CITY		ENGINEER	
CITY OF JOPLIN **602 S. MAIN STREET** **JOPLIN, MO 64801**		Name: BARTLETT & WEST, Inc. Address: 1719 SOUTHRIDGE DR., SUITE 100 JEFFERSON CITY, MO 65109	
Attention: NICK A. HEATHERLY, P.E.		Attention: HERB BAILEY	
Department: PUBLIC WORKS		Phone: (785) 330-7035	Fax: (573) 634-7904
Phone: (417) 624-0820	Fax:	Work Authorization No. BW-Conn-TC0606	

AGREEMENT FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES

THIS AGREEMENT, made and entered into this _____ day of _____, 20___, by the parties identified above.

WITNESSETH:

THAT, WHEREAS, the City of Joplin desires to engage the Engineer to render certain technical and professional services in connection with a projects identified on future Work Authorizations to this Agreement;

WHEREAS, the Engineer made certain representations and statements to the City with respect to the provision of such services and the City has accepted said proposal; and

WHEREAS, the Engineer represents Engineer is licensed by the Missouri Board for Architects, Professional Engineers, and Land Surveyors to perform the services designated under this contract, and further represents that all survey services shall be done under the direction of a Land Surveyor licensed by the Missouri Board for Architects, Professional Engineers, and Land Surveyors;

NOW, THEREFORE, for the considerations herein expressed, it is agreed by and between the City and the Engineer as follows:

1. **Services.** The City agrees to engage the services of the Engineer and the Engineer agrees, upon receipt of each duly executed Work Authorization, to perform the services described in the Work Authorization. The services of the Engineer shall commence as soon as practicable after the execution of a Work Authorization, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract. The Engineer shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by the Engineer under this Agreement. Approval by the City and other agencies of drawings, designs, specifications, reports, and incidental engineering work or materials furnished hereunder shall not in any way relieve the Engineer of his responsibility for the technical adequacy of his work except as to matters involving peculiar conditions or uses of the property known to the City or other agencies but not to the Engineer.

2. **Term.** The services of the Engineer shall commence as soon as practicable after the execution of this contract, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract, but in any event, all of the services required hereunder shall be completed as set forth in the schedule for the project which is attached hereto as ***Exhibit A*** of any executed Work Authorization.

3. **Payment.** The City, pursuant to each fully executed Work Authorization, shall pay Engineer the consideration set forth in the Work Authorization, which shall constitute complete payment for the services furnished in connection with the work required to be performed under the Work Authorization.

4. **Exchange of Data**. All information, data, and reports as are in the City's possession and necessary for the carrying out of the work, shall be furnished to the Engineer without charge, and the parties shall cooperate with each other in every way possible in carrying out the scope of services.

5. **Personnel**. The Engineer represents that Engineer will secure at Engineer's own expense, all personnel required to perform the services called for under this contract by Engineer. Such personnel shall not be employees of or have any contractual relationship

with the City except as employees of the Engineer. All of the services required hereunder will be performed by the Engineer or under Engineer's direct supervision and all personnel engaged in the work shall be fully qualified and shall be authorized under state and local law to perform such services. None of the work or services covered by this contract shall be subcontracted without the written approval of the City.

6. **Termination of Contract.**

a. Termination for breach. Failure of the Engineer to fulfill Engineer's obligations under this contract in a timely and satisfactory manner in accordance with the schedule and description of services set forth in Exhibit A shall constitute a breach of the contract, and the City shall thereupon have the right to immediately terminate the contract. The City shall give written notice of termination to the Engineer by one of three different means: Facsimile Transmission ("FAX") if Engineer has a FAX number; U.S. Postal Service Mails; or by hand delivering a copy of the same to the Engineer; or may give notice by any combination of the above methods. The date of termination shall be the date upon which notice of termination is hand delivered to Engineer or given by FAX, or the third day following mailing of the notice of termination, whichever first occurs. In the event of termination for breach, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other materials prepared by the Engineer under this contract shall at the option of the City become its property, and the Engineer shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials; provided, that the Engineer shall not be relieved of liability to the City for damages sustained by the City by virtue of any such breach of the contract by the Engineer.

b. Right to terminate in the absence of breach. Either party may terminate this contract for any reason, by serving notice of intent to terminate upon the other party by the means specified in paragraph A of this section. Such notice shall specify the date of termination, but in no event shall either party terminate the contract under this provision upon less than thirty (30) days' notice to the other party; provided, that the parties may mutually agree to waive the thirty (30) day requirement and to shorten the time for notice of termination. In the event of termination in the absence of breach, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other materials prepared by the Engineer under this contract shall at the option of the City become its property, and the Engineer shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

7. **Conflicts**. No salaried officer or employee of the City, and no member of the City Council shall have a financial interest, direct or indirect, in this contract. A violation of this provision renders the contract void. Any federal regulations, and applicable provisions in Section 105.450 et seq. RSMo. shall not be violated. Engineer covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services to be performed under this contract. The Engineer further covenants that in the performance of this contract no person having such interest shall be employed.

8. **Assignment**. The Engineer shall not assign any interest in this contract, and shall not transfer any interest in the same (whether by assignment or novation), without prior written consent of the City thereto. Provided, however, that claims for money due or to become due to the Engineer from the City under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of such assignment or transfer shall be furnished in writing promptly to the City. Any such assignment is expressly subject to all rights and remedies of the City under this agreement, including the right to change or delete activities from the contract or to terminate the same as provided herein, and no such assignment shall require the City to give any notice to any such assignee of any actions which the City may take under this agreement, though City will attempt to so notify any such assignee.

9. **Confidentiality of Documents**. Any reports, data, design or similar information given to or prepared or assembled by the Engineer under this contract which the City requests to be kept as confidential shall not be made available to any individual or organization by the Engineer without prior written approval of the City.

10. **Discrimination.** The Engineer agrees in the performance of this contract not to discriminate on the ground or because of race, creed, color, national origin or ancestry, sex, religion, handicap, age, or political opinion or affiliation, against any employee of Engineer or applicant for employment and shall include a similar provision in all subcontracts let or awarded hereunder.

11. **Occupational License**: The Engineer shall obtain and maintain an occupational license with the City of Joplin, Missouri, if required by city code and any required state or federal license. The cost for this occupational license shall be borne by the Engineer. No contract will be executed by the City until this occupational license has been obtained and that the Engineer is current on any City taxes is verified.

12. **Compliance with Laws**. Engineer agrees to comply with all applicable federal, state and local laws or rules and regulations applicable to the provision of services and products hereunder. Engineer affirmatively states that payment of all local, state, and federal taxes and assessments owed by Engineer is current.

13. **Affidavit for Contracts Over $5,000.00**. That pursuant to Missouri Revised Statute Sections 285.525 through 285.550, if this contract exceeds the amount of $5,000.00 and Engineer is associated with a business entity, Engineer shall provide an acceptable notarized affidavit stating that the associated business entity is enrolled in and participates in a federal work authorization program with respect to the employees working in connection with the contracted services, and that said business entity does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. Additionally, Engineer must provide documentation for said business entity evidencing current enrollment in a federal work authorization program.

14. **Nonresident/Foreign Contractors**. The Engineer shall procure and maintain during the life of this contract:

a. If the Engineer is a foreign corporation, a certificate of authority to transact business in the State of Missouri from the Secretary of State, unless exempt pursuant to the provisions of Section 351.572 RSMo.

b. A certificate from the Missouri Director of Revenue evidencing compliance with the transient employer financial assurance law, unless exempt pursuant to the provisions of Section 285.230 RSMo.

15. **General Independent Contractor Clause**. This agreement does not create an employee/employer relationship between the parties. It is the parties' intention that the Engineer will be an independent contractor and not the City's employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, Missouri revenue and taxation laws, Missouri workers' compensation and unemployment insurance laws. The Engineer will retain sole and absolute discretion in the judgment of the manner and means of carrying out the Engineer's activities and responsibilities hereunder. The Engineer agrees that it is a separate and independent enterprise from the public employer, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the Engineer and the City, and the City will not be liable for any obligation incurred by the Engineer, including but not limited to unpaid minimum wages and/or overtime premiums.

