

**AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
BARTLETT & WEST, INC.**

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

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

**Improvements to the Nifong Blvd./Sinclair Road and
Vawter School Road/Old Mill Creek Road intersections.
Improvements are expected to be either adding traffic
signals or reconstructing the intersections as
roundabouts.**

(Description of Project)

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

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

SECTION 1 - AUTHORIZATION OF SERVICES

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

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

SECTION 2 - BASIC SERVICES OF ENGINEER

2.1 General

2.1.1 Perform professional engineering services as set forth in Attachment A - "Scope of Basic Services," dated **May 13, 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>
Todd Kempker, PE	Project Manager
Austin Johnson, EI	Project Engineer
Bob Gilbert, PE	QA/QC

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 Nichols, PE**, 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 **180** 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 \$123,000.00.**

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 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.

7.1.3 **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.

The insurance required by this Agreement shall include coverage which shall meet ENGINEER's obligations to indemnify the CITY as set out above and the CITY shall be named as co-insured for such insurance.

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.

7.3 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, 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, disability, or national origin. 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, disability, or national origin. 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, disability, or national origin.

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. **440-8800-528. 40-23, C00644**, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

By: _____
Director of Finance

BARTLETT & WEST, INC.

By: _____


Date: 5-23-16

ATTEST:

By: _____


Name: Todd Kempker, Project manager

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.

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

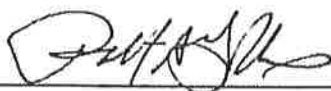
Effective 1/1/2009

County of Cole)
State of Missouri) ss.
)

My name is Robert A. Gilbert. I am an authorized agent of Bartlett & West, Inc. (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.

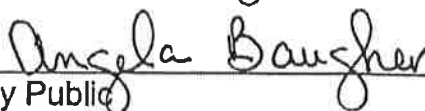


Affiant

Robert A. Gilbert

Printed Name

Subscribed and sworn to before me this 26 day of August, 2014.



Notary Public

ANGELA BAUGHER
Notary Public - Notary Seal
STATE OF MISSOURI
County of Cole
My Commission Expires 10/20/2017
Commission # 13422362

SCOPE OF SERVICES

May 13, 2016

Nifong/Sinclair and Vawter School/Old Mill Creek
City of Columbia Public Works Department

PROJECT DESCRIPTION

The proposed intersection improvements at Nifong Blvd. and Sinclair Road as well as Vawter School Road and Old Mill Creek Road are to be funded by the City. The intersections are both currently four-way stop controlled. Nifong Blvd. changes to Vawter School Road at Old Mill Creek Road. These are all two-lane roadways, with the potential for Nifong/Vawter School to become a four-lane road in the future. Both a traffic signal and a roundabout will be considered for each intersection, and the first phase of design will determine the appropriate intersection improvement for each location. Because the recommended intersection type is unknown at this point, the next phase of this design, which will include preliminary, right-of-way and final plans of the intersections, will be included in an addendum after the conceptual phase is complete and the intersection type has been approved by the City. Construction will eventually include new concrete pavement and sidewalks, stormwater improvements, striping and signage, water quality features, and landscaping. This phase of the design will include developing intersection alternatives with cost estimates and coordinating with the property owners and utilities in the area to determine the preferred alternative. The notice to proceed with design is anticipated to be June 21, 2016, with the conceptual phase of design being completed around December of 2016.

DETAILED SCOPE OF WORK

TASK 1. SURVEY SERVICES (PROVIDED BY CIVIL DESIGN, INC.)

- 1.1 Perform research of existing deeds and easements in corridor at County Recorder's Office.
- 1.2 Perform horizontal and vertical control setting for the project surveying.
- 1.3 Request ONE-CALL utility locates in the project corridor. Does not guarantee utilities accurately locate the utilities or even attempt to do so.
- 1.4 Conduct topographic survey to include existing infrastructure components, private property improvements in vicinity of project, utilities present and marked, and other topographic features.
- 1.5 Complete boundary survey recovery of existing pins and perform calculations to set existing property lines in the project area for base mapping and future easement/right-of-way preparation services.
- 1.6 Develop project base mapping from topographic and boundary survey.

