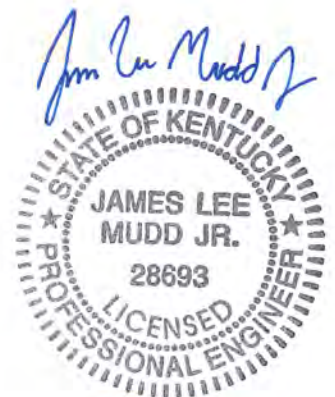


FINAL ENGINEERING REPORT

SOUTH LAUREL WATER SYSTEM IMPROVEMENTS

LAUREL COUNTY WATER DISTRICT NO. 2
LAUREL COUNTY, KENTUCKY

MARCH 2020



3-9-20



February 3, 2020

Mr. Roy Wayne Jenkins, Chairman
Laurel County Water District No. 2
P.O. Box 2598
London, KY 40743

Re: South Laurel Water System Improvements
Bid Opening Results and Recommendations

Dear Mr. Jenkins:

On January 31, 2020, bids were received by the Laurel County Water District No. 2 for the construction of various water system improvements, known collectively as the South Laurel Water System Improvements. The project includes the construction of various interconnections throughout the southern portion of the water system as required to abandon the remaining section of the 14-inch water main along the CSX Railroad. A new 500,000-gallon water storage tank in the Hopewell community is also included as part of the project. The project is separated into two (2) construction contracts as follows:

- Contract No. 1: Water Mains
- Contract No. 2: Hopewell Water Storage Tank

Considering Contract No. 1, four (4) bids were received, with the lowest being submitted by Akins Excavating Co., Inc. of Corbin, Kentucky for \$758,805.00. Considering Contract No. 2, two (2) bids were received, with the lowest being submitted by Phoenix Fabricators & Erectors, LLC of Avon, IN for \$1,412,666.00. A summarized tabulation of all bids received for each contract is attached for your reference.

As indicated in the attached Final Project Budget, summing the low bid from each construction contract results in a total construction cost of \$2,171,471, and a total project cost, including contingency, of \$2,700,000.00. Given that the current amount of available project funding is \$2,350,000.00, the resulting budget shortfall is \$350,000.00. However, based on the competitive nature of the bids received, and the necessity of the proposed improvements, we strongly recommend that the District consider acquiring the additional funds needed to proceed with the development of the project in full.



February 3, 2020
Page Two

U.S.D.A. Rural Development has indicated that they can likely provide the additional \$350,000.00 in needed project financing. However, a final determination relative to the nature of the financing will not be made until a formal request is submitted. It is recommended that the District seek an additional \$275,000 low-interest loan and a \$75,000 grant. This equates to a loan/grant ratio that is consistent with the original funding package. However, depending on the availability of grant funds, the full \$350,000 could be in the form of a loan.

Once an additional funding commitment is obtained, we recommend that the District proceed with contract awards to both Akins Excavating Co., Inc. and Phoenix Fabricators & Erectors, LLC for their full bid amounts.

Please be advised that acquiring the additional financing could be a fairly lengthy process and should begin immediately. A delay in action on the part of the District could result in an inability to award the contracts before the bids expire. Therefore, we recommend that you take action now to minimize the delay and ensure the realization of this much needed project.

All recommendations detailed herein are contingent upon approval from USDA Rural Development and the Kentucky Public Service Commission.

Should you have any questions or require any additional information, please advise.

Sincerely,

Lee Mudd, P.E.
Project Engineer

/jlm

Attachments

Cc: Clay McKnight
Area Specialist, USDA Rural Development
Anthony Hollinsworth
Program Director, USDA Rural Development
Julie Anderson
State Engineer, USDA Rural Development

MONARCH ENGINEERING, INC.