16. **City Benefits**. The Engineer shall not be entitled to any of the benefits established for the employees of the City nor be covered by the Worker's Compensation Program of the City.

17. **Liability and Indemnity**. The parties mutually agree to the following:

a. The Engineer shall defend, indemnify, and hold the City harmless from and against all damages, losses, liabilities, expenses, and costs with respect to all claims, including, but not limited to, claims for personal injuries, wrongful death, and damages to property, which may be asserted against the City by any person or entity as the result of Engineer’s (or any of Engineer’s subcontractors) negligent acts, errors, or omissions in the course of the performance of this contract, provided that the Engineer is not obligated to indemnify or hold harmless the City from the City’s own negligence or wrong doing.

b. The Engineer shall indemnify and hold the City harmless from all wages or overtime compensation due its employees in rendering services pursuant to this agreement, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act or any other federal or state law.

c. In no event shall the City be liable to the Engineer for special, indirect, or consequential damages, except those caused by the City's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the City shall be limited to the amount of money to be paid or received by the City under this contract.

18. **Ownership of Documents.** All files and information will be submitted before or upon final approval and acceptance of the contract documents. All documents, including original drawings, calculations, computer runs, field notes, drawings, estimates, specifications, written design criteria and written reports are and remain the property of the Engineer until such time as this Agreement is, for any reason, terminated, at which time they become the property of the City. The Engineer shall furnish to the City, one set of reproducible record Mylars of drawings, AutoCAD files and copies of estimates, specifications, written reports, and written design criteria, in consideration of which the City will use them fully in connection with the project and will not sell them.

19. **Notices**. All notices required or permitted hereinunder and required to be in writing may be given by FAX or by first class mail addressed to City and Engineer at the addresses shown above. The date of delivery of any notice given by mail shall be the date falling on the third day after the day of its mailing. The date of delivery of notice by FAX transmission shall be deemed to be the date transmission occurs, except where the transmission is not completed by 5:00 p.m. on a regular business day at the terminal of the receiving party, in which case the date of delivery shall be deemed to fall on the next regular business day for the receiving party.

20. **Jurisdiction**. This agreement and every question arising hereunder shall be construed or determined according to the laws of the State of Missouri. Should any part of this agreement be litigated, venue shall be proper only in the Circuit Court of Jasper County, Missouri.

21. **Entire Agreement**. This agreement contains the entire agreement of the parties. No modification, amendment, or waiver of any of the provisions of this agreement shall be effective unless in writing specifically referring hereto, and signed by both parties.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

REVIEWED FOR APPROVAL

David Hertzberg, P.E.
Capitol Improvement Project Manager

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefore.

Leslie Haase, Director of Finance

APPROVED AS TO FORM

Peter Edwards, City Attorney

Engineer:

BARTLETT & WEST, Inc.

By: Robert A. Gilbert

Printed Name: Robert A. Gilbert

Title: Vice President

Date: 12-8-16

CITY OF JOPLIN, MISSOURI

By: _____
Nicholas A. Heatherly, P.E.
Public Works Director

Date: _____

CITY		ENGINEER	
CITY OF JOPLIN **602 S. MAIN STREET** **JOPLIN, MO 64801**		Name: BARTLETT & WEST, Inc. Address: 1719 SOUTHRIDGE DR., SUITE 100 JEFFERSON CITY, MO 65109	
Attention: NICK A. HEATHERLY, P.E.		Attention: HERB BAILEY	
Department: PUBLIC WORKS		Phone: (785) 330-7035	Fax: (573) 634-7904
Phone: (417) 624-0820	Fax:		

WORK AUTHORIZATION NUMBER BW-Conn-TC0606
TO AGREEMENT FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES

City and Engineer agree to amend their Agreement for Professional Engineering Consulting Services to include a scope of work and fees for engineering services, by adding the following terms to their Agreement.

1. **Services**. The City agrees to engage the services of the Engineer and the Engineer agrees to perform the services hereinafter set forth in connection with projects described in ***Exhibit A***.

2. **Addition to Services**. The City may add to the Engineer services or delete therefrom activities of a similar nature to those set forth in ***Exhibit A***, provided that the total cost of such work does not exceed the total cost allowance as specified in Paragraph 5 hereof. The Engineer shall undertake such changed activities only upon the direction of the City. All such directives and changes shall be in written form and prepared and approved by the City and shall be accepted and countersigned by the Engineer.

3. **Term**. The services of the Engineer shall commence as soon as practicable after the execution of this contract, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract, but in any event, all of the services required hereunder shall be completed as set forth in the schedule for the project which is attached hereto as ***Exhibit A***.

4. **Costs not to Exceed**. The City of Joplin is limited by law with respect to the amount of money it can pay. Therefore, the City has established a fixed sum for this contract, which cannot be exceeded unless this contract is amended. The Engineer providing services hereunder shall be required to keep track of the amount of hours billable under this contract at all times; and any work in excess of the fixed sum shall not be eligible for payment. The Engineer shall notify the City if Engineer anticipates that the contract amount may be exceeded, in order to determine whether or not the City is prepared to increase the total compensation. The Engineer shall establish a billing system showing the amount of money remaining on the contract, which shall be shown in each monthly billing.

5. **Payment**.

a. **Conditioned upon acceptable performance**. The City agrees to pay the Engineer in accordance with the terms set forth in ***Exhibit A***, which shall constitute complete compensation for all services to be rendered under this contract; provided, that where payments are to be made periodically to Engineer for services rendered under this contract, the City expressly reserves the right to disapprove in whole or in part a request for payment where the services rendered during the period for which payment is claimed are not performed in a timely and satisfactory manner in accordance with the schedule and description of services set forth in ***Exhibit A***.

b. **Total compensation not to exceed**. It is expressly understood that in no event will the total compensation and reimbursement to be paid to the Engineer under the terms of this Work Auth. No. BW-Conn-TC0606 exceed the sum of Five Hundred Thirty-Nine Thousand Nine Hundred Fifty Dollars ($539,950).

6. **Insurance**. Without limiting any of the other obligations or liabilities of the Engineer, the Engineer shall secure and maintain at its own cost and expense, throughout the duration of this Contract and until the work is completed and accepted by the City of Joplin, insurance of such types and in such amounts as may be necessary to protect it and the interests of the City of Joplin against all hazards or risks of loss as hereunder specified or which may arise out of the performance of the Contract Documents. The form and limits of such insurance, together with the underwriter thereof in each case, are subject to approval by the City of Joplin. Regardless

of such approval, it shall be the responsibility of the Engineer to maintain adequate insurance coverage at all times during the term of the Contract. Failure of the Engineer to maintain coverage shall not relieve it of any contractual responsibility or obligation or liability under the Contract Documents.

The certificates of insurance, including evidence of the required endorsements hereunder or the policies, shall be filed with the City at the time that this contract is signed by the Engineer. All insurance policies shall provide thirty (30) days written notice to be given by the insurance company in question prior to modification or cancellation of such insurance. Such notices shall be mailed, certified mail, return receipt requested, to:

City of Joplin - Public Works, 602 S. Main, Joplin, MO 64801; and

Such policies shall name the City as an additional insured with limits of liability not less than the sovereign immunity limits for Missouri public entities calculated by the Missouri Department of Insurance as of January 1 each calendar year and published annually in the Missouri Register pursuant to Section 537.610, RSMo.
(See, http://insurance.mo.gov/industry/sovimmunity.php).