TASK 2. TRAFFIC ANALYSIS (PROVIDED BY CBB)

- 2.1 Collect data for turning movement counts at each intersection between 7-9 AM and 2-6 PM. 48-hour hose counts will also be collected along two legs of each intersection.
- 2.2 Develop 2016 base VISSIM models for each intersection based on counts collected in the fall of 2016
- 2.3 Generate traffic forecasts for analysis years of 2026 and 2036. Traffic forecasts will be generated for ADT, AM and PM peak hours. CATSO travel demand, historical traffic growth trends and redevelopment potential will be considered.
- 2.4 VISSIM models will be utilized to evaluate a signalized intersection, single lane roundabout, and double lane roundabout for each intersection.
- 2.5 Develop a technical memorandum to summarize findings. VISSIM animations will be generated for use in public involvement use.
- 2.6 Attend up to 1 Public Interest Meeting and up to 3 Core Team Meetings.

TASK 3. CONCEPT DESIGN SERVICES

- 3.1 Collect data and review information to be used in performing the project including the following: City aerial mapping, planimetrics, contours, and existing plans.
- 3.2 Develop conceptual intersection layouts anticipated to include a single lane roundabout, double lane roundabout and a signalized intersection. The conceptual layouts will include up to three potential roundabout locations for each intersection, which brings the total to 7 potential alternatives for each intersection.
- 3.3 Request, develop agenda, and attend a Core Team Meeting to review initial concepts and receive City comments. Up to three concepts per intersection will move forward to more detailed conceptual design.
- 3.4 Request, develop agenda, and attend an initial utility coordination meeting. Consultant to continue utility coordination throughout the concept and final design phases of the project.
- 3.5 Attend meetings with local property owners such as the school as needed (up to 5) to aid in their understanding of the alternatives.
- 3.6 Develop conceptual traffic control on each remaining option. This will include overall detour routes for use during construction, as well as construction phasing to address constructability and traffic pattern concerns. This will be done for up to three options at each intersection.
- 3.7 Develop conceptual drainage design for each remaining option, which will include inlet/pipe and ditch locations. This concept will include a conceptual location for a water quality feature.
- 3.8 Prepare conceptual level cost estimates, as well as pro/con lists and exhibits to aid in evaluation of the alternatives remaining. These pro/cons will include information such as safety, cost, construction phasing/traffic control difficulty, and length of construction.
- 3.9 Request, develop agenda, and attend a Core Team Meeting to discuss the refined concepts and coordination with utilities and property owners. Determine what to bring

- forward to the Interested Party Meeting.
- 3.10 Conduct an Interested Party Meeting with the City, property owners, and stakeholders to share findings evaluating the preferred alternatives for each intersection. Create graphical displays of options as well as associated conflict diagrams, relative costs, and pro/con lists.
 - 3.11 Request, develop agenda, and attend a Core Team Meeting to choose the preferred alternative for each intersection based on overall public option, cost, right of way needs, and safety. Develop meeting minutes.

TASK 4. PROJECT MANAGEMENT AND COORDINATION

- 4.1 General communication with City. This includes email updates, phone conversations, and general correspondence on approximately a bi-weekly basis during the course of the project.
- 4.2 Perform duties necessary for administration of the project contract and sub consultant contracts. Prepare and administer project expenses and invoicing to City.
- 4.3 Perform periodic reviews of project for quality assurance purposes. Perform a quality control review of the project deliverables at each submittal stage.

TASK 5. PRELIMINARY PLANS

- 5.1 **Not included in this scope. To be determined after concept design.**

TASK 6. RIGHT-OF-WAY PLANS AND DOCUMENTS

- 6.1 **Not included in this scope. To be determined after concept design.**

TASK 7. FINAL PLANS

- 7.1 **Not included in this scope. To be determined after concept design.**

TASK 8. CONSTRUCTION PHASE SERVICES

- 8.1 **Not included in this scope. To be determined after concept design.**

ADDITIONAL SERVICES NOT INCLUDED IN THIS SCOPE OF WORK

1. Landscaping plan
2. Geotechnical survey
3. Additional coordination with County (will be included in project meetings)
4. Coordination with additional review agencies such as MoDOT

ATTACHMENT B

**ENGINEERING FEE ESTIMATE - BARTLETT & WEST
INTERSECTION CONCEPT STUDY
NIFONG/SINCLAIR AND VAWTER SCHOOL/OLD MILL CREEK
CITY OF COLUMBIA, MO**

TASK 1 – SURVEY SERVICES (COORDINATED WITH CIVIL DESIGN, INC.)

