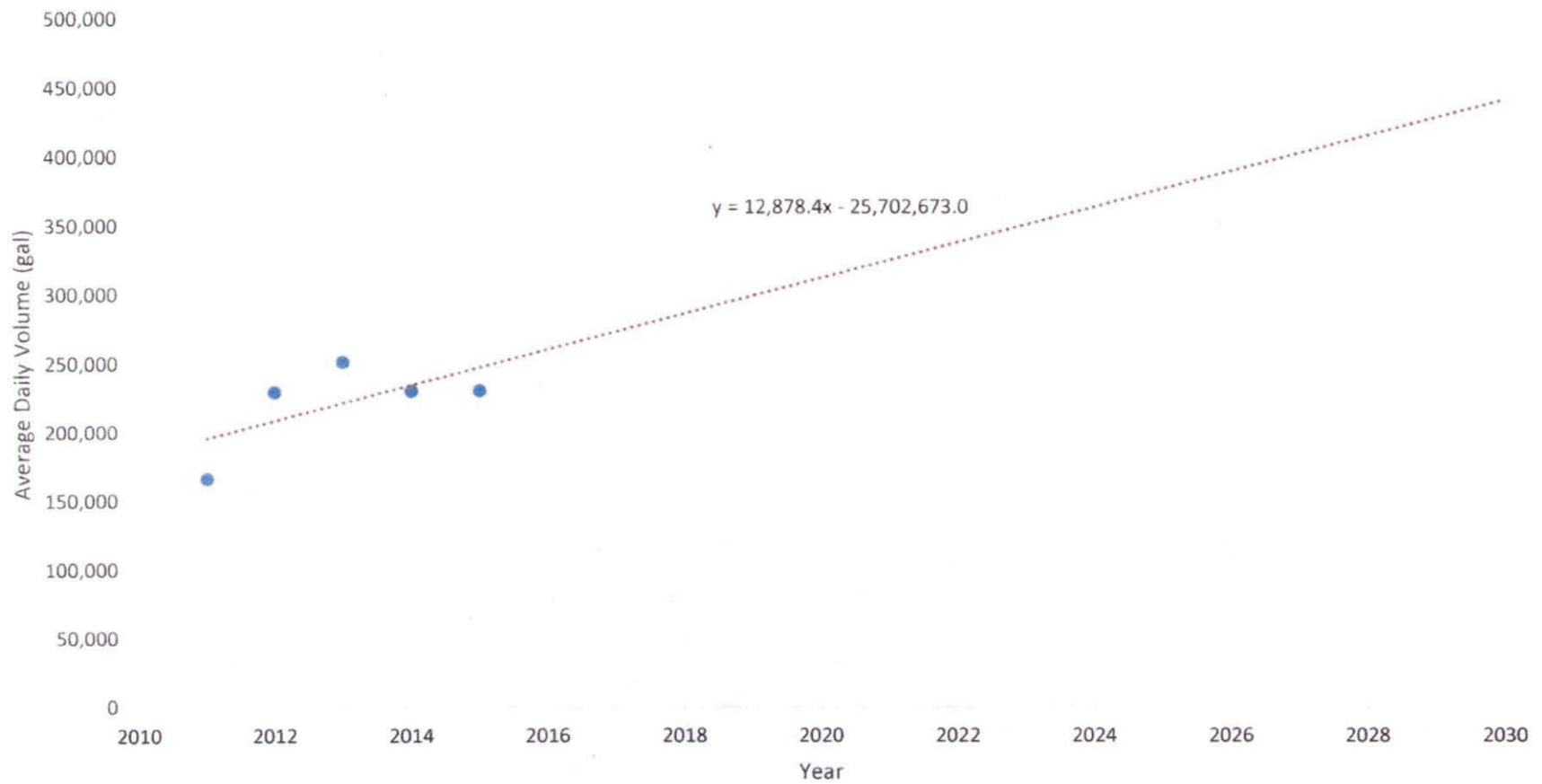