As of January 1, 2016, the minimum coverage for the insurance referred to herein shall be as set out below:

a. Workers' Compensation….Statutory coverage per RSMo 287.010 et seq.
Employer's Liability……. $1,000,000.00

b. Commercial General Liability Insurance, including coverage for Contractual Liability and Independent Contractors Liability. Such coverage shall apply to bodily injury and property damage on an "Occurrence Form Basis" with limits of at least Two Million Seven Hundred Thirty-Four Thousand Five Hundred Sixty-Seven and no/100 Dollars ($2,734,567.00) for all claims arising out of a single accident or occurrence and at least Four Hundred Ten Thousand One Hundred Eighty-Five and no/100 Dollars ($410,185.00) with respect to injuries and/or death of any one person in a single occurrence and an amount not less than at least $1,000,000 for all claims to property arising out of a single occurrence and at least $100,000 to any one owner with respect to damages to property. Engineer agrees that the proceeds of such insurance policy shall first be used to pay any award, damages, costs, and/or attorneys' fees incurred by or assessed against City, its employees, officers and agents, before payment of any award, damages, costs or attorneys fees of Engineer, its employees, officers or agents. Engineer agrees to cause its insurer to name City as an additional insured on such insurance policy, including the City as an additional insured for coverage under its products-completed operations hazard, and said policy shall be primary and noncontributory.

c. Automobile Liability Insurance covering bodily injury and property damage for owned, non-owned and hired vehicles, with limits of at least Two Million Seven Hundred Thirty-Four Thousand Five Hundred Sixty-Seven and no/100 Dollars ($2,734,567.00) for all claims arising out of a single accident or occurrence and at least Four Hundred Ten Thousand One Hundred Eighty-Five and no/100 Dollars ($410,185.00) with respect to injuries and/or death of any one person in a single accident or occurrence.

d. Errors and Omissions Insurance. The Engineer shall maintain a professional liability insurance policy in the amount of $1,000,000.00. This policy shall remain in full force and effect for a period of one year after completion and acceptance by the City of the construction of the project.

e. Subcontracts. In case any or all of this work is sublet, the Engineer shall require the subcontractor to procure and maintain all insurance required in subparagraphs (A), (B) and (C) hereof and in like amounts. Engineer shall require any and all subcontractors with whom it enters into a contract to perform work on this project to protect the City of Joplin through insurance against applicable hazards or risks and shall, upon request of the City, provide evidence of such insurance.

f. Notice. The Engineer and/or subcontractor shall furnish the City prior to beginning the work satisfactory proof of carriage of all the insurance required by this contract, with the provision that policies shall not be canceled, modified or non-renewed without thirty (30) days written notice to the City of Joplin.

g. Legislative or Judicial Changes. In the event the scope or extent of the City's tort liability as a governmental entity as described in Section 537.600 through 537.650 RSMo is broadened or increased during the term of this agreement by legislative or judicial action, the City may require Engineer, upon 10 days written notice, to execute a contract addendum whereby the Engineer agrees to provide, at a price not exceeding Engineer's actual increased premium cost, additional liability insurance coverage as the City may require to protect the City from increased tort liability exposure as the result of such legislative or judicial action. Any such

additional insurance coverage shall be evidenced by an appropriate certificate of insurance and shall take effect within the time set forth in the addendum.

7. All other terms and conditions of the original Agreement shall remain in effect.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

REVIEWED FOR APPROVAL

David Hertzberg, P.E.
Capitol Improvement Project Manager

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefore.

Leslie Haase, Director of Finance

APPROVED AS TO FORM

Peter Edwards, City Attorney

Engineer: BARTLETT & WEST, Inc.

By: _____

Printed Name: Robert A. Gilbert

Title: Vice President

Date: 12-8-16

CITY OF JOPLIN, MISSOURI

By: _____
Nicholas A. Heatherly, P.E.
Public Works Director

Date: _____

EXHIBIT A

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Engineering Services Agreement

Article 1 of the Agreement is supplemented to include the following agreement of the parties.

Engineer shall provide Basic and Additional Services as set forth below.

PART 1 – BASIC SERVICES *All deliverables referred to in the agreement shall also be provided in an electronic format to be specified by the City.*

A1.01 *Conceptual Phase*

A. Engineer shall:

1. Consult with Owner to define and clarify Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations, and identify available data, information, reports, facilities plans, and site evaluations.

   If Owner has already identified one or more potential solutions to meet its Project requirements, then proceed with the study and evaluation of such potential solutions. Options will be discussed and agreed to by Engineer at scoping meeting.

2. Identify potential solution(s) to meet Owner's Project requirements, as needed.

3. Study and evaluate the potential solution(s) to meet Owner's Project requirements.

4. Visit the Site, or potential Project sites, to review existing conditions and facilities, unless such visits are not necessary or applicable to meeting the objectives of the Study and Report Phase.

5. Advise Owner of any need for Owner to obtain, furnish, or otherwise make available to Engineer additional Project-related data and information, for Engineer's use in the study and evaluation of potential solution(s) to Owner's Project requirements, and preparation of a related report.

6. After consultation with Owner, recommend to Owner the solution(s) which in Engineer's judgment meet Owner's requirements for the Project.

7. Identify, consult with, and analyze requirements of governmental authorities having jurisdiction to approve the portions of the Project to be designed or specified by Engineer, including but not limited to mitigating measures identified in an environmental assessment for the Project.

8. Prepare a conceptual report (the "Report") which will, as appropriate, contain schematic layouts, sketches, and conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, considerations involved, and

Engineer's recommended solution(s). For each recommended solution Engineer will provide the following, which will be separately itemized: opinion of probable Construction Cost; proposed allowances for contingencies; the estimated total costs of design, professional, and related services to be provided by Engineer and its Consultants; and, on the basis of information furnished by Owner, a tabulation of other items and services included within the definition of Total Project Costs.

9. Advise Owner of any need for Owner to provide data or services of the types described in Exhibit B, for use in Project design, or in preparation for Contractor selection and construction.

10. When mutually agreed, assist Owner in evaluating the possible use of building information modeling; civil integrated management; geotechnical baselining of subsurface site conditions; innovative design, contracting, or procurement strategies; or other strategies, technologies, or techniques for assisting in the design, construction, and operation of Owner's facilities. The subject matter of this paragraph shall be referred to in Exhibit A and B as "Project Strategies, Technologies, and Techniques."

11. If requested to do so by Owner, assist Owner in identifying opportunities for enhancing the sustainability of the Project, and pursuant to Owner's instructions plan for the inclusion of sustainable features in the design.

12. Develop a scope of work and survey limits for any topographic and other surveys necessary for design.

13. Perform or provide the following other Study and Report Phase tasks or deliverables:

14. Furnish 6 review copies of the Report and any other Study and Report Phase deliverables to Owner by the due date and review by phone or in person with Owner.

15. Revise the Report and any other Study and Report Phase deliverables in response to Owner's comments, as appropriate, and furnish 6 copies of the revised Report and any other Study and Report Phase deliverables to the Owner by the agreed upon due date.

B. Engineer's services under the Study and Report Phase will be considered complete on the date when Engineer has delivered to Owner the revised Report and any other Study and Report Phase deliverables.

C. Billing/Payment Processing Options

1. Request for payment may be submitted at appropriate intervals during the contract. Application for payment must include a detailed breakdown of deliverables completed as well as specific tasks or percentages of specific tasks completed. Payment schedule will be at the approval of the city.

2. ~~Deliverables option as determined by engineering staff on a project by project basis. Example: 30 percent – Preliminary plans, 60 percent Right of Way plans, 90 percent Final plans and bid documents, 100 percent project completion.~~

A1.02 Preliminary Design Phase - (30 percent plans)

A. Proceed with Preliminary Design Phase after the completion of the Conceptual phase which includes: Acceptance by Owner of the Conceptual Report and any other Study and Report Phase deliverables; selection by Owner of a recommended solution; issuance by Owner of any instructions for use of Project Strategies, Technologies, and Techniques, or for inclusion of sustainable features in the design, and Indication by Owner of any specific modifications or changes in the scope, extent, character, or design requirements of the Project desired by Owner.

1. Prepare Preliminary Design Phase documents consisting of final design criteria, preliminary drawings, outline specifications, and written descriptions of the Project.

2. Include on plans, property lines, structure locations, ownership names and contact information.

3. In preparing the Preliminary Design Phase documents, use any specific applicable Project Strategies, Technologies, and Techniques authorized by Owner during or following the Study and Conceptual Phase, and include sustainable features, as appropriate, pursuant to Owner's instructions.

