

AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
HDR ENGINEERING, INC.

THIS AGREEMENT made as of ____ day of _____, 20__, by and between the City of Columbia, Missouri (hereinafter called "CITY"), and **HDR Engineering, Inc.** (hereinafter called "ENGINEER").

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

The City of Columbia, MO (CITY) is embarking upon development of an Integrated Management Plan (IMP) for the CITY's Wastewater and Stormwater Utilities. HDR (ENGINEER) and subconsultants have been retained to help develop the CITY's IMP, based upon the US Environmental Protection Agency's (USEPA) June 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework. The goal of the IMP is to develop an adaptable and affordable long-term plan for addressing the CITY's wastewater and stormwater management needs.

(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 **January 7, 2016** (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>
Trent Stober, PE, Vice President	Project Manager
John Christiansen, Water Quality Specialist	Assistant Project Manager

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 **David A. Sorrell, P.E., Assistant Director, Utilities Department**, 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.

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 **730** 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 is effective to **December 31, 2016**, and may be revised thereafter.

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.

6.1.2 Total payment for Scope of Basic Services and all other expenses and costs to CITY under this Agreement and described herein **shall not exceed \$817,300.**

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 or/and 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 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

ATTESTED BY:

Sheela Amin, City Clerk

APPROVED AS TO FORM:

Nancy Thompson, City Counselor

CERTIFICATION: I hereby certify that the above expenditure is within the purpose of the appropriation to which it is charged, Account No. **555-6310-640.40-23 and 558-6610-601.40-23**, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

By: _____
Director of Finance

HDR ENGINEERING, INC.

By: _____
Joseph E. Drimmel
Date: 1/7/16

ATTEST:

By: _____

Name: _____

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.



**ATTACHMENT A
CITY OF COLUMBIA, MO
INTEGRATED MANAGEMENT PLAN
SCOPE OF SERVICES
JANUARY 7, 2016**

The City of Columbia, MO (CITY) is embarking upon development of an Integrated Management Plan (IMP) for the CITY's Wastewater and Stormwater Utilities. HDR (ENGINEER) and subconsultants have been retained to help develop the CITY's IMP, based upon the US Environmental Protection Agency's (USEPA) June 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework. The goal of the IMP is to develop an adaptable and affordable long-term plan for addressing the CITY's wastewater and stormwater management needs. The following tasks will be executed to develop the IMP.

Task 1. Build the IMP Vision

USEPA Element 1: Description of the Water Quality, Human Health, and Regulatory Issues to be Addressed in the IMP

- A. Conduct IMP Kickoff Meeting.** The ENGINEER will lead a kick-off meeting to review the CITY's current wastewater and stormwater programs, evaluate utility programmatic processes (e.g., asset inventory and management processes), capital improvement plans, and solicit additional insight into the CITY management's concerns and drivers.
- B. Conduct IMP Visioning Workshop.** The ENGINEER will lead a two-day IMP Visioning Workshop with the CITY's management team and legal counsel. ENGINEER will collaboratively work with the CITY to facilitate a visioning process that establishes goals and objectives of the IMP, level of service goals for Columbia, and milestones for the project. Initial topics for discussion include:
- **Regulatory Drivers** – Present insight into the CITY's past, present, and future regulatory drivers and potential strategies to control their impacts.
 - **National and Missouri Integrated Planning Developments** – Provide overview from previous and ongoing integrated planning efforts that municipalities and sewer districts, including scope of regulatory issues, key strategies, and current status.
 - **Wet-Weather Management Programs** – Highlight successful collection system management and improvement programs in reducing sanitary sewer overflows and basement backups and identify opportunities for integration into CITY's program.
 - **Community Outreach** – Examine strategies to engage the public and elected officials in clean water solutions and opportunities to brand the public, private and non-profit partnerships that will carry the IMP forward.
 - **Wastewater and Stormwater Program Priorities** – Discuss potential program priorities and processes that could be used to prioritize program improvement, such as the triple bottom-line accounting for environmental, social, and economic impacts.
- C. Develop IMP Framework.** A summary of the Visioning Workshop will be captured into the IMP Framework document. This document will aid in refining the scope of the Integrated Plan and be a cornerstone throughout the planning process. The draft IMP Framework will be submitted to the CITY within two weeks of the Visioning Workshop for review and comment. ENGINEER will conduct a meeting with the CITY to discuss comments and questions and finalize the IMP Framework.



