

AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
GEORGE L. CRAWFORD & ASSOCIATES, INC./DBA CBB

THIS AGREEMENT made by and between the City of Columbia, Missouri (hereinafter called "City"), and **George L. Crawford & Associates, Inc./dba CBB** (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:

Completion of a Road Safety Audit (RSA) for the Business Loop corridor.

(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 **April 23, 2025** (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>
Shawn Leight, PE, PTOE: Senior Transportation Engineer	Project Manager
Brian Rensing, PE, PTOE, RSP2I: Senior Transportation Engineer	Safety Lead

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 **Richard Stone, P.E.**, 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 **270** 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 agrees to pay Engineer the sum of **\$187,541.98**, which shall constitute complete compensation for all services and payment of expenses to be rendered under this Agreement.

6.1.2 It is expressly understood that in no event will the total amount paid to Engineer under the terms of this Agreement, or any amendment thereto, exceed the sum set forth in paragraph 6.1.1 unless otherwise agreed to in writing between the parties in advance of the provision of such services.

6.2 Payments

6.2.1 Engineer shall submit an invoice to City for the percentage of services rendered to date under this Agreement 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** per occurrence and \$3,000,000 aggregate 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 occurrence and **\$3,000,000** 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** per occurrence and **\$3,000,000** aggregate, 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 a 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, gender identity or expression, or any other protected category designated by local, state, or federal law. 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 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 Missouri Anti-Discrimination Against Israel Act: To the extent required by Missouri Revised Statute Section 34.600, Engineer certifies it is not currently engaged in and shall not, for the duration of this Agreement, engage in a boycott of goods or services from the State of Israel; companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel; or persons or entities doing business in the State of Israel. If any provision of this paragraph, or the application of such provision to any person or circumstance, shall be held invalid, the remainder of this Agreement, or the application of such provision to persons or circumstances other than

those as to which it is held invalid, shall not be affected thereby. This paragraph shall not apply to contracts with a total potential value of less than one hundred thousand dollars (\$100,000.00) or to contractors with fewer than ten (10) employees.

7.16 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.

7.17 Counterparts and Electronic Signatures

This Agreement may be signed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document. Faxed signatures, or scanned and electronically transmitted signatures, on this Agreement or any notice delivered pursuant to this Agreement, shall be deemed to have the same legal effect as original signatures on this Agreement.

7.18 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	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.

7.19 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]

IN WITNESS WHEREOF, the PARTIES have hereunto set their hands and seals the day and year written below.

CITY OF COLUMBIA, MISSOURI

By: _____
City Manager

SSC

Date: _____

ATTESTED BY:

Sheela Amin, City Clerk

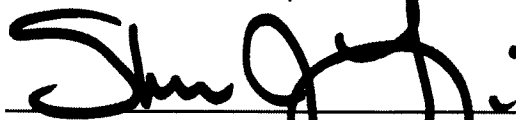
APPROVED AS TO FORM:

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. **44008830-604023, 00917**, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

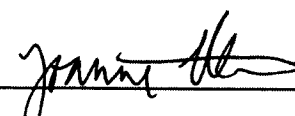
By: _____
Director of Finance

GEORGE L. CRAWFORD, INC./DBA CBB

By: _____


Date: MAY 6, 2025

ATTEST:

By: _____

Name: Joanne Martin

April 23, 2025

Krista Shouse-Jones
Vision Zero Coordinator
Public Works Department
City of Columbia - Missouri
(573) 817-6446
krista.shouse-jones@como.gov

Re: Proposal for Road Safety Audit (RSA): RFQUAL 9/2025
Columbia, Missouri
CBB Proposal No. P24-158

Dear Krista Shouse-Jones,

Per your request, CBB has developed a scope of services, schedule, and fee estimate for the completion of a Road Safety Audit (RSA) for the Business Loop corridor in Columbia, Missouri. This Road Safety Audit (RSA) is a formal safety performance examination of Business Loop from Stadium Boulevard (MO 740) to east of Eastland Circle by an independent multidisciplinary audit team. It estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. The goal of the RSAs is to improve safety by considering the elements of the road that may present safety concerns and to what extent, to which road users, and under what circumstances. Ultimately, the RSA will identify opportunities to eliminate or mitigate safety concerns identified.