Labor:	A	Engineer IX	0 @ \$	210.00	\$	-
	B	Engineer VI	4 @ \$	142.00	\$	568.00
	C	Engineer II	4 @ \$	102.00	\$	408.00
	D	Surveyor VI	0 @ \$	121.00	\$	-
	E	Survey Technician II	0 @ \$	64.00	\$	-
	F	Engineering Tech IV	0 @ \$	78.00	\$	-
	G	Administrator II	0 @ \$	74.00	\$	-
		Sub-Total Labor	8		TOTAL Task 1 \$	976.00

TASK 2 – TRAFFIC ANALYSIS (COORDINATED WITH CBB)

Labor:	A	Engineer VIII	4 @ \$	210.00	\$	840.00
	B	Engineer VI	24 @ \$	142.00	\$	3,408.00
	C	Engineer II	10 @ \$	102.00	\$	1,020.00
	D	Surveyor VI	0 @ \$	121.00	\$	-
	E	Survey Technician II	0 @ \$	64.00	\$	-
	F	Engineering Tech IV	0 @ \$	78.00	\$	-
	G	Administrator II	0 @ \$	74.00	\$	-
		Sub-Total Labor	38		TOTAL Task 2 \$	5,268.00

TASK 3 – CONCEPT DESIGN SERVICES

Labor:	A	Engineer VIII	26 @ \$	210.00	\$	5,460.00
	B	Engineer VI	60 @ \$	142.00	\$	8,520.00
	C	Engineer II	183 @ \$	102.00	\$	18,666.00
	D	Surveyor VI	0 @ \$	121.00	\$	-
	E	Survey Technician II	0 @ \$	64.00	\$	-
	F	Engineering Tech IV	0 @ \$	78.00	\$	-
	G	Administrator II	0 @ \$	74.00	\$	-
		Sub-Total Labor	269		TOTAL Task 3 \$	32,646.00

TASK 4 – PROJECT MANAGEMENT AND COORDINATION

Labor:	A	Engineer VIII	6 @ \$	210.00	\$	1,260.00
	B	Engineer VI	40 @ \$	142.00	\$	5,680.00
	C	Engineer II	2 @ \$	102.00	\$	204.00
	D	Surveyor VI	0 @ \$	121.00	\$	-
	E	Survey Technician II	0 @ \$	64.00	\$	-
	F	Engineering Tech IV	0 @ \$	78.00	\$	-
	G	Administrator II	0 @ \$	74.00	\$	-
		Sub-Total Labor	48		TOTAL Task 4 \$	7,144.00

EXPENSES

Design						
	Mileage	300 @ \$	0.540	\$		162.00
	CADD Software	100 @ \$	7.00	\$		700.00
	Printing and Plotting	1 @ \$	300.00	\$		300.00
	Postage & Delivery	1 @ \$	134.00	\$		134.00
Sub-consultant						
	CDI (Survey)	1 @ \$	35,200.00	\$		35,200.00
	CBB (Traffic Analysis)	1 @ \$	40,000.00	\$		40,470.00
				TOTAL EXPENSES \$		76,966.00

TOTAL COST FOR ALL SERVICES \$ 123,000

ENGINEERING FEE ESTIMATE - BARTLETT & WEST INTERSECTION CONCEPT STUDY NIFONG/SINCLAIR AND VAWTER SCHOOL/OLD MILL CREEK CITY OF COLUMBIA, MO		Bartlett & West Personnel							Total Hours
		E-IV	E-VI	E-II	S-VI	ST-II	ET-IV	Admin	
		A	B	C	D	E	F	G	
TASK 1 – SURVEY SERVICES (COORDINATED WITH CIVIL DESIGN, INC.)									
1.1	Coordination with subconsultant		4	4					8
	Subtotal Task 1	0	4	4	0	0	0	0	8
TASK 2 – TRAFFIC ANALYSIS (COORDINATED WITH CBB)									
2.1	Coordination with subconsultant	4	24	10					38
	Subtotal Task 2	4	24	10	0	0	0	0	38
TASK 3 – CONCEPT DESIGN SERVICES									
3.1	Collect and review data from the City		1	6					7
3.2	Develop concept intersection layouts (assumes 7 options at each intersection)	2	8	60					70
3.3	Conduct a conceptual Core Team Meeting to select layouts to move forward with concept design on (assumes 3 per intersection)	3	3	4					10
3.4	Conduct a conceptual Utility Meeting to determine potential conflicts and costs		3	4					7
3.5	Attend meetings with local property owners such as the school as needed (up to 5) to aid in their buy in on alternatives	8	16	8					32
3.6	Develop conceptual traffic control phasing and detour routes for each remaining option	2	10	40					52
3.7	Develop conceptual drainage design for inlet and pipe placement and discharge for each option	1	4	16					21
3.8	Prepare cost estimates, pros/cons, and exhibits to evaluate each of the preferred alternatives at each intersection	1	4	32					37
3.9	Conduct a Core Team Meeting to determine what to move forward to the Interested Party Meeting with	3	3	4					10
3.10	Assist with an Interested Party Meeting and prepare exhibits for options, costs, and pro/cons (assumes 3 options per intersection)	3	4	4					11
3.11	Conduct a Core Team Meeting to discuss outcomes of all public meetings and recommend a preferred option at each intersection	3	4	5					12
	Subtotal Task 1	26	60	183	0	0	0	0	269
TASK 4 – PROJECT MANAGEMENT AND COORDINATION									
4.1	General communication with City	2	12	2					16
4.2	Perform duties necessary for administration of project contract and sub consultant contracts		20						20
4.3	Perform periodic reviews of project for quantity assurance purposes	4	8						12
	Subtotal Task 2	6	40	2	0	0	0	0	48