Task 2. Develop Regulatory Strategy and Engage Regulatory Developments

There are a number of outstanding or upcoming regulatory drivers at the state and federal levels that will influence the planning, development, implementation, and ultimate success of the IMP. These issues include, but are not limited to, water quality standards changes, bacteria and chloride Total Maximum Daily Loads (TMDLs), NPDES permit renewals, the Hinkson Creek TMDL and associated collaborative adaptive management (CAM) process, and Missouri Nutrient Reduction Strategy. ENGINEER will provide the CITY with regulatory and technical support on these and other Clean Water Act issues to help shape a strategy that provide regulatory certainty and leads to a successful IMP. Specific tasks may include the following:

- A. Develop Regulatory Strategy** – ENGINEER will work with CITY and their legal counsel to develop a strategy to monitor and respond to regulatory developments throughout the IMP process. The strategy will be comprehensive to provide regulatory certainty, but flexible enough to adapt to unanticipated changes in the regulatory environment.
- B. Monitor Regulatory Developments** – ENGINEER will monitor regulatory developments at the state and federal levels to provide the most current understanding of drivers facing the CITY. This task will primarily include participation in regulatory, procedure development, or TMDL-related workgroups. Currently, there are a number of important workgroups active at the state level, including the wetlands classification workgroup, nutrient reduction strategy workgroup, and affordability/integrated planning workgroup. Engagement into regulatory developments will be directed by the CITY as they arise. ENGINEER assumes that engagement will consist of up to 10 workgroup meetings for up to 196 hours of technical support, including meeting preparation.
- C. Characterize Regulatory Drivers** – As regulatory drivers develop over the course of the IMP, it will be necessary to analyze and interpret existing and new data to prioritize water quality issues and better understand long-term planning needs. At the request of the CITY, ENGINEER will evaluate data compiled during the project with respect to regulatory drivers and provide analyses relevant to planning and implementation of the IMP (e.g., relative water quality impacts, timing, relative magnitude of fiscal impacts, etc.).
- D. Prioritize Water Quality Issues and Drivers** – ENGINEER will work with the CITY to initially prioritize water quality issues and drivers based upon the relative magnitude of the water quality issues, certainty of impairments, and potential impacts from the CITY's wastewater and stormwater utilities. Water quality issues will be prioritized further through the Community Outreach Program.
- E. IMP Negotiations** – Working with the CITY and their counsel, the ENGINEER will engage MDNR as appropriate to negotiate approval of the IMP. These negotiations will likely involve a series of meetings with MDNR to gain buy-in and discuss IMP elements. As part of this Task, we will get MDNR input on the draft IMP Framework developed in Task 1 and revise the Framework as necessary. Under this task, the ENGINEER will also work with the CITY to negotiate approval of the final IMP document developed under Task 7. As with the Framework document, a draft of the final IMP will be presented to MDNR to solicit their input; revisions will be made as necessary.

Regulatory meetings and negotiations needs will be identified and addressed through IMP development. It is assumed that engagement will consist of up to 6 MDNR meetings for up to 100 hours of technical support, including meeting preparation.