Consultant Team

The Consultant Team's Project Manager will work with the City of Columbia Project Manager to prepare the RSA. The Consultant Team (Consultant) consists of George L. Crawford & Associates, Inc./dba CBB and Bartlett & West, Inc. The primary roles for each team member are as follows:

- **CBB** – Traffic Data Inventory and Collection, Traffic Operational and Safety Analysis, Field RSA, Documentation, and Public/Stakeholder Engagement.
- **Bartlett & West, Inc** – Field RSA, Conceptual Layouts, and Cost Estimation.

Study Area Limits

- **Business Loop 70** – Between Stadium Boulevard (MO 740) to Eastland Circle, a 4-mile-long study corridor.

Task 1: Project Management (CBB Lead)

Task 1.1: Cost Control/Invoicing

- Subcontract Administration – The Consultant will administer project contracts and subcontracts. CBB will coordinate these efforts with the City of Columbia Vision Zero Coordinator, Krista Shouse-Jones.



- Cost Accounting – The Consultant will establish and maintain a cost control system.
- Invoicing – The Consultant will prepare invoicing to include progress reports with brief narrative descriptions, financial reports, and expenditures. The reports should provide City of Columbia with sufficient, timely financial and study progress information so that managerial decisions concerning control of various aspects of the study can be made.
- Project Close-Out – At the completion of the study, the Consultant will provide City of Columbia a complete summary of all time and resources spent on the project.

Task 1.2: Kick-Off Meeting (CBB & B&W) – The Consultant will coordinate a kick-off meeting consisting of the Consultant team, City of Columbia, and MoDOT Central District Office, if needed. This meeting will be used to introduce the Consultant team members, City Members and MoDOT representatives to discuss the context and scope of the project and advise the consultant team on any specific issues or concerns. The scope and schedule for the RSA would also be shared. A draft RSA Team list would also be developed.

Task 1.3: Coordination/Team Calls (CBB & B&W) – The Consultant will coordinate with the city and the consultant team as needed. Bi-weekly virtual project meetings are anticipated.

Task 2: Traffic Operational and Safety Analysis (CBB Lead)

Task 2.1: Obtain & Summarize Traffic Data from Agencies (CBB) – The Consultant team will request and obtain any current and historical traffic data (such as traffic counts, field speed information and signal timing) from the city and/or MoDOT.

CBB has historical intersection counts from 2018 and 2021 at the following locations.

- Business Loop 70 & Interstate 70 (West Boulevard Exit)
- Business Loop 70 & Creasy Springs Road
- Business Loop 70 & Parkade Boulevard/Madison Street
- Business Loop 70 & Grand Avenue
- Business Loop 70 & Missouri 163 (Providence Road)
- Business Loop 70 & Seventh Street
- Business Loop 70 & Missouri 763 (Rangeline Street)
- Business Loop 70 & Missouri 763 (College Avenue)
- Business Loop 70 & Old Highway 63
- Business Loop 70 & Paris Road

CBB has historical mid-block traffic counts and speed data from 2021 at the following locations.

- Between Jackson Street and Parkdale Boulevard;
- Between Parkdale Boulevard and Garth Avenue;
- Between Garth Avenue and Providence (MO 163);
- Between Providence (MO 163) and 7th Street; and
- Between College Avenue and Paris Road.



CBB would request any plans for the corridor and specifically the interchange with I-70/US 63 roundabout. This task is expected to help provide base traffic information for the study area.

