



July 6, 2022

Hon. Kevin Neal – Judge Executive
Marshall County Fiscal Court
1101 Main Street
Benton, KY 42025

**Re: West Marshall / Oak Level Phase 1 Water System Expansion – North of KY 408
Engineering Services Proposal
Benton, Marshall County, KY**

Judge Neal:

Based upon recent meetings and discussions with you, City of Benton staff, and the Marshall County Fiscal Court (MCFC), it is our understanding that the MCFC has elected to proceed with this much needed, Phase 1 water system expansion project for the residents in western Marshall County. RIVERCREST Engineering (RIVERCREST) understands this project, located just west of Benton, will consist of the installation of approximately 54,600 linear feet of 6" & 8" SDR-21 PVC water mains, presumably within private utility easements and KYTC/County owned rights of way along the following routes:

- a) JB Copeland Road (KY 348 to Arant Road) – 7,200 l.f.
- b) Arant Road (JB Copeland to Breezeel School Road) – 2,600 l.f.
- c) KY 408 (Gatlin Road to Wadesboro Road) – 3,600 l.f.
- d) Gatlin Road (Wadesboro Road to KY 408) – 5,000 l.f.
- e) Jackson School Road (KY 408 to Breezeel School Road) – 4,500 l.f.
- f) Breezeel School Road & Phelps Road (Arant Road to Pleasant Valley) – 15,600 l.f.
- g) JB Copeland Road (Arant to Elva Road) – 2,100 l.f.
- h) Breezeel School Road (Oak Level Tank to Elva Road) – 1,600 l.f.
- i) Elva Road (Breezeel School Road to KY 348) – 9,300 l.f.
- j) Arant Road (JB Copeland to KY 348) – 3,100 l.f.

The intent of this water system expansion effort will be to extend public water service to residents along these routes, while improving water service with fire protection capabilities to customers in the area. RIVERCREST understands that this work will be performed during fiscal years 2022-25.

RIVERCREST's proposal for engineering services is contained in this letter. This proposal includes the scope of services and associated engineering services fees for the project, based on our current understanding of the project intent, and a general review of the corridors along the proposed routes, which are included as part of this proposal. RIVERCREST's proposal will address the following phases of the project,

RIVERCREST Engineering Incorporated, 7020 U.S. Highway 68 W, Paducah, Kentucky 42003

- a) Preliminary Evaluation
- b) Surveying & Preliminary Design
- c) Final Design & Standard Permitting
- d) Environmental Permitting
- e) Easement Development & Negotiations
- f) ARPA Fund Administration
- g) Procurement
- h) Construction Engineering & Support
- i) Construction Observation

I. Preliminary Evaluation & Corridor Selection Phase

RIVERCREST understands the importance of proper planning and coordination on the front end of capital improvements projects. As we begin work on these efforts, our team will prepare preliminary corridor mapping for critical field evaluations. These “boots on the ground” evaluations many times steer the course of the project and also aid in identifying major conflicts on the front end as opposed to later in the design processes.

Prior to initiating RIVERCREST's Surveying & Preliminary Design Phase, the RIVERCREST team will make BUD calls, and coordinate completion of a field review of each proposed project corridor. During these field reviews, RIVERCREST will coordinate with County/City staff to evaluate existing, marked utilities, available utility strips, and right-of-way features, for the selection of preliminary alignments/corridors. Following completion of this review, RIVERCREST staff will prepare preliminary alignment GIS mapping and conduct preliminary hydraulic analyses to gauge the limitations of the proposed efforts. At the completion of these efforts, we will coordinate with the MCFC prior to initiating the field survey phase of the project.

II. Surveying & Preliminary Design Phase

The RIVERCREST team will conduct a field survey of the project limits for each section.

The project's field survey phase will consist of:

- KY 811 BUD calls and coordination of field utility locates
- Establishment of project survey control
- Capturing of aerial imagery, using guided drone (UAV) technology to obtain up to date background information to aid in plan development
- Collection of survey data including, edges of pavement, visible property/right-of-way corners, existing utility information, and topographic data.
- Collection of large trees and landscape features that may be obscured in aeriels
- Collection of identifiable septic tank/field line locations and elevation data for area drainage ways
- GPS or conventional survey techniques will be utilized to set up on the established control monuments. Horizontal datum will be referenced to Kentucky State Plane South Zone coordinates for GIS compatibility and to correlate with survey datum. Vertical control will be referenced to NAVD 88 vertical datum.

The preliminary design process will consist of:

- Development of preliminary water line alignment drawings
- Evaluation of existing utilities – water lines and appurtenances, fiber optic / standard telephone and appurtenances, cable lines, gas main and service lines, and septic / drainage features.
- Evaluate property limits and ownership
- Develop and review existing surface models
- Develop plan/profile sheets associated with the proposed water mains
- Identify tie-in locations
- Conduct on site review with City/County staff
- Complete prelim design based on field locates, engineering judgment, and feedback from stakeholder representatives.
- Prepare preliminary estimate of construction costs.

