

## ENGINEERING SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of Nov. 15, 2018, between the **LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT**, an urban county government of the Commonwealth of Kentucky pursuant to KRS Chapter 67A (“**OWNER**”) and Strand Associates, Inc. with offices located at 1525 Bull Lea Road, Suite 100, Lexington, KY 40511 (“**CONSULTANT**”). **OWNER** intends to proceed with the Engineering Services for Investigation/Design Services for Town Branch WWTP Secondary Digester Complex Improvements as described in the attached **EXHIBIT A**, Scope of Engineering Services and Related Matters RFP # 26-2018 (the “**PROJECT**”). The **CONSULTANT** shall perform professional engineering services and deliverables as described in **EXHIBIT A** which include customary master planning, civil, geotechnical, electrical, mechanical, structural, programming, water quality and sanitary engineering services as related to providing the deliverables specific to this agreement—that will assist the **OWNER** in successfully implementing the **PROJECT** and complying with any requirements which are related to the Consent Decree entered in a case styled *United States & Commonwealth of Kentucky v. Lexington Fayette Urban County Government*, United States District Court for the Eastern District of Kentucky, Civil Action No. 5:06-cv-386-KSF (the “**CONSENT DECREE**”). The services are hereinafter referred to as the **PROJECT**. The primary goal of the **PROJECT** is to provide the **OWNER** with the technical support necessary to successfully meet the RMP Implementation Plan-WWTP Reliability Upgrade Town Branch WWTP-11 Secondary Digesters/Sludge Holding obligations and deadlines of the CONSENT DECREE. **OWNER** and **CONSULTANT** in consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by **CONSULTANT** and the payment for those services by **OWNER** as set forth below.

**CONSULTANT** shall provide professional consulting services for **OWNER** in all phases of the **PROJECT** to which this Agreement applies, serve as **OWNER'S** professional engineering representative for the **PROJECT** as set forth below and shall give professional consultation and advice to **OWNER** during the performance of services hereunder.

### SECTION 1 - BASIC SERVICES OF CONSULTANT

#### **1.1. General**

**CONSULTANT** shall perform professional services as hereinafter stated that include customary civil, geotechnical, structural, mechanical, electrical and sanitary engineering services incidental thereto.

#### **1.2. Incorporated Documents**

The following documents are incorporated by reference as part of this Agreement:

1. The **CONSENT DECREE**, as may be amended, including all appendices.
2. **EXHIBIT A** – Scope of Engineering Services and Related Matters RFP #26 (Including Addendums).
3. **EXHIBIT B** – Certificate of Insurance and Evidence of Insurability.

4. **EXHIBIT C** – Proposal of Engineering Services and Related Matters (the **CONSULTANT**'s response to RFP #26).
5. ~~**EXHIBIT D** – Further Description of Basic Engineering Services and Related Matters.~~

To the extent of any conflict among the provisions of these documents and/or this Agreement, the provisions of this Agreement shall control, followed by the provisions of **EXHIBIT A**, then **EXHIBIT D**, and then **EXHIBIT C**.

### 1.3 Project Phase

A complete description of the duties and responsibilities of the **CONSULTANT** are as indicated in **EXHIBIT A**, Scope of Engineering Services and Related Matters RFP #26, **EXHIBIT C** Proposal of Engineering Services and Related Matters, and **Exhibit D** Further Description of Basic Engineering Services and Related Matters. After written authorization to proceed from the **OWNER**, **CONSULTANT** shall:

- 1.3.1. Notify the **OWNER** in writing of its authorized representative who shall act as Project Engineer and liaison representative between the **CONSULTANT** and the **OWNER**. **OWNER** has the right to approve the Project Engineer, or any change thereto, which approval shall not be unreasonably withheld.
- 1.3.2. The **CONSULTANT** **must perform all duties necessary to fully complete the deliverables as further described in attached EXHIBIT A**, Scope of Engineering Services and Related Matters RFP #26, attached **EXHIBIT C**, Proposal of Engineering Services and Related Matters, ~~and attached **EXHIBIT D** Further Description of Basic Engineering Services and Related Matters~~ **unless otherwise agreed to in writing by the parties.**
- 1.3.3. The **CONSULTANT** shall provide written documentation of all meetings and be responsible for incorporating all comments and changes resulting therefrom in final work product.
- 1.3.4. The **CONSULTANT** shall submit five (5) copies (hardcover) of all initial draft final work products for this **PROJECT** unless otherwise described in Exhibit A. The copies of the initial draft final reports are submitted for review and comment by the **OWNER**, and should be presented in person to the **OWNER**.
- 1.3.5. After the **OWNER'S** detailed review, the **CONSULTANT** will revise the initial draft final for all work products for this **PROJECT**, and the **CONSULTANT** shall submit five (5) copies (hardcover) unless otherwise described in Exhibit A. One electronic copy of the all work products for this **PROJECT**, including all appendices, shall be provided and prepared in such a manner that it can readily be converted to a quick-link accessible form for the **OWNER'S** Website. The **OWNER** shall have ten (10) business days within which to accept or deny each such final draft. If it is denied, the **OWNER** shall provide a detailed explanation in writing for the basis of such denial. Once the **OWNER** accepts the draft as final, a total of ten (10) final copies (hardcover) are required in addition to an electronic copy unless otherwise described in Exhibit A.
- 1.3.6. Immediately notify **OWNER** of any delay in the delivery of a work product or deliverable, regardless of cause. Give written notice to **OWNER** within five (5)

business days whenever **CONSULTANT** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of Contractor(s).

## **SECTION 2 - EXTRA WORK BY CONSULTANT**

- 2.1. The **OWNER** may desire to have the **CONSULTANT** perform work or render services in connection with this **PROJECT** other than provided by the expressed intent of this Agreement. Such work shall be considered as Extra Work, subject to a change order, supplemental to this Agreement, setting forth the character and scope thereof and the compensation therefore. Work under such change order shall not proceed until the **OWNER** gives written authorization. Should the **OWNER** find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the **CONSULTANT** shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as Extra Work and shall be paid as such.
- 2.2. All Extra Work is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

## **SECTION 3 - OWNER'S RESPONSIBILITIES**

### **OWNER shall:**

- 3.1. Provide criteria and information as to **OWNER'S** requirements for the **PROJECT**, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- 3.2. Assist **CONSULTANT** by placing at his disposal available information pertinent to the Project.
- 3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **CONSULTANT**, and provide written approval or disapproval thereof within a reasonable time so as not to delay the services of **CONSULTANT**.
- 3.4. Designate in writing a person to act as **OWNER'S** representative agent with respect to the services to be rendered under this Agreement (see Section 8.1.1.). Such person shall have complete authority to transmit instructions, receive information, interpret, and define **OWNER'S** policies and decisions with respect to materials, equipment, elements, and systems pertinent to **CONSULTANT'S** services.
- 3.5. Give written notice to **CONSULTANT** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of **CONSULTANT**.
- 3.6. Furnish or direct **CONSULTANT** to provide, Extra Work as stipulated in Section Two (2) of this Agreement or other services as required.

## **SECTION 4 - PERIOD OF SERVICES**

- 4.1. Time is of the essence in the performance of this Agreement. **CONSULTANT** is aware that the **OWNER** is subject to penalties for non-compliance with the **CONSENT DECREE** deadlines. See attached **EXHIBIT A** for the overall current project schedule.

- 4.2. The provisions of this Section Four (4) and the various rates of compensation for **CONSULTANT'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the **PROJECT** through completion.
- 4.3. If a delay results from the acts of **OWNER** or another entity that is required to permit or approve the work or services, an extension of time for such delay will be considered by **OWNER**.
- 4.3.1. If the above type of delay occurs and **CONSULTANT** wants an extension of time, it must, within ten (10) days from the date of the delay, apply in writing to **OWNER** for an extension of time for a reasonable period, which must be agreed upon by **OWNER**.
- 4.3.2. If the extension of time is approved by **OWNER**, the **PROJECT** schedule shall be revised to reflect the extension. Such extension of time to the completion date shall in no way be construed to operate as a waiver on the part of **OWNER** of any of its other rights in the Agreement.
- 4.3.3. If the above type of delay would prevent complete performance of the **PROJECT** within sixty (60) days of the time specified therein, **OWNER** shall have the option of cancelling the **PROJECT** or otherwise adjusting the scope of the services or work.
- 4.3.4. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 under "DISPUTES" of this Agreement shall apply.
- 4.4. If delays result solely by reason of acts of the **CONSULTANT**, the **CONSULTANT** shall be held liable for any financial penalties incurred by the **OWNER** as a result of the delay, **including but not limited to those assessed pursuant to the CONSENT DECREE**. Section 6.5 of this Agreement (**Disputes**), shall apply in the event the parties cannot mutually agree upon the cause(s) associated with delays in completing project deliverables. The **CONSULTANT** must immediately notify the **OWNER** in the event of such delay, and provide the **OWNER** a written action plan within five (5) business days on how it will attempt to resolve the delay.

## **SECTION 5 - PAYMENTS TO CONSULTANT**

### **5.1. Methods of Payment for Services of CONSULTANT.**

#### **5.1.1. For Basic Services**

**OWNER** shall pay **CONSULTANT** a lump sum amount not to exceed \$159,000.00 As defined in Exhibit C.

#### **5.1.2. For Extra Work**

Extra Work shall be paid for by the **OWNER** on the basis of a fixed fee, the amount of which shall be determined by negotiation. The **OWNER** shall have the right to negotiate alternate methods of payment for Extra Work if the **OWNER** determines that the fixed fee basis is not feasible. In the event the **OWNER** and the **CONSULTANT** are unable to agree upon the amount of payment for Extra

Work, then the amount of such payment shall be determined pursuant to Section 6.5 (Disputes).

**5.2. Times of Payment**

**5.2.1** CONSULTANT shall submit to OWNER detailed monthly statements for Basic Services and Extra Work rendered. The Statements will be based upon CONSULTANT'S estimate of the proportion of the total services actually completed at the time of billing. OWNER shall respond to CONSULTANT'S monthly statements within thirty (30) days, either denying payment or making payment.

**5.3. Other Provisions Concerning Payments**

**5.3.1.** In the event the Agreement is terminated by the OWNER without fault on the part of the CONSULTANT, the CONSULTANT shall be paid for the work performed or services rendered for which it has not already been paid in an amount bearing the same ratio to the total Agreement fee as the amount of work completed or partially completed and delivered to the OWNER is to the total amount of work provided for herein, as determined by mutual agreement between the OWNER and the CONSULTANT.

**5.3.2.** In the event the services of the CONSULTANT are terminated by the OWNER for fault on the part of the CONSULTANT, the CONSULTANT shall be paid reasonable value of the work performed or services rendered and delivered for which it has not already been paid, and the amount to be paid shall be determined by the OWNER.

**SECTION 6 - GENERAL CONSIDERATIONS**

**6.1. Termination**

**6.1.1.** CONSULTANT may only terminate this Agreement due to OWNER'S material breach of the terms hereof which breach causes CONSULTANT to be unable to perform its duties and responsibilities under this Agreement and upon forty-five (45) days written advance notice to OWNER.

**6.1.2.** The OWNER may terminate this Agreement for cause upon seven (7) business days written advance notice to the CONSULTANT. The OWNER reserves the right to terminate the Agreement for any reason whatsoever, with or without cause, at any time upon thirty (30) days written advance notice to the CONSULTANT.

**6.2. Ownership and Reuse of Documents**

All documents, including raw data, reports, drawings and specifications, prepared by the CONSULTANT pursuant to this Agreement shall be delivered to and become the property of the

**OWNER.** The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **CONSULTANT**.

**6.3. Legal Responsibilities and Legal Relations**

- 6.3.1.** The **CONSULTANT** shall familiarize itself with and shall at all times comply with the **CONSENT DECREE** and all federal, state, and local laws, ordinances, and regulations that in any manner affect the services of this Agreement.
- 6.3.2.** In performing the services hereunder, the **CONSULTANT** and its consultants, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **CONSULTANT** shall be acting as an independent contractor. The **CONSULTANT** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any claim, demand or application to or for any right or privilege applicable to an officer or employee of **OWNER**. The **CONSULTANT** shall be solely responsible for any claims for wages or compensation by **CONSULTANT'S** employees, agents and representatives, including consultants, and shall save and hold **OWNER** harmless therefrom.
- 6.3.3.** The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, and that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County, Kentucky. The parties further agree that Kentucky law shall apply with respect to the interpretation of any provision of this Agreement.

**6.4. Successors and Assigns**

- 6.4.1.** **CONSULTANT** binds itself and its partners, successors, assigns and legal representatives to this Agreement. **CONSULTANT** shall not assign any interest in this Agreement without prior written consent of **OWNER**. **OWNER'S** consent shall not relieve the **CONSULTANT** of any responsibility for compliance with the provisions of this Agreement.
- 6.4.2.** **In no event shall the CONSULTANT subcontract more than fifty percent (50%) of the work, based upon dollar value of the work.**
- 6.4.3.** Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **CONSULTANT**.

**6.5. Disputes**

Except as otherwise provided in this Agreement, any dispute hereunder may be resolved by agreement of the **OWNER'S** Agent (Section 8.1.1) and the **CONSULTANT**. In the absence of such an agreement, the dispute shall be submitted to the **OWNER'S** Commissioner, Department of Environmental Quality, whose decision shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary, or so grossly

erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **CONSULTANT** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.

#### **6.6. Accuracy of Consultant's Work**

**CONSULTANT** shall be required to perform this Agreement in accordance with the degree of ordinary and reasonable skill and care usually exercised by professional engineers prevailing at the time, place and under similar conditions as the services hereunder are rendered. **CONSULTANT** shall be responsible for the accuracy of all work, even though raw data, reports, Drawings and Specifications have been accepted by **OWNER**, and it shall make any necessary revisions or corrections resulting from its errors and/or omissions for no additional compensation. By submission of reports, soils and subsurface information, quantities estimates, calculations and Drawings and Specifications to **OWNER**, **CONSULTANT** has made an incontrovertible representation that the information is accurate within the appropriate standard of skill and care. Failure on the part of **CONSULTANT** to provide the expected level of accuracy may be grounds for **OWNER** to terminate this Agreement

#### **6.7. Security Clause**

The **CONSULTANT** certifies that he shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization without prior approval of the **OWNER** unless otherwise required by law

#### **6.8. Access to Records**

The **CONSULTANT** and its sub-consultants shall maintain all books, documents, papers, and accounting records, and make such materials available at their respective offices at all reasonable times during the Agreement period and for three (3) years from the date of final payment under the Agreement for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may be grounds for the **OWNER** to disqualify the **CONSULTANT** from consideration for future consultant engineering Agreements.