4. Provide necessary field surveys, topographic and utility mapping for Engineer's design purposes. Comply with the scope of work and procedure for the identification and mapping of existing utilities as defined by Section A1.03 "Utility Requirements" and Section A1.04 "Survey Services"

5. Visit the Site as needed to prepare the Preliminary Design Phase documents.

6. Advise Owner if additional reports, data, information, or services of the types described are necessary and assist Owner in obtaining such reports, data, information, or services.

7. Continue to assist Owner with Project Strategies, Technologies, and Techniques that Owner has chosen to implement.

8. Based on the information contained in the Preliminary Design Phase documents, prepare a revised opinion of probable Construction Cost, and assist Owner in tabulating the various cost categories which comprise Total Project Costs.

9. Obtain and review Owner's instructions regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other

information necessary for the finalization of Owner's bidding-related documents (or requests for proposals or other construction procurement documents), and Construction Contract Documents. Also obtain and review copies of Owner's design and construction standards, Owner's standard forms, general conditions, supplementary conditions, text, and related documents or content for Engineer to include in the draft bidding-related documents (or requests for proposals or other construction procurement documents), and in the draft Construction Contract Documents, when applicable.

10. Development communication plan for project: considering the use of door hangers, letters, public meetings, changeable message boards.

11. Furnish 6 review copies of the Preliminary Design Phase documents, opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables to Owner by established due date, and review them with Owner. Owner shall submit to Engineer any comments regarding the furnished items.

12. Revise the Preliminary Design Phase documents, opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables in response to Owner's comments, as appropriate, and furnish to Owner 6 copies of the revised Preliminary Design Phase documents, revised opinion of probable Construction Cost, and any other deliverables by the specified due date.

13. Engineer's services under the Preliminary Design Phase will be considered complete on the date when Engineer has delivered to Owner the revised Preliminary Design Phase documents, revised opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables.

A1.03 *Utility Requirements*

A. Make notification to utilities during conceptual phase of preliminary design process. Communication to be made in a specific, documented format. (As detailed in item D).

B. Based on specific utility feedback, and field observation, identify potential high expense utility relocation issues.

C. Prepare and present plan for city review, detailing significant utility conflicts, proposed pothole locations, and associated costs for verifying existing utilities. Potholing process to include horizontal and vertical alignment and depth details. Details will be included in 30 percent plan completion, final right of way plans, and final construction plans. Necessary corrective action to address incomplete or inaccurate details may be subject to errors and omissions insurance claim.

D. Submit utility report at 30 percent submittal and close out of project. Utility report to include representatives contacted, meeting dates, and a summary of discussions, requests, observations and/or concerns. (See City of Joplin utility notification form)

A1.04 Surveying Services – General

A. Control Survey
All horizontal control for the project will be based on the Missouri State Plane Coordinate System of 1983, West Zone.
All vertical control for the project will be based on the North American Vertical Datum of 1988 (NAVD 88) provided by NOAA's National Geodetic Survey (NGS).

Control points and temporary bench marks will be set inter-visible and in strategic locations along the project route so as to be conveniently used during all phases of the project, including construction.

B. Engineering Survey
Provide topographic engineering survey for the length of the project to facilitate design. Provide a survey of all existing surface and sub-surface utilities in the project corridor.

C. Property Boundary Survey/Right-of-way Survey/Easements
Provide a boundary survey or surveys to locate the existing Right-of-Way/Easements for the length of the project, the adjacent property lines of the parcels along the project, and all existing easements of record encumbering each property that will affect the project. Consultant will be responsible for ordering title work for each parcel along the project route and procuring existing right-of-way documents and/or right-of-way plans.

D. Right-of-way and Easement Description Preparation
Upon final approval of the Right-of-Way/Project Plans consultant will provide descriptions and exhibit drawings for all property right acquisitions including, but not limited to: right-of-way takings, permanent easements and temporary easements.

E. Right-of-way and Easement Staking

During the property negotiation phase of the project it may be necessary to stake the proposed right-of-way and/or easement locations to assist the right-of-way agent. Upon request, the consultant will temporarily stake the proposed right-of-way/easement locations with wooden lathe to allow the property owner to visually inspect the location of such.

Pre-Construction Phase – On projects that will require the relocation of existing utilities prior to the award of the construction contract the consultant shall temporarily stake the location of the Right-of-Way and/or easements at points predetermined by Owner. This service will be provided one (1) time as a part of the contract. Any additional staking, if required by utility contractors due to the destruction of the temporary stakes, will be done at the advertised hourly rate and billed back to the utility contractor who is found to be responsible for removing the original stakes.

Pre-Construction Phase service are only included with this design fee for the 32nd St. intersection. Pre-Construction Phase services for the remainder of Connecticut Avenue will need to be authorized through an addendum to this agreement.

F. Existing United States Public Land Survey System Corners
All existing USPLSS corners that may/will be removed or altered as a result of this project must be referenced and re-established according to 20 CSR 2030-17.020 and 20 CSR 2030-17.030.

G. Survey Records

Consultant shall provide to Owner originals or copies of all survey records relevant to the project. These records shall include, but are not limited to: survey notes, research records, computations, calculations and drawings.

H. Other Services

Services not covered by A through F that are determined in the scoping meeting to be necessary for completion of the project.

A1.05 Right of Way Plan Phase – 60 percent plans

A. Determine parcels and parcel ownership information to be included on right of way plans.

B. Determine parcel size.

C. Prepare R.O.W. plan tabulation sheet.

D. Prepare R.O.W. plan sheets showing easement and right of way takings.

E. Furnish 6 review copies of the Right of Way Plan Phase documents, opinion of probable Right of Way Cost, and any other Right of Way Plan Phase deliverables to Owner by established due date, and review them with Owner. Owner shall submit to Engineer any comments regarding the furnished items.

F. Revise the Right of Way Plan Phase documents, opinion of probable Right of Way Cost, and any other Right of Way Plan Phase deliverables in response to Owner's comments, as appropriate, and furnish to Owner 6 copies of the revised Right of Way Plan Phase documents, revised opinion of probable Right of Way Cost, and any other deliverables by the specified due date.

G. Engineer's services under the Right of Way Plan Phase will be considered complete on the date when Engineer has delivered to Owner the revised Right of Way Plan Phase documents, revised opinion of probable Right of Way Cost, and any other Right of Way Plan Phase deliverables.

A1.06 Final Design Phase

Design fee includes Final Design Phase for 32nd St. intersection only. Final Design Phase services for remainder of Connecticut Avenue improvements will need to be authorized through an addendum to this agreement.

A. After acceptance by Owner of the Preliminary Design Phase documents, revised opinion of probable Construction Cost as determined in the Preliminary Design Phase, and/or any other Right of Way plan documents, subject to any Owner-directed modifications or changes in the scope, extent, character, or design requirements of or for the Project, and upon written authorization from Owner, Engineer shall:

1. Prepare final Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor.

2. Visit the Site as needed to assist in preparing the final Drawings and Specifications.

3. Provide technical criteria, written descriptions, and design data for Owner's use in filing applications for permits from or approvals of governmental authorities having jurisdiction to review or approve the final design; assist Owner in consultations with such authorities; and revise the Drawings and Specifications in response to directives from such authorities, as appropriate.

4. Advise Owner of any recommended adjustments to the opinion of probable Construction Cost.

5. After consultation with Owner, include in the Construction Contract Documents any specific protocols for the transmittal of Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website. Any such protocols shall be applicable to transmittals between and among Owner, Engineer, and Contractor during the Construction Phase and Post-Construction Phase, and unless agreed otherwise shall supersede any conflicting protocols previously established for transmittals between Owner and Engineer.

6. Assist Owner in assembling known reports and drawings of Site conditions, and in identifying the technical data contained in such reports and drawings upon which bidders or other prospective contractors may rely.

7. In addition to preparing the final Drawings and Specifications, assemble drafts of other Construction Contract Documents based on specific instructions and contract forms, text, or content received from Owner.

8. Prepare or assemble draft bidding-related documents (or requests for proposals or other construction procurement documents), based on the specific bidding or procurement-related instructions and forms, text, or content received from Owner.