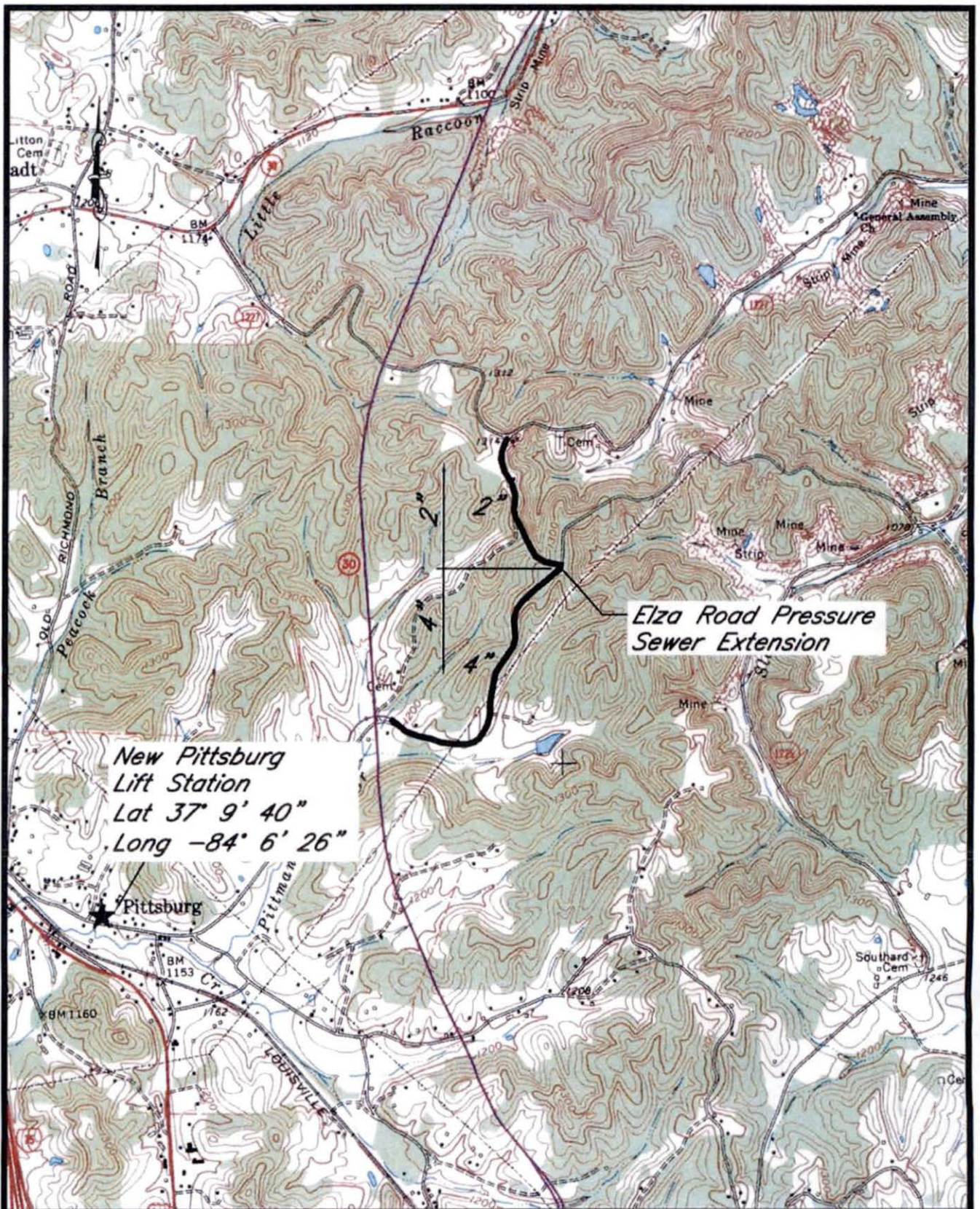