#### **6.9. Risk Management Provisions, Insurance and Indemnification**

##### **6.9.1. DEFINITIONS**

The **CONSULTANT** understands and agrees that the Risk Management Provisions of this Agreement define the responsibilities of the **CONSULTANT** to the **OWNER**.

As used in these Risk Management Provisions, the terms "**CONSULTANT**" and "**OWNER**" shall be defined as follows:

- a. **CONSULTANT** means the consultant and its employees, agents, servants, owners, principals, licensees, assigns and subcontractors of any tier.

- e. These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- f. **OWNER** is a political subdivision of the Commonwealth of Kentucky. **CONSULTANT** acknowledges and agrees that **OWNER** is unable to provide indemnity or otherwise save, hold harmless, or defend the **CONSULTANT** in any manner.

**6.9.3. DAMAGES RELATED TO NONPERFORMANCE OR DELAY BY CONSULTANT**

In the event that **CONSULTANT'S** delay or other nonperformance of its obligations hereunder results in the imposition of penalties against the **OWNER** pursuant to the **CONSENT DECREE**, or the **OWNER** otherwise suffers damage as a result of such delay or nonperformance, **CONSULTANT** shall be solely liable to **OWNER** for any and all such damages, including any costs and attorney's fees.

**6.9.4. FINANCIAL RESPONSIBILITY**

The **CONSULTANT** understands and agrees that the **CONSULTANT** shall, prior to final acceptance of the **CONSULTANT'S** proposal and the commencement of any work; demonstrate the ability to assure compliance with the Indemnity Agreement and other provisions of this Agreement.

**6.9.5. INSURANCE REQUIREMENTS**

**6.9.5.1. Required Insurance Coverage**

**CONSULTANT** shall procure and maintain for the duration of this Agreement the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to **OWNER** in order to protect **OWNER** against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by **CONSULTANT**. The cost of such insurance shall be included in any proposal:

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Professional Liability	\$1 million per occurrence,



#### **6.9.5.2. Renewals**

After insurance has been approved by **OWNER**, evidence of renewal of an expiring policy must be submitted to **OWNER**, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

#### **6.9.5.3. Right to Review, Audit and Inspect**

**CONSULTANT** understands and agrees that **OWNER** may review, audit and inspect any and all of **CONSULTANT'S** records and operations to insure compliance with these Insurance Requirements.

#### **6.9.6. SAFETY AND LOSS CONTROL**

**CONSULTANT** shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and **OWNER**.

#### **6.9.7. DEFINITION OF DEFAULT**

**CONSULTANT** understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default under this Agreement. **CONSULTANT** also agrees that **OWNER** may elect as its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging **CONSULTANT** for any such insurance premiums purchased, or suspending or terminating this Agreement.

### **SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY**

During the performance of this Agreement, the **CONSULTANT** agrees as follows:

- 7.1.** The **CONSULTANT** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age, or handicap. The **CONSULTANT** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age, or handicap. Such action shall include, but not be limited to the following: employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeships. The **CONSULTANT** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.
- 7.2.** The **CONSULTANT** will, in all solicitations or advertisements for employees placed by or on behalf of the **CONSULTANT**, state that all qualified applicants will receive

consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

## **SECTION 8 - SPECIAL PROVISIONS, EXHIBITS, AND SCHEDULES**

- 8.1.** This Agreement is subject to the following provisions.
- 8.1.1.** Pursuant to subparagraph 3.4 of this Agreement, **OWNER** has assigned Charles H. Martin, P.E., Director of the Division of Water Quality (the "**OWNER'S** Agent"), as the authorized agent of **OWNER**, to monitor, direct and review the performance of work of the **CONSULTANT**. Documents, data, reports, and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S** Agent or his designee. Questions by the **CONSULTANT** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S** Agent or his designee. The **CONSULTANT** shall look only to the **OWNER'S** Agent or his designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **CONSULTANT** within thirty (30) days.
- 8.2.** This Agreement, together with the Incorporated Documents (Section 1.2) constitutes the entire Agreement between **OWNER** and **CONSULTANT** and supersedes all prior written or oral understandings. This Agreement and **EXHIBITS A, B, C and D** and any related schedules or documents may only be amended, supplemented, modified or canceled by a duly executed written instrument.
- 8.3. NO THIRD PARTY RIGHTS.** This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **CONSULTANT**.
- 8.4 UNENFORCEABLE TERMS/SURVIVABILITY.** If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.
- 8.5. NON-WAIVER.** The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

**OWNER:**  
**LEXINGTON-FAYETTE URBAN**  
**COUNTY GOVERNMENT**

**CONSULTANT:**  
Strand Associates, Inc.

BY: *Jim Gray*  
JIM GRAY, MAYOR

BY: *Matthew Stiehl*

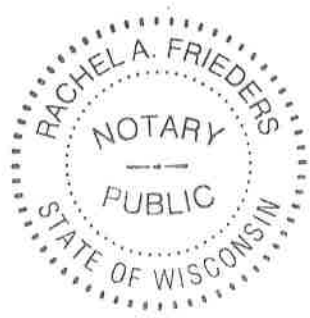
ATTEST: *[Signature]*  
URBAN COUNTY COUNCIL CLERK

STATE OF WISCONSIN )  
~~COMMONWEALTH OF KENTUCKY~~ )  
COUNTY OF ~~FAYETTE~~ DANE )

The foregoing Agreement was subscribed, sworn to and acknowledged before me by Matthew S. Richards, as the duly authorized representative for and on behalf of Strand Associates, Inc., on this the 21st day of December, 2018.

My commission expires: March 21, 2021.

*Rachula Frieders*  
NOTARY PUBLIC



**EXHIBIT A**

**Scope of Engineering  
Services and Related Matters**

**RFP #26**

**Investigation / Design Services for Town Branch WWTP  
Secondary Digester Complex Improvements**

**Lexington – Fayette Urban County Government (LFUCG) Division of Water Quality**

The Lexington-Fayette Urban County Government is accepting proposals from interested consulting engineering firms for the Investigation / Design Services for Town Branch Wastewater Treatment Plant (WWTP) Secondary Digester Complex (SDC) Improvements.

**1. General Project Description**

The CONSULTANT shall perform professional services as hereinafter stated which shall include but is not limited to customary civil, structural, mechanical, electrical engineering, and programming services as related to the Investigation / Design for Town Branch WWTP SDC Improvements.

Per the Group Two Sanitary Sewer System and WWTP Remedial Measures Plan, the intent of the SDC Improvements is as follows:

1. Complete NFPA 820 compliance study with suggested modifications if necessary
2. Replace Motor Control Center (MCC) that has surpassed its useful life therefore increasing reliability and lowering operating cost by improving efficiency.
3. Repair building deficiencies to ensure continued reliable operation
  - a. Repair exterior façade (spalling brick)
  - b. New roof
  - c. Replace exterior concrete stairs (between sidestream tank & secondary digester tank #1)
  - d. Replace windows
  - e. Replace doors
  - f. Replace interior lighting with LED fixtures
4. Install new service line, valves and control sensors serving secondary digesters and mixing tanks from sludge withdrawal pump
5. Coordinate with the manufacturer of the floating digester tank tops (Geomembrane Technologies Inc.) to inspect the units, make any repairs or parts replacements needed and replace retention ropes
6. Install new heating system in Secondary Digester Control Building
7. Identify abandon process piping, controls and equipment for removal

Construction of the Secondary Digester Complex Improvements must be complete by December 31, 2020.

Funding for this project is 100% sewer fund revenue, no federal fund involvement is expected.

## 2. Scope of Work: SDC Improvements

The SDC Improvements will evaluate the most efficient way to replace equipment that has surpassed its useful life, repair base building deficiencies and increase reliability while lowering operating cost by improving efficiency. The project must be completed by **December 31, 2020**.

### A. Task 1: Existing WAS Process Review

- (1) Interview Town Branch Wastewater Treatment Plant Operations and Management staff for input regarding the current process equipment control and functionality related to the Secondary Digester Complex.
- (2) Collect any other supporting data needed for design decisions.

### B. Task 2: Develop Equipment/Process Replacement Concepts and Schedules

- (1) Prepare a conceptual layout for each concept evaluated along with design calculations.
- (2) Conduct a 20-year life cycle and present worth analysis for each conceptual design evaluated.
- (3) Prepare preliminary cost estimates and implementation schedules for all conceptual designs.
- (4) Present Preliminary Engineering Report to Treatment Plant Management Staff for a review of all conceptual designs and receive guidance for progress towards the final design.
- (5) LFUCG will respond in writing to the preliminary Engineering Report, providing authorization for work under Task 3.

### C. Task 3: Detailed Design

- (1) Conduct detailed design progress meetings at 25%, 50%, and 90% completion. The dates for these progress meetings will be decided on during the first pre-design meeting. Progress reports and drawings will be submitted one week before the Lexington-Fayette Urban County Government review and comment. (3 copies)
- (2) Conduct and present any related design calculations to support the new equipment/process.
- (3) Furnish detailed cost estimates for probable cost and revise the 20-year life cycle and present worth analysis for the 50% review and the final design.
- (4) Update project schedules at 25%, 50% and 90%?

D. Task 4: Bidding Services

- (1) Prepare final plans and specifications ready for bidding. Plans and specifications are to be provided in both hard copy and standard electronic format compatible with Lexington-Fayette Urban County Government equipment. The most recent plans and specifications have been submitted in PDF format. software. A minimum of 7 copies will be required.
- (2) Coordinate and submit plans, specifications, and permit application to the Kentucky Division of Water for the purposes of receiving a construction permit.
- (3) Provide customary bidding services including preparation of advertisement, conducting pre-bid meeting, issuing required addenda, evaluating bids and providing a recommendation of award.

E. Task 5: Construction Administration Services

- (1) Track, review and approve all shop drawings.
- (2) Track change orders, review requests, recommendation comments, and prepare the paper work to be submitted to council.
- (3) Track and answer all Request for Information (RFIs)
- (4) Coordinate and lead monthly construction progress meetings.
- (5) Conduct construction inspections and submit weekly reports once construction begins. Please submit estimated hours per week, total hours included for inspections and the hourly rate with your detailed cost estimate
- (6) Take before and after photos of all stages of construction.
- (7) Review and approve contractor's monthly payment applications.
- (8) Attend and maintain test reports for all equipment start-up for the project.
- (9) Coordinate final inspection of completed work and prepare the final punch list.
- (10) Transfer field notes from the contractor's drawings and submit final as-built drawings to the owner.

NOTE: This outline is not intended to be all inclusive but is intended to be a guide for prospective firms as to the general expectations of the Owner. The Lexington-Fayette Urban County Government will not compensate firms for the cost of proposal preparation.

### 3. Detailed Cost Estimates

The CONSULTANT shall prepare a detailed cost estimate for this proposal based on the Tasks defined in this Request for Proposal. The estimate shall show a preliminary schedule estimating the time necessary to complete the Tasks outlined with a unit price associated. The intent of this proposal is to show the number of hours associated with a lump sum fee for the SDC Improvements. If your firm has additional Tasks that would be recommended show the new Tasks as separate line items with the scope well defined.

### 4. Proposal Content

The proposal will contain the following components.

- A. Cover Letter
- B. Scope/fee (Detailed Cost Estimate) – No more than 8 pages. ***The attached Fee Schedule completed with your estimated cost will be the last page in this section.***
- C. Estimated Schedule – No more than 4 pages.
- D. Project Team with One-Page Resumes (Do not submit resumes for individuals contributing less than 10% of total man hours allocated)
- E. A list of 5 similar projects with owner contact information. This section shall be no more than 5 pages total.

### 5. Schedule and Completion

The proposed timeline for completion of the Scope of Services outlined in the proposal is as follows:

#### SDC Improvements

Award Design Contract	October 2018
Meeting to Review Final Design – 90% Completion	April 2019
Bid Opening	May 2019
Award of GC Contract	July 2019

The CONSULTANT shall coordinate the exact time and location of all meetings with the Plant Engineer, Division of Water Quality.

NOTE: Schedule may be adjusted based on final negotiations. When submitting the schedule with your proposals please indicate if your firm could complete this project any sooner than the estimated time above.



## **6. Method of Invoice and Payment**

The CONSULTANT shall submit monthly for basic services or work rendered, based upon the CONSULTANT'S estimate of the portion of the total services actually completed during the billing cycle. Each invoice shall be accompanied by a breakdown of hours attributed to each task for both the billing cycle and the cumulative project period. Also include the percent Disadvantaged Business Enterprise (DBE) cost with each monthly invoice.

The Director of Water Quality or his designee shall respond to the invoice within thirty days of receipt, either denying or approving payment. Specific project time sheets and other payroll information may be subject to reviews and audits by the Lexington-Fayette Urban County Government.

## **7. Miscellaneous**

All plans, specifications and accompanying documents are subject to review by the Lexington-Fayette Urban County Government's Division of Water Quality, Division of Engineering, Division of Risk Management and Division of Building Inspection. The CONSULTANT shall be responsible for incorporating the comments and requirements of the divisions into all documents.

**Investigation/Design Services for Town Branch WWTP  
Secondary Digester Complex Improvements**

**Fee Schedule**

(For a description of task refer to Section 2 of the RFP)

***Section 2***

**Scope of Work: Secondary Digester Complex Improvements**

A. Task 1: Existing Process Performance Review

Cost Task 1: \_\_\_\_\_

B. Task 2: Develop Equipment/Process Replacement Concepts

Cost Task 2: \_\_\_\_\_

C. Task 3: Detailed Design

Cost Task 3: \_\_\_\_\_

D. Task 4: Bidding Services

Cost Task 4: \_\_\_\_\_

E. Task 5: Construction Administration Services

Cost Task 5: \_\_\_\_\_

Details for Task 5.5 - The total cost should be included in Cost Task 5. Please provide the following breakdown. Estimated Weekly Inspection Hrs/Estimated Total Inspection Hrs/Hourly Rate.