Task 3. Evaluate Existing System Performance

USEPA Element 2: Description of Existing Wastewater and Stormwater Systems and Current Performance

Once the IMP vision has been defined, ENGINEER will work collaboratively with the CITY to evaluate the performance and needs of its existing wastewater and stormwater collection and treatment systems. This



task directly forms the basis for developing a long-term capital and asset management program to help facilitate refinement of future IMP phases. As part of this effort, the ENGINEER will:

- A. Collect and Organize Existing Wastewater and Stormwater Performance Data** – The ENGINEER will work with the CITY to collect and organize existing stormwater and wastewater treatment and collection system data, including location and frequency of sanitary sewer overflow, building backups, and flooding, and flow monitoring data. Treatment flow and process data will also be gathered to evaluate performance of recent wastewater treatment plant (WWTP) upgrades.
- B. Review Current Wastewater and Stormwater Planning Documents** – The ENGINEER will review CITY's previous wastewater and stormwater master plans and engineering reports.
- C. Assess Current Water Quality Conditions** – The ENGINEER will compile and analyze existing surface water quality and hydrologic data to characterize water quality conditions to identify water quality priorities in surface waters affected by the CITY's wastewater and stormwater systems. These data will be summarized to evaluate current and future impairment status, document the basis for previous impairment decisions, provide information to help assess the effectiveness of watershed management programs, and to support development of management strategies to address present and future water quality standards issues. Future water quality monitoring recommendations will be developed to help inform future water quality priorities and measure IMP success.
- D. Characterize Existing Wastewater and Stormwater Utility Performance and Conditions** – The ENGINEER will work with the CITY to summarize the existing performance and condition of the CITY's sanitary sewer and stormwater utility assets, and planned capital and operations and maintenance costs. The ENGINEER will review the CITY's inventory of system performance and other metrics that can be used to measure future improvements to the systems and impacts on citizens (e.g., public health, flooding, and sanitary sewer overflows) and receiving waters.
 - 1. Characterize Wastewater Collection System Performance** – The ENGINEER will review existing collection system data and evaluate current collection system performance and level of service (LOS) goals. This analysis will include meetings with CITY's staff and review of documentation of historical collection system performance, the CITY's collection system condition and infiltration/inflow (I/I) data, flow monitoring, and available hydraulic modeling information.
 - 2. Characterize Wastewater Treatment System Performance** – The ENGINEER will assess treatment performance through the mechanical treatment system, constructed wetlands, and the Eagle Bluff Conservation Area with respect to current and anticipated NPDES permit parameters. Pre- and post-expansion data will be evaluated to assess treatment improvements and potential future effluent quality. The ENGINEER will also evaluate previous conceptual wastewater treatment plans in comparison to current and future regulatory drivers.
 - 3. Characterize Stormwater Management System Performance** – The ENGINEER will review existing stormwater management system data and evaluate current collection system performance and level of service goals. This evaluation will include the extent and potential causes of known flooding problems, readily available stormwater quality data within the CITY's Municipal Separate Storm Sewer System (MS4), and previous system failures.
- E. Assess Existing Wastewater Collection and Stormwater Management Programs** – The ENGINEER will evaluate the CITY's current wastewater collection and stormwater management programs to understand and document current processes, procedures, and data management



systems in place and identify opportunities for improvement based on input from staff and industry best practices.

- 1. Assess Wastewater Collection System Management Programs** - The current processes will be benchmarked using the *Core Attributes of Effectively Managed Wastewater Collection Systems*, July 2010, published by APWA, ASCE, NACWA, and WEF and EPA's Capacity Management, Operation, and Maintenance (CMOM) guidance.

To facilitate this task, ENGINEER will facilitate a series of workshops over a one-week period and work directly with CITY staff to understand current processes, procedures, and data management systems. Prior to these workshops, ENGINEER will conduct a conference call with the CITY's project management ENGINEER to identify the individuals/groups that need to participate in this effort. In between, ENGINEER will work on-site and engage in a series of focused small group meetings with appropriate members of the CITY's staff.

