

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:

Engineering services for the design of a pumping station and pipelines which create the new Southeast Pressure Zone.

(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 Exhibit A - "Scope of Basic Services," dated **July 27, 2020** (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>
Ben Freese, Engineering Manager	Design Team Leader

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. ENGINEER is prohibited from holding a retainage on any payment to a subcontractor that provides any services or work on this Project.
- 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 **Shawn Carrico**, 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 **365** 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 \$748,669.**

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.

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 Missouri Licensure & Certificate of Authority

ENGINEER certifies that it is currently in compliance, and agrees to maintain compliance for the duration of this Agreement, with all licensure requirements of the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects (hereinafter "APEPLSPLA") to practice in Missouri as a professional engineer as provided under chapter 327 of the Missouri Revised Statutes. To the extent required by Section 327.401 of the Missouri Revised Statutes, ENGINEER understands and agrees that the person personally in charge and supervising the professional engineering services of ENGINEER under this Agreement shall be licensed and authorized to practice engineering in Missouri, and that ENGINEER will keep and maintain a valid certificate of authority from APEPLSPLA.

7.2.2 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.

7.2.3 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.

7.2.4 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, gender identity or expression, or any other protected category designated by local, state, or federal law. 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, gender identity or expression, or any other protected category designated by local, state, or federal law.

7.9.3 ENGINEER shall comply with all provisions of local, 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 themselves and their 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.

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

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

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: _____
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. 27288342-604992, W0280, 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: *Derek L. Cambridge*
Derek L. Cambridge

Date: 7/28/2020

ATTEST:

By: *Theresa A. Vervynck*

Name: Theresa A. Vervynck

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.

EXHIBIT A

SCOPE OF SERVICES

Owner: City of Columbia, Missouri

Project: Southeast Pump Station and Pressure Zone Establishment

Engineer: Black & Veatch Corporation

Date: July 27, 2020

SCOPE OF SERVICES

The Engineer's scope of services includes preliminary design, final design, and bid phase services for the referenced project. The purpose of the project is to construct a booster pump station and develop a new pressure zone to serve the southeast portion of the distribution system.

The proposed project includes the following:

- Separation for new pressure zone from existing main pressure zone
- A new Booster Pump Station
- Means of dissipating pressure surges within the pressure zone

TASK 1 – Project Administration, Management, and Quality

- A. Throughout all tasks, provide project administration and management activities such as staffing, sub-consultant coordination, budget management, schedule management, and coordination with City staff and maintain the quality of the work products defined within this scope as consistent with applicable standards and City's expectations.
- B. Initial Project Meeting – An initial project meeting shall be conducted to introduce team to the City staff and review the project. At the meeting potential risks to the project's success and development of mitigating strategies shall be presented.
- C. Prepare and submit monthly status reports including current status of project tasks, updated project schedule, and project financials.
- D. Schedule and attend milestone based progress meetings during design and construction to review project status. Some meetings may be conducted virtually.
- E. Provide summaries following all project meetings.

TASK 2 – Hydraulic Modeling of Pressure Zone Boundary

- A. System hydraulic evaluation shall be conducted using the City provided calibrated InfoWater computer model to establish pressure boundary and elevation gradient.
- B. Hydraulic modeling shall be conducted for the preferred pump station site to size the pump station and associated piping. The pump station shall be designed to meet conditions without storage within the pressure zone. The steady state modeling scenarios shall include:
 - Average day demand
 - Maximum day demand
 - Max hour demand
 - Max day plus fire flow demand
 - Future demands based on land use within new boundary. It is anticipated the model will contain future demands and spatial locations or they will be provided by the City.
- C. Modeling shall identify locations to close or install valves to separate the pressure zones. Include pressure reducing valve (PRV) stations where needed to allow flow to pass through the new pressure zone.
- D. Provide a brief Technical Memorandum summarizing the results of the hydraulic analysis for review and approval by City.

TASK 3 – Site Selection Analysis

- A. Three potential booster pump station sites shall be evaluated. The evaluation shall consist of the feasibility of each site, identifying the zone boundary, required system piping improvements, and other input from Stakeholders.
- B. For the selected pump station site, prepare project route maps from GIS data and other publicly available information for use in project planning.
- C. Perform a preliminary investigation to confirm the route and which side of the road is proposed for new waterlines.
- D. Provide a preliminary siting confirmation and layout for the booster pump station facility. Site investigations for waterlines and booster pump station site shall be conducted during a single one day visit.
- E. Provide a brief Technical Memorandum summarizing the results of the field reconnaissance and other preliminary considerations and a concept route recommendation for review and approval by City.

