

AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
BLACK & VEATCH CORPORATION

THIS AGREEMENT by and between the City of Columbia, Missouri (hereinafter called "CITY"), and **Black & Veatch Corporation** (hereinafter called "ENGINEER"), is entered into on the date of the last signatory noted below (the "Effective Date").

WITNESSETH, that whereas CITY intends to make improvements as described below, hereinafter called the PROJECT, consisting of the following:

**Wastewater Treatment Plant Phase 2 Improvements –
Digester Complex**

(Description of Project)

NOW, THEREFORE, in consideration of the mutual covenants set out herein the parties agree as follows:

ENGINEER shall serve as CITY's professional engineering contractor in those assignments to which this Agreement applies, and shall give consultation and advice to CITY during the performance of the services. All services shall be performed under the direction of a professional engineer registered in the State of Missouri and qualified in the particular field.

SECTION 1 - AUTHORIZATION OF SERVICES

1.1 ENGINEER shall not undertake to begin any of the services contemplated by this agreement until directed in writing to do so by CITY. CITY may elect to authorize the PROJECT as a whole or in parts.

1.2 Authorized work may include services described hereafter as Basic Services or as Additional Services of ENGINEER.

SECTION 2 - BASIC SERVICES OF ENGINEER

2.1 General

2.1.1 Perform professional engineering services as set forth in Attachment A - "Scope of Basic Services," dated **May 9, 2018** (hereinafter referred to as "Scope of Basic Services").

2.1.2 ENGINEER will designate the following listed individuals as its project team with responsibilities as assigned. ENGINEER shall dedicate whatever additional resources are necessary to accomplish the PROJECT within the specified time frame but will not remove these individuals from the assigned tasks for any reason within the control of ENGINEER without the written approval of CITY.

<u>Name and Title</u>	<u>Assignment</u>
Derek Cambridge, Associate VP	Project oversight.
Suzie Carpenter, Project Manager	Project management.
Amanda Johnson, Eng. Manager	Engineering management.
Brian Huska, Eng Manager	Engineering management and mechanical process design.

All of the services required hereunder will be performed by ENGINEER or under its supervision and all personnel engaged in the work shall be fully qualified and authorized or permitted under state and local law to perform such services.

None of the work or services covered by this Agreement shall be subcontracted without the prior written approval of CITY and any work or services so subcontracted shall be subject to the provisions of this Agreement.

2.2 ENGINEER shall furnish such periodic reports as CITY may request pertaining to the work or services undertaken pursuant to this Agreement, the costs and obligations incurred or to be incurred, and any other matters covered by this Agreement.

2.3 ENGINEER shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Agreement and any other records as deemed necessary by CITY to assure proper accounting for all project funds. These records must be available to CITY or its authorized representatives, for audit purposes, and must be retained for three (3) years after expiration or completion of this Agreement.

SECTION 3 - ADDITIONAL SERVICES OF ENGINEER

3.1 General

If authorized in writing by CITY, and agreed to in writing by ENGINEER, ENGINEER shall furnish or obtain from others Additional Services of the following types which are not considered normal or customary Basic Services. The scope of Additional Services may include:

3.1.1 Financial Consultation

Consult with CITY's fiscal agents and bond attorneys and provide such engineering data as required for any bond prospectus or other financing requirements.

- 3.1.2 Property Procurement Assistance
Provide consultation and assistance on property procurement as related to professional engineering services being performed.
- 3.1.3 Obtaining Services of Others
Provide through subcontract the services or data set forth in Scope of Basic Services.
- 3.1.4 Preliminary or final engineering design of capital facilities except as specifically identified herein.
- 3.1.5 Preparation of reports, data, application, etc., in connection with modifications to FEMA floodplain definition and/or mapping.
- 3.1.6 Extra Services
Services not specifically defined heretofore that may be authorized in writing by CITY.

SECTION 4 - RESPONSIBILITIES OF CITY

- 4.1 Provide full information as to CITY's requirements for the PROJECT.
- 4.2 Assist ENGINEER by placing at ENGINEER's disposal available information pertinent to the assignment including previous reports and other data relative thereto, including the items outlined in Scope of Basic Services.
- 4.3 Guarantee access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform ENGINEER's services under this Agreement.
- 4.4 Examine all studies, reports, sketches, estimates, Bid Documents, Drawings, proposals and other documents presented by ENGINEER and render in writing decisions pertaining thereto.
- 4.5 Provide such professional legal, accounting, financial and insurance counseling services as may be required for the PROJECT.
- 4.6 Designate **Erin Keys**, as CITY's representative with respect to the services to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define CITY's policies and decisions with respect to materials, equipment, elements and systems to be used in the PROJECT, and other matters pertinent to the services covered by this Agreement. The CITY's designated representative may be changed during the duration of this Agreement by written notice from the City Manager, or City Manager's designee, to ENGINEER.