9. Contract shall include contractor provided changeable message signs to communication construction information.

10. Furnish for review by Owner, its legal counsel, and other advisors, 6 copies of the final drawings and Specifications, assembled drafts of other construction Contract Documents, the draft bidding-related documents (or requests for proposals or other construction procurement documents), and any other final design Phase deliverables, by the established due date, with the Final Design Phase, and review them with Owner. Owner shall submit to Engineer any comments regarding the furnished items, and any instructions for revisions.

B. Engineer's services under the Final Design Phase will be considered complete on the date when Engineer has delivered to Owner the final Drawings and Specifications, other assembled Construction Contract Documents, bidding-related documents (or requests for

proposals or other construction procurement documents), and any other Final Design Phase deliverables.

C. In the event that the Work designed or specified by Engineer is to be performed or furnished under more than one prime contract, or if Engineer's services are to be separately sequenced with the work of one or more prime Contractors (such as in the case of fast-tracking), Owner and Engineer shall, prior to commencement of the Final Design Phase, develop a schedule for performance of Engineer's services during the Final Design, Bidding or Negotiating, Construction, and Post-Construction Phases in order to sequence and coordinate properly such services as are applicable to the work under such separate prime contracts.

A1.07 Bidding Phase

Design fee includes Bidding Phase for 32nd St. intersection only. Bidding Phase services for remainder of Connecticut Avenue improvements will need to be authorized through an addendum to this agreement.

A. After acceptance by Owner of the final Drawings and Specifications, other Construction Contract Documents, bidding-related documents (or requests for proposals or other construction procurement documents), and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and upon written authorization by Owner to proceed, Engineer shall:

1. Advertise for and obtain bids or proposals for the Work, assist Owner in issuing assembled design, contract, and bidding-related documents (or requests for proposals or other construction procurement documents) to prospective contractors, and where applicable, maintain a record of prospective contractors to which documents have been issued, attend pre-bid conferences, if any, and receive and process contractor deposits or charges for the issued documents.

2. Prepare and issue Addenda as appropriate to clarify, correct, or change the issued documents.

3. Provide information or assistance needed by Owner in the course of any review of proposals with prospective contractors.

4. If Federal funding is involved, set up prequalification's for contractor. This includes researching all applicable debarment & qualified contractor's lists & providing this documentation in the project file

5. Consult with Owner as to the qualifications of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors, for those portions of the Work as to which review of qualifications is required by the issued documents.

6. If the issued documents require, the Engineer shall evaluate and determine the acceptability of "or equals" and substitute materials and equipment proposed by prospective contractors, provided that such proposals are allowed by the bidding-related documents

7. Attend the bid opening, prepare bid tabulation sheets to meet Owner's schedule, and assist Owner in evaluating bids, assembling final contracts for the

Work for execution by Owner and Contractor, and in issuing notices of award of such contracts.

B. The Bidding Phase will be considered complete upon commencement of the Construction Phase.

A1.08 Construction Phase

Design fee includes Construction Phase for 32nd St. intersection only. Construction Phase services for remainder of Connecticut Avenue improvements will need to be authorized through an addendum to this agreement.

A. Upon successful completion of the Bidding and Negotiating Phase, and upon written authorization from Owner, Engineer shall:

1. *General Administration of Construction Contract:* Consult with Owner and act as Owner's representative as provided in the Construction Contract. The extent and limitations of the duties, responsibilities, and authority of Engineer shall be as assigned below. All of Owner's instructions to Contractor will be issued through Engineer, which shall have authority to act on behalf of Owner in dealings with Contractor to the extent provided in this Agreement and the Construction Contract except as otherwise provided in writing.

2. *Resident Project Representative (RPR):* Provide the services of an RPR at the Site to assist the Engineer (unless provided by the city), and to provide more extensive observation of Contractor's work. Duties, responsibilities, and authority of the RPR are as set forth. The furnishing of such RPR's services will not limit, extend, or modify Engineer's responsibilities or authority except as expressly set forth

3. *Selection of Independent Testing Laboratory:* Assist Owner in the selection of an independent testing laboratory to perform the services identified.

4. *Pre-Construction Conference:* Participate in a pre-construction conference prior to commencement of Work at the Site.

5. *Electronic Transmittal Protocols:* Consultant shall follow City of Joplin protocols shown below.

6. *Original Documents:* If requested by Owner to do so, maintain and safeguard during the Construction Phase at least one original printed record version of the Construction Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals in accordance with applicable Laws and Regulations. Throughout the Construction Phase, make such original printed record version of the Construction Contract Documents available to Contractor and Owner for review.

7. *Schedules:* Receive, review, and determine the acceptability of any and all schedules that Contractor is required to submit to Engineer, including the Progress Schedule, Schedule of Submittals, and Schedule of Values.

8. *Baselines and Benchmarks:* As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.

9. *Visits to Site and Observation of Construction:* In connection with observations of Contractor's Work while it is in progress:

   a) Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary, to observe as an experienced and qualified design professional the progress of Contractor's executed Work. Such visits and observations by Engineer, and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of the Work or to involve detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Construction Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Construction Contract Documents, and Engineer shall keep Owner informed of the progress of the Work.

   b) The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. Engineer shall not, during such visits or as a result of such observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to any Constructor's work in progress, for the coordination of the Constructors' work or schedules, nor for any failure of any Constructor to comply with Laws and Regulations applicable to furnishing and performing of its work. Accordingly, Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish or perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.

10. *Defective Work:* Reject Work if, on the basis of Engineer's observations, Engineer believes that such Work is defective under the terms and standards set forth in the Construction Contract Documents. Provide recommendations to Owner regarding whether Contractor should correct such Work or remove and

replace such Work, or whether Owner should consider accepting such Work as provided in the Construction Contract Documents.

11. *Compatibility with Design Concept:* If Engineer has express knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed Project as a functioning whole, then inform Owner of such incompatibility, and provide recommendations for addressing such Work.

12. *Clarifications and Interpretations:* Accept from Contractor and Owner submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. With reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Construction Contract Documents.

13. *Field Orders:* Subject to any limitations in the Construction Contract Documents, Engineer may prepare and issue Field Orders requiring minor changes in the Work.

14. *Change Orders and Work Change Directives:* Recommend Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.

    a) Identify discrepancy
    b) Contractor submits pricing
    c) Cost analysis by Project Manager
    d) Submit Conceptual Plan to MoDOT and FHWA, if applicable
    e) Receive conceptual approval from both agencies and give contract Notice to Proceed
    f) Change in work complete, submit official change Order with Justification and copy of conceptual to MoDOT and FHWA if applicable (justification provided by City Project Manager)
    g) After signatures on Change order are complete, notify the contractor.

15. *Differing Site Conditions:* Respond to any notice from Contractor of differing site conditions, including conditions relating to underground facilities such as utilities, and hazardous environmental conditions. Promptly conduct reviews and prepare findings, conclusions, and recommendations for Owner's use.

16. *Shop Drawings, Samples, and Other Submittals:* Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals, but only for conformance with the information given in the Construction Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Engineer shall meet any Contractor's submittal schedule that Engineer has accepted.

17. *Substitutes and "Or-equal":* Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor.

18. *Inspections and Tests:*

    a) Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents. Engineer's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Construction Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Construction Contract Documents. Engineer shall be entitled to rely on the results of such inspections and tests.

    b) As deemed reasonably necessary, request that Contractor uncover Work that is to be inspected, tested, or approved.

    c) Pursuant to the terms of the Construction Contract, require special inspections or testing of the Work, whether or not the Work is fabricated, installed, or completed.

19. *Change Proposals and Claims:*

    a) Review and respond to Change Proposals. Review each duly submitted Change Proposal from Contractor and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer will not resolve the Change Proposal.

    b) Provide information or data to Owner regarding engineering or technical matters pertaining to Claims.