FIGURE 3



LONDON, KY QUADRANGLE

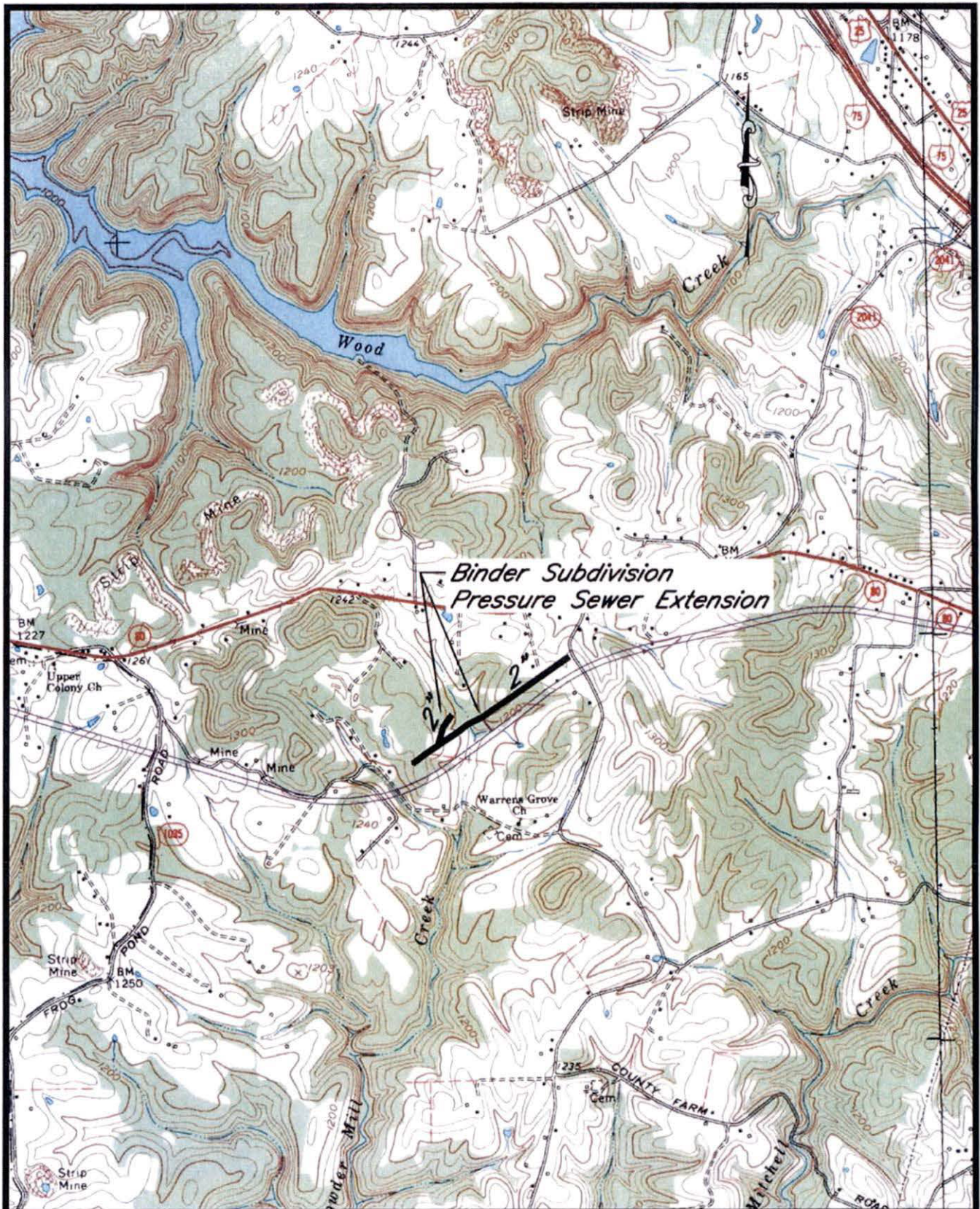


KENVIRONS, INC.
FRANKFORT, KENTUCKY

Project:
Checked By: EWB
Date: April 2016
Scale: 1"=2000'