Task 2.2: Field Counts & Summarize Traffic Data collected (CBB) –The Consultant team will perform new intersection turning movement counts during the weekday morning (7:00 to 9:00 a.m.) and weekday afternoon (2:00 to 6:00 p.m.) peak periods of a typical weekday at the following intersections:

- Business Loop 70 & Missouri 740 (Stadium Boulevard)
- Business Loop 70 & Cosmo Park Main Entrance
- Business Loop 70 & Sexton Road
- Business Loop 70 & Garth Avenue
- Business Loop 70 & Bowling Street
- Business Loop 70 & Hathman Place

To obtain the most accurate traffic data, the Consultant team prefers to perform the traffic data collection efforts when the local schools are on their normal session. Since the University of Missouri (Mizzou) has significant impacts on traffic patterns in Columbia, the data collection efforts will need to be completed before May 12, when Mizzou typical schedule ends and finals start. This task is intended to provide a baseline for the existing conditions and help determine traffic operating issues that may also be contributing to safety issues.

Task 2.3: Engineer Field Observations (CBB) – The Consultant will perform peak period observations of traffic and pedestrian activities within the Study Area during the morning and afternoon peak periods on a typical weekday as well as a midday peak hour near Hickman High School. It is important that the observations be performed during typical traffic conditions (when the schools are in session) to fully understand typical conditions. This task is expected to help reveal the most prominent traffic and congestion issues such as queueing or obvious speeding and can assist in identifying potential safety issues along the corridor and items that may warrant further investigation.

Task 2.4: Obtain & Summarize Safety Data (CBB) – The Consultant will obtain the most current five years of crash data to analyze crash patterns. The years of 2019 to 2023 are expected to be used in the historical crash summaries. Historical crash data will assist in identifying crash patterns, severity, trends, hour of day, day of the week, month of the year, etc. Summaries will be made in a tabular and graphical format. The Consultant will request permission from MoDOT to use their crash database to obtain the crash data including summaries as well as crash reports. This task is expected to help understand where crashes are occurring, the types of crashes that are occurring and other important crash trends as it related to historical crash data.

Task 2.5: HSM Analysis (CBB) – The Consultant will develop a Highway Safety Manual (HSM) predictive safety model using the HSM spreadsheets. Additionally, the 2018 MoDOT Calibration factors as well as the historical crash data obtained in Task 2.4 will be used to help “calibrate” the model to state and local conditions. HSM models will be generated for existing geometric



conditions and existing volumes, future no-build geometric conditions with increased volumes, and various future build scenarios based on potential safety improvements (countermeasures). This task will compare how the corridor is currently operating from a safety perspective compared to other similar facilities. This helps to identify the potential for safety improvements and to quantify the potential benefits of specific safety countermeasures. The HSM predictive analysis method will also as well as help determine the cost to benefit ratio of specific countermeasures.

Task 2.6: Forecast Traffic (CBB) – The Consultant will coordinate with the City and MoDOT in the development of traffic forecasts. This process would consider previous studies, historical trend analysis, and anticipated changes to surrounding land use and proposed developments. Forecasts will be “quality checked” to ensure “reasonableness”. Forecasts will be developed in coordination with the City and/or MoDOT based upon future anticipated development roadway connections/improvements. The future scenario is typically a 20-year forecast. This task is expected to forecast the future traffic along the corridor so that improvements would also remain beneficial in the future.

Task 2.7: Traffic Analysis (CBB) – The Consultant will evaluate the operating conditions during the AM and PM peak hours at the study intersection identified in Task 2.2 using SYNCHRO. Analysis will be completed for both the existing (2025) and future year traffic conditions as developed in Task 2.2. SIDRA will be used to evaluate roundabouts if any are considered in the future conditions. The operational analyses would address the efficiency and congestion along the corridor, identify impacts from proposed safety improvements such as the installation of medians or changing flashing yellow arrow signal operations to protected only left turns, and help to determine the need for roadway improvements (designated left-turn lanes/length of right-turn lanes) and/or heightened traffic controls to help provide safe and efficient operations.

Task 3: Community Engagement (CBB Lead)

Task 3.1: Stakeholder meetings (CBB) – The Consultant will participate in up to four (4) stakeholder group meetings that will be held as a part of the Business 70 Loop Revitalization Study.

Task 3.2: Community Meetings (CBB and B&W) – The Consultant will participate in a public meeting that will be held as a part of the Business 70 Loop Revitalization Study.