20. *Applications for Payment:* Based on Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation:

    a) Determine the amounts that Engineer recommends Contractor be paid. Recommend reductions in payment (set-offs) based on the provisions for set-offs stated in the Construction Contract. Such recommendations of payment will be in writing and will constitute Engineer's representation to Owner, based on such observations and review, that, to the best of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the Work is generally in accordance with the Construction Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Construction Contract Documents, and to any other qualifications stated in the recommendation), and the conditions

precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work. In the case of unit price Work, Engineer's recommendations of payment will include final determinations of quantities and classifications of the Work (subject to any subsequent adjustments allowed by the Construction Contract Documents).

b) By recommending payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement.

21. *Contractor's Completion Documents:* Receive from Contractor, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data. Receive from Contractor, review, and transmit to Owner the annotated record documents which are to be assembled by Contractor in accordance with the Construction Contract Documents to obtain final payment. The extent of Engineer's review of record documents shall be to check that Contractor has submitted all pages.

22. *Substantial Completion:* Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with Owner and Contractor, visit the Site to review the Work and determine the status of completion. Follow the procedures in the Construction Contract regarding the preliminary certificate of Substantial Completion, punch list of items to be completed, Owner's objections, notice to Contractor, and issuance of a final certificate of Substantial Completion. Assist Owner regarding any remaining engineering or technical matters affecting Owner's use or occupancy of the Work following Substantial Completion.

23. *Other Tasks:* Perform or provide the following other Construction Phase tasks or deliverables:

24. *Final Notice of Acceptability of the Work:* Conduct a final visit to the Project to determine if the Work is complete and acceptable so that Engineer may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Engineer shall also provide a notice to Owner and Contractor in the form of the acceptance identified in MoDOT's LPA Manual, that the Work is acceptable (subject to the provisions of the Notice and Paragraph A1.05.A.21.b) to the best of Engineer's knowledge, information, and belief, and based on the extent of the services provided by Engineer under this Agreement.

25. *Standards for Certain Construction-Phase Decisions:* Engineer will render decisions regarding the requirements of the Construction Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth in the Construction Contract for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable

to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

B. *Duration of Construction Phase:* The Construction Phase will commence with the execution of the first Construction Contract for the Project or any part thereof and will terminate upon written recommendation by Engineer for final payment to Contractors. If the Project involves more than one prime contract, then Construction Phase services may be rendered at different times in respect to the separate contracts. Engineer shall be entitled to an equitable increase in compensation if Construction Phase services (including Resident Project Representative services, if any) are required after the original date for

completion and readiness for final payment of Contractor as set forth in the Construction Contract.

A1.09 Post-Construction Phase

Design fee includes Post-Construction Phase for 32nd St. intersection only. Post-Construction Phase services for remainder of Connecticut Avenue improvements will need to be authorized through an addendum to this agreement.

A. Upon written authorization from Owner during the Post-Construction Phase, Engineer shall:

1. Together with Owner, visit the Project to observe any apparent defects in the Work, make recommendations as to replacement or correction of defective Work, if any, or the need to repair of any damage to the Site or adjacent areas, and assist Owner in consultations and discussions with Contractor concerning correction of any such defective Work and any needed repairs.

2. Together with Owner, visit the Project within one month before the end of the Construction Contract's correction period to ascertain whether any portion of the Work or the repair of any damage to the Site or adjacent areas is defective and therefore subject to correction by Contractor.

3. Full payment of the final invoice will not be considered until the consultant has electronically furnished the following documents:

   a) The city's semi-final inspection letter stating the date of semi-final inspection and listing those who were present.
   b) The city's final acceptance letter showing the number of working days or calendar days charged, completion date and the amount of liquidated damages, if any.
   c) A final list of acceptance testers used on the project and a certification stating:

      "The results of the tests or acceptance samples indicate that material incorporated in the construction work and the construction operations controlled by sampling and testing were in reasonably close conformity with the approved plans and specifications, and such results compare favorably with the results of independent assurance sampling and testing." Any deviations from the specifications must be explained along with the reason for acceptance.

"All field tests were performed in conformity with the governing specifications and the results were in reasonably close conformity with the specifications." Explain any deviations and why the work was accepted.

"The project was constructed substantially in conformity with the plans and specifications for the project."

d) Contractor certification and city recommendation:

Showing the final DBE participation on the project including the DBEs used, the type of work performed, and the dollar amount paid to each DBE.

The city's recommendation regarding the contractor's fulfillment of the DBE requirements. The consultant shall also provide written documentation from each DBE that they were paid in full for the work identified in the Contractor DBE Certification. Examples of documentation from DBEs may include a letter, e-mail, lien waiver or copies of reimbursement checks. If DBE goals were not met, include documentation as to why.

e) Final Invoice

f) Final Detailed Estimate of Quantities

g) Contractor's Affidavit Regarding Settlement of Claims

h) Final Change Order (if needed)

i) Affidavit (Compliance with Prevailing Wage Law)

j) These documents are to be received within 60 days of the Final Inspection date. Final Reimbursement will be processed once all close out documentation has been reviewed and accepted.

B. The Post-Construction Phase services may commence during the Construction Phase and, if not otherwise modified, will terminate twelve months after the commencement of the Construction Contract's correction period.

PART 2 – ADDITIONAL SERVICES

A2.01 *Additional Services Requiring Owner's Written Authorization*

A. If authorized in writing by Owner, Engineer shall provide Additional Services of the types listed below. These services are not included as part of Basic Services and will be paid for by Owner as indicated.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements

and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Undertaking investigations and studies including, but not limited to:

a. Detailed consideration of operations, maintenance, and overhead expenses.

PERIOD OF SERVICE

The Consultant shall make submittals in accordance with the schedule described below:

Concept Study by March 31, 2017

Preliminary Plans by July 31, 2017

Right-of-Way Plans by October 31, 2017

Final Plans (32nd St.) to be determined at a later date.

Final Plans (Conn Ave Widening) to be included in a future work authorization.

ENGINEERING FEE ESTIMATE
CIST PROJECT #TC0606
CONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS
CITY OF JOPLIN, JASPER COUNTY, MISSOURI

TASK 1 - CONCEPTUAL PHASE

Labor:	A	Engineer X	6	@	$	224.00		$	1,344.00
	B	Engineer VI	128	@	$	164.00		$	20,992.00
	C	Engineer II	190	@	$	118.00		$	22,420.00
	E	Engineering Tech IV	73	@	$	90.00		$	6,570.00
	F	Surveyor VI	0	@	$	140.00		$	-
	G	Administrator II	5	@	$	86.00		$	430.00
		Sub-Total Labor	402				Subtotal	$	51,756.00
							3% added for 2017	$	1,553.00
Expenses:							TOTAL LABOR - TASK 1		$53,309.00
	Field								
	by AMA		0						
	Office								
	CADD Software		237	@	$	7.00	per hour	$	1,659.00
	Printing and Plotting		1	@	$	500.00	lump sum	$	500.00
	Postage & Delivery		1	@	$	100.00	lump sum	$	100.00
	Mileage (trav to 6 mtgs)		1200	@	$	0.540	per mile	$	648.00
	Subconsultant Costs								
	Allgeier Martin & Associates		1	@	$	37,586.00	lump sum	$	37,586.00
	Palmerton & Parrish		1	@	$	3,300.00	lump sum	$	3,300.00
							TOTAL EXPENSE - TASK 1		$43,793.00
							TOTAL COST - TASK 1		$97,102.00