4.7 Give prompt written notice to ENGINEER whenever CITY observes or otherwise becomes aware of any defect in the PROJECT.

4.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the PROJECT and such approvals and consents from others as may be necessary for completion of the PROJECT.

4.9 Furnish ENGINEER data such as probings and subsurface explorations, with appropriate professional interpretations; property, boundary, easement, right-of-way, topographic and utility surveys; zoning and deed restriction; and other special data or consultations, all of which ENGINEER may rely upon in performing his services under this Agreement.

SECTION 5 - PERIOD OF SERVICE

5.1 This Agreement will become effective upon the first written notice by CITY authorizing services hereunder.

5.2 This Agreement shall be applicable to all work assignments authorized by CITY subsequent to the date of its execution and shall be effective as to all assignments authorized.

5.3 Services shall be started within 10 calendar days of Notice to Proceed and completed within **480** calendar days from the issuance of the Notice to Proceed. CITY shall have the right to establish performance times for individual phases or elements of the PROJECT by delivering a written schedule setting out the performance times to the ENGINEER.

SECTION 6 - PAYMENTS TO ENGINEER

6.1 Amount of Payment

6.1.1 For services performed, CITY shall pay ENGINEER the sum of amounts determined as follows:

6.1.1.1 For time spent by personnel, payment at the hourly rates indicated in the "Schedule of Hourly Labor Billing Rates" (attached). Such rates include overhead and profit. The schedule may be revised annually if the term of this Agreement exceeds one (1) year. To be effective, any revision in the Schedule of Hourly Labor Billing Rates shall be provided by ENGINEER to CITY as least thirty (30) days prior to work performed under this Agreement to which such rates apply.

6.1.1.2 For outside expenses incurred by ENGINEER, such as authorized travel and subsistence, commercial services, and incidental expenses, the cost to ENGINEER.

6.1.1.3 For reproduction, printing, long-distance telephone calls, company vehicle usage, testing apparatus, computer services and computer-assisted drafting (CAD), amounts will be charged according to the ENGINEER's standard rates in effect at the time service is provided.

6.1.1.4 For professional services rendered by others as subcontractor(s) to ENGINEER such as surveying, real property descriptions, soil borings, subsurface investigations, laboratory testing, field quality control tests, progress photos, or other activities required or requested by CITY, will be billed at the cost to ENGINEER.

6.1.1.5 For time spent by outside individual professional consultants employed by ENGINEER in providing services to CITY, the cost to ENGINEER. Expenses incurred by such outside consultants in service to CITY shall be reimbursable in accordance with 6.1.1.2 above.

6.1.1.6 Total payment for Scope of Basic Services and all other expenses and costs to CITY under this Agreement and described herein **shall not exceed \$752,839.**

6.2 Payments

6.2.1 ENGINEER shall submit an invoice for services rendered to CITY not more than once every month. Upon receipt of the invoice and progress report, CITY will, as soon as practical, pay ENGINEER for the services rendered, provided CITY does not contest the invoice, to the extent of ninety-five percent (95%) of the uncontested amount earned. Upon completion and acceptance of the final plans by CITY, the five percent (5%) of these services retained by CITY will be paid to ENGINEER.

SECTION 7 - GENERAL CONSIDERATIONS

7.1 Insurance

7.1.1 ENGINEER'S INSURANCE: ENGINEER agrees to maintain, on a primary basis and at its sole expense, at all times during the life of this contract the following insurance coverages, limits, including endorsements described herein. The requirements contained herein, as well as CITY's review or acceptance of insurance maintained by ENGINEER is not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by ENGINEER under this contract.

Commercial General Liability ENGINEER agrees to maintain Commercial General Liability at a limit of liability not less than **\$2,000,000** combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death. Coverage shall not contain any endorsement(s) excluding nor limiting Contractual Liability or Cross Liability. If the contract involves any underground/digging operations, the general liability certificate shall include X, C and U (Explosion, Collapse and Underground) coverage.

Professional Liability ENGINEER agrees to maintain Professional (Errors & Omissions) Liability at a limit of liability not less than **\$2,000,000** per claim and **\$2,000,000** aggregate. For policies written on a “Claims-Made” basis, ENGINEER agrees to maintain a Retroactive Date prior to or equal to the Effective Date of this contract. In the event the policy is canceled, non-renewed, switched to an Occurrence Form, retroactive date advanced; or any other event triggering the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this contract, ENGINEER agrees to purchase a SERP with a minimum reporting period not less than two (2) years. The requirement to purchase a SERP shall not relieve ENGINEER of the obligation to provide replacement coverage.