Study Task 4: Field RSA (CBB Lead)

To evaluate the most accurate conditions, Field RSA is expected to begin early September 2025 after the fall semester has begun for the University of Missouri (Mizzou) and Columbia public schools.

Task 4.1: Pre-RSA Field Review Meeting (CBB and B&W) – The Consultant will lead a Pre-RSA Field Review Meeting to inform the RSA Team about the study area, safety issues and safety



procedures for the field RSA. The meeting will briefly summarize the existing traffic volumes, operating conditions, geometrics, historical crash data as well as information gathered from the engagement process from the public and stakeholder meetings. The Consultant will generate “Fact Sheets” to be distributed prior to the meeting so that RSA Team participants can review prior to the meeting. This information will help the RSA Team to consider safety issues demonstrated by a pattern of crash occurrence as well as circumstances under which a cause-and-effect link is not so clear or other issues that may not be evident based on review of crash data alone such as sight distance limitations. An agenda will be prepared prior to the meeting to ensure that the meeting time is used efficiently. This task is intended to briefly inform the RSA Team about existing conditions and concerns expressed through the engagement process.

Task 4.2: Field RSA Field Reviews (CBB and B&W) – The RSA field review will include comprehensive notetaking with photographs and/or video footage to thoroughly document findings in the field. Prompt lists will be used to help the RSA team members to think about the broader issues first and to get into specific details after the more general issues are considered. The prompt lists would prompt RSA members to review design criteria related to road alignment/cross section, barriers, clear zones, drainage, visibility, landscaping, pavement markings, delineation, signs, lighting, traffic signals, vulnerable users, pedestrian, bicycles, bridges/culverts, parking, heavy vehicles, trains, driveways, intersections and interchanges. The field review team would move through the corridor as a group, location by location. While in the field, issues noted in the pre-review meeting will be considered.

- Based on a preliminary review of the existing crash data, it is anticipated that daylight midday and nighttime observations/visits will be necessary. Additionally, based on the length of the corridor it is anticipated that a combination of inspection by vehicle and walking will be required.
- Based on the 4-mile length of the corridor, the Field RSA scope of work assumes observations during the morning peak, midday peak and evening peak during the daylight and a night review of the entire corridor performed on evening of day one.
- Should RSA members not be able to complete the full Field Audit during the scheduled day(s), the RSA team members will be encouraged to observe conditions and complete/consider elements on the RSA Prompt List with a focus on safety on their own, preferably before the RSA so that their opinions and ideas can be considered in the RSA evaluation.

Task 4.3: Review Meeting to Discuss Risks & Countermeasures (CBB and B&W) - Once the field review is complete, the RSA team will meet again, preferably either same day as field audit or next day, to assess observations and develop suggestions for improving safety issues. The consultant will prepare a post audit discussion guide to keep the discussion on track. This task is intended to review and summarize items identified in the field for a complete analysis.



Task 5: Conceptual Drawings/Opinion of Probable Cost (B&W Lead)

Task 5.1 Develop Initial Concept Drawings (B&W) – The consultant will develop high-level conceptual drawings. It is anticipated that no more than two (2) overall corridor drawings and two (2) drawings per intersection will be required as a part of this work. These drawings will be completed over aerial photography. No survey will be completed for this work.

Task 5.2 Order of Magnitude Cost Estimates for Initial Concepts – The Consultant will provide conceptual order of magnitude cost comparisons for options developed in 5.1.

Task 5.3 Develop Concept Drawing for Preferred Concept – The consultant will develop a concept drawing for the preferred concept showing conceptual geometric changes (only one concept taken to this level).

Task 5.4 Order of Magnitude Cost Estimates for Preferred Concept – The Consultant will develop a conceptual cost estimate for the chosen concept developed in Task 5.3 based on final recommended configuration.

Task 5.5 Revise Drawings/Cost Estimates – The Consultant will revise concepts and cost estimates based on discussions with City and MoDOT.