556 Carlton Drive

Lawrenceburg, KY 40342

Phone (502) 839-1310

Fax (502) 839-1373

BID TABULATIONS
LAUREL COUNTY WATER DISTRICT NO. 2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS
CONTRACT NO. 1
LAUREL COUNTY, KENTUCKY
BID DATE: JANUARY 31, 2020 @ 11:00 A.M. LOCAL TIME

Akins Excavating Company, Inc.*
182 Busy Lane
Corbin, KY 40701

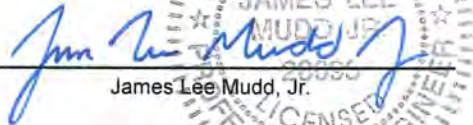
Clay Pipeline
70 Fox Hollow Road
Manchester, KY 40962

ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL COST	UNIT PRICE	TOTAL COST
BASE BID CONTRACT						
1	16-Inch HDPE DR-9 Water Line	100 LF	\$120.00	\$12,000.00	\$181.00	\$18,100.00
2	16-Inch HDPE DR-9 Water Line via Directional Bore	200 LF	132.00	26,400.00	294.00	58,800.00
3	12-Inch PVC SDR-17 Water Line	4,770 LF	30.00	143,100.00	31.80	151,686.00
4	12-Inch PVC SDR-21 R.J. Water Line	185 LF	44.00	8,140.00	46.40	8,584.00
5	10-Inch PVC SDR-17 Water Line	100 LF	25.00	2,500.00	35.00	3,500.00
6	8-Inch PVC SDR-17 Water Line	1,090 LF	21.00	22,890.00	21.00	22,890.00
7	8-Inch PVC SDR-17 R.J. Water Line	300 LF	32.00	9,600.00	30.35	9,105.00
8	6-Inch PVC SDR-17 Water Line	2,570 LF	16.00	41,120.00	17.00	43,690.00
9	6-Inch PVC SDR-17 I.B.R.J. Water Line	370 LF	22.00	8,140.00	23.20	8,584.00
10	4-Inch PVC SDR-17 Water Line	2,685 LF	12.00	32,220.00	12.50	33,562.50
11	3-Inch PVC SDR-17 Water Line	1,670 LF	9.50	15,865.00	9.65	16,115.50
12	2-Inch PVC SDR-17 Water Line	790 LF	8.50	6,715.00	8.75	6,912.50
13	Bore & Case for 12-Inch Water Line	100 LF	195.00	19,500.00	207.50	20,750.00
14	Bore & Case for 8-Inch Water Line	280 LF	170.00	47,600.00	157.70	44,156.00
15	Bore & Case for 6-Inch Water Line	365 LF	125.00	45,625.00	133.80	48,837.00
16	Bore & Case for 3-Inch Water Line	50 LF	120.00	6,000.00	107.50	5,375.00
17	Driveway Bore & Case for 12-Inch W.L.	670 LF	75.00	50,250.00	95.90	64,253.00
18	Driveway Bore & Case for 4-Inch W.L.	90 LF	43.00	3,870.00	52.60	4,734.00
BASE BID CONTRACT - Continued						

THE ABOVE IS A TRUE AND COMPLETE TABULATION OF BIDS RECEIVED AT 11:00 A.M. LOCAL TIME, FRIDAY, JANUARY 31, 2020 AT THE LAUREL COUNTY WATER DISTRICT NO. 2.

* DENOTES AN ARITHMETIC ERROR WAS MADE ON BASE BID, AMOUNT HAS BEEN CORRECTED TO REFLECT UNIT PRICE SUBMITTED.