Business Automobile Liability ENGINEER agrees to maintain Business Automobile Liability at a limit of liability not less than **\$2,000,000** combined single limit for any one occurrence and not less than \$150,000 per individual, covering both bodily injury, including accidental death, and property damage, to protect themselves from any and all claims arising from the use of the ENGINEER’s own automobiles, and trucks; hired automobiles, and trucks; and automobiles both on and off the site of work. Coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event ENGINEER does not own automobiles, ENGINEER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers’ Compensation Insurance & Employers’ Liability ENGINEER agrees to take out and maintain during the life of this contract, Employers’ Liability and Workers’ Compensation Insurance for all of their employees employed at the site of the work, and in case any work is sublet, the ENGINEER shall require the subcontractor similarly to provide Workers’ Compensation Insurance for all the latter’s employees unless such employees are covered by the protection afforded by the ENGINEER. Workers’ Compensation coverages shall meet Missouri statutory limits. Employers’ Liability minimum limits shall be \$500,000 each employee, \$500,000 each accident and \$500,000 policy limit. In case any class of employees engaged in hazardous work under this contract is not protected under the Workers’ Compensation Statute, the ENGINEER shall provide and shall cause each subcontractor to provide Employers’ Liability Insurance for the protection of their employees not otherwise protected.

Excess/Umbrella Liability The above liability limits may be satisfied by any combination of primary and excess/umbrella liability policies.

Additional Insured ENGINEER agrees to endorse CITY as an Additional Insured with a CG 2026 Additional Insured – Designated Person or Organization endorsement, or similar endorsement, to the Commercial General Liability. The Additional Insured shall read “City of Columbia.”

Waiver of Subrogation ENGINEER agrees by entering into this contract to a Waiver of Subrogation for each required policy herein except professional liability. When required by the insurer, or should a policy condition not permit ENGINEER to enter into an pre-loss agreement to waive subrogation without an endorsement, then ENGINEER agrees to notify the insurer and request the policy be endorsed with a Waiver of

Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition specifically prohibiting such an endorsement, or voids coverage should ENGINEER enter into such an agreement on a pre-loss basis.

Certificate(s) of Insurance ENGINEER agrees to provide CITY with Certificate(s) of Insurance evidencing that all coverages, limits and endorsements required herein are maintained and in full force and effect. Said Certificate(s) of Insurance shall include a minimum thirty (30) day endeavor to notify due to cancellation or non-renewal of coverage. The Certificate(s) of Insurance shall name the City as additional insured in an amount as required in this contract and contain a description of the project or work to be performed.

Right to Revise or Reject CITY reserves the right, but not the obligation, to review and revise any insurance requirement, not limited to limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work / specifications affecting the applicability of coverage. Additionally, CITY reserves the right, but not the obligation, to review and reject any insurance policies failing to meet the criteria stated herein or any insurer providing coverage due of its poor financial condition or failure to operating legally.

7.1.2 HOLD HARMLESS AGREEMENT: To the fullest extent not prohibited by law, ENGINEER shall indemnify and hold harmless the City of Columbia, its directors, officers, agents and employees from and against all claims, damages, losses and expenses (including but not limited to attorney's fees) arising by reason of any negligent act or failure to act, or willful misconduct, of ENGINEER, of any subcontractor (meaning anyone, including but not limited to consultants having a contract with ENGINEER or a subcontractor for part of the services), of anyone directly or indirectly employed by ENGINEER or by any subcontractor, or of anyone for whose acts ENGINEER or its subcontractor may be liable, in connection with providing these services except as provided in this Agreement. This provision does not, however, require ENGINEER to indemnify, hold harmless or defend the City of Columbia from its own negligence, except as set out herein.

7.2 Professional Responsibility

7.2.1 ENGINEER will exercise reasonable skill, care, and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted good professional engineering practices. If ENGINEER fails to meet the foregoing standard, ENGINEER will perform at its own cost, and without reimbursement from CITY, the professional engineering services necessary to correct errors and omissions which are caused by ENGINEER's failure to comply with above standard, and which are reported to ENGINEER within one year from the completion of ENGINEER's services for the PROJECT.

7.2.2 In addition, ENGINEER will be responsible to CITY for damages caused by its negligent conduct during its activities at the PROJECT site or in the field.

7.2.3 Professional Oversight Indemnification

ENGINEER understands and agrees that CITY has contracted with ENGINEER based upon ENGINEER's representations that ENGINEER is a skilled professional and fully able to provide the services set out in this Agreement. In addition to any other indemnification set out in this Agreement, ENGINEER agrees to defend, indemnify and hold and save harmless CITY from any and all claims, settlements and judgments whatsoever arising out of CITY's alleged negligence in hiring or failing to properly supervise ENGINEER. ENGINEER agrees to provide CITY with Certificate(s) of Insurance evidencing that all coverages, limits and endorsements are maintained and in full force and effect.

7.3 Estimates and Projections

Estimates and projections prepared by ENGINEER relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating results are based on ENGINEER's experience, qualifications and judgment as a design professional. Since ENGINEER has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, competitive bidding or market conditions and other factors affecting such estimates or projections, ENGINEER does not guarantee that actual rates, costs, performance, schedules, etc., will not vary from estimates and projections prepared by ENGINEER.