TASK 4 – Field Surveys and Investigations

- A. A detailed field survey shall be conducted along the alignment proposed and approved by City under Task 3. Field surveys shall be conducted primarily on one side of the road, expanding at intersections, crossings, tie-ins and other areas where additional detail is needed and will include the following at a minimum. The city will provide available resources to aid in the design and completion of the project. Resources available include:
- Parcel Data
 - GIS Utility Data
 - Plans for previously completed projects
 - Hydraulic water system model
 - Customer billed water use
 - Aerial imagery
- B. Topographic and Planimetric Survey: Provide planimetric and topographic survey work and create a topographic base file for use in the project design, permitting, and contract document preparation. Surveying shall generally encompass:
- Develop and distribute survey notification letters to parcel owners along the project route.
 - Field survey a corridor along the pipeline route, generally from centerline of the roadway to the back of the right of way, widening at intersections and crossings.
 - Coordination for the location of underground utilities and indication of the type and location of both underground and above ground utilities based on available information.
 - Location of property corners adjacent to or within the survey corridor.
 - Location of all drainage and sanitary sewer information (ditch bottoms, storm drain top elevations, invert elevations, sizes, and connections), including elevations of storm or sanitary pipes extending to the opposite side of the road.
 - Topographic survey of the corridor with two foot contour intervals.
 - Establishment of right-of-way and property lines sufficient for the preparation of easement preparation for land acquisition along the survey corridor.
 - Location of roadway features including, edge of pavement, curb and gutter and roadway centerline.
 - Labeling of road names and property owners on drawing.
 - Location of permanent structures within the survey corridor.

- Location of trees > 8 inches in diameter indicating diameter and species.
 - Location of significant obstacles along route to include fences, sheds, power poles, light poles, signs, etc.
 - Location of driveways.
 - Location of creek centerlines, waterline elevation and the bottom/top of banks.
 - Location of existing connection points, coordinating with City Staff.
- C. Geotechnical Investigations. Conduct a geotechnical investigation at the pump station site and along the water pipeline route. Geotechnical scope shall be included in the proposal and generally consist of the following:
- Soil borings and geotechnical report for the booster pump station site, suitable for design of the pump station foundation and slab. It is anticipated two borings will be provided at the pump station site with depth up to 25 feet.

TASK 5 – Easement Drawings and Encroachment Assistance

- A. Provide easement drawing exhibits for City use in obtaining property and easements along the proposed pipeline route and pump station location. Coordinate with City land acquisition staff on project related questions during the easement procurement process. Prepare documentation as necessary for the City to obtain necessary MoDOT permits. Majority of pipeline is anticipated to be in existing R/W. Five permanent easements and associated temporary easements are included in the scope of services.

TASK 6 – Design Document Preparation

- A. The detailed design phase shall consist of the preparation of drawings and specifications for permitting and construction of the proposed water mains and pump station in accordance with City standards and MO DNR requirements. The design shall be conducted in the following phases. Each phase shall end with pdf's for review and workshop meetings at the 30%, 60% and 90% design milestones to review the design documents and City comments. Engineers Opinion of Probable Construction Cost (OPCC) will be provided at the 30% and 90% design levels. The City will utilize Bluebeam Revu for plan review purposes and all comments consolidated into one file.

The detailed design scope is based on the following:

- Three PRV stations located in below grade concrete vaults. Each station will consist of:
 - One pressure reducing valve with manual bypass, or two pressure reducing valves (one larger, one smaller), located in the vault.
 - One magnetic flowmeter in separate, precast manhole.