\_\_\_\_\_ / \_\_\_\_\_

Section 2 Total Cost:

MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #1**

RFP Number: #26-2018

Date: September 11, 2018

Subject: Investigation/Design Services for Secondary Digester Complex Improvements

Address inquiries to:

Brian Marcum  
(859) 258-3320

**TO ALL PROSPECTIVE SUBMITTERS:**

**Please be advised of the following clarifications to the above referenced RFP:**

To provide clarification from Section 1. General Project Description, Item 4. Install new service line, valves and control sensors serving secondary digesters and mixing tanks from sludge withdrawal pump.

This work item is to include the following (see attached reference drawing):

Replace (6) existing plug valves, add actuators and integrate with SCADA for following  
6" Sludge Supply to Sidestream Holding Tank  
6" Sludge Supply to Secondary Digester No. 1  
6" Sludge Bypass Between Sidestream Holding Tank & Secondary Digester No.1  
6" Sludge Supply to Sludge Blending Tank  
6" Sludge Supply to Secondary Digester No. 2  
6" Sludge Bypass Between Sludge Blending Tank & Secondary Digester No. 2

Replace (2) existing 6" plug valves utilized for isolation between the Sidestream Holding Tank and Secondary Digester No. 1.

Add (2) 6" plug valves, to be utilized for isolation between Sludge Blending Tank and Secondary Digester No. 2.

Additional clarifications and work items provided by plant operations staff to be included in the RFP addendum:



Replace VFDs serving Transfer Pumps #1 & #2.

Replace Transfer Pumps #1 & #2, Check Valves and Pressure Gauges.

Replace Supernate Pumps #1 & #2 and Check Valves.

Replace Supernate flow meter and integrate with SCADA.

Replace (2) sump pumps.

Add new PLC located inside Secondary Digester Building and provide programming per owners instructions. All new devices (actuators, flow meter, etc.) to be routed to this PLC.

Relocate current i/o conductor from current location (Solids Building) to new Secondary Digester Building PLC.

Replace existing Secondary Digester Complex Level Monitoring Panel w/ a PLC integrated local control interface and integrate with SCADA.

From BM Pre-Bid Notes

Ropes for geomembrane - Engineering Services Provider to coordinate with manufacturer to determine best replacement option.

Identify abandoned piping – Town Branch plant staff will aide in identifying abandon piping to be removed.

The percentage of work to be performed by employees in Fayette County shall be identified as part of your Degree of Local Employment response

Pumps in basement replace? – This is clarified above.

Water Quality sets of plans how many? – (2) Full Size, (3) ½ Size

Purchasing needs 1-CD and 1-1/2 set





Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_



MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #2**

RFP Number: #26-2018

Date: September 12, 2018

Subject: Investigation/Design Services for Secondary Digester Complex Improvements

Address inquiries to:

Brian Marcum  
(859) 258-3320

**TO ALL PROSPECTIVE SUBMITTERS:**

**Please be advised of the following clarifications to the above referenced RFP:**

Drawing referenced in Addendum#1 is attached.

Todd Slatin, Director  
Division of Central Purchasing

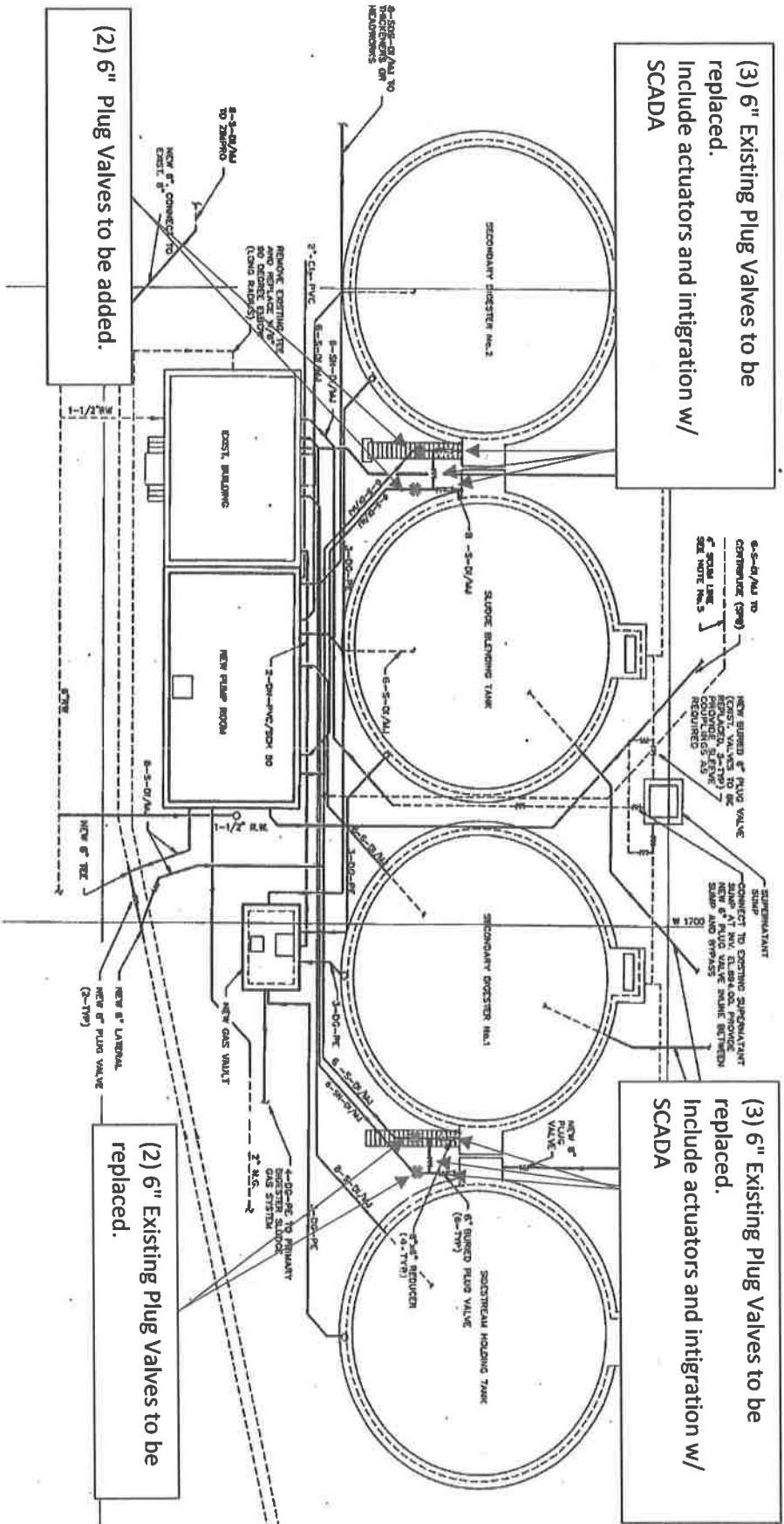
All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_





(3) 6" Existing Plug Valves to be replaced.  
 Include actuators and integration w/ SCADA

(3) 6" Existing Plug Valves to be replaced.  
 Include actuators and integration w/ SCADA

(2) 6" Plug Valves to be added.

(2) 6" Existing Plug Valves to be replaced.

**EXHIBIT B**

**Certificate of Insurance**

**and**

**Evidence of Insurability**





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
10/12/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ansay & Associates, LLC. MSN 702 N High Point Road Suite 201 Madison WI 53717	<b>CONTACT NAME:</b> Susan Simoneau <b>PHONE (A/C, No, Ext):</b> 800-643-6133 <b>E-MAIL ADDRESS:</b> sue.simoneau@ansay.com	<b>FAX (A/C, No):</b> 608-831-4777
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b> Strand Associates, Inc 910 W. Wingra Drive Madison WI 53715	<b>INSURER A :</b> CNA Insurance Companies <b>INSURER B :</b> <b>INSURER C :</b> <b>INSURER D :</b> <b>INSURER E :</b> <b>INSURER F :</b>	<b>NAIC #</b> 35289

**COVERAGES**                      **CERTIFICATE NUMBER: 835281258**                      **REVISION NUMBER:**


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> XCU Cov. Inc. GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	Y		5099170076	1/1/2018	1/1/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 900,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	Y		5099170062	1/1/2018	1/1/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			5099170059	1/1/2018	1/1/2019	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	WC595126B44	1/1/2018	1/1/2019	<input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Professional Liability Full Prior Acts			AEH113974097	7/1/2018	7/1/2019	Each Claim 2,000,000 Aggregate 2,000,000 Full Prior Acts

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, If more space is required)**  
 PROJECT: RFP #26-2018 Town Branch Secondary Digester Complex Improvements  
 JOB #: 2815-276

Lexington Fayette Urban County Government is named as an additional insured on a primary & non-contributory basis as per written agreement.

Thirty (30) days advance written notice via certified mail, return receipt requested, will be given to the Certificate Holder in the event any of the required policies are cancelled or non-renewed.

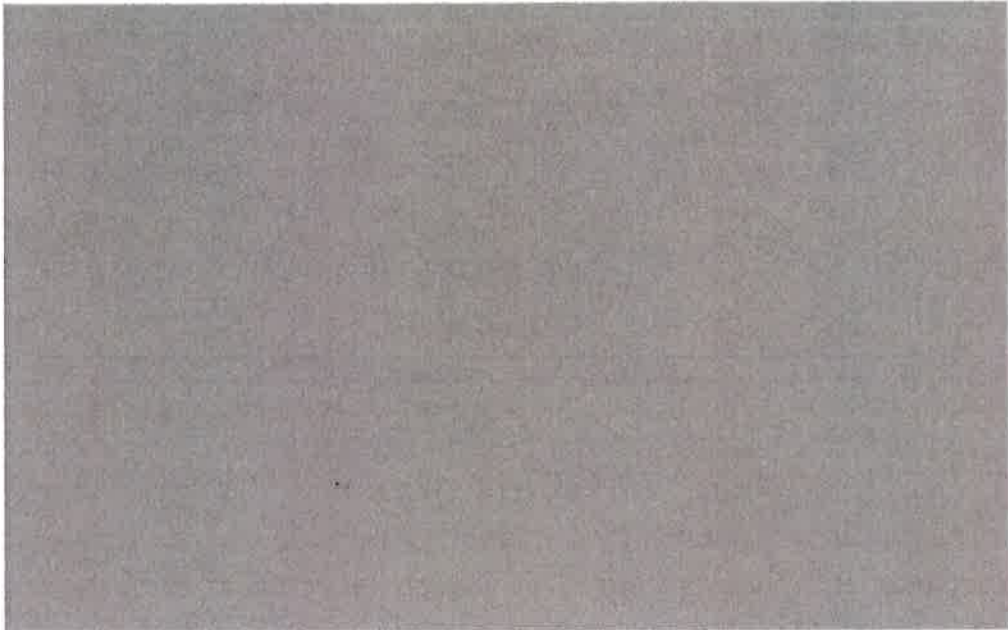
<b>CERTIFICATE HOLDER</b>  Lexington-Fayette Urban County Government 200 E. Main Street Lexington KY 40507	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

**EXHIBIT C**

**Proposal of Engineering Services**

**and**

**Related Matters**



Investigation/  
Design  
Services for  
Town Branch  
Secondary  
Digester  
Complex  
Improvements

RFP#26 – 2018

**Proposal for**

Lexington-Fayette  
Urban County  
Government

September 19, 2018

Firm Submitting Proposal: Strand Associates, Inc.

Complete Address: 1525 Bull Lea Road, Suite 100, Lexington, KY 40511  
Street City Zip

Contact Name: Michael Davis Title: Senior Associate

Telephone Number: (859)225-8500 Fax Number: (859)225-8501

Email address: mike.davis@strand.com



# Table of Contents

Section  
Page No.

**Addendum(s)**

Addendum #1 ..... dated 9/11/18  
 Addendum #2 ..... dated 9/12/18

**Cover letter**

Selecting Strand Associates, Inc.® for the Town Branch Secondary Digester Complex  
 Improvements Results in Facilities that Meet Current Need and Anticipate Potential  
 Future Operational Needs.  
 ..... A.

**Scope/Fee**

..... B.  
 • Fee Schedule..... 7

**Estimated Schedule**

..... C.  
 • Degree of Local Employment..... 1  
 • Capacity for Performance..... 3

**Project Team**

..... D.  
 • Character, Integrity, Reputation, Judgment, Experience and Efficiency ..... 3  
 • Resumes ..... 4

**Similar Projects**

..... E.  
 • Past Record of Performance ..... 1.  
 • Specialized Experience..... 1.

**Appendix**

- Affidavit
- General Provisions
- Equal Opportunity Agreement
- Strand Equal Employment Opportunity Policy Statement
- MWDBE Participation Form
- Good Faith Efforts Form
- Work Force Analysis Form
- Certificate of Insurance





**ADDENDUM #1**

**RFP Number: #26-2018**

**Date: September 11, 2018**

**Subject: Investigation/Design Services for Secondary Digester Complex Improvements**

**Address inquiries to:**

**Brian Marcum  
(859) 258-3320**

**TO ALL PROSPECTIVE SUBMITTERS:**

**Please be advised of the following clarifications to the above referenced RFP:**

To provide clarification from Section 1. General Project Description, Item 4. Install new service line, valves and control sensors serving secondary digesters and mixing tanks from sludge withdrawal pump.

This work item is to include the following (see attached reference drawing):

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Replace (2) existing 6" plug valves utilized for isolation between the Sidestream Holding Tank and Secondary Digester No. 1.

Add (2) 6" plug valves, to be utilized for isolation between Sludge Blending Tank and Secondary Digester No. 2.

Additional clarifications and work items provided by plant operations staff to be included in the RFP addendum:



Replace VFDs serving Transfer Pumps #1 & #2.

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From BM Pre-Bid Notes

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Identify abandoned piping – Town Branch plant staff will aide in identifying abandon piping to be removed.

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Water Quality sets of plans how many? – (2) Full Size, (3) ½ Size

Purchasing needs 1-CD and 1-1/2 set







Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Strand Associates, Inc.