7.4 On-Site Services

PROJECT site visits by ENGINEER during construction shall not make ENGINEER responsible for construction means, methods, techniques, sequences or procedures; for construction safety precautions or programs; or for any construction contractor(s') failure to perform its work in accordance with the plans and specifications.

7.5 Changes

CITY shall have the right to make changes within the general scope of ENGINEER's services, with an appropriate change in compensation and/or schedule, upon execution of a mutually acceptable amendment or change order signed by an authorized representative of CITY and the President or any Vice President of ENGINEER.

7.6 Suspension of Services

Should CITY fail to fulfill its responsibilities as provided under Section 4 to the extent that ENGINEER is unduly hindered in ENGINEER's services or if CITY fails to make any payment to ENGINEER on account of its services and expenses within ninety (90) days after receipt of ENGINEER's bill therefor, ENGINEER may, after giving seven (7) days' written notice to CITY, suspend services under this Agreement until CITY has satisfied his obligations under this Agreement.

7.7 Termination

Services may be terminated by the CITY at any time and for any reason, and by ENGINEER in the event of substantial failure to perform in accordance with the terms hereof by CITY through no fault of ENGINEER, by ten (10) days' notice. If so terminated, CITY shall pay ENGINEER all uncontested amounts due ENGINEER for all services properly rendered and expenses incurred to the date of receipt of notice of termination.

7.7.1 In the event of CITY's termination of this Agreement pursuant to the above section, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared under this Agreement, shall at the option of CITY become its property.

Further, ENGINEER shall not be relieved of any liability to CITY for any damages sustained by CITY by virtue of any breach of this Agreement by ENGINEER and CITY may withhold any payments due ENGINEER for the purpose of set-off until such time as the exact amount of damages to CITY, if any, is determined.

7.8 Publications

Recognizing the importance of professional development on the part of ENGINEER's employees and the importance of ENGINEER's public relations, ENGINEER may prepare publications, such as technical papers, articles for periodicals, and press releases, pertaining to ENGINEER's services for the PROJECT. Such publications will be provided to CITY in draft form for CITY's advance review. CITY will review such drafts promptly and will provide comments to ENGINEER. CITY may require deletion of proprietary data or confidential information from such publications but otherwise will not unreasonably withhold its approval. The cost of ENGINEER's activities pertaining to any such publication shall be paid entirely by ENGINEER.

7.9 Nondiscrimination

During the performance of this Agreement, ENGINEER agrees to the following:

7.9.1 ENGINEER shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, ancestry, marital status, disability, sexual orientation or gender identity. ENGINEER shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, age, national origin, ancestry, marital status, disability, sexual orientation or gender identity. 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 apprenticeship. ENGINEER agrees to post notices in conspicuous places, available to employees and applicants for employment.

7.9.2 ENGINEER shall, in all solicitation or advertisements for employees placed by or on behalf of ENGINEER, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, national origin, ancestry, marital status, disability, sexual orientation or gender identity.

7.9.3 ENGINEER shall comply with all provisions of State and Federal Laws governing the regulation of Equal Employment Opportunity including Title VI of the Civil Rights Act of 1964.

7.10 Successor and Assigns

CITY and ENGINEER each binds himself and his successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement; except as above, neither CITY nor ENGINEER shall assign, sublet or transfer his interest in the Agreement without the written consent of the other.

7.11 Rights and Benefits

ENGINEER's services will be performed solely for the benefit of the CITY and not for the benefit of any other persons or entities.

7.12 Compliance with Local Laws

ENGINEER shall comply with all applicable laws, ordinances and codes of the state and city.

7.13 Law; Submission to Jurisdiction Governing

This Agreement shall be governed by, interpreted and enforced in accordance with the laws of the State of Missouri and/or the laws of the United States, as applicable. The venue for all litigation arising out of, or relating to this Agreement, shall be Boone County, Missouri or the United States Western District of Missouri. The parties hereto irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of Missouri and waive any defense of forum non conveniens.

7.14 Employment of Unauthorized Aliens Prohibited

7.14.1 ENGINEER agrees to comply with Missouri State Statute section 285.530 in that they shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

7.14.2 As a condition for the award of this Agreement, ENGINEER shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. ENGINEER shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

7.14.3 ENGINEER shall require each subcontractor to affirmatively state in its contract with ENGINEER that the subcontractor shall not knowingly employ, hire for

employment or continue to employ an unauthorized alien to perform work within the state of Missouri. ENGINEER shall also require each subcontractor to provide ENGINEER with a sworn affidavit under the penalty of perjury attesting to the fact that the subcontractor's employees are lawfully present in the United States.

7.15 No Waiver of Immunities

In no event shall the language of this Agreement constitute or be construed as a waiver or limitation for either party's rights or defenses with regard to each party's applicable sovereign, governmental, or official immunities and protections as provided by federal and state constitutions or laws.