- Manual isolation valves located outside the vault
 - Pressure transmitters located upstream and downstream of the PRV
 - Sump pump
 - Radio communication to monitor pressures and flow with PLC
 - It is anticipated the PRV stations will be located within existing right-of-way and identical size.
- Pipelines
 - The scope of services is based on 2,500 ft of new distribution piping along Ponderosa St and four distribution connections. The scope includes using one of the two existing Highway 63 crossings as part of the new pressure zone. All pipelines designed based on open cut. The pipeline designs will use City's front-end documents, specifications, and standard details. Drawings of the pipeline and special details will be provided to the City to be incorporated into separate bid package from the pump station.
 - A new Booster Pump Station
 - New at-grade booster pump station shall be provided to serve the new pressure zone. The Booster Pump Station shall generally include:
 - Sufficient number of pumps to meet typical demands and maximum instantaneous flow. The scope is based on five pump bays to meet these conditions.
 - Variable frequency drives shall be provided for the pumps and located in a separate conditioned room.
 - A PLC shall be included in the pump station to monitor and operate the pump station. The pump station shall be allowed to be remotely controlled, and based on pressure. A flowmeter shall be provided in the station discharge
 - The precast concrete tilt-up panel building shall be used to house the pumping equipment.
 - A self-standing manual monorail system shall be included for pump removal.
 - Configured for future connection to standby generator.
 - All associated site work, including drive entrance, fencing, and site lighting shall be incorporated.

- Surge control such as pump control valves and surge relief valves shall be incorporated into the pump station and system.
 - The scope of services is based on pump station site and general pressure boundary identified in the Request for Proposal (RFP)
- B.* Drawings and Documents shall be submitted to the review team at least (10) working days prior to any workshop for comment and markup.
- C.* The 30% Preliminary Engineering design shall consist of the following:
 - Base drawings utilizing field survey data
 - Plans indicating the proposed horizontal alignment
 - Locations of tie-ins and connections
 - Preliminary Pump Station Layout
 - Preliminary opinion of probable construction cost
 - Standard Construction Details
 - Permitting and easement requirements based on field delineation and survey results
- D.* The 60% design shall address comments received at the 30% phase and shall consist of the following:
 - Drawings including pipeline profile sheets
 - Suggested hydrant locations, valving, and piping connection details
 - Pump Station Site Plan
 - Pump Station Piping Layout
 - Electrical Plan
 - Sizing / locational analysis for air release and surge protection devices
 - Erosion and sedimentation control plan and details
 - Technical specifications
 - Bid Form
 - Updated opinion of probable construction cost
- E.* The 90% design shall address comments received at the 60% phase and consist of a full set of plans, details, specifications and bid documents. It is anticipated, 90% drawings will be sufficient for project permitting.
- F.* The 100% design shall include the resolution of all review comments and incorporation of regulatory agency comments. The design documents shall be sufficient for bidding the project for construction.

TASK 7 – Permitting

- A. In preparation for bidding and construction of the project, prepare and coordinate submittals, address comments, and obtain all necessary permits including the following:
- MoDOT right-of-way construction permit
 - MO-DNR construction permit
 - City of Columbia land disturbance permit
 - City of Columbia construction permit

TASK 8 – Bid Phase Services

- A. When approved by City, assist in the bidding process for the project. Prepare a complete set of contract documents, including:
- Project technical specifications
 - Project bid drawings including incorporation of all applicable permit review comments
 - Project Bid Form
- B. City will provide and combine the “Front End Documents” with Technical Specifications, Drawings, and Bid Form for a bid ready package.
- Upon advertisement of the construction project by City, provide bid period services consisting of the following specific activities:
 - Attend a Pre-Bid Conference for the pumping station and assist City in conducting the conference. Participate in Pre-Bid Conference for the pipeline project virtually.
 - If necessary, prepare addenda to interpret, clarify, and amend the Contract Documents
 - Answer technical questions from contractors during the bidding period
 - Assist City in reviewing bid proposals and selecting the lowest and best qualified proposal.

TASK 9 – Stakeholder Involvement and Public Outreach

- A. Provide support to City for stakeholder involvement and public outreach to attend two public meetings and provide GIS based project overview exhibit and detailed technical

drawings. City will develop mailing lists and maintain community contacts for stakeholders.