Study Task 6: RSA Report and Presentation (CBB Lead)

Task 6.1: Draft RSA Report of Finding (CBB) – The Consultant will summarize the safety issues and consider safety improvements. Each safety improvement would identify a potential safety benefit. Optimally, the benefit ranking would attempt to find appropriate Crash Modification Factors (CMF) from either the Highway Safety Manual (HSM) or the CMFClearinghouse to assist in quantifying potential crash reductions, but some solutions may not have specific or appropriate CMFs.

The consultant team will coordinate with the City to develop an appropriate procedure for prioritizing the issues and solutions.

- Potential solutions will be identified as low, medium, or high priority.
- Safety enhancements will also identify a likely timeframe such as short-term, mid-term and long-term.
- High-level costs for improvements and ranked as low, medium or high cost.

Where CMFs are applicable, the costs associated with safety improvements would be compared and a benefit cost analysis would identify if the solutions are cost-effective.

The Consultant will produce a Draft RSA Report on Findings. A succinct RSA report will be generated to document the safety concerns, operational constraints, and suggestions for safety improvements along the corridor. Photographs taken during the site visit that support findings and



suggestions will be included in the written report. Overall, the RSA report will remain concise and easy to understand. The document is expected to have several technical appendices that would include: the summarization of the pre-safety audit technical information (summary of safety data, traffic volumes, maps, etc.), meeting agendas and RSA participant list, benefit cost estimates, and other pertinent information. This task is intended to produce a draft document for City Staff to review that summarizes the process and provides safety recommendations.

Task 6.2: Final RSA Report of Finding (CBB) – After the City has reviewed the Draft RSA and provided feedback, the consultant will make final modifications and generate a final RSA.

Task 6.3: Presentations to City and MoDOT (CBB) – The Consultant will conduct two (2) in-person meetings to present the findings of the RSA to the City, Stakeholders and MoDOT. It is anticipated that the City and MoDOT will develop a response to the study recommendations explaining why recommendations will or will not be utilized moving forward. If appropriate, the Consultant will provide a range of short-term/low-cost to long-term/high-cost recommendations, giving the City and MoDOT flexibility in their response.

Project Schedule

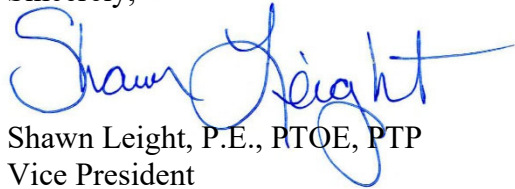
We anticipate schedule milestones as provided in the attached schedule.

Fees

We propose to provide the above scope of services for a fee not to exceed \$187,541.98 as is detailed in the attached fee estimate.

We look forward to working with you on this project. Should there be any questions regarding this proposal, please contact me at (314) 922-3099 or Sleight@cbbtraffic.com.