In the event of a conflict between the terms and conditions of this Agreement and any attachment hereto, the terms contained in this Agreement shall prevail and the terms contained in any attachment shall subsequently prevail in the order attached hereto.

7.16 Agreement Documents

This Agreement includes the following exhibits, which are incorporated herein by reference:

<u>Exhibit</u>	<u>Description</u>
A	Scope of Work
B	Hourly Fee Schedule
C	Work Authorization Affidavit

7.17 Entire Agreement

This Agreement represents the entire and integrated Agreement between ENGINEER and CITY relative to the Scope of Basic Services herein. All previous or contemporaneous agreements, representations, promises and conditions relating to ENGINEER's services described herein are superseded.

[SIGNATURES ON FOLLOWING PAGE]

CITY OF COLUMBIA, MISSOURI

By: _____
Mike Matthes, City Manager

Date: _____

ATTESTED BY:

Sheela Amin, City Clerk

APPROVED AS TO FORM:

Nancy Thompson, City Counselor *AK*

CERTIFICATION: I hereby certify that the above expenditure is within the purpose of the appropriation to which it is charged, Account No. 55516388 604990 SW508, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

By: _____
Director of Finance

BLACK & VEATCH CORPORATION

By: *David L. Casbridge*

Date: *5/10/18*

ATTEST:

By: *Suzie Carpenter*

Name: *5/10/18*

**EXHIBIT A
TO
AGREEMENT FOR ENGINEERING SERVICES**

SCOPE OF BASIC SERVICES

Owner: City of Columbia Utilities Department
Engineer: Black & Veatch Corporation
Project Title: WWTP Phase 2 Improvements - Digester Complex
Project Location: Columbia Regional Wastewater Treatment Plant

Overview

Engineer will provide professional services for the preliminary design, final design, and bid phase and construction phase services for improvements to the digester complex.

The objectives of the proposed scope of professional services are as follows:

- Masonry repair at Digestion Complex
- Digester crack/concrete repair
- Replace covers on Digesters No. 1 and 2
- Replace/modify cover on Digester No. 3
- Install new mixing systems in primary digesters
- Piping modifications in the Sludge Injection Pump Station (SIP)
- New sludge heat exchanger temperature control valves, controllers, and piping modifications for sludge heating
- Replace Digester Building roof and general rehabilitation/replacement of identified roof mounted assets.
- Digester level monitoring for all four digesters and foam detection for primary digesters
- I&C improvements to add Digester Complex to SCADA
- I&C improvements for additional monitoring and automation of digestion processes

Scope of Work

The scope of work for this project consists of the following tasks:

Task 1. Project Management and Coordination

Task 1.1. Project Management Plan. Engineer will develop a project management plan for implementation throughout the project to control cost, schedule, and quality. The project management plan will be prepared for City's review prior to the Project Kickoff Meeting and finalized based upon input received.

Task 1.2. Kickoff Meeting. The project will be initiated by holding a meeting among key members of the City staff and Engineer. The following will be discussed at the kickoff meeting:

- Review project goals and scope
- Communication process (City staff, Engineer, stakeholders, and regulatory agencies)
- Key milestones and project schedule
- Points of contact for City and Engineer staff
- Data requests

Task 1.3. Project Review Meetings. It is anticipated that six (6) additional project review meetings will be conducted, independent of meetings for Public Outreach and workshops associated with deliverables. Project review meetings shall be supplemented with conference calls as necessary to ensure good communication with the City and that comments are received and addressed.

Task 1.4. Progress Reporting. Engineer will provide a progress report to accompany each monthly invoice. The progress report shall include an updated schedule, summary of work completed, comparison of progress to project schedule and budget, outstanding data needs, and any potential scope adjustments. Up to sixteen (16) months is anticipated for Task 1 through Task 5 in this scope of work.

Task 2. Evaluations and Condition Assessments

Task 2.1. Digester Capacity Evaluation. Engineer will evaluate the capacity of the existing digesters relative to current and projected future plant loads. Evaluation will include concepts to accommodate future plant loads. Historical process data will be evaluated to

determine suitability for use in process modeling. Engineer will obtain additional process data from the City for use in capacity evaluation. Growth projections and any additional sampling and data collection will be provided by the City.

Task 2.2. Heating Requirements and Capacity Evaluation. Engineer will evaluate the digester process heating demands, plant-wide building heating demands, boiler capacity, and heat exchanger capacities in order to determine if adequate heating equipment capacity and redundancy is available.

Task 2.3. Condition Assessment of Digester Complex. Engineer will visit the site for one (1) day to perform an architectural, structural, mechanical, instrumentation, and electrical assessment of the Digester Complex. Engineer will consult with City staff to identify and prioritize repairs and modifications. The evaluation will include assessment of potential interior sludge sampling locations.