ADDRESS: 1525 Bull Lea Road, Suite 100, Lexington, KY 40511

SIGNATURE OF BIDDER: 



MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #2**

RFP Number: #26-2018

Date: September 12, 2018

Subject: Investigation/Design Services for Secondary Digester Complex  
Improvements

Address inquiries to:

Brian Marcum  
(859) 258-3320

**TO ALL PROSPECTIVE SUBMITTERS:**

**Please be advised of the following clarifications to the above referenced RFP:**

Drawing referenced in Addendum#1 is attached.

Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Strand Associates, Inc.

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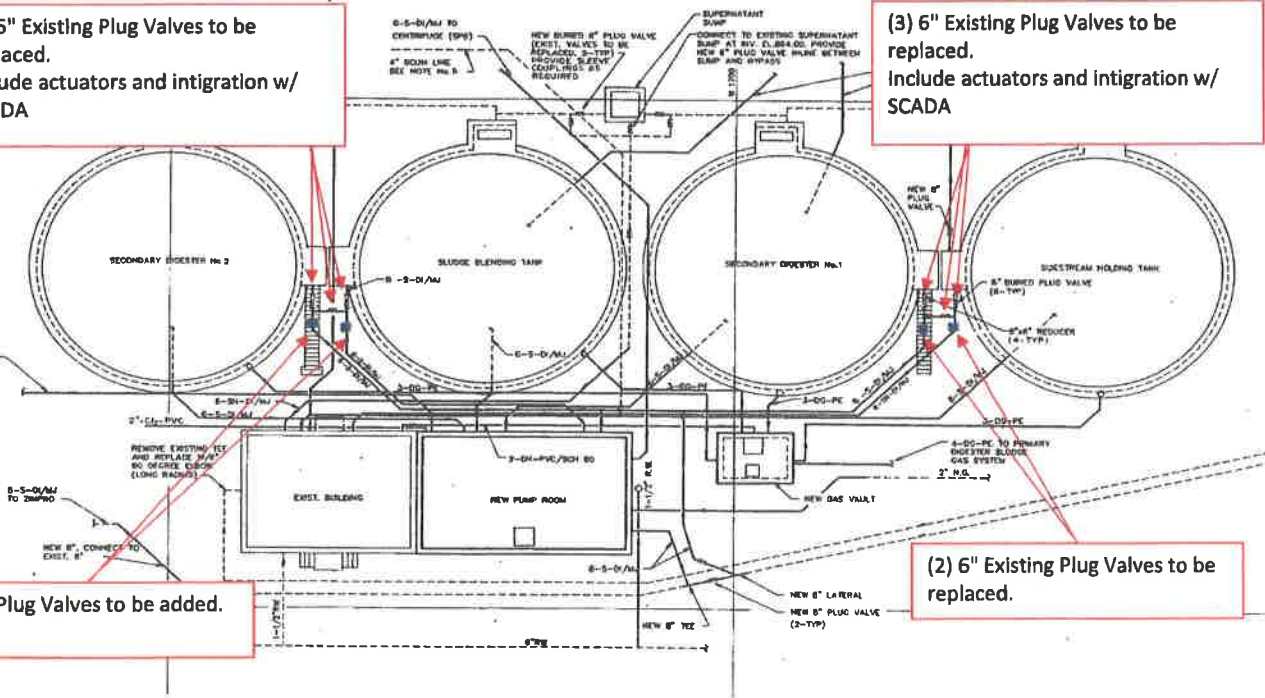
SIGNATURE OF BIDDER: Matthew Skibbl



(3) 6" Existing Plug Valves to be replaced.  
Include actuators and integration w/  
SCADA

(3) 6" Existing Plug Valves to be replaced.  
Include actuators and integration w/  
SCADA

8-505-5/41 TO  
TRUCK LIFTERS OR  
HEADWORKS



(2) 6" Plug Valves to be added.

(2) 6" Existing Plug Valves to be replaced.



**Strand Associates, Inc.®**

1525 Bull Lea Road, Suite 100

Lexington, KY 40511

(P) 859-225-8500

September 19, 2018

Mr. Todd Slatin, Purchasing Director  
Lexington-Fayette Urban County Government  
Room 338, Government Center  
200 East Main Street  
Lexington, KY 40507

Re: Request for Proposals for RFP#26-2018 Investigation/Design Services for  
Town Branch Secondary Digester Complex Improvements

Dear Mr. Slatin:

Thank you for the opportunity to submit this proposal for the above referenced project. **Selecting Strand Associates, Inc.® for the Town Branch Secondary Digester Complex Improvements Results in Facilities that Meet Current Requirements and Anticipate Potential Future Operational Needs.** Listed below are major factors that support this statement and demonstrates our Team's ability to meet your specific needs.

- **Strand's Unique Understanding of the Town Branch Sludge Process Results in Improvements that Increase System Reliability and Operational Flexibility**
- **Our Project Team has an Extensive Understanding of LFUCG's Operations, Streamlining the Design, Bidding and Contract Administration Phases**
- **Our Proven Treatment Process Knowledge Demonstrated by Years of Service Provides Confidence in Our Team and Approach**
- **Our Project Team's Proven Service and Commitment to LFUCG Demonstrates Our Ability to Serve LFUCG Effectively on this Project**
- **Strand's Collaborative Approach Addresses Plant Staff Concerns for an Operation Friendly Facility with Minimal Plant Impacts During Construction**

We look forward to the opportunity to continue our service on behalf of the Lexington-Fayette Urban County Government.

Sincerely,

STRAND ASSOCIATES, INC.®

Michael L. Davis, P.E.  
Senior Associate





## Scope/Fee

### Strand's Unmatched Knowledge of Project Requirements and Existing Facilities Results in a Comprehensive Scope that Matches LFUCG's Needs

Strand's project scope is based on our unmatched knowledge of existing facilities and plant operations. Through Strand's ongoing project experience, coupled with specific site visits to understand project components, we understand the project goals and requirements. Our project team includes individuals with over 30 years of experience meeting engineering needs at the Town Branch WWTP. Our proposal addresses all tasks included in the Request for Proposals as clarified by addendum.

Strand's approach relies on our long-term investment in projects at Town Branch WWTP.

### Approach

#### Scope of Engineering Services

Strand's Scope of Services is tailored to meet the requirements contained within LFUCG's RFP, and to address specific project needs that we have identified through our investigation. The Scope of Services is described below, following the format contained in the RFP. Our approach to project design and implementation includes significant and timely interaction with plant staff. This collaboration starts with the initial operations review and extends through project completion.

#### Project Overview

The Town Branch WWTP has a 30 MGD design capacity and peak flow capacity of 64 MGD. Strand (formerly PEH Engineers) provided engineering services to LFUCG when the existing secondary digester complex was last upgraded in the late 1980s.



Town Branch Wastewater Treatment Plant.

The Remedial Measures Plan (RMP) was developed in response to the LFUCG's Consent Decree with the USEPA. The RMP includes this secondary digester improvements project, which is intended to result in an upgrade and renewal of the existing secondary digester complex. The project generally requires the update and replacement of aging process, mechanical and electrical equipment located in the Secondary Digester Complex. This complex includes the following major facilities:

- Digester Control Building
- Pumping Station
- Secondary Digester No. 1
- Secondary Digester No. 2
- Sludge Blending Tank
- Sidestream Holding Tank

The project will begin with a process review assessment of the existing facilities and equipment, followed by an evaluation of upgrade alternatives for this equipment. After planning is complete, design of a comprehensive improvements project will achieve the objectives of improving reliability, enhancing performance and reducing operating costs.

Bidding and construction-phase services will complete the project, and because of our extensive experience with your staff and familiarity with the plant, our services will provide the right level of involvement throughout.



Supernatant Pump.

#### **Task 1: Existing WAS Process Review**

Strand will conduct a kick-off meeting followed by an interview with Town Branch operations and management staff regarding operation, maintenance and control of the Secondary Digester Complex. Through this process, Strand will obtain information regarding the daily operation and maintenance of existing facilities, which we will use to further evaluate the condition and remaining life for process equipment. Our team will utilize information available from prior Town Branch studies and design activities completed by Strand. These include the original 1988 design, 2005 Phosphorus study, 2007 Electrical Condition Assessment, 2012 Electrical/SCADA improvements project and on-going Primary Digester Complex improvements project. Strand will also collect any additional information and data needed for the project.

#### **Task 2: Develop Equipment And Process Replacement Concepts**

Using a collaborative approach, working with LFUCG operations and engineering staff, Strand will develop an approach to replacing existing equipment and materials as defined in the RFP. Preliminary cost opinions will be developed for the selected improvements. During this phase, an evaluation of existing facilities will be completed to determine compliance of existing and proposed facilities with NFPA 820. This code defines fire protection requirements in wastewater facilities, and identifies areas that may require higher than typical ventilation, or installations that must be rated for Class I, Division 1 and 2 hazardous locations.



Strand will evaluate equipment replacement concepts for all equipment in the secondary digester complex. A list of the key equipment used in the secondary digester complex is included in the following table.

The adjacent table summarizes major equipment and systems that will be replaced or rehabilitated through this project.

Equipment Item	No.	Comments
Sidestream Pumps	2	The existing Sidestream Pumps, located in the control building basement, will be replaced with new pumps. The existing pumps are WEMCO centrifugal type, approximately 30 years old. Pump type and manufacturer to be selected during Task 2.
Supernatant Pump	1	The existing Supernatant Pump, located in the control building basement, will be replaced with a new pump. The existing pump is a WEMCO centrifugal type, approximately 30 years old. Pump type and manufacturer to be selected during Task 2.
Sludge Transfer Pump	2	The existing Sludge Transfer Pumps, located in the basement expansion, will be replaced with new pumps. These pumps will be provided with VFDs for variable capacity pumping. The existing pumps are Borger type, installed after the last major plant upgrade. Pump type and manufacturer to be selected during Task 2.
Digester Covers	4	The existing covers, manufactured by Geomembrane Technologies, Inc. have been installed since the last major renovation. Cover condition and operation will be evaluated during Task 2, and will include on-site evaluation with the cover manufacturer. Required improvements will be determined based on this evaluation.
Sump Pumps	3	Three submersible sump pumps are located in the control building basement. The pumps will be replaced with similar pumps, selected during Task 2.
Valves and Actuators	6	These existing valves are located on the secondary digester structures. The valves will be replaced, and actuators will be added to provide control through SCADA improvements. Actuators will be based on Limatorque standard.
Valves	4	Two new and two replacement plug valves will be installed in the exterior piping adjacent to the secondary digester structures.
Motor Control Center	1	The existing MCC will be replaced with new equipment, modified as necessary to operate and control new equipment. Short Circuit rating and arc flash labeling will be provided based on study performed during construction.
Process Control and SCADA System	1	The plant SCADA system will be modified to monitor and control new equipment installed in this project.
Field Instruments	-	Field instruments, including flow meters will be replaced/upgraded as necessary. (Existing gas monitoring equipment will not be replaced.)
PLC	1	A new PLC will be installed in the Secondary Digester control building. This PLC will interface with the existing SCADA system. The PLC manufacturer and type will be specified to match Town Branch WWTP standard equipment selections.
Level Monitor Panel	1	The existing digester level monitoring panel will be replaced with a new panel.





**Task 3: Detailed Design**

Design will be based on results from the previous evaluation. Detailed drawings and specifications will be provided for bidding and construction. Where possible, bid alternatives will be identified that will enhance competition among equipment suppliers resulting in lower project costs. Our recent Town Branch/West Hickman WWTP Electrical/SCADA/Blower project is a good example of structuring bid alternatives to maximize project funding.

Replacement equipment alternatives will be evaluated with input from plant operations staff.

We will meet with LFUCG at the 25%, 50% and 90% stages of completion to review the design, solicit input and discuss costs and schedule. Our proposal includes:

**1) Process Equipment and System Replacement**

The treatment process and operation of the Secondary Digester Complex will remain essentially unchanged by the project. Pumps and equipment will be replaced with new systems and facilities upgraded to improve reliability. New Sludge Withdrawal Pump piping will be installed, along with valves and appurtenances to serve the secondary digesters and mixing tanks. New plug valves will be installed at the secondary digesters for flow control and isolation.

Detailed design drawings and bid alternatives allow LFUCG to minimize project costs and optimize the project budget.

Any repairs and replacements recommended as a result of the digester cover evaluation will be incorporated into the construction contract.



Geomembrane Technologies Cover.

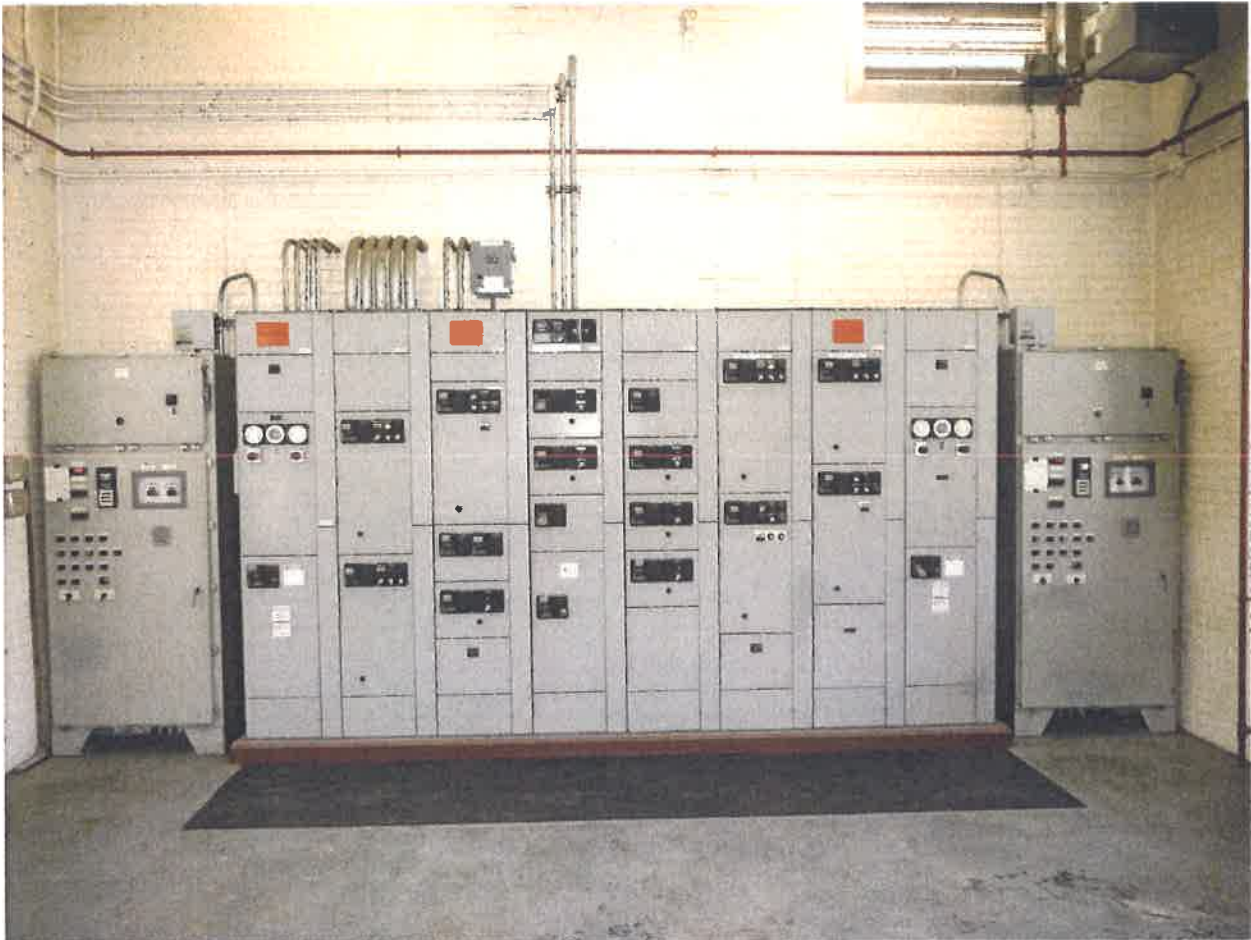


**2) Electrical, Control and Instrumentation System**

The existing MCC will be replaced with a new MCC. We anticipate ampacities and services sizes will not change compared to the existing equipment. The new systems will be coordinated with the existing plant SCADA system. I/O points from the MCC, valve actuators and other equipment will be connected to the SCADA system through a new PLC installed in the Secondary Digester control building. The SCADA system graphics will be updated to remove eliminated equipment and to add the new systems. 3-D and 2-D graphics will be modified by the construction contractor's systems integrator.