Nifong Intersections Survey									
Task Description	Hours						Total Hours	Fee	
	Proj Mgr I	Proj Eng II	Proj Eng I	Designer I	Land Surv I	Surv Tech			
Survey									
Establish Horizontal and Vertical Control					24	24	48	\$ 3,500.64	
Perform Topographic and Utility Survey					80	80	160	\$ 11,668.80	
Draft Topographic and Utility Survey						60	60	\$ 3,415.80	
Review Topographic and Utility Survey, QA/QC		4			16		20	\$ 1,814.52	
Research Boundary/Right of Way						24	24	\$ 1,366.32	
Perform Boundary/ROW Survey					32	32	64	\$ 4,667.52	
Draft Record Boundary information					16	24	40	\$ 2,789.20	
Reduce boundary, boundary calculations, QA/QC					24		24	\$ 2,134.32	
Engineering Services									
Conceptual Phase									
Site visit & Field Data collection							0	\$ -	
Meetings							0	\$ -	
Sidewalk and Curb Ramp Conceptual Layout							0	\$ -	
Conceptual Quantities and Fee Estimate							0	\$ -	
Conceptual Design submittals							0	\$ -	
Preliminary Phase									
Sidewalk and Curb Ramp Preliminary Plan layout							0	\$ -	
Plan Productions									
Title Sheet							0	\$ -	
Typical Sections							0	\$ -	
Plans							0	\$ -	
Cross Sections							0	\$ -	
Preliminary Field Check							0	\$ -	
Preliminary Quantities and Fee Estimate							0	\$ -	
Preliminary Design submittals							0	\$ -	
Final Design Phase									
Final Design and Details							0	\$ -	
Plan Production									
Title Sheet							0	\$ -	
Typical Sections							0	\$ -	
Summary							0	\$ -	
Plans							0	\$ -	
Reference Points/Control Points							0	\$ -	
Special Sheets							0	\$ -	
Traffic Control							0	\$ -	
Erosion Control							0	\$ -	
Cross Sections							0	\$ -	
Specifications							0	\$ -	
Final Field Check							0	\$ -	
Estimate							0	\$ -	
Support for Public Involvement							0	\$ -	
Meetings							0	\$ -	
Subtotal Labor Hours	0	4	0	0	192	244	440	\$ 31,357.12	
	Quantity	Units	Unit Cost						
Direct Costs									
Mileage - Field Visit	1885	miles	0.54						\$ 1,017.90
Mileage - Project Meetings	260	miles	0.54						\$ 140.40
Prints	50		2.50						\$ 125.00
Right of Way research Printing Fees	1	Lump Sum	500.00						\$ 500.00
Legal Descriptions (assume 0)	0	Each	500.00						\$ -
Lodging	14	Each	89.00						\$ 1,246.00
Per Diem	14	Each	51.00						\$ 714.00
Survey Materials (stakes, rebar, etc)	1	Lump Sum	100.00						\$ 100.00
Nifong Intersections Survey								\$ 35,200.42	
Notes:									
CDI - MoDot Approved Billing Rates - 2015									
Project Manager I								\$ 140.57	
Project Engineer II								\$ 97.91	
Project Engineer I								\$ 75.75	
Designer I								\$ 69.31	
Land Surveyor I								\$ 88.93	
Survey Tech								\$ 56.93	