Task 2.4. Condition Assessment of Gas Handling. During the same site visit described above, Engineer will assess the condition of the digester gas pipe, gas safety equipment, and the Digesters No. 3 and 4 covers. Digester cover assessment will be based on exterior inspection, review of shop drawings, and communication with City staff.

Task 2.5. Digester Mixing Evaluation. Engineer will conduct a digester mixing technology evaluation for replacement of the mixing systems in the primary digesters and addition of a mixing system to the secondary digester. The evaluation will build off of the previous digester mixing evaluation conducted during the Phase I Improvements.

Task 2.6. Code Compliance Review. Engineer will conduct a meeting with the Fire Marshall to discuss the planned improvements and identify if any modifications or improvements will be required in order to comply with current code requirements.

Task 2.7. Deliverables. Engineer will provide a memorandum to summarize each of the individual tasks above. Any costs developed with the above tasks will be prepared to a Class 5 definition consistent with the Association for Advancement of Cost Engineering (AACE International).

Task 2.8. Workshop. Engineer will conduct a workshop with City staff to prioritize and finalize the scope of design for the preliminary design report.

Task 3. Preliminary Design

Task 3.1. Regulatory Coordination. Coordinate with MDNR and confirm their requirements for the design and construction of the project.

Task 3.2. Prepare Draft Basis of Design Memorandum. Engineer will prepare a Draft Basis of Design Memorandum (BDM) for the design and construction of improvements to the Digester Complex that are selected for implementation by the City. The Draft BDM will document the design of new process improvements in the form of process schematics, and piping and instrumentation (P&ID) diagrams. The Draft BDM will document the design criteria for the major facility components for the following engineering disciplines: civil, architectural, structural, mechanical, electrical, and instrumentation and control. The Draft BDM will also include an outline of the proposed facility improvements, site drawings, process diagrams, process P&IDs, control system block diagrams, power functional diagram, facility and building layout drawings, and a preliminary construction sequence and schedule. Engineer will review the Draft BDM for accuracy and completeness prior to submitting five (5) copies to the City for review and comment.

Task 3.3. Interested Parties Meeting. Engineer will participate in the Interested Parties meeting to receive questions or comments regarding the project.

Task 3.4. Improvements Prioritization Workshop. Engineer will conduct a meeting with City staff to review the City's comments and to discuss the improvements in the Draft BDM, along with the opinion of probable construction costs of the improvements. A priority list of the improvements to be incorporated into the Final BDM will be developed to align with the available project funding.

Task 3.5. Final Basis of Design Memorandum. Engineer will incorporate City's comments into the Final Basis of Design Memorandum and submit five (5) copies and one pdf copy of the Final Basis of Design Memorandum to the City.

Task 3.6. Preliminary Opinion of Probable Construction Cost. Engineer will prepare an opinion of probable construction cost consistent with AACE International Class 4 for the improvements defined in the Final Basis of Design Memorandum and submit it to the City.

Task 3.7. Public Hearing. Engineer will attend one (1) public hearing to present results of the Basis of Design Memorandum and one (1) City Council Work Session.

Task 4. Detailed Design. After acceptance of the BDM by the City, Engineer will proceed with detailed design and preparation of Construction Contract Documents. Delivery of detailed

design shall follow Engineer's standard workflow model. Intermediate deliverables for detailed design will be submitted to the City at the end of Level 2 (60% completion) and Level 3 (90% completion). Engineer has assumed the following will be included in the detailed design:

- New covers for Digester Tanks 1, 2, and 3
- Linear Motion Mixing
- Gas handling piping modifications at the digester covers only
- Masonry repair at Digestion Complex
- Digester crack/concrete repair
- Piping modifications in the Sludge Injection Pump Station (SIP)
- New sludge heat exchanger temperature control valves, controllers, and piping modifications for sludge heating
- Replace Digester Building roof and general rehabilitation/replacement of identified roof mounted assets.
- Digester level monitoring for all four digesters and foam detection for primary digesters
- I&C improvements to add Digester Complex to SCADA

Task 4.1. Level 2 (60%) Drawings and Specifications. The Level 2 submittal will include draft front end documents, including Bidding Requirements, Bidding Forms, Contracting Forms, and Conditions of the Contract; mechanical floor plans and sections; electrical power plans; P&ID drawings and control system block diagrams; architectural plans and sections; structural plans and sections; major equipment specifications; an instrument device schedule; and a preliminary input/output (I/O) list. Engineer will prepare an updated opinion of probable construction cost consistent with AACE Class 3 cost estimate definition. Engineer will perform an internal quality control review on the above items before submitting five (5) copies to the City for review.

Task 4.2. Level 2 Review Meeting. Engineer will meet with City staff to review the Level 2 design documents and discuss the City's review comments.

Task 4.3. Identify Potential Contractors. Engineer will identify and prequalify potential contractors and suppliers, and suggest to the City the names of firms to be included in an Invitation to Bid distribution list. The City will distribute the Construction Contract Documents to prospective bidders and maintain a record of prospective bidders and suppliers that have been issued Construction Contract Documents.