WOOD CREEK WATER DISTRICT
ELZA ROAD: ALTERNATIVE #1
PRESSURE SEWER EXTENSION
LAUREL COUNTY, KENTUCKY

FIGURE 4



BERNSTADT, KY QUADRANGLE

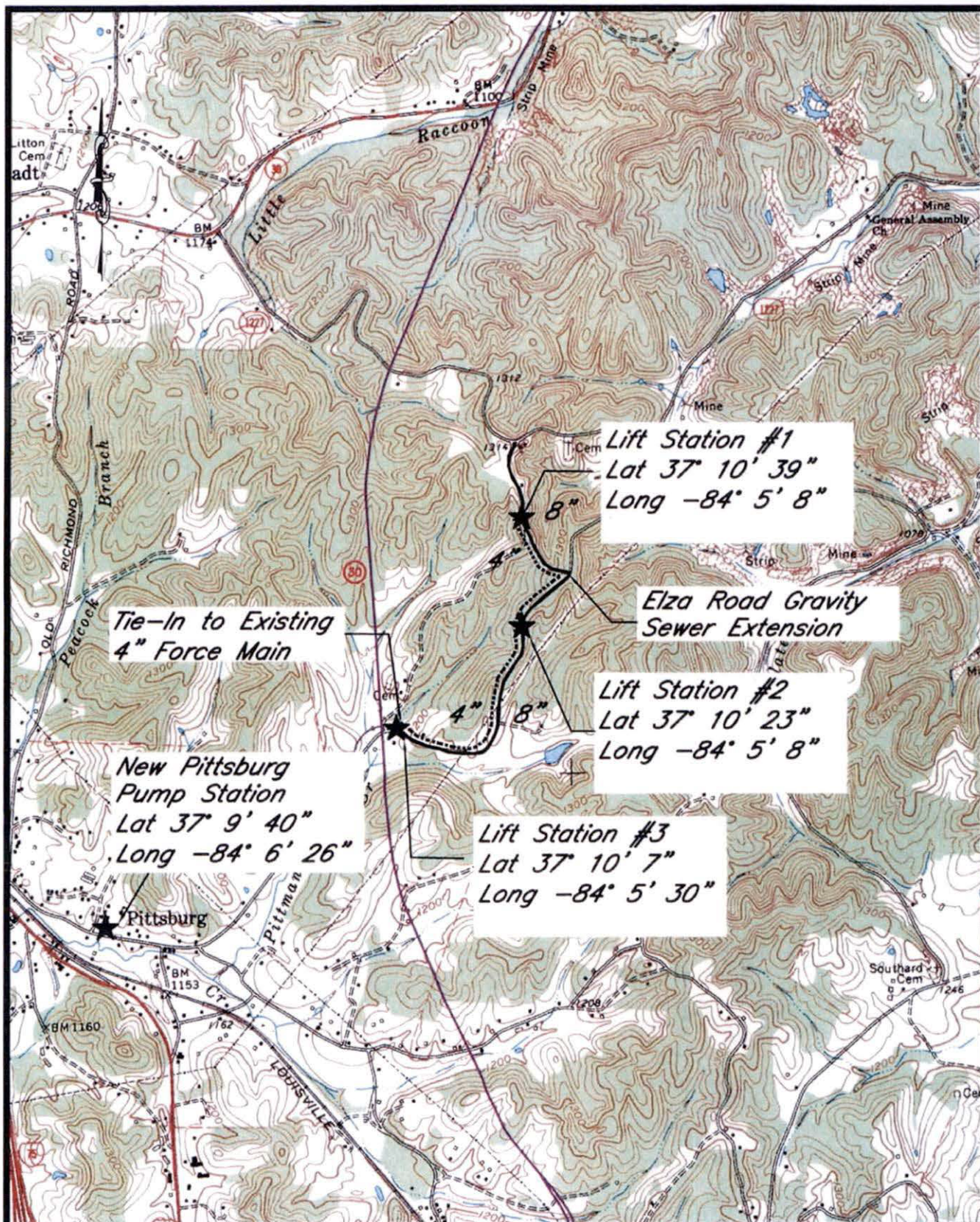


KENVIRONS, INC.
FRANKFORT, KENTUCKY

Project:
Checked By: EWB
Date: April 2016
Scale: 1"=2000'

WOOD CREEK WATER DISTRICT
BINDER SUBDIVISION: ALTERNATIVE #1
PRESSURE SEWER EXTENSION
LAUREL COUNTY, KENTUCKY

FIGURE 5



LONDON, KY QUADRANGLE



KENVIRONS, INC.
FRANKFORT, KENTUCKY

Project:
Checked By: EWB
Date: April 2016
Scale: 1"=2000'

WOOD CREEK WATER DISTRICT
ELZA ROAD: ALTERNATIVE #2
GRAVITY SEWER EXTENSION
LAUREL COUNTY, KENTUCKY

FIGURE 6



BERNSTADT, KY QUADRANGLE



KENVIRONS, INC.
FRANKFORT, KENTUCKY

Project:
Checked By: EWB
Date: April 2016
Scale: 1"=2000'