Project Title: Nifong Intersections Analysis

Date: 1/1/2016

Task	Description	Sr. Eng V \$ 160.00	PE III \$ 120.00	SE I \$ 85.00	CADD II \$ 75.00	Tech II \$ 65.00	ODC	Total	
								Hours by Task	Total Cost by Task
1a	Data Collection - manual counts							18	\$ 1,170.00
1b	Data Collection - hose counts		2		12	24	600	38	\$ 3,300.00
2	2016 Base Vissim Models	2	12	32				46	\$ 4,480.00
3	Develop traffic forecasts	8	16	32				56	\$ 5,920.00
4a	2026 Models	16	32	56				104	\$ 11,160.00
4b	2036 Models	8	16	32				56	\$ 5,920.00
5	Documentation	8		16	24			48	\$ 4,440.00
6a	PI Meetings	8					100	8	\$ 1,380.00
6b	Coordination Meetings	15					300	15	\$ 2,700.00
	Total Hours	65	78	168	36	42		389	
	Total Manhour Costs	\$ 10,400.00	\$ 9,360.00	\$ 14,280.00	\$ 2,700.00	\$ 2,730.00	\$ 1,000		\$ 40,470.00

BARTLETT & WEST, INC.
2016 SCHEDULE OF HOURLY CHARGES
Effective January 1, 2016

Engineer XI/Landscape Arch XI	\$210.00	Right-of-Way Technician V	\$99.00
Engineer X/Landscape Arch X	194.00	Right-of-Way Technician IV	90.00
Engineer IX/Landscape Arch IX	182.00	Right-of-Way Technician III	82.00
Engineer VIII/Landscape Arch VIII	169.00	Right-of-Way Technician II	72.00
Engineer VII/Landscape Arch VII	156.00	Right-of-Way Technician I	62.00
Engineer VI/Landscape Arch VI	142.00		
Engineer V/Landscape Arch V	132.00	GIS Coordinator VIII	\$200.00
Engineer IV/ Landscape Arch IV	122.00	GIS Coordinator VII	190.00
Engineer III/Landscape Arch III	112.00	GIS Coordinator VI	180.00
Engineer II/Landscape Arch II	102.00	GIS Coordinator V	170.00
Engineer I/Landscape Arch I	92.00	GIS Coordinator IV	155.00
		GIS Coordinator III	140.00
		GIS Coordinator II	125.00
		GIS Coordinator I	115.00
Engineering Technician XI	\$165.00		
Engineering Technician X	140.00		
Engineering Technician IX	125.00		
Engineering Technician VIII	108.00	GIS Developer/DBA V	\$155.00
Engineering Technician VII	99.00	GIS Developer/DBA IV	145.00
Engineering Technician VI	91.00	GIS Developer/DBA III	135.00
Engineering Technician V	85.00	GIS Developer/DBA II	125.00
Engineering Technician IV	78.00	GIS Developer/DBA I	115.00
Engineering Technician III	70.00		
Engineering Technician II	64.00		
Engineering Technician I	60.00	GIS Project Administrator V	\$140.00
		GIS Project Administrator IV	130.00
Surveyor VIII	\$140.00	GIS Project Administrator III	120.00
Surveyor VII	131.00	GIS Project Administrator II	110.00
Surveyor VI	121.00	GIS Project Administrator I	100.00
Surveyor V	109.00		
Surveyor IV	98.00	GIS Analyst V	\$125.00
Surveyor III	88.00	GIS Analyst IV	115.00
Surveyor II	77.00	GIS Analyst III	105.00
Surveyor I	67.00	GIS Analyst II	95.00
		GIS Analyst I	85.00
Survey Technician VI	\$85.00	GIS Technician IV	\$86.00
Survey Technician V	75.00	GIS Technician III	77.00
Survey Technician IV	66.00	GIS Technician II	67.00
Survey Technician III	58.00	GIS Technician I	56.00
Survey Technician II	53.00		
Survey Technician I	48.00		
		Systems Analyst	\$130.00
Field Representative X	\$135.00	IS Support Specialist	69.00
Field Representative IX	122.00	Computer Systems Technician III	79.00
Field Representative VIII	112.00	Computer Systems Technician II	69.00
Field Representative VII	102.00	Computer Systems Technician I	55.00
Field Representative VI	93.00		
Field Representative V	85.00	Project Coordinator	\$115.00
Field Representative IV	77.00		
Field Representative III	70.00	Administrator V	\$110.00
Field Representative II	63.00	Administrator IV	97.00
Field Representative I	57.00	Administrator III	82.00
		Administrator II	74.00
		Administrator I	66.00
Right-of-Way Specialist IV	\$180.00		
Right-of-Way Specialist III	150.00	Administrative Technician V	\$70.00
Right-of-Way Specialist II	130.00	Administrative Technician IV	63.00
Right-of-Way Specialist I	115.00	Administrative Technician III	56.00
		Administrative Technician II	51.00
		Administrative Technician I	45.00