The City is considering alternative delivery of the project. One option is Construction Manager at Risk (CMAR) requiring the selection of a Contractor through an RFP process. If the City elects a CMAR approach, the efforts associated with Task 4.3 will be reallocated to supporting the City in the development of and RFP and the selection of a qualified Contractor.

Task 4.4. Level 3 (90%) Drawings and Specifications. Engineer will address the City's review comments on the Level 2 submittal and incorporate them into the drawings for Level 3. The Level 3 submittal will include final front end documents, including Bidding Requirements, Bidding Forms, Contracting Forms, and Conditions of the Contract; final installation details, schedules, sequence of operating, and diagrams for design disciplines. Drawings will be 90-percent complete at the completion of Level 3. Engineer will prepare the remaining specification sections and make final edits to the major equipment specification sections. Engineer will prepare an updated opinion of probable construction cost consistent with AACE Class 2 cost estimate definition. Engineer will perform an internal quality control review on the above items and then submit five (5) copies to the City for review.

Task 4.5. Level 3 Review Meeting. Engineer will meet with City staff to review the Level 3 design documents and to discuss the City's review comments.

Task 4.6. Permit Acquisition. Engineer will provide in the specifications a list of the permits that must be obtained by the construction contractor. Engineer will provide assistance to the City in securing the following permits:

- **Construction Permit.** Engineer will prepare MDNR construction permit documents for submittal to MDNR by the City.

Task 4.7. Final (100%) Design Documents – MDNR/City Building Code Review. After addressing the City's review comments on the Level 3 submittal, Engineer will incorporate the City's comments into the design documents and prepare 100-percent complete contract documents. The City will reproduce and submit four sets of the signed and sealed Construction Contract Documents to MDNR for approval of a construction permit and provide the electronic copy to their Building Development Department for approval of a building permit.

Engineer will prepare an updated opinion of probable construction cost consistent with AACE Class 2 cost estimate definition. Since Engineer has no control over the cost of labor, materials, or equipment furnished by others not under contract to Engineer, or over

the resources provided by others not under contract to Engineer to meet project schedules, Engineer's opinion of probable cost for construction of the work will be made on the basis of experience and qualifications as a professional engineer. Engineer does not guarantee that proposals, bids, or actual project costs will not vary from Engineer's opinions of probable cost or that actual schedules will not vary from Engineer's projected schedules. The final cost opinion level of accuracy presented by Engineer will be a definitive opinion in accordance with accepted industry guidelines.

Task 4.8. Final Construction Contract Documents. After addressing review comments received from MDNR and the City's Building Development Department, Engineer will finalize the drawings and specifications and prepare final Construction Contract Documents. Engineer will provide one set of original signed and sealed drawings and specifications and one electronic copy to the City. The signed and sealed Construction Contract Documents will be reproduced by the City for distribution to potential bidders.

Task 5. Bidding Services

Task 5.1. Prepare Invitation to Bid. Engineer will coordinate the bid letting date, time, and place with City and prepare the final Invitation to Bid. The City will place the advertisements of the Invitation to Bid to solicit bids paying directly all fees associated therewith.

Task 5.2. Attend Pre-Bid Conference. Engineer will attend a pre-bid conference at a date, time, and place provided by the City. Engineer will assist the City as follows:

- Instruct prospective bidders and suppliers as to the types of information required by the Construction Contract Documents and the format in which bids should be presented.
- Review special project requirements and the contract documents in general.
- Receive requests for interpretations, which will be addressed by addendum.
- Prepare minutes of the pre-bid conference for distribution by the City to plan holders of record.

Task 5.3. Interpret Bidding Documents and Prepare Addenda. Engineer will assist the City with interpretation of the Construction Contract Documents and prepare addenda when required. Engineer will prepare a maximum of two addenda during the bidding phase. City will distribute each addendum to plan holders of record.

Task 5.4. Review Bids Received by City. Engineer will review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include such factors as work previously completed, equipment that is available for the work, financial resources, technical experience, and responses from references.

If the City elects to proceed using the CMAR delivery process, the efforts associated with Task 5 services will be reallocated to coordination efforts between the Engineer and Contractor throughout the design phase of the project.

Task 6. Supplemental Services

An allowance in the amount of \$115,900 has been included and established for Supplemental Services not yet authorized by the City that may be required throughout the course of the work. This allowance amount shall not be utilized by the Engineer unless specifically authorized in writing by the City to perform supplemental design services. Supplemental design services that may be needed based on the decisions made during the Conceptual Design Phase are listed below. The allowance may be utilized for these tasks or other supplemental services requested by the City which may be required during the project.

Task 6.1. Digester Cover Rehabilitation instead of Replacement. Engineer will prepare drawings and specifications to direct the Contractor on requirements for rehabilitation of the cover of Digester No. 3. Engineer will coordinate with the manufacturer of the covers to specify the requirements.