The key functional areas for the assessment will include:

- Management Metrics and Reporting
- Planning & Scheduling of Operations and Maintenance Activities
- Pipe/Inlet/Catch Basin Cleaning Practices
- Fats, Oils and Grease (FOG) Program
- Rehabilitation & Repair Program
- Inspection and Condition Assessment (including CCTV inspection)
- Inflow and Infiltration Removal Program
- Drainage Operation & Maintenance Practices (other than pipes and pump stations)
- Overflow Emergency Response Planning (OERP)
- Data Management
- Capacity Analysis Opportunities

- 2. Assess Stormwater Management Program** - ENGINEER will review available stormwater system asset inventory, condition assessment data, and asset management program information. This information will be summarized and gaps in asset information will be identified. The CITY's current MS4 Stormwater Management Program (SWMP) will be evaluated with respect to permit requirements and compared to MS4 programs of similar size.

F. Identify Priorities and Recommend Data Needs – The ENGINEER will identify critical issues or high priority areas, and outline important short-term data needs that should be collected to evaluate wastewater collection and treatment and stormwater management alternatives. For example, ENGINEER may recommend short-term flow monitoring by the CITY to evaluate long-term collection system alternatives, condition assessment of critical stormwater assets to identify short-term stormwater asset renewal needs, or effluent characterization data to evaluate long-term treatment options.

G. Review Current Wastewater and Stormwater Capital Improvement Program (CIP) – The ENGINEER will review the CITY's current wastewater and stormwater CIP and the driving factors (e.g., improved service, asset renewal, regulatory, increased efficiency) behind selection of these projects. This understanding will help frame the IMP's short- and long-term recommendations.



Task 4. Develop and Implement Community Outreach Program

USEPA Element 3: A process which opens and maintains channels of communication with relevant community stakeholders in order to give full consideration of the views of others in the planning process and during implementation of the plan.

A. Develop Community Outreach Program

The ENGINEER will lead a Community Outreach Workshop with the CITY to develop a Community Outreach Plan directed towards the public, key stakeholders, and elected officials. The workshop goals are to identify key stakeholders, develop messages and talking points, and discuss and select various tools for community outreach. The menu of public engagement options could include a range of options from a series of community focus groups to an IMP committee. Potential community outreach tools include:

- Community focus groups
- Public workshops
- Website and social media
- IMP Committee
- Individual interviews with community leaders

Protocols for communications briefings with the CITY, elected officials, and other identified stakeholders will also be established. Prioritization of next steps and key communication objectives will be developed and synthesized in a Community Outreach Plan.

B. Implement Community Outreach Program

The ENGINEER will implement the Community Outreach Plan to help guide prioritization of potential wastewater and stormwater improvements and to build consensus for the IMP. For estimation purposes, two days of interviews with community leaders in up to six focus group sessions, eight meetings with an IMP Committee (potentially from members of the Hinkson Creek CAM Stakeholder Committee), and one public meeting are assumed. It is assumed that the public meeting will be held on the same evening as one of the IMP Committee meetings. Residents and business owners will be encouraged to complete the survey online through the CITY's website and social media tools. The draft IMP will be presented at the final IMP Committee meeting, which will be open to the public, to gain feedback for finalizing the IMP. Community outreach efforts and results will be documented within a technical memorandum.

Task 5. Evaluate Alternative Wastewater and Stormwater Alternatives

USEPA Element 4: A process for identifying, evaluating, and selecting alternatives and proposing implementation schedules.

Based upon the information compiled in Tasks 1 through 4, the ENGINEER will collaborate with the CITY to identify and assess alternative solutions for system and water quality improvements.

A. Establish Initial Wastewater Collection and Stormwater Conveyance Level of Service (LOS)

Goals - The ENGINEER will evaluate the current LOS goals for the CITY and recommend changes based on local conditions and our experience with similar urbanized communities. LOS goals will be initially set based upon current performance, potential costs, and community outreach. LOS goals will be refined as cost estimates are iteratively refined through alternatives analyses and future revisions of the IMP.

B. Compile Wastewater Collection System Alternatives – The ENGINEER will conduct a review of currently planned alternatives against the recommended LOS goals. Potential gaps in the alternatives evaluated will be identified including infiltration and inflow (I/I) source reduction strategies as well as operation and maintenance (O&M) practices and system optimization approaches throughout the collection system. Where possible, immediate opportunities to optimize existing assets and implement cost-effective and rapidly implementable sanitary sewer overflow



(SSO) controls will be identified. Both programmatic and capital collection system alternatives will be evaluated as follows.