BY:


 James Lee Mudd, Jr.
 LICENSED PROFESSIONAL ENGINEER

2-3-2020

Date

MONARCH ENGINEERING, INC.
 556 Carlton Drive
 Lawrenceburg, KY 40342
 Phone (502) 839-1310
 Fax (502) 839-1373

BID TABULATIONS
LAUREL COUNTY WATER DISTRICT NO. 2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS
CONTRACT NO. 1
LAUREL COUNTY, KENTUCKY
BID DATE: JANUARY 31, 2020 @ 11:00 A.M. LOCAL TIME

		Akins Excavating Company, Inc.*			Clay Pipeline	
		182 Busy Lane			70 Fox Hollow Road	
		Corbin, KY 40701			Manchester, KY 40962	
ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL COST	UNIT PRICE	TOTAL COST
	BASE BID CONTRACT - Continued					
19	Creek Crossing for 4-Inch Water Line	20 LF	\$70.00	\$1,400.00	\$48.80	\$976.00
20	Creek Crossing for 3-Inch Water Line	20 LF	70.00	1,400.00	50.00	1,000.00
21	Direct Connection	26 EA	1,750.00	45,500.00	1,290.00	33,540.00
22	Type II Connection	3 EA	2,535.00	7,605.00	1,830.00	5,490.00
23	16-Inch Butterfly Valve	2 EA	8,645.00	17,290.00	6,195.00	12,390.00
24	12-Inch Gate Valve	9 EA	3,360.00	30,240.00	3,165.00	28,485.00
25	10-Inch Gate Valve	1 EA	2,715.00	2,715.00	2,783.00	2,783.00
26	8-Inch Gate Valve	9 EA	2,200.00	19,800.00	1,929.00	17,361.00
27	6-Inch Gate Valve	5 EA	1,425.00	7,125.00	1,360.00	6,800.00
28	4-Inch Gate Valve	11 EA	1,135.00	12,485.00	1,186.00	13,046.00
29	3-Inch Gate Valve	2 EA	1,060.00	2,120.00	1,081.00	2,162.00
30	2-Inch Gate Valve	2 EA	895.00	1,790.00	842.00	1,684.00
31	3-Way Flush Hydrant Assembly	5 EA	5,850.00	* 29,250.00	5,545.00	27,725.00
32	Blowoff Assembly	2 EA	3,300.00	6,600.00	2,068.00	4,136.00
33	Meter Setting (Less Meter)	9 EA	1,265.00	11,385.00	1,070.00	9,630.00
34	Meter Reconnection	23 EA	630.00	14,490.00	425.00	9,775.00
35	Service Line Reconnection	9 EA	625.00	5,625.00	610.00	5,490.00
36	1-Inch PE Service Tubing	620 LF	10.00	6,200.00	12.65	7,843.00
37	3/4-Inch PE Service Tubing	1,025 LF	10.00	10,250.00	12.50	12,812.50
38	Exploration	120 HR	200.00	24,000.00	200.00	24,000.00
	TOTAL BASE BID			\$758,805.00		\$796,763.00

MONARCH ENGINEERING, INC.
 556 Carlton Drive
 Lawrenceburg, KY 40342
 Phone (502) 839-1310
 Fax (502) 839-1373

BID TABULATIONS
LAUREL COUNTY WATER DISTRICT NO. 2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS
CONTRACT NO. 1
LAUREL COUNTY, KENTUCKY
BID DATE: JANUARY 31, 2020 @ 11:00 A.M. LOCAL TIME

United Pipeline, Inc. 150 Hill Road Tompkinsville, KY 42167	Stotts Construction Co., Inc. P.O. Box 1689 Columbia, KY 42728
--	---

ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL COST	UNIT PRICE	TOTAL COST
	BASE BID CONTRACT					
1	16-Inch HDPE DR-9 Water Line	100 LF	\$222.00	\$22,200.00	\$140.00	\$14,000.00
2	16-Inch HDPE DR-9 Water Line via Directional Bore	200 LF	374.00	74,800.00	275.00	55,000.00
3	12-Inch PVC SDR-17 Water Line	4,770 LF	63.00	300,510.00	47.00	224,190.00
4	12-Inch PVC SDR-21 R.J. Water Line	185 LF	67.00	12,395.00	46.00	8,510.00
5	10-Inch PVC SDR-17 Water Line	100 LF	50.00	5,000.00	45.00	4,500.00
6	8-Inch PVC SDR-17 Water Line	1,090 LF	30.00	32,700.00	32.00	34,880.00
7	8-Inch PVC SDR-17 R.J. Water Line	300 LF	36.00	10,800.00	30.00	9,000.00
8	6-Inch PVC SDR-17 Water Line	2,570 LF	20.00	51,400.00	25.00	64,250.00
9	6-Inch PVC SDR-17 I.B.R.J. Water Line	370 LF	25.00	9,250.00	25.00	9,250.00
10	4-Inch PVC SDR-17 Water Line	2,685 LF	16.00	42,960.00	22.00	59,070.00
11	3-Inch PVC SDR-17 Water Line	1,670 LF	15.00	25,050.00	17.00	28,390.00
12	2-Inch PVC SDR-17 Water Line	790 LF	14.00	11,060.00	15.00	11,850.00
13	Bore & Case for 12-Inch Water Line	100 LF	293.00	29,300.00	250.00	25,000.00
14	Bore & Case for 8-Inch Water Line	280 LF	253.00	70,840.00	255.00	71,400.00
15	Bore & Case for 6-Inch Water Line	365 LF	224.00	81,760.00	350.00	127,750.00
16	Bore & Case for 3-Inch Water Line	50 LF	184.00	9,200.00	120.00	6,000.00
17	Driveway Bore & Case for 12-Inch W.L.	670 LF	138.00	92,460.00	200.00	134,000.00
18	Driveway Bore & Case for 4-Inch W.L.	90 LF	80.00	7,200.00	60.00	5,400.00
	BASE BID CONTRACT - Continued					

MONARCH ENGINEERING, INC.

556 Carlton Drive

Lawrenceburg, KY 40342

Phone (502) 839-1310

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BID TABULATIONS
LAUREL COUNTY WATER DISTRICT NO. 2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS
CONTRACT NO. 1
LAUREL COUNTY, KENTUCKY
BID DATE: JANUARY 31, 2020 @ 11:00 A.M. LOCAL TIME

			United Pipeline, Inc.		Stotts Construction Co., Inc.	
			150 Hill Road		P.O. Box 1689	
			Tompkinsville, KY 42167		Columbia, KY 42728	
ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL COST	UNIT PRICE	TOTAL COST
	BASE BID CONTRACT - Continued					
19	Creek Crossing for 4-Inch Water Line	20 LF	\$40.00	\$800.00	\$80.00	\$1,600.00
20	Creek Crossing for 3-Inch Water Line	20 LF	35.00	700.00	80.00	1,600.00
21	Direct Connection	26 EA	1,000.00	26,000.00	2,100.00	54,600.00
22	Type II Connection	3 EA	1,500.00	4,500.00	3,200.00	9,600.00
23	16-Inch Butterfly Valve	2 EA	10,000.00	20,000.00	7,000.00	14,000.00
24	12-Inch Gate Valve	9 EA	4,000.00	36,000.00	2,500.00	22,500.00
25	10-Inch Gate Valve	1 EA	3,600.00	3,600.00	2,800.00	2,800.00
26	8-Inch Gate Valve	9 EA	2,200.00	19,800.00	1,600.00	14,400.00
27	6-Inch Gate Valve	5 EA	1,800.00	9,000.00	1,200.00	6,000.00
28	4-Inch Gate Valve	11 EA	1,500.00	16,500.00	1,000.00	11,000.00
29	3-Inch Gate Valve	2 EA	1,700.00	3,400.00	950.00	1,900.00
30	2-Inch Gate Valve	2 EA	1,400.00	2,800.00	850.00	1,700.00
31	3-Way Flush Hydrant Assembly	5 EA	4,600.00	23,000.00	4,500.00	22,500.00
32	Blowoff Assembly	2 EA	2,700.00	5,400.00	2,500.00	5,000.00
33	Meter Setting (Less Meter)	9 EA	1,000.00	9,000.00	1,200.00	10,800.00
34	Meter Reconnection	23 EA	400.00	9,200.00	600.00	13,800.00
35	Service Line Reconnection	9 EA	200.00	1,800.00	400.00	3,600.00
36	1-Inch PE Service Tubing	620 LF	14.00	8,680.00	18.00	11,160.00
37	3/4-Inch PE Service Tubing	1,025 LF	10.00	10,250.00	18.00	18,450.00
38	Exploration	120 HR	55.00	6,600.00	100.00	12,000.00
	TOTAL BASE BID			\$1,105,915.00		\$1,131,450.00