TASK 10 – Construction Phase Services - By Future Amendment

TASK 11 - Supplemental Services

- A. An allowance in the amount of \$59,577 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 Preliminary Design Stage 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.
 - 1. Additional Pressure Reducing Valve Stations.
 - 2. Additional Piping. Engineer will incorporate requested piping based on decisions made during the site selection.
 - 3. Additional Easements
 - 4. Surveying.
 - 5. Additional geotechnical borings for rock, ground water and other constructability concerns along the pipeline route.
 - 6. Additional public meetings
 - 7. Additional hydraulic modeling
- B. Any work requested by Owner that is not specifically included in one of the items listed above will be classified as supplemental services.
- C. Supplemental services shall include, but are not limited to:
 - 1. Preparation of additional contract documents for bidding portions of the work to general or specialty contractors including front end documents.
 - 2. Separation of the work into multiple design packages.
 - 3. Any site visits to gather additional information not already identified in the scope of services.
 - 4. Prequalification of contractors and equipment suppliers.
 - 5. Any meetings with local, State, or Federal agencies to discuss the project not specifically listed above.

6. Any supplemental engineering work required to meet the requirements of regulatory or funding agencies requested by the Owner other than providing copies of the Contract Documents to be prepared under this amendment. This includes preparing any specific figures or exhibits.
7. Engineer shall receive additional compensation if changes to regulatory submittals must be made because new regulations or procedures become effective subsequent to the date of this agreement.
8. An environmental assessment report and/or environmental impact statement as requested by Owner or required by review agencies.
9. PLC programming or HMI configuration. No point to point loop drawings included as part of the I&C scope of work.
10. An environmental assessment report and/or environmental impact statement as requested by CITY or required by review agencies.
11. Construction phase services.

END OF EXHIBIT A

EXHIBIT B
BILLING RATE SCHEDULE

Owner: City of Columbia, Missouri

Project: Southeast Pump Station and Pressure Zone Establishment

Engineer: Black & Veatch Corporation

A. The schedule of hourly billing rates and charges by job classification are shown below.

<u>Title</u>	<u>2020 Billing Rates (per hour)</u>
Project Director	\$275
Sr. Project Manager	\$260
Project Manager	\$237
Sr. Engineering Manager	\$225
Engineering Manager	\$210
Design Engineer – Level 5	\$188
Design Engineer – Level 4	\$171
Design Engineer – Level 3	\$155
Design Engineer – Level 2	\$134
Design Engineer – Level 1	\$120
QC Admin/Senior Eng.	\$231
Technician Admin	\$186
Sr. Technician	\$143
Technician	\$110
Estimator	\$192
Project Accountant	\$105
Project Administrative	\$94

B. 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:

<u>Expense Item</u>	<u>Unit Cost</u>
Travel, Subsistence, and Incidental Expenses	Net Cost
Automobile/Motor Vehicles — Local Mileage	\$0.55/mile
Automobile/Motor Vehicles — Rental	Net Cost
Telephone and Telegraph Costs	*
Reproduction of Reports, Drawings & Specifications	*
Postage & Shipping Charges of Job-Related Materials	*
Computer Services	*
Photograph and Video Reproductions	Net Cost
Sub-Consultant Fees	Net Charge x 1.05

* Included in \$8.75 hourly expense rate.

- C. The Schedule of Hourly Billing Rates and Charges indicated herein is effective for service in 2020. The Schedule of Hourly Billing Rates and Charges will be revised and re-issued in March of subsequent years.

END OF EXHIBIT B

**CITY OF COLUMBIA, MISSOURI
WORK AUTHORIZATION AFFIDAVIT
PURSUANT TO 285.530 RSMo
(FOR ALL CONTRACTS IN EXCESS OF \$5,000.00)**

County of Jackson)
) ss.
State of Missouri)

My name is Derek L. Cambridge. I am an authorized agent of Black & Veatch Corporation (Bidder). This business is enrolled and participates in a federal work authorization program for all employees working in connection with services provided to the City of Columbia. This business does not knowingly employ any person who is an unauthorized alien in connection with the services being provided.

Documentation of participation in a federal work authorization program is attached to this affidavit.

Furthermore, all subcontractors working on this contract shall affirmatively state in writing in their contracts that they are not in violation of Section 285.530.1 RSMo and shall not thereafter be in violation. Alternatively, a subcontractor may submit a sworn affidavit under penalty of perjury that all employees are lawfully present in the United States.



Affiant

Derek L. Cambridge

Printed Name

Subscribed and sworn to before me this 28 day of July, 2020.



Vervynck, Theresa

Notary Public

Digitally signed by Vervynck, Theresa
DN: CN="Vervynck, Theresa",
OU=Professionals, OU=Corp - NA, OU=Corp,
DC=na, DC=bycorp, DC=net
Date: 2020.07.28 10:14:51-05'00'