RIVERCREST proposes to complete the preliminary design & survey phase within approximately 6 months following issuance of approval from the Fiscal Court.

III. Final Design & Permitting Phase

Upon receiving the Fiscal Court and City of Benton's approval of the preliminary designs, RIVERCREST will prepare design documents and final plans. Design drawings will potentially include the following:

- Cover Sheet
- General Notes & Location Map
- Project Quantities Sheet
- Water Line Plan & Profiles
- Construction Details

Plan sheets shall be developed at minimum 1"=50' scale.

RIVERCREST will utilize standard technical specifications as necessary for completion of KDOW's standard permit package development and submittal. In addition, this phase will include updating our hydraulic model to add the proposed alignments for completion of the Division of Water required demand and flushing analyses. Due to the nature of this project, we do anticipate the need to secure KYTC encroachment permits for work along/within the right of ways of the following routes:

- a) KY 2606 (Jackson School Road)
- b) KY 1949 Wadesboro Road
- c) KY 1490 (Elva Road)
- d) KY 408 (Oak Level Road)
- e) KY 348 (Symsonia Road)

These services are included.

IV. Environmental Permitting

At this time, it is our understanding that the Marshall County Fiscal Court plans to fund this project through Kentucky Infrastructure Authority – American Recovery Protection Act

(ARPA) grant monies. In compliance with funding requirements, RIVERCREST will prepare the required project checklists, contract documents, and permit applications for review and approval by the Division of Water. In addition, RIVERCREST will coordinate completion of the required KY eClearinghouse submittal, as well as the required submittals to the following cross-cutter agencies:

- a) KY Fish & Wildlife
- b) Army Corps of Engineers
- c) USDA – Natural Resources Conservation Service (NRCS)
- d) State Historic Preservation Office (SHPO)

Additional permitting services such as endangered species studies, critical habitat studies, and historical landmark or archaeologic studies have not been included in our proposed scope of work. These studies can be added to our scope later at the Fiscal Court's request, with our service fees being adjusted on an agreed lump sum or hourly T&M basis.

V. Utility Easement Development & Acquisition

RIVERCREST anticipates the need to prepare and secure utility easements for completion of the project's construction phase. Our anticipations are based upon site and available PVA data reviews along the proposed corridors. RIVERCREST proposes to prepare fifty (50) easement descriptions for review by the City of Benton's attorney as they will ultimately own and maintain the water line infrastructure following construction. RIVERCREST's surveying sub consultant will review and approve each description prior to the City's legal counsel preparing the proper easement acquisition documents. For the purposes of this proposal, RIVERCREST assumes that any required easements will be secured by the RIVERCREST team.

Once the final easement documents are obtained from legal counsel, RIVERCREST will provide three good faith efforts to negotiate the easements on behalf of the City. These efforts will include initial contact through mailing of the easement package, telephone contact (when possible), and up to two on site meetings with the property owner(s). If successful, we will forward the easement documents to the City for recording. If unsuccessful after three attempts, we will deliver the documents to the Fiscal Court, along with our discussion records and await further direction. For the purposes of this proposal, our easement negotiation scope excludes exercises beyond the three good faith attempts. In the event additional easement development and/or negotiations become necessary, the RIVERCREST team can conduct these activities in accordance with our established time & materials service rates.

VI. ARPA/KIA Fund Administration

In preparing this proposal, RIVERCREST Engineering, Inc. (RIVERCREST) has reviewed the KIA/ARPA Grant requirements for the processing and administration of Kentucky Infrastructure Authority American Recovery Protection Act (ARPA) funds. RIVERCREST has the capacity to assist the Fiscal Court with the administration of this grant.

The following summarizes RIVERCREST's proposed scope of services for assisting the MCFC with administering the grant through the Procurement and Construction phases of this project. For reference, we have separated the tasks by project phase:

PROCUREMENT PHASE

RIVERCREST will assist the Fiscal Court through the project bidding and award process as governed by the DOW and KIA for compliance with the ARPA grant. Administrative tasks are anticipated to include,

- Completion of the Project Review & Cost Summary Form
- Coordination and submittal of Affidavits of publication from local newspaper
- Completion and submittal of an as-bid budget
- Coordination with low bidder for completion and submittal of Disadvantaged Business Enterprise Participation Policy Forms
- Coordination with low bidder for completion and submittal of DBE subcontractor solicitation forms
- Coordination with low bidder for completion and submittal of DBE certifications/letters of intent
- Review of bid submittal package and submittal of Davis-Bacon Contract award information
- Coordination with City for completion and submittal of Clear Site Certificates

CONSTRUCTION PHASE

RIVERCREST assumes that the following services will be performed during a construction period of twelve (12) months:

- Monthly coordination with Contractor for submittal of all required, pay requests, DBE documentation, Davis-Bacon compliance certifications, certified payrolls, and progress reports.
- Preparation of monthly submittals to KIA, including meeting notes, progress reports, pay requests, loan reimbursement requests, Davis-Bacon certifications, and DBE documentation.
- Coordination of Quarterly reporting to KIA, including quarterly DBE submittals, progress reports, and project budget updates.
- Coordination of project closeouts and submittals of final documentation to KIA.