Strand's knowledge of the Town Branch SCADA Control System results in consistency between new and existing systems.

Lighting will be replaced with new LED type light fixtures to match plant standards.



MCC and VFDs.

**3) Mechanical Improvements**

Minimal building mechanical improvements are anticipated. The existing heating equipment will be replaced with new equipment. We anticipate new equipment will be unit heaters, similar to existing systems. Adequacy of building ventilation and compliance with NFPA 820 will be evaluated, with required improvements incorporated into the construction contract.

**4) Structural/Architectural Improvements**

We have included replacement of all doors and windows in the secondary digester complex, and replacement of the membrane roof on the building. Miscellaneous brick masonry repairs and concrete stair replacement is also included.



Drawings will be developed during the final design phase. We anticipate the drawing set will include approximately 20 sheets, addressing demolition and new construction for process, structural, electrical and instrumentation disciplines.

Specifications will also be developed during the design phase. Strand will provide technical specifications, including Divisions 1 through 16. Division 0, including Parts I through IX will be based on LFUCG standard specifications. Strand is familiar with LFUCG specification requirements, and understands how these documents are interfaced with the technical specifications.

**Task 4: Bidding Services**

Strand will assist LFUCG during the bidding phase of this project. Strand understands LFUCG's requirements, and is experienced providing these types of services for LFUCG projects. Bidding phase services include all items contained in the RFP.

**Task 5: Construction Services**

Strand will support LFUCG during the construction phase of this project. Strand has recent experience providing these services to LFUCG on other wastewater improvements projects, and has developed good working relationships with staff that complement our ability to provide these services. Construction phase services include all items contained in the RFP. We will provide regular site visits to monitor the progress of construction. We anticipate making one site visit per week during active construction, for an average of 2.5 hours per week. The proximity of our office to the Town Branch site makes these visits very efficient and flexible.

**Strand's  
experience  
supporting LFUCG  
through bidding  
and construction  
will streamline  
these phases of  
project**

**Investigation/Design Services for Town Branch WWTP  
Secondary Digester Complex Improvements**

**Fee Schedule**

(For a description of task refer to Section 2 of the RFP)

**Section 2**

**Scope of Work: Secondary Digester Complex Improvements**

A.	Task 1: Existing Process Performance Review	Cost Task 1: _____	\$ 8,000
B.	Task 2: Develop Equipment/Process Replacement Concepts	Cost Task 2: _____	\$ 14,000
C.	Task 3: Detailed Design	Cost Task 3: _____	\$ 59,000
D.	Task 4: Bidding Services	Cost Task 4: _____	\$ 14,000
E.	Task 5: Construction Administration Services	Cost Task 5: _____	\$ 64,000

Details for Task 5.5 - The total cost should be included in Cost Task 5. Please provide the following breakdown. Estimated Weekly Inspection Hrs/Estimated Total Inspection Hrs/Hourly Rate.

\_\_\_\_\_ 2.5 hours/week / \_\_\_\_\_ 130 hours total / \_\_\_\_\_ \$109/hr.

Section 2 Total Cost: \$159,000





# Estimated Schedule

**Strand's Project Schedule and Staffing Plan Provide Engineering Support to Meet December 2020 Consent Decree Completion Date**

## DEGREE OF LOCAL EMPLOYMENT

### Our Lexington-Based Project Team Will Maximize Local Employment

Selection of Strand for this project will maximize local employment utilizing our Lexington office staff to manage and deliver the project. We anticipate approximately 94% of total staff hours expended, will be staff permanently located in our Lexington office. Our Project Team is local and invested in many aspects of our community. We have established working relationships with LFUCG DWQ engineering and plant operations personnel. The following illustrates that our Lexington office and Project Team is local with team members that live in Lexington and have supported LFUCG initiatives for over 30+ years.

**Strand project schedule meets EPA Remedial Measures Plan completion schedule.**



### Our Lexington Office is Local

- Founded in 1968 (Six Years before Lexington and Fayette County Governments merged).
- Provided continuous record of service to Lexington since 1968.
- Local Design Team members have over 30 years of project experience serving LFUCG on major wastewater treatment projects.
- 5 miles separate our Lexington Office and the Town Branch Wastewater Treatment Plant.

The schedule on the following page shows project final completion by December 31, 2020, with engineering evaluation beginning in November 2018. The schedule allows two months to complete the operations review and the preliminary engineering report. The schedule allows four months for design. We have included KDOW review and approval in the implementation schedule. Our recent experience with KDOW indicates the review process will take approximately one month. (Based on the project's nature, KDOW approval may not be required if no process modifications result.) Bid documents will be issued to solicit bids from contractors. The bid process will take approximately three months to receive bids and obtain LFUCG Council approval. Once awarded, the construction contract duration is expected to be 12 months. The construction duration will be impacted by actual equipment delivery times, and may need to be adjusted during design.

We have prepared a construction phase Gantt chart showing reasonable schedules for shop drawings and equipment fabrication and delivery. Our 12-month construction schedule predicts an early completion and generous float before reaching the Consent Decree deadline.

**Town Branch Secondary Digester Complex Impro**





### Strand’s Project Approach Seeks to Engage MWDBE/VOB Participation

As a firm that supports initiatives of our local government, we endeavor where practical to incorporate MWDBE/VOB participation goals in our contracting opportunities. Based on defined project scope, we have included Magna Engineers to provide HVAC/mechanical design services.

### CAPACITY TO PERFORM WORK

#### Our Team is Available to Start Work Immediately and has Capacity to Meet LFUCG’s Schedule

Strand coordinates staff assignments corporate-wide through a scheduling system. This allows us to make sure the right staff are available at the right time for each of our projects. The following table shows staff availability and project requirements for the next 12 months beginning in November 2018.

**Our Project Team can start work immediately and has the capacity to complete this important project on time.**

12-MONTH CAPACITY	* Mike Davis		Mark Sneve		* Emily Epperson		Randy Wirtz		* Nadia Aljabi		Troy Larson		* Liz Dienst										
	REQ'D	AVL	REQ'D	AVL	REQ'D	AVL	REQ'D	AVL	REQ'D	AVL	REQ'D	AVL	REQ'D	AVL									
NOVEMBER-18	●	81	●	79	●	86	●	48	●	15	●	55	●	108									
DECEMBER-18	↓	89	↓	58	↓	106	↓	60	↓	15	↓	110	↓	154									
JANUARY -19	↓	93	↓	75	↓	97	↓	86	↓	40	↓	89	↓	155									
FEBRUARY -19	↓	105	↓	106	↓	115	↓	112	↓	48	↓	17	↓	163									
MARCH -19	↓	99	↓	122	↓	105	↓	108	↓	48	↓	20	↓	160									
APRIL-19	↓	122	↓	138	↓	126	↓	104	↓	44	↓	17	↓	154									
MAY-19	↓	121	↓	138	↓	127	↓	96	↓	40	↓	124	↓	152									
JUNE -19	↓	148	↓	146	↓	135	↓	132	↓	176	↓	133	↓	159									
JULY -19	↓	158	↓	142	↓	132	↓	162	↓	168	↓	122	↓	137									
AUGUST -19	↓	166	↓	89	↓	140	↓	170	↓	176	↓	50	↓	159									
SEPTEMBER -19	↓	152	↓	103	↓	132	↓	164	↓	168	↓	48	↓	153									
OCTOBER -19	↓	168	↓	156	↓	140	↓	172	↓	176	↓	56	↓	161									
<b>TOTAL</b>		200		1,502		40	1,352		300		1,441		8	1,414		240	1,114		12	841		160	1,815

Lexington-based staff are noted with an asterisk in the table above. Based on these projected hours, we anticipate Strand’s Lexington-based staff will provide approximately 94% of required services.







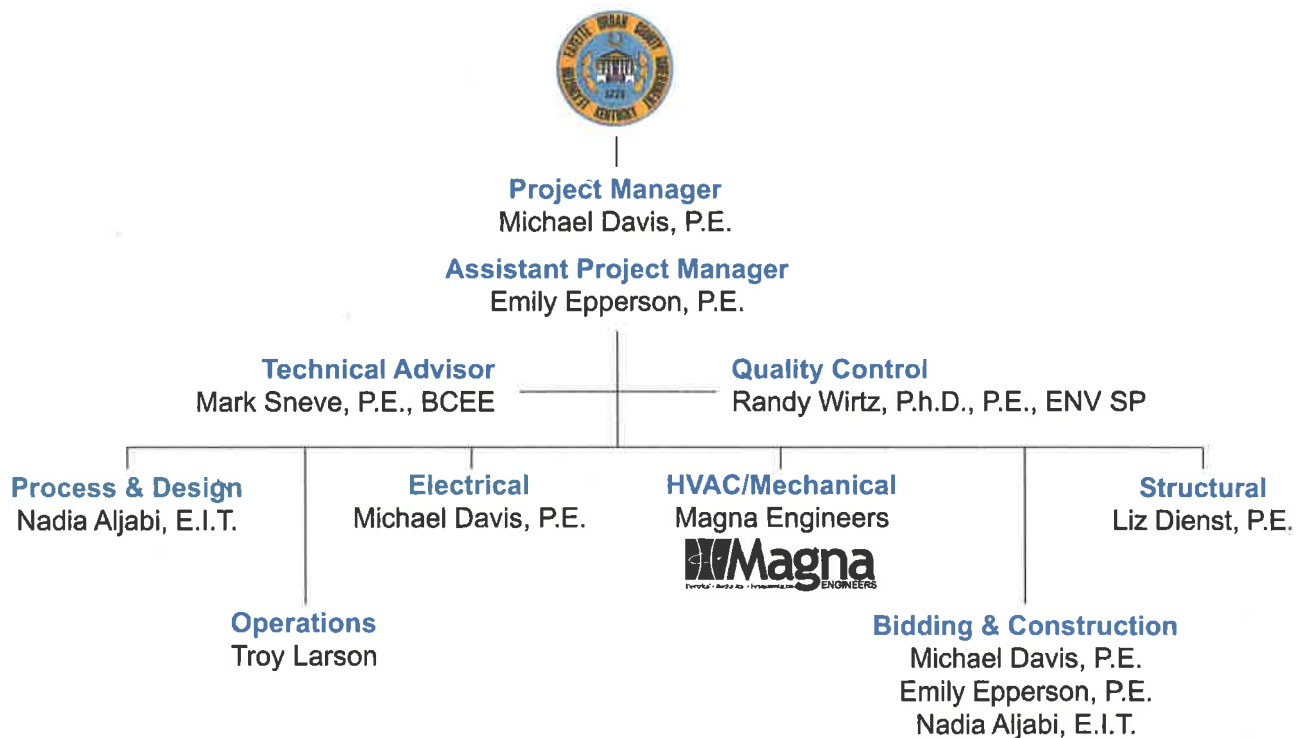
# Project Team

## Strand’s Project Team Understands The Town Branch WWTP Sludge Handling Operational Requirements and Flexibilities that are to be Incorporated Into the Improvements Project

Our Project Team is assembled to provide all the technical expertise necessary to upgrade the secondary digester complex. During design, the project team will evaluate existing conditions and potential impacts from other on-going and future treatment plant construction projects. Our Team includes individuals who have extensive wastewater treatment experience, intimate familiarity with the Town Branch Wastewater Treatment Plant (WWTP), and lengthy professional careers successfully providing wastewater treatment design services for Lexington-Fayette Urban County Government (LFUCG) and other municipal utilities.

Our Team has the commitment and requisite design experience to successfully complete this project.

In addition to technical expertise, our Team Members have availability to provide the level of service required in the available project time schedule. Our organization chart is structured to take advantage not only of expertise, but available time. Our Project Team is organized to share tasks in an efficient manner, resulting in project delivery to meet the consent decree deadline. *One-page resumes of key team members, contributing more than 10% of the total man hours, follow at the end of this section.*



### Qualifications of Key Project Team Members

**Michael Davis, P.E. – Project Manager/Bidding & Construction/Electrical**  
**Mike** has over 35 years of experience serving LFUCG on numerous wastewater treatment projects. He has served as **Project Manager** for many of these projects, including the Town Branch/West Hickman WWTP Electrical/SCADA Improvements project and the Town Branch WWTP Primary Digester Complex Improvements project. He provides a historical understanding of operations and improvements at Town Branch WWTP, and he will also provide electrical design services as he has on many LFUCG projects since the late 1980s.