1. **Programmatic Wastewater Collection System Alternatives** – Based upon information gathered in Task 2, the ENGINEER will evaluate opportunities to optimize the CITY's asset management program, including prioritized maintenance and renewal programs. This will include evaluation of using risk models to prioritize capital improvement projects and inspection programs. The ENGINEER will also evaluate historic flow monitoring and modeling efforts and recommend future efforts to inform future collection system plans. Recommendations of these programmatic alternatives and potential implementation steps and schedules will be included with a technical memorandum.
2. **Capital Wastewater Collection System Improvement Alternatives** – The ENGINEER will utilize existing CITY planning documents to develop an initial set of collection system capital improvement alternatives for IMP planning purposes. Short-term capital project cost estimates (5-10 year) will be based upon the 2004 Wastewater Master Plan and the current CIP projects that the CITY has prioritized. Long-term collection system improvement costs will be estimated based upon the Master Plan and planning level estimates of system renewal costs, accounting for system material, age, expected life, and replacement costs.

The ENGINEER and the CITY will assess the baseline assumptions used to develop the Master Plan and latest CIP to help inform future programmatic recommendations (e.g., flow monitoring and modeling). In addition, future I/I reduction program recommendations will be based upon the evaluation of existing program effectiveness and level of service goals.

- C. **Compile Wastewater Treatment Alternatives** - Future WWTP upgrade alternatives and planning level capital and O&M cost data will be developed to improve plant operations, address potential regulatory drivers, and provide more sustainable treatment practices. The primary sources of capital and O&M cost data will be the 2004 Wastewater Master Plan and the 2008 Conceptual Design Study. These previous cost estimates will be updated based upon current construction costs to provide greater certainty of the financial magnitude of these improvements. The planning level cost estimates will be developed for the following wastewater treatment plant improvements:

- Influent Pump Station Capacity Improvements
- High-Rate Wet Weather Treatment
- Complete Nitrification
- Biological Nutrient Removal
- Enhanced Nutrient Removal
- Disinfection
- Constructed Wetlands Improvements
- Biosolids System Improvements
- Effluent Conveyance

The ENGINEER will facilitate a workshop to discuss wastewater treatment plant alternatives and cost estimation approaches. Planning level cost estimates will be documented within a Technical Memorandum and presented to the CITY during the Wastewater Treatment Alternatives Workshop.

- D. **Compile Stormwater Management Alternatives** – Based upon the review of the CITY's existing stormwater management program, the ENGINEER will evaluate various



programmatic and capital collection system alternatives for both stormwater conveyance and water quality improvements purposes.

- 1. Programmatic Stormwater Management Alternatives** – Based upon information gathered in Task 3 the ENGINEER will evaluate opportunities to develop the CITY's stormwater asset management program, including prioritized maintenance and renewal programs. This will include assessment of CITY's current asset inventory and condition assessment data. Data gaps will be identified and recommendations for a systematic approach to fill these data gaps will be recommended to the CITY for implementation in future phases. The ENGINEER will also develop recommendations for future asset management options to prioritize capital improvement projects and inspection programs to compliment wastewater collection system asset recommendations since these programs can be leveraged between similar linear, buried assets. Recommendations of these programmatic alternatives and potential implementation steps and schedules will be included with a technical memorandum along with wastewater collection system asset management recommendations.

The ENGINEER will also identify potential enhancements to the CITY's current MS4 SWMP based upon existing and potential permit requirements. In addition, potential SWMP enhancements will be identified to address current and future water quality drivers (e.g., Hinkson Creek and upcoming TMDLs).

- 2. Capital Stormwater Management System Improvement Alternatives** – The ENGINEER will use the CITY's existing planning documents to develop an initial set of stormwater management system capital improvement alternatives for IMP planning purposes. Short-term capital project cost estimates (5-10 year) will be based upon the current CIP projects that the CITY has prioritized.