Task 6.2. Additional Piping Modifications. Engineer will incorporate requested piping modifications based on decisions made during the condition and capacity assessments. Piping improvements may include: Sludge Heat Exchanger Pump and Piping Modifications, Hydronic Heating Loop Expansion or Replacement, or non-potable water piping modifications.

Task 6.3. Code Updates. Engineer will incorporate required code updates based on meeting with the Fire Marshall. Engineer has assumed that the updates required will require the construction of a false wall and ventilation to separate the digester walls from the building space. If required, full replacement of electrical systems and components or construction of new spaces room within the existing facility has not been included and would be considered supplemental services.

Task 6.4. Pumped Mixing. Engineer will design pumped mixing for each of the four digester tanks. The mixing system will include one pump, grinder (if needed), piping, valves, and injection nozzles dedicated to each tank with one shelf spare pump.

Task 7. Construction Phase Services (Services to be added by Amendment)

As a future amendment to this contract, Engineer will perform project administration services during the construction phase of the project.

Task 8. O&M Manual Update and Startup Services (Services to be added by Amendment)

As a future amendment to this contract, Engineer will provide an update to the plant's Operations Manual and and startup and commissioning services during the construction phase of the project.

Supplemental Services

Any work requested by the City that is not included in one of the items listed in the Scope of Services above will be classified as Supplemental Services. Supplemental Services will include, but not be limited to:

- A. Laboratory and field testing required during design.
- B. Preparation of procurement specifications for separate procurement of major equipment.
- C. Assistance with bid protests including preparation for litigation, arbitration, or other legal or administrative proceedings; appearances in court or at arbitration sessions in connection with bid protests.
- D. Study, design, remediation, or any other services associated with abatement of asbestos or asbestos-containing building products or lead-based painting systems.

**EXHIBIT B
TO
AGREEMENT FOR ENGINEERING SERVICES**

BILLING RATES

Owner: City of Columbia Utilities Department
 Engineer: Black & Veatch Corporation
 Project Title: WWTP Phase 2 Improvements - Digester Complex
 Project Location: Columbia Regional Wastewater Treatment Plant

1. For services as described in Attachment A - Scope of Basic Services, an amount equal to the Engineer's salary billings plus reimbursable expenses and subcontract billings at cost. The maximum billed for these services shall not exceed **\$752,839** without further authorization.
2. Compensation for personnel used in the performance of engineering services shall be in accordance with the following hourly rates.

Black & Veatch Job Classification	2018 Hourly Billing Rate
Project Director	\$255
Project Manager	\$210
Project Control Specialist	\$138
Project Accountant	\$115
Project Administrator	\$83
Resident Engineer	\$155
Engineering Manager	\$170
Civil Engineer Level 4	\$148
Civil Engineer Level 3	\$133
Civil Engineer Level 2	\$118
Civil/Mechanical Designer 1	\$110
Architect	\$157
Architect Technician	\$126
Structural Senior Engineer	\$181
Structural Engineer	\$170

Senior Geotechnical Engineer	\$192
Mechanical Senior Engineer	\$189
Mechanical Engineer	\$170
Mechanical Process Engineer	\$165
Pump Specialist	\$211
Electrical Admin.	\$218
Electrical Engineer	\$186
Electrical Technician	\$132
I&C Engineer	\$176
I&C Technician	\$120
Technical Editor	\$110
Senior Process Engineer	\$240
Process Engineer	\$178
Operations Spec-Writer	\$160
CAD Technician	\$132
QC Engineer	\$205
Estimator	\$160

3. Compensation for reimbursable expense items and other charges incurred in connection with the performance of the work shall be in accordance with the following schedule:

Expense Item	Unit Cost
Travel, Subsistence, Relocation, and Incident Expenses	Net Cost
Automobile/Motor Vehicles – Local Mileage	Net Cost
Automobile/Motor Vehicles – Rental	Net Cost
Telephone and Telegraph Costs	*
Day to Day Reproduction of Reports and Drawings	*
Postage & Shipping Charges of Job-Related Materials	*
Computer Services	*
Photograph and Video Reproductions	Net Cost
Major Reproduction for Submittals & Bidding	Net Cost
Sub-Consultant Fees	Net Cost

* Included in hourly billing rates.

The Schedule of Hourly Billing Rates and Charges indicated herein is effective as of April 5, 2018. The schedule of Hourly Billing Rates and Charges will be revised and re-issued each April 5th for each subsequent year.

NOTICE TO VENDORS

Section 285.525 – 285.550 RSMo Effective January 1, 2009

Effective January 1, 2009 and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

As a condition for the award of any contract or grant in excess of five thousand dollars by the state or by any political subdivision of the state to a business entity, or for any business entity receiving a state administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. [RSMO 285.530 (2)]

An employer may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 1 of this section. [RSMO 285.530 (4)]

For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is an example of this type of program. Information regarding E-Verify is available at:

http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm.