WOOD CREEK WATER DISTRICT
BINDER SUBDIVISION: ALTERNATIVE #2
GRAVITY SEWER EXTENSION
LAUREL COUNTY, KENTUCKY

FIGURE 7

Wood Creek Water District

Sewer Extension

Opinion of Probable Cost

June 28, 2016

Alternative #1: Pressure Sewer Extension-Elza Rd. and Binder Subdivision

Item No.	Description	Unit	Quantity	Unit Price	Item Price
1	4" PVC SDR-17 Force Main	LF	4,500	\$16.00	\$72,000.00
2	2" PVC SDR-17 Force Main	LF	5,600	\$14.00	\$78,400.00
3	Open Cut Encasement for 2" Pipe	LF	185	\$50.00	\$9,250.00
4	Bored Encasement for 2" Pipe	LF	60	\$60.00	\$3,600.00
5	Free Bore	LF	1,000	\$30.00	\$30,000.00
6	New Pittsburg Pump Station	LS	1	\$180,000.00	\$180,000.00
7	Portable Pump	EA	1	\$60,000.00	\$60,000.00
8	Individual Grinder Pumps	EA	300	\$1,600.00	\$480,000.00
9	1 1/2" Service Tubing	LF	3000	\$6.00	\$18,000.00
10	Pavement Replacement	LF	185	\$30.00	\$5,550.00
Total Construction Cost					\$936,800.00

Contingency	\$93,680.00
Engineering Design	\$83,750.00
Resident Inspection	\$53,680.00
Facilities Plan Upgrade	\$52,000.00
Environmental	\$20,000.00
Preliminary Engineering Report	\$10,000.00
Local Council	\$4,100.00
Bond Council	\$8,400.00
Land & Rights	\$5,000.00
Capitalized Interest	\$12,000.00

TOTAL PROJECT COST	\$1,279,410.00
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FIGURE 8

Wood Creek Water District

Sewer Extension

Opinion of Probable Cost

June 28, 2016

Alternative #2: Gravity Sewer Extension-Elza Rd. and Binder Subdivision

Item No.	Description	Unit	Quantity	Unit Price	Item Price
1	8" PVC SDR-35	LF	10,100	\$60.00	\$606,000.00
2	4" PVC SDR-17 Force Main	LF	8,500	\$16.00	\$136,000.00
3	Open Cut Encasement	LF	300	\$80.00	\$24,000.00
4	Bored Encasement	LF	100	\$100.00	\$10,000.00
5	Free Bore	LF	1,000	\$25.00	\$25,000.00
6	48" Dia. Manhole	EA	70	\$4,000.00	\$280,000.00
7	Cleanout-Gravity	EA	4	\$500.00	\$2,000.00
8	New Pittsburg Lift Station	EA	1	\$180,000.00	\$180,000.00
9	New Elza Rd. Lift Stations	EA	3	\$100,000.00	\$300,000.00
10	New Binder Subdivision Lift Station	EA	1	\$150,000.00	\$150,000.00
11	Portable Pump	EA	1	\$60,000.00	\$60,000.00
12	Individual Grinder Pumps	EA	300	\$1,600.00	\$480,000.00
13	1 1/2" Service Tubing	LF	3000	\$6.00	\$18,000.00
14	Customer Connections	EA	30	\$150.00	\$4,500.00
15	Pavement Replacement	LF	1000	\$30.00	\$30,000.00
Total Construction Cost					\$2,305,500.00

Contingency	\$230,550.00
Engineering Design	\$162,540.00
Resident Inspection	\$96,800.00
Facilities Plan Upgrade	\$52,000.00
Environmental	\$20,000.00
Preliminary Engineering Report	\$10,000.00
Local Council	\$5,675.00
Bond Council	\$12,825.00
Land & Rights	\$20,000.00
Capitalized Interest	\$25,000.00

TOTAL PROJECT COST	\$2,940,890.00
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ATTACHMENTS

**WOOD CREEK WATER DISTRICT
EXISTING OPERATING BUDGET
FOR YEAR ENDING 2015**

REVENUE REQUIREMENTS

2015

Operation & Maintenance Expenses

Purchased Water and Power	\$	26,056	
Administration and General	\$	10,684	
Sewer Maintenance and Treatment	\$	388,687	
			\$ 425,427.00

Debt Service

RD Annual Principal & Interest

Total Loan	\$	895,587
Interest Percentage		2.50%
Repayment Period		40 years

Annual Payment

\$	35,677	
		\$ 35,676.81

Debt Service Coverage, Reserve, & Service Fees

RD	\$	3,567.68	
			\$ 3,567.68

Other

Total Taxes Paid	\$	-	
Short-Term Assets	\$	202,500	
			\$ 202,500.00

TOTAL REVENUE REQUIREMENTS

\$ 667,171.49

UTILITY INCOME

Operating Income

Sewer Services	\$	748,706	
Tap on Fees	\$	71,253	
Other Operating Income	\$	11,569	
			\$ 831,527.97

Non-Operating Income

Interest on Deposits	\$	20	
Other, Non-Utility	\$	-	
			\$ 20.00

TOTAL UTILITY INCOME

\$ 831,547.97