Potential long-term stormwater conveyance system improvement costs will be estimated based upon planning level estimates of system renewal costs, accounting for system material, age, expected life, and replacement costs. Potential long-term stormwater quality improvement costs will be estimated based up planning level estimates of stormwater best management practices to address current and anticipated TMDL pollutants. Potential stormwater quality improvement costs will be based upon planning level basin retrofit goals related to the impaired basins and the severity and cause of current and anticipated impairments. The ENGINEER will use a planning level process for estimating stormwater management system retrofit goals and costs, using nationally accepted methodologies.

- E. Recommend Wastewater and Stormwater Management Priorities** - ENGINEER will summarize potential programmatic and capital wastewater and stormwater management alternatives in terms of potential drivers (e.g. regulatory, service, renewal) magnitude, and timing. These alternatives will be presented to the CITY within a workshop to develop a prioritized suite of recommendations. Based upon workshop feedback, ENGINEER will finalize the CITY's wastewater and stormwater management priorities within a technical memorandum, which will be presented to stakeholders, elected officials, and regulatory agencies prior to development of the IMP.

Task 6. Assess Financial Capability

The ENGINEER will work closely with the CITY and their financial advisor in developing a financial capability assessment (FCA) to assist in prioritizing potential integrated planning alternatives. In doing so, the ENGINEER and the CITY's financial advisor will use methods presented in EPA's assessment tool, as well as alternative approaches developed by the US Conference of Mayors and others, to more accurately evaluate the CITY's ability to fund proposed alternatives, as well as identify potential significant impacts on disadvantaged populations within the community.



- A. Prepare Baseline Demographics and Financial Information** – The ENGINEER will compile relevant demographic and financial data to define current socioeconomic conditions in the CITY. These data will serve as the foundation of the FCA analysis and be the baseline from which FCA forecasts are made. Primary data sources will likely include the US Census Bureau, Missouri Department of Economic Development, and CITY (e.g., financial reports and CIP).
- B. Evaluate Rate Impacts Associated with Potential Improvement Alternatives** – The ENGINEER and the CITY will evaluate impact of proposed programmatic and capital wastewater and stormwater alternatives on user rates. ENGINEER will provide the additional capital and annual operational costs of the potential wastewater and stormwater management alternatives to the CITY for input into the recent cost of service study rate model. Up to four alternative implementation schedules for wastewater and stormwater improvements will be provided to assess potential rate impacts. The CITY will then provide future rate projections for use within the FCA.
- C. Develop FCA Tool** – The ENGINEER will build a FCA spreadsheet tool that integrates baseline demographic, financial, cost, and funding data to forecast socioeconomic impacts of the potential wastewater and stormwater improvement alternatives. As part of this task, the ENGINEER will work with the CITY to identify important metrics and approaches that will be used to guide the FCA evaluation.
- D. Finalize FCA** – The ENGINEER will present the FCA information and tool to the CITY within a workshop setting to develop the final FCA. The FCA will be documented within a technical memorandum based upon the results of the FCA Workshop.

Task 7. Develop Integrated Management Plan

After selection of the recommended wastewater and stormwater alternatives and developing an affordable implementation schedule, the ENGINEER will integrate the findings of the previous tasks into a summary document which will comprise the draft IMP. To meet USEPA's Integrated Planning Framework Elements 5 and 6, the IMP will include recommendations for measuring IMP success and a process for improving the IMP through adaptive management. The ENGINEER will coordinate with CITY staff and Counsel in the development of the IMP and its approval by the regulators. Following approval by CITY staff, the draft IMP will be presented to stakeholders, elected officials, and regulators to gain feedback prior to finalizing the IMP.

Task 8. Project Management

ENGINEER will develop a project management guide for implementation throughout the project to control cost, schedule, and quality. The project management guide will be prepared for CITY's review prior to the Project Kick-Off Meeting and finalized based upon input received. ENGINEER will provide a progress report to accompany each 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 potential scope adjustments.