VII. Procurement

RIVERCREST will prepare a project manual complete with standard contract and procurement documents for the Fiscal Court's use in obtaining competitive construction bids for one (1) construction contract. RIVERCREST will work with the MCFC to develop one general contract, consisting of plans, specifications, wage rates, and documentation conforming to Kentucky Infrastructure Authority (KIA) and Division of Water funding requirements. RIVERCREST will prepare the advertisement for bids and forward to the local newspaper, local Association of General Contractors (AGC) office in Paducah, and surrounding plan rooms if requested. Our proposal assumes that the Fiscal Court will accept all direct expenses and invoices for advertising the projects. RIVERCREST will also coordinate with and upload the construction documents to River City Printing, LLC (in Paducah) for document reproduction and distribution to interested Bidders.

RIVERCREST will coordinate the bidding processes, respond to prospective bidder inquiries, issue addenda if necessary, open and tabulate bids received, make necessary

reference calls, prepare letters of award recommendation, and execution of contract documents.

It is estimated that RIVERCREST would participate in two (2) project meetings during this phase of work: one to review the contract plans and procurement packages with the County/City prior to soliciting bids, and the second being the bid opening.

VIII. Construction Engineering & Closeout

RIVERCREST's Project Manager will receive, review and comment on material and shop drawings submittals. Prior to initiating construction, survey crews will field stake the centerlines of the proposed water main alignments on approximately 100-foot intervals, and layout the proposed hydrants. We will also stake significant changes in horizontal alignment, bores, encasements, and tie-ins. Our proposal assumes that we will stake the project alignments once. All remedial or additional staking requested by the Contractor or Owner can be provided on a time & materials basis.

Upon completion of field staking, RIVERCREST's project manager will schedule and conduct a pre-construction meeting with the selected general contractor, associated subcontractors, engineering representatives, County, and City staff. Our project manager will review schedule, project communication roles, plans, details, and any additional information deemed useful.

RIVERCREST will provide construction engineering services including, coordination with MCFC & City of Benton staff, contractor(s), and the inspector on project activities and progress, periodic review of construction activities and structural layout, coordination and attendance at monthly progress meetings, processing of monthly pay requests and coordination of required Contractor submittals and payroll certifications, field walkthrough/punchlist inspection, KDOW certification, project closeout, and record drawing development and distribution services.

IX. Construction Observation

RIVERCREST estimates our construction representative will be on site approximately seven (7) hours per day during active construction activity. We have also allocated one (1) hour per day for preparation, travel, document preparation, and photographic logging of daily construction activity. We estimate our field personnel will be actively involved with the construction process, five (5) days per week for a project duration of 50 calendar weeks.

During the construction phase, our project representative will track daily pay item quantities, prepare detailed field book sketches for the water main installations, tie-ins, and service connections, log daily photos of the construction activities, assist with interpretation of the project plans and specifications, and coordinate with City of Benton operations staff and the Contractor for required system shut-downs, line testing, and tie-ins.

X. Proposed Fee

Our proposed lump sum engineering fees are divided into distinct work descriptions as noted below:

• Preliminary Evaluation & Alignment	\$28,000.00
• Prelim Design & Survey Coordination	\$100,100.00
• Final Design & Permitting	\$130,200.00
• Environmental Permitting	\$15,000.00
• Easement Development & Acquisition	\$46,800.00
• ARPA/KIA Fund Administration	\$32,300.00
• Procurement	\$8,600.00
• Construction Engineering & Closeout	\$90,300.00
• Construction Observation	\$170,000.00
• <u>Direct Expenses – Topo Survey & Reproduction</u>	<u>\$77,400.00</u>
Total Proposed Lump Sum Fee	\$698,700.00

Engineering scope of work or schedule adjustments requested by the Fiscal Court after the initial scope of work and schedule is approved and contracts are executed can certainly be accommodated, with our fees being adjusted on an agreed upon lump sum or hourly basis.

XI. Schedule

We estimate that the requested engineering services for the project, as described herein, can begin within 2 weeks of approval, and can be completed on the general timeframe as noted below:

Preliminary Evaluation	5 weeks
Preliminary Design & Surveying	20 weeks
Final Design/Easement Development	20 weeks
Environmental Permitting	8 weeks
Easement Negotiations	16 weeks
Procurement	6 weeks
Construction	52 weeks
Record Drawings & Closeout	8 weeks

This proposal assumes preliminary work will commence during the month of July 2022. Once you and the board have an opportunity to review, and if you are agreeable to starting the engineering work, please sign below and return a copy to us.

We appreciate this opportunity to provide our proposal for this project and look forward to working with you and your staff for another successful project. If you have any questions or if you would like to meet and discuss our proposal, please let us know and we will meet at your convenience.

Sincerely,

RIVERCREST ENGINEERING, INC.



Charles D. McCann II, P.E.
Project Manager

APPROVED BY:



Kevin Neal, Judge Executive
Marshall Co. Fiscal Court