**Randall Wirtz, Ph.D., P.E., Env SP – Quality Control**

**Randy** will be responsible for the **Quality Control** of this project. Randy is a licensed professional engineer with 24 years of project experience. He has extensive experience in planning and design of biological treatment facilities, nutrient removal, odor control facilities, chemical treatment systems, sludge dewatering systems, biosolids stabilization facilities, disinfection facilities, and pumping and conveyance facilities. Randy has recent experience with LFUCG as the principal author of the completed Town Branch Digester Gas Master Plan. Randy brings the perspective of dozens of similar projects to his role as Quality Control reviewer.



**Mark Sneve, P.E., BCEE – Technical Advisor**

**Mark** will serve as a **Technical Advisor** to Mike, Emily, and Nadia during all phases of the project. Mark is a licensed professional engineer, with 29 years of project experience. Mark has extensive experience providing engineering services for major wastewater plant expansions. He is very familiar with the Town Branch WWTP from previous studies and the on-going Primary Digester Complex renovation.



**Emily Epperson, P.E. – Assistant Project Manager/Bidding & Construction**

**Emily** will serve as **Assistant Project Manager and Process Engineer** through **design, bidding, and construction** on this project. Emily has 5 years of experience, which includes recent LFUCG wastewater experience providing design for the Town Branch Primary Digester Complex Improvements project and RPR services for the West Hickman Blower Improvements project. She has also completed several studies to evaluate operation and treatment efficiencies of water and wastewater treatment facilities and has worked on wastewater collection and treatment design projects for several other municipalities.



**Nadia Aljabi, E.I.T. – Process & Design**

**Nadia** will serve as **Project Engineer** during design and bidding and **RPR** during construction. Nadia has experience serving as process engineer for the West Hickman WWTP Scum Removal and ASH Tank Cover project, which addressed operation and maintenance issues of scum accumulation throughout the WWTP. Nadia has recent experience on several wastewater collection and rehabilitation projects that make her an asset to the project team.



**Troy Larson – Operations**

**Troy** will be the **Plant Operations Specialist** for this project. Troy received his B.S. in Biology and has 22 years of broad experience in the wastewater operations field, including plant operations. He has operated treatment facilities, worked as a soils technician, and currently works to support our wastewater treatment facility planning, design, and construction-related projects with input from the operator’s perspective. Troy has an extensive background in the optimization and control of wastewater treatment processes. He has performed in a similar role for LFUCG projects, providing operator-focused input for wastewater system design, and providing follow-up services to help optimize treatment operation.



**Liz Dienst, P.E. – Structural Design**

**Liz** will be the **Structural Engineer** on this project. Liz is a graduate of the University of Dayton and is a licensed professional engineer with 16 years of experience. From our Lexington, KY office, Liz has a variety of project management experiences covering municipal, water, wastewater, and structural design and construction administration projects. Liz’s design capabilities include structural design, architectural-related tasks, waterline and sanitary sewer line design. She has served LFUCG on every waste management project Strand has been hired for over the past 16 years.





### SUBCONSULTANT PARTICIPATION

Magna Engineers, a Lexington-based woman-owned business, is a regular participant on Strand Project Teams, and will provide mechanical engineering planning, design and construction-related services. This is a role Magna recently performed as part of our team on the Town Branch WWTP Primary Digester Complex Improvements project. We have developed a successful working relationship with Magna through collaborating on five WWTP projects.

Magna provides our Team with DBE participation subcontracting opportunities.

### Character, Integrity, Reputation, Judgment, Experience and Efficiency Strand's History of Success is Fostered by Helping Our Clients Succeed through Excellence in Engineering

We are proud of our reputation for quality work, technical expertise, and efficiency of production, which is complemented by the character and integrity of our respective employees. Strict adherence to an attitude of professionalism and objectivity toward all our clients has brought us success over the years, as evidenced by the longstanding history of our firm. Our record of success is firmly supported by this history and the volume of work we have been entrusted to administer on behalf of our clientele, many of whom we have maintained continuous relationships spanning decades.

Our work experience includes a wide variety of engineering projects, including wastewater treatment, stormwater management, environmental regulatory compliance, water supply projects, municipal engineering, transportation, structural, electrical, surveying and mechanical projects. As a full-service engineering firm, it is our practice to follow our projects through to construction completion and beyond, providing the necessary staff to perform office and field activities alike.

The table below highlights the volume of construction projects designed and bid by Strand. In addition, Strand provides a large volume of client service that does not result in construction for studies and other related field activities. We remain firm believers that the growth of this volume is indicative of our commitment to meeting client needs. *For calendar year 2018, Strand was ranked in the Engineering News Record as 188th of the Top 500 Design Firms nationally and ranked 17th in the Nation as a Wastewater Design Firm by Engineering News Record Midwest.*

The adjacent list shows, for our designs, the annual value and number of our construction contracts in each of the last 10 years. Strand has been a part of the Lexington community for more than 50 years. During this time, we have served LFUCG on numerous major wastewater treatment projects. Our **Character, Integrity, Reputation, Judgment, Experience and Efficiency** are demonstrated by our long-standing working relationship with LFUCG, and the interaction of our Project Team members with DWQ and Town Branch WWTP staff.

Strand-Designed Construction Contracts		
Year	No. of Contracts	Bid Amount
2017	169	\$320,000,000
2016	125	\$365,000,000
2015	128	\$320,900,000
2014	84	\$144,900,000
2013	120	\$193,000,000
2012	126	\$161,900,000
2011	126	\$193,600,000
2010	84	\$218,800,000
2009	122	\$238,300,000
2008	104	\$101,600,000
2007	128	\$138,300,000



Magna provides our Team with DBE participation subcontracting opportunities.

Our Character, Integrity, Reputation, Judgment, Experience and Efficiency are demonstrated by our years of consistent services to LFUCG.



# Michael L. Davis, P.E.

Senior Associate

## AREAS OF EXPERTISE

- Electrical Distribution
- Site Utilities
- Contract Administration
- Instrumentation and Control
- Wastewater Treatment

## PROFESSIONAL EXPERIENCE

**Wastewater Treatment Facilities** experience includes project management and design for treatment plants up to 30 mgd. Responsibilities include management during the design, bidding, and construction administration phases of the project.

**Sanitary Sewer Modeling** experience includes project management for study and modeling of sanitary sewers within three major water sheds within Fayette County. Activities include setting modeling guidelines, developing field investigation techniques, and reviewing results to make recommendations for system improvements.

**Site Utilities** experience includes design and construction-phase services in support of municipal and commercial projects. Municipal project responsibilities included design and coordination with utility companies to provide appropriate services for water, sanitary sewer, natural gas, and electric services.

**Sewer System Rehabilitation** experience includes project management and design to rehabilitate sewer systems using a variety of rehabilitation methods including pipe bursting, slip-lining, and cured-in-place lining, in addition to traditional excavation types of repairs. Responsibilities include project planning, evaluation of existing pipe conditions, applying the different rehabilitation strategies and construction administration.

**Electrical Instrumentation and Control** experience includes design and construction-phase services for numerous projects including water and wastewater treatment plants, pumping stations, commercial office buildings, signals and lighting. Projects include distribution systems with voltages ranging from 120/240

volts to 12,470 volts. Instrumentation control experience includes PC-based SCADA systems with up to 60 remote sites, and PLC-based control systems and treatment process monitoring/control equipment to provide plant automatic control.

**Pumping Station** experience includes project management and design experience for wastewater pumping stations and force mains. Pump station sizes range from 35 to 15,000 gpm. Force mains range in diameter up to 30 inches, and lengths up to 24,000 feet.

**Lexington-Fayette Urban County Government Town Branch/West Hickman WWTP Electrical, SCADA and Blower Improvements, Lexington, Kentucky** – Project Manager and Electrical Engineer for \$17 Million major electrical and SCADA improvements project. Project included SCADA replacement of Town Branch and West Hickman treatment facilities, and major electrical renovation at West Hickman.

**Lexington-Fayette Urban County Government Town Branch and West Hickman WWTP Redundant Power, Lexington, Kentucky** – Project Manager and Electrical Engineer for \$500,000 electrical upgrade to provide dual electrical services to both wastewater treatment plants.

**Lexington-Fayette Urban County Government – South Limestone, West Main Street, Vine Street, and East Main Street Streetscape Design, Lexington, Kentucky** – Streetscape design project includes signal replacement, signing, sidewalk, delivery zones, on-street parking, pedestrian amenities, and landscaping. Led efforts for the electrical design for lighting and signal, including photometrics.

## YEARS OF EXPERIENCE

35

## YEARS WITH FIRM

35

## EDUCATION

B. S. Electrical Engineering – University of Kentucky, Lexington, 1984

## REGISTRATION

Professional Engineer in Kentucky, Alabama, and Mississippi

# Mark A. Sneve, P.E., BCEE

Senior Associate



## AREAS OF EXPERTISE

- Wastewater Collection and Treatment Facilities
- Solids Handling Processes
- Biological Processes
- Combined Sewer System Studies
- Advanced Nutrient Removal
- Infiltration and Inflow Studies

## PROFESSIONAL EXPERIENCE

**Consulting** experience in the field of environmental engineering with emphasis on wastewater treatment process selection, planning, treatment system design, construction coordination, startup and operator training

**Wastewater Treatment** experience includes serving as project engineer, assistant project manager, or project manager for efforts in facilities planning of major additions and upgrades for municipal wastewater treatment plants, process design for wastewater treatment facilities, additions to wastewater treatment plants with high industrial flows, **activated sludge process**, coordinator of construction efforts, serving as resident project representative, contributing to operation and maintenance manuals for various municipal wastewater treatment facilities, instructing staff on wastewater facility operation, and user charge system studies.

**Combined Sewer Systems** experience includes preparing CSO Operational Plans, Long-Term Control Plans, investigating solids and floatable control, water quality sampling, monitoring and data evaluation, Citizen Advisory Committees and negotiating Enforcement Actions with Agencies.

**Specialized Field Service** experience includes efforts in the area of litigation support, managing compliance with enforcement actions, industrial pretreatment permitting, industrial discharge monitoring, groundwater investigations, solids processing equipment evaluations, industrial sampling auditing, priority pollutant sampling, and coordination of WWTP effluent biomonitoring.

**Laboratory** experience includes serving as Director of Technical Activity for private

laboratory. Responsible for laboratory quality assurance plan, troubleshooting, personnel, and financial aspects.

## PUBLICATIONS (Partial Listing)

- Simple Early Steps Toward Meeting Lower Phosphorus Effluent Limits with Randy Wirtz, Ph.D., P.E., presented at Ohio WEA 87th Annual Meeting, June 2013.
- Phosphorus Removal – Planning and Operational Strategies for Biological and Chemical Phosphorus Removal Facilities with Scott Stearns and Troy Larson, presented as a Webinar for Ohio WEA, September 2013.
- West Hickman Creek WWTP Blower Upgrade Reduces Power Consumption with Tiffany Rank, Jane Worton, and Mike Davis, presented at the Water Professional Conference, July 2013.
- Phosphorus & Nitrogen Removal in Wastewater, presented at the Kentucky Rural Water 33rd Annual Conference, August 2012, and the Central Kentucky Water & Wastewater Operators Association Fall Conference, September 2012.
- Existing Water Quality Standards and Wet Weather Compliance Are Mutually Exclusive, Why? presented at the Water Professionals Conference, July 2011.

## YEARS OF EXPERIENCE

29

## YEARS WITH FIRM

29

## EDUCATION

M.S. Civil/Environmental Engineering – University of Iowa, 1989

B.S. Civil/Environmental Engineering – University of Iowa, 1987

## REGISTRATION

Professional Engineer in Kentucky, Indiana, Ohio, Alabama, Mississippi, and Wisconsin

Board Certified Environmental Engineer, American Academy of Environmental Engineers and Scientists

# Emily L. Epperson, P.E.



## AREAS OF EXPERTISE

- Water Distribution Systems
- Wastewater Collection Systems
- Wastewater Treatment
- Municipal Stormwater Programming
- Construction Observation Services
- Streetscape

## PROFESSIONAL EXPERIENCE

**Wastewater Treatment** experience includes design for equipment upgrades and structural and mechanical improvements at the Primary Digester Complex at LFUCG's Town Branch Wastewater Treatment Plant. Other projects involve studies and/or design of industrial and package wastewater treatment plants for the Job Corps, Nestle USA, and Mercer County Sanitation District.

**Water Distribution** experience includes hydraulic evaluation, tank design, and water main extensions for the City of Maysville, Kentucky, and main extensions and interconnects for Jackson Energy Authority in Jackson, Tennessee and Kentucky American Water.

**Wastewater Collection** experience includes design for Mercer County Sanitation District in Mercer County, Kentucky. She was responsible for preliminary engineering studies as well as plan and profile design of low pressure and gravity sewer line installations. Additional experience includes condition assessments and repair recommendations of portions of the wastewater collection system in Frankfort, Kentucky.

**Municipal Stormwater Programming** experience includes work with the City of Georgetown, Kentucky's Phase II permit program. Staff training, public outreach, water quality sampling, facility inspections, and illicit discharge detection and elimination plan updates are components of her scope of experience.

**Construction Observation** experience includes RPR for water tank construction and water main installation in Maysville, aeration improvements at West Hickman Wastewater Treatment Plant,

and gravity sewer installation in Mercer County, Kentucky.

**Streetscape** experience includes grading, sidewalk design, and landscaping layout for the City of Maysville and preliminary sidewalk and site design work for a multiuse development in downtown Lexington, Kentucky.

## PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Kentucky Stormwater Association

## CONTINUING EDUCATION AND SEMINARS

- Confined Space Awareness Training – Confined Space Regulation and Equipment Familiarization Course – Received information and training requirements as set forth in Subpart J-Confined Spaces, 29 CFR Part 1910.146 – July 2017
- Four-Hour Fall Protection Training – Fall Protection Regulation and Equipment Familiarization Course – Received information and training requirements as set forth in Subpart M-Fall Protection, 29 CFR Parts 1910 and 1926 specifically part 1926.503 – July 2017

## YEARS OF EXPERIENCE

5

## YEARS WITH FIRM

5

## EDUCATION

B.S. Civil Engineering – Tennessee Tech University, Cookeville, Tennessee, 2013

## REGISTRATION

Professional Engineer in Kentucky

# Nadia Aljabi, E.I.T.



## AREAS OF EXPERTISE

- Wastewater Treatment
- Stormwater Systems
- Sanitary Sewer
- Engineering Education
- Materials Engineering
- AutoCad and ArcGIS Drafting

## PROFESSIONAL EXPERIENCE

**Wastewater Treatment** experience includes serving as process engineer through design, bid, and construction for a WWTP scum removal and ASH tank cover project. This project addresses operation and maintenance issues of scum accumulation throughout the WWTP. The gravity decant well aids in dewatering, odor control, and operational reliability.

Responsibilities included plan and design of the gravity decant well and its connecting sewer line, as well as the design of the odor control piping for the new aerated sludge holding tank aluminum cover. Responsibilities also included design for the following additional improvements during this project: a waterline for the sprinkler system in the new odor control building, decant scum pipes in the biological phosphorous removal tanks, access hatches to zone 1 and zone 2 aeration tank influent and effluent channels, and spray bars and spray nozzles in Zone 1 and Zone 2 aeration tanks.

- West Hickman WWTP Scum Removal and ASH Tank Cover Project, Lexington, Kentucky

**Sanitary Sewer** experience includes developing drawings of the proposed collection system plan and profile for a sanitary sewer project.

- Kennedy Bridge Road Sanitary Sewer Project, Mercer County, Kentucky

**Sewer Rehabilitation** experience includes developing drawings for a sanitary sewer rehabilitation project using ArcGIS and AutoCAD.

- Rolling Acres Sanitary Sewer Rehabilitation Phase 2 Project, Frankfort, Kentucky

**Field** experience includes intersection traffic counts, wastewater treatment plant field measurements and GPS mapping, and data collection of municipal stormwater systems.

- Lexington-Fayette Urban County Government, Lexington, Kentucky
- City of Georgetown, Kentucky

**Supply Chain Management (Houston, Texas)** – Improved the safety environment and reduced potential risks for drill bit furnace malfunctions at Halliburton. Addressed material management issues by reducing monthly recirculation adjustments of inventory materials by 61 percent.

**Engineering Education Research (West Lafayette, Indiana)** – Analyzed and reviewed books, games, and toys to determine whether they support early childhood development of STEM knowledge such as spatial skills, problem solving, programming, teaming, and prototyping. The findings from this extensive review process was published in the Engineering Gift Guide 2015 to the public.

**Materials Engineering Research (West Lafayette, Indiana)** – Explored the capabilities of Phase Transforming Cellular Materials (PXCMS) to improve structure resistance to damage caused by natural hazards and investigated fabrication techniques. PXCMS can absorb energy and is a reusable material since the phase transformation is reversible and does not induce permanent deformation in the base material. The results of this study allowed for increased versatility of PXCMS, which can lead to designs applicable in the development of safer, multihazard resilient buildings.

## PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Chi Epsilon National Civil Engineering Honors Society
- Women in Engineering Program

## YEARS OF EXPERIENCE

1

## YEARS WITH FIRM

1

## EDUCATION

B.S. Civil Engineering, Minor in Global Engineering, Purdue University, West Lafayette, Indiana, 2017

## REGISTRATION

Engineer-in-Training



# Elizabeth A. Dienst, P.E.



## AREAS OF EXPERTISE

- Project Management
- Structural Design of Commercial Buildings
- Structural Design of Wastewater Treatment Facilities
- Structural Design of Educational and Industrial Buildings
- Structural Design of Retaining Structures
- Design of Water Supply and Design of Wastewater Collection

## PROFESSIONAL EXPERIENCE

Elizabeth is a licensed professional engineer in Kentucky with more than 14 years of experience. She has a variety of project management experience covering municipal, water, wastewater, and structural design and construction administration projects. Her project management experience has ranged from small, short-term projects up to multiyear construction administration projects with construction budgets up to \$26 million. Elizabeth's design capabilities include structural design, architectural related tasks, as well as sanitary sewer design and studies. Her structural project assignments have given her experience with steel framed buildings, reinforced concrete structures of all shapes and sizes, reinforced masonry structures, retaining structures in a variety of materials, and precast structures. Through the variety of projects she has worked on she has gained the ability to analyze buildings in a variety of situations and geographical locations, for compliance to building codes, including buildings in Hazardous occupancies.

**Municipal Wastewater** experience includes structural design of wastewater treatment facilities utilizing cast-in-place concrete, precast concrete, reinforced masonry, and structural steel for both new facilities and modifications to existing facilities for communities in Kentucky, West Virginia, Ohio, Indiana, and Wisconsin. Design and construction project management and resident observation experience for wastewater treatment facilities and sanitary sewer collection, conveyance, and pump stations in Kentucky.

**Municipal Water** experience includes structural design of potable water reservoirs, pumping stations, and water treatment facilities for communities in Kentucky, West Virginia, and Wisconsin. Experience includes hazardous occupancy code review and compliance. Design

and construction project management and resident observation experience for water treatment plant, water storage, and water main projects in Kentucky.

**Industrial Building** experience includes new facilities as well as modifications to existing structures for food processing plants, distillery buildings and warehouses, and manufacturing warehouses.

**Project Management** experience with design and construction administration projects. Successful in managing large or small design teams on site-civil design, facilities design and water and wastewater design projects. Effective manager of construction administration projects of all types and disciplines. Experience includes large and small site-civil contracts, water supply and wastewater treatment facilities, sanitary sewer systems, water mains and structural facilities.

## CONTINUING EDUCATION AND SEMINARS

- Leadership PE Graduate, Class of 2008 – 2009.

## PROFESSIONAL AFFILIATIONS

- Kentucky Society of Professional Engineers (Past President, Bluegrass Chapter)
- National Society of Professional Engineers

## YEARS OF EXPERIENCE

16

## YEARS WITH FIRM

16

## EDUCATION

B.C.E. Civil Engineering –  
University of Dayton, Ohio,  
2002

## REGISTRATION

Professional Engineer in  
Kentucky



# Similar Projects

## Strand's Proven Service and Commitment to LFUCG Demonstrates Our Ability to Serve LFUCG Effectively on this Project

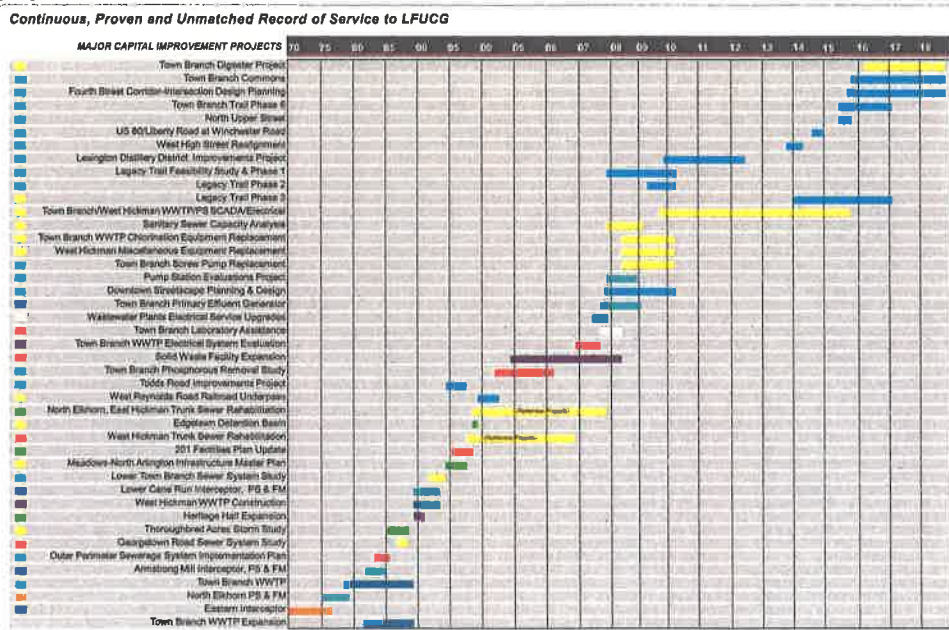
Strand has been providing consistent and dependable engineering services for public and private sector clients since 1946. To serve our national client base, we have nearly 415 staff in 11 offices throughout the country, including our office in Lexington, Kentucky. Our Lexington-based staff have an established track record serving LFUCG since 1968. Wastewater is a major area of specialized experience for our company. After 72 years of success, we have grown into a significant wastewater engineering firm that is ranked among Engineering News Record Midwest as a Top 20 Wastewater Firm, of which we were ranked 17th in 2017. Our Project Team provides the capabilities of a nationally recognized firm, with service from our local Lexington staff. Our Project Team brings the following key attributes to this important LFUCG project.

Strand has provided engineering services for LFUCG WWTP projects for over 38 years.

### PAST RECORD OF PERFORMANCE

Strand has served LFUCG continuously and successfully since 1968. We are proud of our record of performance and the privilege to be of service to the Urban County Government and our community. Strand has provided a broad range of wastewater engineering services from initial planning through design and construction. More recently, we provided engineering services for the Town Branch Primary digester Complex Improvements project, Town Branch Primary Effluent Pump Station Improvements (Screw Pump Replacement) project, and the West Hickman Electrical and SCADA Improvements project.

Strand's working knowledge of Town Branch WWTP treatment facilities and operations results in custom solutions for specific needs.



### SPECIALIZED EXPERIENCE

#### Strand's Understanding of the Town Branch Operations Results in Seamless Integration of Process Improvements

For a project of this nature to be successful, it must incorporate input from LFUCG staff that are responsible for these facilities on a daily basis. Strand's approach to project development emphasizes owner input. Beginning with the project kick-off meeting and continuing through all phases of project development, Strand will engage LFUCG operations and engineering staff to obtain input regarding equipment and process upgrades. This input, combined with Strand's engineering expertise, will result in efficient, cost-effective systems. Strand has demonstrated this approach through prior projects completed with the LFUCG Division of Water Quality.



**Strand’s Wastewater Solids Processing and Pumping Experience, Coupled with Our Understanding of the Town Branch WWTP Facility Results in Efficient Systems that Meet Specific Plant Needs**

Strand-designed treatment facilities anticipate the need to treat and handle sludge produced during wastewater treatment. Strand has a wealth of experience applying sludge handling facilities and designing sludge pumping facilities for primary, waste and thickened sludge.



Town Branch Wastewater Treatment Plant.

The Secondary Digester Complex is an important component in sludge processing at Town Branch. The facility interfaces with primary digesters, sludge thickening and sludge dewatering system. Strand has extensive projects experience applying all these sludge processes. The following table and project descriptions list our project experience for similar facilities utilizing anaerobic digestion. We would be happy to provide additional information regarding these projects at LFUCG’s request.

Client/Location	Brief Project Description	Plant Size (mgd)	Biosolids Planning	Biosolids Disposal	Anaerobic Digestion	Biogas Use Analysis	Sludge Pumping	Sludge Thickening or Dewatering
Lexington-Fayette Urban County Gov't	Town Branch WWTP Primary Digester Complex Improvements	30	●		●	●	●	
Lexington-Fayette Urban County Gov't	Town Branch WWTP Expansion	30	●	●	●	●	●	●
Louisville MSD, KY	Biosolids Planning and Preliminary Design	120	●	●	●			
Madison Metropolitan Sewerage District, WI	Energy Master Plan	50			●	●		
FRWRD, IL	Biosolids and Biogas Master Plan	38	●	●	●	●		
KRMA, IL	Planning, Design, and Construction	20	●	●	●	●	●	●
Glenbard, IL	Planning, Design, and Construction	16.2	●	●	●	●	●	●
Joliet, IL (East Plant)	Anaerobic Digestion Expansion and upgrade	18.2			●		●	●
Manitowoc, WI	Operation and Needs Review	15.5	●	●	●	●	●	●
Parkersburg, WV	Planning, Design, and Construction	15	●	●	●	●	●	●
Prichard, AL (Morris WWTP)	Anaerobic Digestion Equipment Replacement	4			●		●	
Prichard, AL (Brooks WWTP)	Anaerobic Digestion Equipment Replacement	1.5			●		●	●
Waukesha, WI	Planning and Design	14	●	●	●	●	●	●
Brookfield, WI	Facilities and Biogas Use Plan	12.5	●	●	●	●	●	●
Fond du Lac, WI	Planning, Design, and Construction	10	●	●	●	●	●	●
Dubuque, IA	Facilities Plan, Design and Construction	11	●	●	●	●	●	●
RMMSD, WI	Facilities Plan	4.5	●	●	●			
Whitewater, WI	Biosolids/Biogas Study, Design, and Construction	3.5	●	●	●	●	●	●
Cedar Rapids, IA	Anaerobic Treatment for High-Strength Industrial Waste Plan	3.5			●	●	●	●
Stoughton, WI	Biosolids Studies, Designs, and Construction	2.1	●	●	●	●		
Howard County, MD	Anaerobic Treatment for High-Strength Industrial Waste Plan	0.4			●	●		

Five similar projects for treatment facilities utilizing anaerobic digestion are detailed on the following pages.



**19th Street WWTP Facility Planning and Anaerobic Digestion Upgrades – Parkersburg, WV**

The Parkersburg Utility Board (PUB) provides wastewater services for the Cities of Parkersburg and Vienna, West Virginia, and for several unincorporated areas outside of the city limits. Our firm’s history with PUB extends back more than 30 years during which we have provided engineering services for multiple WWTP improvements projects, including Phase 1 and Phase 2 improvements.

In 2012, facilities planning for Phase 2 improvements began. As part of the Phase 2 planning process, we completed detailed evaluations of six digestion alternatives and four biogas utilization alternatives to help the City determine the best approach to address long-term sludge treatment needs. The digestion alternatives ranged from utilization of existing aerobic digestion and maximization of anaerobic digestion capacity to complete conversion to aerobic digestion. The biogas utilization alternatives ranged from flaring of waste biogas to conditioning and use of biogas in an energy generation system, such as microturbines. The planning report evaluated the alternatives based on a 20-year net present worth, including initial capital and replacement costs, operational and maintenance costs, and potential energy production and the associated natural gas and electric energy savings. Operational flexibility and process consistency were also taken into account during the evaluations.