MONARCH ENGINEERING, INC.
 556 Carlton Drive
 Lawrenceburg, KY 40342
 Phone (502) 839-1310
 Fax (502) 839-1373

BID TABULATIONS
LAUREL COUNTY WATER DISTRICT NO. 2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS
CONTRACT NO. 2 - HOPEWELL WATER STORAGE TANK
LAUREL COUNTY, KENTUCKY
BID DATE: JANUARY 31, 2020 @ 11:00 A.M. LOCAL TIME

ITEM NO.	DESCRIPTION	QUANTITY	Phoenix Fabricators, LLC 182 South County Rd. 900 East Avon, IN 46123		Caldwell Tanks, Inc. 4000 Tower Road Louisville, KY 40219	
			UNIT PRICE	TOTAL COST	UNIT PRICE	TOTAL COST
BASE BID CONTRACT						
1	Site Protection (Temporary Site Fencing)	1 LS	\$3,500.00	\$3,500.00	\$15,000.00	\$15,000.00
2	Erosion & Sedimentation Controls	1 LS	7,500.00	7,500.00	8,500.00	8,500.00
3	Site Preparation, Grading & Excavation	1 LS	42,300.00	42,300.00	55,000.00	55,000.00
4	500,000 Gallon Steel Multi-Column Elevated Water Storage Tank					
	4A) Foundation	1 LS	92,500.00	92,500.00	160,000.00	160,000.00
	4B) Welded Steel Reservoir & Support Structure	1 LS	767,866.00	767,866.00	700,000.00	700,000.00
	4C) Appurtenances & Accessories	1 LS	500.00	500.00	146,700.00	146,700.00
	4D) Electrical Lighting	1 LS	67,000.00	67,000.00	35,000.00	35,000.00
	4E) Coatings & Disinfection	1 LS	140,000.00	140,000.00	189,500.00	189,500.00
5	Yard Piping & Appurtenances	1 LS	133,700.00	133,700.00	95,300.00	95,300.00
6	Miscellaneous Site Improvements (Access Road, Site Drainage, Lined Ditches, etc.)	1 LS	60,000.00	60,000.00	65,000.00	65,000.00
7	Oak Ridge Tank Control Valve Vault Addition	1 LS	76,000.00	76,000.00	105,000.00	105,000.00
8	Final Site Restoration & Cleanup	1 LS	21,800.00	21,800.00	20,000.00	20,000.00
TOTAL BASE BID				\$1,412,666.00		\$1,595,000.00

THE ABOVE IS A TRUE AND COMPLETE TABULATION OF BIDS RECEIVED AT 11:00 A.M. LOCAL TIME, FRIDAY, JANUARY 31, 2020 AT THE LAUREL COUNTY WATER DISTRICT NO. 2.

BY: _____

James Lee Mudd, Jr.
 James Lee Mudd, Jr.