Deliverables

IMP Framework
Community Outreach Plan
Community Outreach Results Memorandum
Consolidated Water Quality and Hydrologic Database
Water Quality and Biological Conditions and Future Monitoring Recommendations Technical Memorandum
Existing Wastewater and Stormwater Utility Performance and Conditions Technical Memorandum
Programmatic & Capital Wastewater Collection System Alternatives Technical Memorandum
Wastewater Treatment Alternatives Technical Memorandum
Programmatic & Capital Stormwater Management System Alternatives Technical Memorandum
Wastewater and Stormwater Management Priorities Technical Memorandum



Financial Capabilities Assessment Spreadsheet Tool
Financial Capabilities Assessment Technical Memorandum
Draft IMP
Final IMP

Workshops

Kick-Off Meeting
IMP Visioning Workshop
Community Outreach Workshops and Interviews
Wastewater Collection System Management Workshops (1 week duration)
Wastewater Collection System Alternatives Workshop
Wastewater Treatment Alternatives Workshop
Stormwater Management System Workshop
IMP Alternatives Workshop
Financial Capabilities Assessment Workshop
Draft/Final IMP Development Workshops

Optional Services

Wastewater Collection System and Stormwater System Asset Management Program Development
Wastewater and Stormwater System Asset Inventory or Condition Assessment Services
Wastewater Treatment Process Capacity Evaluations
Wastewater and Stormwater Hydraulic Modeling
Wastewater and Stormwater Flow Monitoring
Water Quality Monitoring
GIS-Based Water Quality and Hydrologic Data Visualization Tools
Wastewater and Stormwater Utility Rate Calculations and Financial Advisement
Interactive IMP Website
Randomized Public Survey



RATE SCHEDULE

(JANUARY 1, 2016 – DECEMBER 31, 2016)

ROLE.....	HOURLY RATE RANGE
CLIENT MANAGER/PROJECT PRINCIPAL/QUALITY CONTROL	\$190.00 - \$255.00
SENIOR PROJECT MANAGER	\$190.00 - \$245.00
PROJECT MANAGER	\$150.00 - \$190.00
ASSISTANT PROJECT MANAGER	\$130.00 - \$150.00
SENIOR PROJECT ENGINEER/CONSULTANT/SCIENTIST	\$175.00 - \$235.00
PROJECT/COLLECTION SYSTEM ENGINEER	\$100.00 - \$175.00
ASSISTANT PROJECT ENGINEER/EIT	\$90.00 - \$110.00
SENIOR STRUCTURAL ENGINEER	\$155.00 - \$220.00
STRUCTURAL ENGINEER	\$90.00 - \$155.00
SENIOR ELECTRICAL ENGINEER	\$150.00 - \$200.00
ELECTRICAL ENGINEER	\$90.00 - \$150.00
SENIOR MECHANICAL ENGINEER	\$155.00 - \$200.00
MECHANICAL ENGINEER	\$90.00 - \$155.00
SENIOR ENVIRONMENTAL ENGINEER	\$150.00 - \$175.00
ENVIRONMENTAL ENGINEER	\$85.00 - \$150.00
ASSET MANAGEMENT SPECIALIST	\$185.00 - \$235.00
GIS SPECIALIST	\$100.00 - \$160.00
SENIOR ARCHITECT	\$150.00 - \$190.00
ARCHITECT ENGINEER	\$90.00 - \$150.00
SENIOR CADD TECHNICIAN	\$120.00 - \$140.00
CADD TECHNICIAN	\$80.00 - \$120.00
SURVEY MANAGER	\$110.00 - \$135.00
SURVEY CREW	\$120.00 - \$155.00
ADMINISTRATION PERSONNEL	\$ 75.00 - \$105.00

REIMBURSABLES:

PRINTING & REPRODUCTION	COST
TRAVEL	CURRENT IRS RATE
PHONE	COST
MAPPING	COST
SUBCONSULTANTS	COST