TASK 2 - PRELIMINARY PLANS PHASE

Labor:	A	Engineer X	8	@	$	224.00		$	1,792.00
	B	Engineer VI	126	@	$	164.00		$	20,664.00
	D	Engineer II	360	@	$	118.00		$	42,480.00
	E	Engineering Tech IV	355	@	$	90.00		$	31,950.00
	F	Surveyor VI	28	@	$	140.00		$	3,920.00
	G	Administrator II	5	@	$	86.00		$	430.00
		Sub-Total Labor	882				Subtotal	$	101,236.00
							3% added for 2017	$	3,037.00
Expenses:							TOTAL LABOR - TASK 2		$104,273.00
	Field								
	Mileage		1000	@	$	0.540	per mile	$	540.00
	Per Diem		2	@	$	61.00	per day	$	122.00
	Survey Equipment - One-Man Crew		4	@	$	50.00	per hour	$	200.00
	Survey Materials (stakes, rebar, etc)		1	@	$	200.00	lump sum	$	200.00
	LiDAR Mobile Scanner		1	@	$	5,000.00	per day	$	5,000.00
	Office								
	CADD Software		644	@	$	7.00	per hour	$	4,508.00
	Printing and Plotting		1	@	$	500.00	lump sum	$	500.00
	Postage & Delivery		1	@	$	100.00	lump sum	$	100.00
	Mileage (trav to 6 mtgs)		1200	@	$	0.540	per mile	$	648.00
	Subconsultant Costs								
	Allgeier Martin & Associates		1	@	$	42,665.00	lump sum	$	42,665.00
	Utility Locating Contractor (TBD)		1	@	$	3,200.00	lump sum	$	3,200.00
	Palmerton & Parrish		1	@	$	10,780.00	lump sum	$	10,780.00
							TOTAL EXPENSE - TASK 2		$68,463.00
							TOTAL COST - TASK 2		$172,736.00

ENGINEERING FEE ESTIMATE
CIST PROJECT #TC0606
CONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS
CITY OF JOPLIN, JASPER COUNTY, MISSOURI

TASK 3 - RIGHT OF WAY PLANS PHASE

Labor:	A	Engineer X	4	@	$	224.00		$	896.00	
	B	Engineer VI	80	@	$	164.00		$	13,120.00	
	D	Engineer II	288	@	$	118.00		$	33,984.00	
	E	Engineering Tech IV	269	@	$	90.00		$	24,210.00	
	F	Surveyor VI	0	@	$	140.00		$	-	
	G	Administrator II	5	@	$	86.00		$	430.00	
		Sub-Total Labor	646				Subtotal	$	72,640.00	
							3% added for 2017	$	2,179.00	
Expenses:							TOTAL LABOR - TASK 3			$74,819.00
	Office									
		CADD Software	501	@	$	7.00	per hour	$	3,507.00	
		Printing and Plotting	1	@	$	350.00	lump sum	$	350.00	
		Postage & Delivery	1	@	$	100.00	lump sum	$	100.00	
		Mileage (trav to 2 mtgs)	800	@	$	0.540	per mile	$	432.00	
	Subconsultant Costs									
		Allgeier Martin & Associates	1	@	$	21,688.00	lump sum	$	21,688.00	
							TOTAL EXPENSES - TASK 3	$	26,077.00	
							TOTAL COST - TASK 3			$100,896.00

TASK 4 - FINAL PLANS, SPECS & EST - 32ND ST INTERSECTION

Labor:	A	Engineer X	7	@	$	224.00		$	1,568.00	
	B	Engineer VI	92	@	$	164.00		$	15,088.00	
	D	Engineer II	207	@	$	118.00		$	24,426.00	
	E	Engineering Tech IV	176	@	$	90.00		$	15,840.00	
	F	Surveyor VI	2	@	$	140.00		$	280.00	
	G	Administrator II	4	@	$	86.00		$	344.00	
		Sub-Total Labor	488				Subtotal	$	57,546.00	
							3% added for 2017	$	1,726.00	
Expenses:							TOTAL LABOR - TASK 3			$59,272.00
	Office									
		CADD Software	345	@	$	7.00	per hour	$	2,415.00	
		Printing and Plotting	1	@	$	2,000.00	lump sum	$	2,000.00	
		Postage & Delivery	1	@	$	100.00	lump sum	$	100.00	
		Mileage (trav to 3 mtgs)	2250	@	$	0.540	per mile	$	1,215.00	
	Subconsultant Costs									
		Allgeier Martin & Associates	1	@	$	-	lump sum	$	-	
							TOTAL EXPENSES - TASK 3	$	5,730.00	
							TOTAL COST - TASK 4			$65,002.00

TASK 5 - BID & CONSTRUCTION PHASE - 32ND ST INTERSECTION

Labor:	A	Engineer X	1	@	$	224.00		$	224.00	
	B	Engineer VI	37	@	$	164.00		$	6,068.00	
	D	Engineer II	11	@	$	118.00		$	1,298.00	
	E	Engineering Tech IV	0	@	$	90.00		$	-	
	F	Surveyor VI	12	@	$	140.00		$	1,680.00	
	G	Administrator II	4	@	$	86.00		$	344.00	
		Sub-Total Labor	65				Subtotal	$	9,614.00	
							3% added for 2017	$	288.00	
							TOTAL LABOR - TASK 3			$9,902.00

ENGINEERING FEE ESTIMATE
CIST PROJECT #TC0606
CONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS
CITY OF JOPLIN, JASPER COUNTY, MISSOURI

Expenses:

Office								
CADD Software	10	@	$	7.00	per hour	$	70.00	
Printing and Plotting	1	@	$	2,000.00	lump sum	$	2,000.00	
Postage & Delivery	1	@	$	100.00	lump sum	$	100.00	
Mileage (trav to 2 mtgs)	1500	@	$	0.540	per mile	$	810.00	
Subconsultant Costs								
Allgeier Martin & Associates	1	@	$	91,332.00	lump sum	$	91,332.00	
						TOTAL EXPENSES - TASK 3	$	94,312.00
						TOTAL COST - TASK 5		$104,214.00

TOTAL ESTIMATED FEE **$539,950**

ENGINEERING FEE ESTIMATE								
CIST PROJECT #TC0606	Bartlett & West Personnel							
ONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS								
CITY OF JOPLIN, JASPER COUNTY, MISSOURI	E-X	E-VI	E-II	ET- IV	S-VI	Admin		Total
	A	B	D	E	F	H		Hours
TASK 1 - CONCEPTUAL PHASE								
Kickoff Meeting w City		16	8					24
Prepare field check memo to document visual road conditions		4	2					6
Conduct Title search ***by AMA***								0
Conduct Utility survey ***by AMA***								0
Create existing site plan using City resources, utility survey & title search ***by AMA***								0
Conduct conceptual hydraulic studies for crossroad culverts.	2	24	32					58
Conduct QA/QC review of site plan, hyd studies, util survey	2	2						4
Identify potential environmental clearance & permits needed.		1						1
Determine design standards		1						1
Identify reasonable alternatives (full-depth pvmt repl & overlay + partial full-depth pvmt repl)		2	2					4
Evaluate alternatives for lining up 36th St. & 38th St. intersection.		2	4					6
Evaluate right turn lanes at 32nd Street Intersection (NB Conn Ave, EB 32nd St)		2	8					10
Coordinate line and grade with hydraulic study		2	4					6
Perform preliminary corridor modeling, dev cross sections for approx. construction limits.		1	40					41
Conduct geotechnical literature search (no borings) of reasonable alternatives ***by PPI***								0
Prepare prel est's of rt turn lanes, right of way, utility and const costs for reasonable alternatives (2)		2	20	20				42
Prepare evaluation matrix comparing traffic operation, cost, constructability, rw impacts, env impacts, etc		1	4					5
Develop conceptual exhibit showing potential solutions		2	40	40				82
Develop displays for property owner's meeting.		1	8	8				17
Conduct internal QA/QC review of conceptual solutions, estimates. Address comments.	2	2	4					8
Conduct QA/QC review of conceptual exhibit, alternative estimates, and meetings ***by AMA***								0
Address comments from QA/QC review.		1	8					9
Conduct preliminary utility relocation meeting at City Hall ***by AMA***								0
Attend preliminary utility relocation meeting at City Hall (incl 6 hrs travel)		4	2					6
Submit elec conceptual exhibit and estimate to City for review.		1		1		1		3
Address comments from City's review and submit revised elec exhibit to City		1	4	4				9
Attend progress meetings with City (assume 2 mtgs, 6 hrs travel time x 2 attendees)		32						32
Prepare minutes of meetings with City. Provide action items.		4						4
Provide project admin during concept (emails, phone, conf calls, invoices, progress reports, budget ctrl)		20				4		24
Subtotal Task 1	**6**	**128**	**190**	**73**	**0**	**5**		**402**
TASK 2 - PRELIMINARY PLANS PHASE 30%								
Conduct boundary survey, set LiDAR ground control & targets ***by AMA***								0
Prepare property ownership map ***by AMA***								0
Coordinate with utilities ***by AMA***								0
Calculate hydraulics of crossroad culvert design elements (type, size, location - extension or reconstruct)	2	8	24					34
Conduct QA/QC review of prop ownership, hyd study, util's	2	2	8					12
Conduct mobile LiDAR survey scan (incl ground calibration from control pts)		1		12	12			25
Process LiDAR data into base map (AutoCAD)		1		80	16			97
Conduct field check on LiDAR base map		1	12					13
Address field check comments and finalize LiDAR base map		1	8	16				25
Prepare title sheet (incl project limits, access note, traffic data, utilities)		1	2	6				9
Develop preliminary typical section sheets		1	6	12				19
Develop preliminary horizontal alignment		2	12					14
Develop preliminary vertical alignment (profile)		2	16					18
Develop plan & profile sheets		1	40	40				81
Develop preliminary cross sections sheets (50' intervals)		1	40	40				81
Develop preliminary intersection layout at 32nd Street.		2	8	12				22
Identify crossroad culvert locations based on AMA hydraulic study.		1	4					5
Identify storm sewer locations (incl drop inlet locations)		1	16					17
Identify locations & general size of retaining walls		1	4					5
Identify entrance locations			8					8
Identify sidewalk locations			4					4
Identify tentative lighting layout.		2	24					26
Identify traffic control solution		2	24	16				42
Identify erosion control issues		1	4					5
Identify tentative easement and right of way requirements		2	8	8				18
Calculate preliminary quantities and prepare preliminary const estimate for 32nd Street rt turn lanes		1	4	4				9
Calculate preliminary quantities and prepare preliminary construction estimate		1	24	24				49