2-3-2020

Date



FINAL PROJECT BUDGET
LAUREL COUNTY WATER DISTRICT #2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS

JANUARY 2020

PROJECT COSTS

DEVELOPMENT

CONTRACT NO. 1 - 14-INCH RAILROAD WATER LINE ABANDONMENT	\$758,805
CONTRACT NO. 2 - HOPEWELL WATER STORAGE TANK	<u>1,412,666</u>
TOTAL DEVELOPMENT	2,171,471
CONTINGENCY	214,029
ENGINEERING DESIGN	144,000
CONSTRUCTION INSPECTION	87,000
PRELIMINARY ENGINEERING REPORT	10,000
ENVIRONMENTAL ASSESSMENT	7,500
GEOTECHNICAL INVESTIGATION	5,000
ADMINISTRATION	8,000
LEGAL	18,000
LAND & EASEMENT ACQUISITION	5,000
INTEREST	<u>30,000</u>
TOTAL PROJECT COSTS	\$2,700,000

PROJECT FUNDING

USDA RURAL DEVELOPMENT LOAN	\$1,850,000
USDA RURAL DEVELOPMENT GRANT	500,000
ADDITIONAL USDA RURAL DEVELOPMENT LOAN	275,000
ADDITIONAL USDA RURAL DEVELOPMENT GRANT	<u>75,000</u>
TOTAL PROJECT FUNDING	\$2,700,000



March 9, 2020

Mr. Roy Wayne Jenkins, Chairman
Laurel County Water District No. 2
P.O. Box 2598
London, KY 40743

Re: South Laurel Water System Improvements
Bid Opening Results and Recommendations

Dear Mr. Jenkins:

As a follow-up to my original letter dated February 3, 2020 outlining our recommendations relative to the above referenced project, I offer the following. As you may recall, on January 31, 2020, bids were received by the District for the construction of the project known collectively as the South Laurel Water System Improvements. Considering Contract No. 1, four (4) bids were received, with the lowest being submitted by Akins Excavating Co., Inc. of Corbin, Kentucky for \$758,805.00. Considering Contract No. 2, two (2) bids were received, with the lowest being submitted by Phoenix Fabricators & Erectors, LLC of Avon, IN for \$1,412,666.00.

As indicated in the original Final Project Budget, the total "as-bid" project cost is \$2,700,000.00. Given that the original amount of available project funding was \$2,350,000.00, the resulting budget shortfall was \$350,000.00. However, since that time additional funding in that amount has been acquired via additional loan funds from USDA Rural Development.

With adequate funding now in place, we unequivocally recommend that the District proceed with contract awards to both Akins Excavating Co., Inc. and Phoenix Fabricators & Erectors, LLC for their full bid amounts. A revised Final Project Budget based on this recommendation has been attached for your reference. This recommendation is contingent upon approval from USDA Rural Development and the Kentucky Public Service Commission.

Should you have any questions or require any additional information, please advise.

Sincerely,

Lee Mudd, P.E.
Project Engineer

/jlm

Cc: Clay McKnight - Area Specialist, USDA Rural Development
Julie Anderson - State Engineer, USDA Rural Development

**FINAL PROJECT BUDGET
LAUREL COUNTY WATER DISTRICT #2
SOUTH LAUREL WATER SYSTEM IMPROVEMENTS**

MARCH 2020

PROJECT COSTS

DEVELOPMENT

CONTRACT NO. 1 - 14-INCH RAILROAD WATER LINE ABANDONMENT	\$758,805
CONTRACT NO. 2 - HOPEWELL WATER STORAGE TANK	<u>1,412,666</u>
TOTAL DEVELOPMENT	2,171,471
CONTINGENCY	214,029
ENGINEERING DESIGN	144,000
CONSTRUCTION INSPECTION	87,000
PRELIMINARY ENGINEERING REPORT	10,000
ENVIRONMENTAL ASSESSMENT	7,500
GEOTECHNICAL INVESTIGATION	5,000
ADMINISTRATION	8,000
LEGAL	18,000
LAND & EASEMENT ACQUISITION	5,000
INTEREST	<u>30,000</u>
TOTAL PROJECT COSTS	\$2,700,000

PROJECT FUNDING

USDA RURAL DEVELOPMENT LOAN	\$1,850,000
USDA RURAL DEVELOPMENT GRANT	500,000
ADDITIONAL USDA RURAL DEVELOPMENT LOAN	<u>350,000</u>
TOTAL PROJECT FUNDING	\$2,700,000