The age of the anaerobic digestion facilities, including the poor condition of the existing biogas collection and handling system, and lack of digester mixing were important factors to consider during the evaluation. The best digestion alternative selected for the City included adding primary digester mixing equipment to increase anaerobic digestion capacity; piping modification to transfer thickened WAS to the anaerobic digesters, capitalizing on the expanded anaerobic digestion capacity in lieu of constructing additional aerobic digestion; and replacing the aged gas safety equipment. Reuse of biogas in boilers, to provide building and digester heating, was selected as the best biogas utilization alternative. After the digestion alternative was determined, an additional evaluation of pumped mixing, draft tube mixing, and linear motion mixing alternatives was completed.

The project includes a TWAS holding tank with submersible jet-ring mixers and medium bubble membrane diffusers that can provide process flexibility by doubling as an aerobic digester; a linear motion mixing system in the three, 55-foot primary digesters; new air-operated diaphragm primary and thickened WAS sludge pumps; a new 2 MMBTU biogas/natural gas boiler; completely new digester gas collection and handling system, including all new digester gas piping, flow monitoring, foam sensing and separation equipment, waste gas burner, biogas storage monitoring, biogas wasting controls, and biogas safety equipment; and additional forward flow improvements.

**Water and Resource Recovery Plant Upgrade Facilities Planning – Dubuque, IA**

The City of Dubuque is widely considered to be a model “sustainable” community. Nowhere is this more apparent than with the City’s decisions related to wastewater biosolids digestion and follow-up projects and studies related to renewable energy, biogas conditioning and cogeneration, codigestion, and food residuals management. We were hired in 2007 to conduct long-range planning for the aging wastewater treatment plant, which was built in the 1960s and 1970s.

The plant has historically incinerated wastewater sludge followed by landfilling of the ash, and one of the goals of this project was to determine whether a more sustainable approach for solids management could be implemented. Throughout the planning effort, the City’s sustainable goals were incorporated in the evaluations through carbon footprint and greenhouse gas emission analyses, energy evaluations, and related measures. In the

**Client/Contact:**  
Parkersburg Utility Board  
Eric Bennett, General  
Manager  
304-424-8469



Parkersburg Utility Board's 19th St. WWTP.

**Client/Contact:**  
City of Dubuque, IA  
Steve Sampson Brown,  
Ph.D., P.E., Project  
Manager  
563-589-4270



Dubuque anaerobic digesters and biogas



end, anaerobic digestion of the City’s biosolids was recommended and ultimately implemented.

Our 2009 project included updating nearly everything at the plant, with the major portion of the project devoted to replacing the aging sludge incinerators with new anaerobic digestion facilities for solids stabilization.

In our most recent follow-up project with the City, we designed the following biogas-related components:

- Hydrogen sulfide removal using “sulfa-treat” media vessels.
- Mechanical chilling for moisture removal.
- Siloxane removal using activated carbon-based technology.
- Cogeneration of conditioned biogas using microturbines (three at 200-kW each).
- Heat recovery for digester and building heat.

**Anaerobic Digestion Upgrades, Biogas Conditioning, and Cogeneration – Fond du Lac, WI**

The City of Fond du Lac operates a water pollution control plant that treats wastewater from the City and 15 outlying communities. Since the 1970s, the plant used energy-intensive, high-purity oxygen-activated sludge and Zimpro sludge conditioning with dewatered sludge being landfilled. In 2002, process upsets occurred at the plant causing permit violations.

**Client/Contact:**  
 City of Fond du Lac, WI  
 Jeremy Cramer  
 Superintendent  
 920-322-3662

Our recommended plan included plant improvements and upgrades, with the largest part of the upgrades being for biosolids management changes. The Zimpro equipment was expensive to operate and becoming more maintenance-intensive as the equipment began to wear out and odors were significant. Landfilling, although relatively low cost at the time, was becoming more expensive.



Fond du Lac Regional WPCP.

We conducted detailed evaluations of a wide range of biosolids stabilization and management alternatives, including helping the City set the direction for biosolids management, including continuing with Zimpro, anaerobic digestion (Class A and Class B), pasteurization, composting, and combinations of these alternatives. Anaerobic digestion was selected as the best alternative for the City and design and construction of the facilities commenced. Centrifuges were included for digested biosolids dewatering, and off-site storage with contract hauling was selected as the preferred biosolids disposal option. We designed a cogeneration system with biogas conditioning to provide more efficient energy recovery throughout the year.

**Anaerobic Digestion Upgrades, Biogas Conditioning and Cogeneration – Kankakee River Metropolitan Agency – Kankakee, IL**

Kankakee River Metropolitan Agency (KRMA) provides wastewater services for the City of Kankakee and Villages of Bradley, Bourbonnais, and Aroma Park, Illinois. The facility has an average daily flow of 20 mgd and a peak flow of 85 mgd. We have been providing nearly continuous services to the KRMA regional wastewater treatment facility since 2001. Four major projects are the result of our long-range planning and subsequent design services to KRMA. The largest of these is the biosolids management upgrade project.

**Client/Contact:**  
 The Kankakee River Metropolitan Agency  
 Art Strother, Plant Superintendent  
 815-936-1462

In December 2010, an explosion in the digester building at the KRMA WWTP completely destroyed the main digester control building and effectively shut down biosolids digestion at the plant. KRMA hired our firm to conduct fast-track biosolids master planning to determine whether the anaerobic digestion system should be rebuilt or whether another direction should be considered for biosolids management, stabilization, and disposal. We evaluated numerous biosolids stabilization technologies, including several forms of anaerobic digestion, autothermal aerobic digestion, and drying. We



evaluated 20-year present-worth costs to determine the lowest cost and overall best option for KRMA. Continuing with mesophilic anaerobic digestion was selected and a fast-track design project was completed.

The five digesters (three primary and two secondary) were reused and refurbished. New boilers, heat exchangers, draft tube mechanical digester mixing equipment, and sludge and biosolids pumping equipment were provided, and a new control building was constructed to house the equipment. Sludge handling prior to digestion was improved to address digester foaming issues. DAF-thickened WAS and primary sludge are blended and stored prior to digestion to equalize the loadings to the digesters.

In addition, new foam separation scrubbers were provided on the gas lines from the digesters to mitigate foaming concerns.

**Biosolids and Biogas Facilities Master Plan – Elgin IL**

The Fox River Water Reclamation District (FRWRD) has three water reclamation facilities (WRFs) in Elgin with a combined treatment capacity of approximately 38 mgd. Biosolids from the north and west WRFs are treated at the main (Albin D. Pagorski) WRF. Most of the biosolids and biogas facilities are at or beyond their expected service life. A Master Plan was commissioned to address both immediate and future needs.

The Master Plan included an evaluation of the existing capacity and condition of equipment, review of phosphorus and other pending regulations that could impact biosolids production and beneficial reuse, review of established and innovative technologies, ranking of potential technologies based on cost and nonmonetary factors, detailed review of shortlisted alternatives, development of a 5-year capital improvements plan and 20-year facilities plan, and determination of future “road signs” (e.g., energy costs) that may drive selection of one alternative over another.

The recommended plan includes continued use of anaerobic digestion with cogeneration of heat and power from the biogas. Digested biosolids will continue to be dewatered, and when the existing belt filter presses reach the end of their service life they may be replaced with centrifuges. Covered on-site storage was recommended for the dewatered biosolids. Alternatives that were retained for potential future implementation, depending on effluent limits and other factors, include recovery of phosphorus and removal of ammonia from biosolids side-streams, implementation of temperature phased anaerobic digestion if Class A biosolids are required, and acceptance of grease or other hauled wastes for digestion and additional energy generation. Biosolids drying could be reconsidered if vehicle fuel prices increase significantly or Class A biosolids production becomes necessary.

FRWRD has begun to implement the recommended 5-year capital improvement program, starting with covering of biosolids storage areas and changes to the struvite control chemical feed system. Other short-term projects will include digester mixing and biogas handling systems improvements, and replacement of heating and ventilating systems in select buildings.



Biological H<sub>2</sub>S scrubbers.

**Client/Contact:**  
Fox River Water  
Reclamation District  
Robert Trueblood,  
Executive Director  
847-742-2068



FRWRD's Albin D. Pagorski WRF.



**AFFIDAVIT**

Comes the Affiant, Matthew S. Richards, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Matthew S. Richards and he/she is the individual submitting the proposal or is the authorized representative of Strand Associates, Inc.®, the entity submitting the proposal (hereinafter referred to as "Proposer").
  
2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
  
3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
  
4. Proposer has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
  
5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.
  
6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."



**Continued on next page**

7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

Matthew S. Richards

STATE OF Wisconsin

COUNTY OF Dane

The foregoing instrument was subscribed, sworn to and acknowledged before me  
by Matthew S. Richards on this the 17 day  
of September, 2018

My Commission expires: July 4, 2021

Laura Elizabeth Roberts  
NOTARY PUBLIC, STATE AT LARGE



## GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, *29 U.S.C. 650 et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. Additional Information: While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. Ambiguity, Conflict or other Errors in RFP: If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. Cancellation: If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

A. Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
  - (a) Failure to perform the contract according to its terms,

- conditions and specifications;
- (b) Failure to make delivery within the time specified or according to a delivery schedule fixed by the contract;
  - (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
  - (d) Failure to diligently advance the work under a contract for construction services;
  - (e) The filing of a bankruptcy petition by or against the contractor; or
  - (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

#### B. At Will Termination

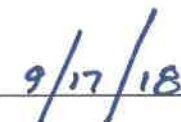
Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

- 13. **Assignment of Contract:** The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
- 14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
- 15. **Authority to do Business:** The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this

Contract. The Respondent will provide LFUCG with a copy of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must be signed by a duly authorized officer, agent or employee of the Respondent.

16. **Governing Law:** This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. **Ability to Meet Obligations:** Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.

  
Signature

  
Date

## EQUAL OPPORTUNITY AGREEMENT

### The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

*The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.*

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

*The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.*

\*\*\*\*\*

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

### Bidders

*I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.*

*Matthew Schick*

Signature

*Strand Associates, Inc.*

Name of Business



**Strand Associates, Inc.®**

1525 Bull Lea Road, Suite 100

Lexington, KY 40511

(P) 859-225-8500

(F) 859-225-8501

**Equal Employment Opportunity Policy Statement**

Strand Associates, Inc.® is committed to a policy of equal opportunity for all employees. It is our policy to seek and employ the best qualified personnel in all positions, to provide equal opportunity for advancement to all employees, including upgrading, promotion and training, and to administer these activities in a manner which will not discriminate against or give preference to any person because of race, color, religion, age, sex, national origin, handicap, marital status, or any other discriminatory basis prohibited by state or federal law.

Strand is further committed to providing a work environment in which employees are treated with courtesy, respect, and dignity. As part of this commitment, we will not tolerate any form of harassment, verbal or physical, with regard to an individual's race, sex, national origin, or any other protected characteristics. Therefore, all employees are encouraged to bring forth any concerns or complaints in this regard to the attention of management by contacting Human Resources, Shawn Cannon, or Ted Richards.

All complaints of sexual harassment, or harassment of any kind, will be investigated promptly and, where necessary, immediate and appropriate action will be taken to stop and remedy any such conduct. Any employee found in violation of this policy will be subject to disciplinary action which could include discharge.

**WORKFORCE ANALYSIS FORM**

Name of Organization: Strand Associates, Inc.

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators	9	7	1						1							7	2
Professionals	289	223	53	4	1	1				7						235	54
Superintendents	0															0	0
Supervisors	0															0	0
Foremen	0															0	0
Technicians	49	42	4	1		2										45	4
Protective Service	0															0	0
Para-Professionals	0															0	0
Office/Clerical	51	9	36	1	1		2		1	1						11	40
Skilled Craft	0															0	0
Service/Maintenance	4	1				3										4	0
<b>Total:</b>	<b>402</b>	<b>282</b>	<b>94</b>	<b>6</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>302</b>	<b>100</b>

Prepared By: Ashley Pekul, H/R Assistant  
(Name and Title)

Date: 09 / 17 / 18  
Revised 2015-Dec-15





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

7/3/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ansay & Associates, LLC. 702 N High Point Road Suite 201 Madison WI 53717	<b>CONTACT NAME:</b> Susan Simoneau <b>PHONE (A/C, No, Ext):</b> 800-643-6133 <b>E-MAIL ADDRESS:</b> sue.simoneau@ansay.com	<b>FAX (A/C, No):</b> 608-831-4777	
	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURED</b> Strand Associates, Inc 310 W. Wingra Drive Madison WI 53715	STRAASS-01	<b>INSURER A:</b> CNA Insurance Companies <b>INSURER B:</b> <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	35289

**COVERAGES**

CERTIFICATE NUMBER: 1983236503

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Bklt Contractual GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			5099170059	1/1/2018	1/1/2019	EACH OCCURRENCE	\$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 900,000
							MED EXP (Any one person)	\$ 15,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ 2,000,000
							PRODUCTS - COMP/OP AGG	\$ 2,000,000
								\$
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			5099170062	1/1/2018	1/1/2019	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			5099170059	1/1/2018	1/1/2019	EACH OCCURRENCE	\$ 2,000,000
							AGGREGATE	\$ 2,000,000
								\$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y/N <input checked="" type="checkbox"/> N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			WC595126844	1/1/2018	1/1/2019	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
							E.L. EACH ACCIDENT	\$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
A	Professional Liability Full Prior Acts			AEH113974097	7/11/2018	7/11/2019	Each Claim Aggregate Full Prior Acts	2,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

**CERTIFICATE HOLDER****CANCELLATION**

Certificate Holder

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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For more location information  
please visit [www.strand.com](http://www.strand.com)

## Office Locations

Brenham, Texas | 979.836.7937

Cincinnati, Ohio | 513.861.5600

Columbus, Indiana | 812.372.9911

Columbus, Ohio | 614.835.0460

Indianapolis, Indiana | 317.423.0935

Joliet, Illinois | 815.744.4200

Lexington, Kentucky | 859.225.8500

Louisville, Kentucky | 502.583.7020

Madison, Wisconsin\* | 608.251.4843

Milwaukee, Wisconsin | 414.271.0771

Phoenix, Arizona | 602.437.3733

\*Corporate Headquarters



**~~EXHIBIT D~~ NOT USED**

**Further Description of Basic Engineering Services**

**and**

**Related Services**