Sincerely,


Shawn Leight, P.E., RTOE, PTP
Vice President

CBB Fee
Columbmbia RSA
City of Columbia, MO
April 23, 2025

	CBB										B&W					
	Principal	Sr Eng V	Sr Plnr II	Project Engr III	Staff Eng III	Staff Eng I	CADD Tech III	Total CBB Hours	Total CBB Labor	CBB Direct Costs	Project Manager	Lead Engineer	Designer	Total B&W Hours	Total B&W Labor	B&W Direct Costs
	\$ 230.00	\$ 215.00	\$ 190.00	\$ 175.00	\$ 150.00	\$ 140.00	\$ 115.00				\$ 185.00	\$ 172.00	\$ 146.00			
Task 1: Project Management (Cost Control/Invoicing)								60	\$ 13,380.00	\$ 161.00				46	\$ 6,348.00	\$ 42.00
Task 1.1: Cost Control/Invoicing	4							4	\$ 920.00		2			2	\$ 370.00	
Task 1.2: Kickoff Meeting	4	4						8	\$ 1,780.00	1 Trip to Columbia	4	4		8	\$ 1,428.00	Mileage
Task 1.3: Coordination/Teams Calls	24	24						48	\$ 10,680.00		12	24		36	\$ 6,348.00	
Task 2: Traffic Operational and Safety Analysis								194	\$ 32,580.00	\$ 1,419.00				0	\$ -	
Task 2.1: Obtain/Summarize Traffic Data Agencies		2				2		4	\$ 710.00	Traffic Count Data Processing and 3 trips to Columbia				0	\$ -	
Task 2.2: Obtain/Summarize Historical Safety Data		8			40			48	\$ 7,720.00					0	\$ -	
Task 2.3: Highway Safety Manual Predictive Analysis		16		40				56	\$ 10,440.00					0	\$ -	
Task 2.4: Field Counts (6 Locations)		2				8	16	26	\$ 3,390.00					0	\$ -	
Task 2.5: Engineer Field Observations	4	4	8	8				24	\$ 4,700.00					0	\$ -	
Task 2.6: Forecast Traffic for Future Scenario		2		4				6	\$ 1,130.00					0	\$ -	
Task 2.7: Traffic/Synchro Analysis		2		4		24		30	\$ 4,490.00					0	\$ -	
Task 3: Community Engagement								52	\$ 11,140.00	\$ 483.00				18	\$ 3,096.00	\$ 126.00
Task 3.1: Stakeholder Meetings (4)	16	16						32	\$ 7,120.00	3 Trips to Columbia		12		12	\$ 2,064.00	3 Trips to Columbia
Task 3.2: Public Engagement Meeting	8	8					4	20	\$ 4,020.00			6		6	\$ 1,032.00	
Task 4: Field RSA								184	\$ 35,360.00	\$ 1,119.98				32	\$ 5,504.00	\$ 84.00
Task 4.1: Pre-RSA Review (Review Existing Data with RSA Team)	8	8			16	16	8	56	\$ 9,120.00	Travel for 4 people to Columbia		4		4	\$ 688.00	2 Trips to Columbia
Task 4.2a: Field RSA East (Day)	8	8	8	8				32	\$ 6,480.00			8		8	\$ 1,376.00	
Task 4.2b: Field RSA East&West (Night)	4	4	4	4				16	\$ 3,240.00			4		4	\$ 688.00	
Task 4.2c: Field RSA West (Day)	8	8	8	8				32	\$ 6,480.00			8		8	\$ 1,376.00	
Task 4.3: Discuss Issues & Countermeasures	16	16	8	8				48	\$ 10,040.00			8		8	\$ 1,376.00	
Task 5: Concept Drawings and Cost Estiamtes								0	\$ -					240	\$ 35,098.00	
Task 5.1: Develop Initial Concepts for Corridor									\$ -		4	30	24	58	\$ 9,404.00	
Task 5.2: Develop Initial Concepts for Intersectons									\$ -		4	30	24	58	\$ 9,404.00	
Task 5.3: Develop Order of Magnitude Costs for Initial Concepts									\$ -		2	10	8	20	\$ 3,258.00	
Task 5.4: Develop Conceptual Geometric Changes for 1 Concep									\$ -		6	32	24	62	\$ 10,118.00	
Task 5.5: Develop Conceptual Opinion of Cost - 1 Concep									\$ -		2	8	8	18	\$ 2,914.00	
Task 5.6: Revise Concepts/Costs									\$ -			16	8	24	\$ 3,920.00	
Task 6: Reports and Deliverables								204	\$ 33,960.00	\$ 161.00				10	\$ 1,720.00	\$ 42.00
Task 6.1: Generate Draft RSA Document	8	16	16	40		40	24	144	\$ 23,680.00	1 Trip to Columbia		4		4	\$ 688.00	1 Trip to Columbia
Task 6.2: Final RSA Document	4	8				16	16	44	\$ 6,720.00			2		2	\$ 344.00	
Task 6.3 Presentation to Facility Owner	8	8						16	\$ 3,560.00			4		4	\$ 688.00	
Total	124	164	52	124	56	106	68	694	\$ 126,420.00	\$ 3,343.98	36	214	96	346	\$ 57,484.00	\$ 294.00

\$ 187,541.98

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

County of St. Louis)
State of Missouri) ss.

My name is Shawn J. Leight. I am an authorized agent of _____

(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

Shawn J. Leight
Printed Name

Subscribed and sworn to before me this 6th day of May, 2025.

Diane M. Miromonti
Notary Public