ENGINEERING FEE ESTIMATE								
CIST PROJECT #TC0606	Bartlett & West Personnel							
ONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS								
CITY OF JOPLIN, JASPER COUNTY, MISSOURI	E-X	E-VI	E-II	ET- IV	S-VI	Admin		Total
	A	B	D	E	F	H		Hours
Attend Meetings during Preliminary Plans Phase (2)		32						32
Prepare minutes of meetings with City. Provide action items.		4						4
Develop and submit design exceptions as appropriate.		2	4					6
Create exhibits for public mtg (location map, display, sign-in sht, comment cards, incl reviews).		2	16	32				50
Attend public meeting (assume 3, 2 hr mtg, 6 hr travel ea)		16	8					24
Incorporate appropriate comments into preliminary plans from City recommendations from public hearing.		2	12	24				38
Conduct internal QA/QC review of preliminary plans, estimate. Address comments.	4	8	12	12				36
Conduct QA/QC review of preliminary plans, estimate, meetings ***by AMA***								0
Address comments from QA/QC review.		1	4	4				9
Submit elec prel plans, engr's est and any other design deliverables to City for review		1		1		1		3
Address comments from City's review and submit revised elec prel plans & revised elec engrs est.		2	4	12				18
Provide project admin during preliminary (emails, phone, conf calls, invoices, progress reports, budget ctrl)		20				4		24
Subtotal Task 2	**8**	**126**	**360**	**355**	**28**	**5**		**882**
TASK 3 - RIGHT OF WAY PLANS PHASE 60%								
Calculate storm sewer calculations and sizing (non-crossroad)		1	32					33
Develop entrance profiles.		1	24	24				49
Develop crossroad culvert sections.		1	12	16				29
Develop sidewalk locations.		1	24	16				41
Develop storm water profiles.		1	40	40				81
Develop lighting layout with input from City		4	40	60				104
Develop final RW and/or easement requirements.		4	12	12				28
Prepare ROW plan sheets showing easement and right of way takings		2	40	40				82
Determine parcel size and tract drawings (48 parcels) ***by AMA***								0
Prepare deed descriptions of easements and right of way (48 parcels) ***by AMA***								0
Develop preliminary traffic control plan		2	24	24				50
Develop preliminary erosion & sediment control plan		1	16	16				33
Conduct internal QA/QC review of preliminary plans, estimate. Address comments.	4	4	8	12				28
Conduct QA/QC review of ROW plans, estimate, meetings ***by AMA***								0
Address comments from QA/QC review.		1	8	8				17
Prepare ROW acquisition estimate ***by AMA***								0
Submit elec ROW plans for City to review		1		1		1		3
Distribute one 11"x17" set of plans to ea util co (assume power, tele, gas, rural water) ***by AMA***								0
Conduct utility coordination meeting and provide minutes ***by AMA***		18	8					26
Attend Meetings with City during ROW Phase (assume 1 mtg, 6 hrs travel time x 2)		16						16
Prepare minutes of meeting with City. Provide action items.		2						2
Perform temporary staking and flagging of ROW/Esmt parcels for negotiations ***by AMA***								0
Provide project admin during ROW (emails, ph calls, conf calls, invoices, progress reports, budget ctrl)		20				4		24
Subtotal Task 3	**4**	**80**	**288**	**269**	**0**	**5**		**646**
TASK 4 - FINAL PLANS, SPECS & ESTIMATE FOR 32ND STREET INTERSECTION								
Prepare final title sheet			1	2				3
Prepare final typical section sheets (incl alternate pvmt)			1	2				3
Prepare final plan & profile sheets for auxiliary turn lanes (2)	1	2	8	20				31
Prepare final plan sheet for 32nd Street Intersection	1	2	8	12				23
Prepare coordinate points sheet			1	2	1			4
Prepare reference point sheet			1	2	1			4
Prepare culvert and inlet drainage design sheets		1	12	8				21
Prepare traffic control plan sheet & std sign sheet incl qtys		2	16	24				42
Prepare temporary erosion control sheets & quantities		2	4	8				14
Prepare permanent signal modification sheets & quantities		1	16	16				33
Prepare permanent lighting sheets & quantities		1	16	16				33
Prepare permanent pavement marking sheets		1	4	12				17
Prepare final cross section sheets with notes (incl 3D model)		2	16	16				34
Attend Final Field Check with City, (assume 1 mtg, 6 hrs travel time x 2)		8	8					16
Prepare minutes of final field check. Provide action items (within 2 weeks)		2						2
Incorporate appropriate final field check comments into final plans.		2	4	12				18
Calculate final qtys. Prepare summary of quantities sheet.		2	32	8				42
Research recent bid tabulations for similar projects (from MoDOT website)		1	2					3
Prepare final construction estimate.		2	8					10

ENGINEERING FEE ESTIMATE								
CIST PROJECT #TC0606	Bartlett & West Personnel							
ONNECTICUT AVENUE WIDENING FROM 32ND STREET TO I-44 OVERPASS								
CITY OF JOPLIN, JASPER COUNTY, MISSOURI	E-X	E-VI	E-II	ET- IV	S-VI	Admin		Total
	A	B	D	E	F	H		Hours
Prepare job special provisions		12	4					16
Prepare workday study		2	4					6
Provide internal peer review of final plans, specifications and estimate. (QA/QC) Provide comments.	4	4	4					12
Incorporate appropriate comments from peer review		1	4	4				9
Submit electronic (PDF) set of review plans, specs and est to City		1	1					2
Attend progress meetings during Final Plans Phase (assume 2 mtgs, 6 hrs travel time x 2)		14	14					28
Prepare minutes of progress meetings. Provide action items (within 2 weeks)		4						4
Incorporate appropriate final comments from City review into final pls, specs & est		2	16	12				30
Prepare & submit electronic plans & data, 3D model, JSPs in Word (w seal block) & Estimate to City		1	2					3
Provide project admin during final plans phase (invoices, progress reports, budget tracking)	1	20				4		25
Subtotal Task 4	**7**	**92**	**207**	**176**	**2**	**4**		**488**
TASK 5 - BID & CONSTRUCTION PHASE FOR 32ND STREET INTERSECTION								
Provide bidder consultation to City to interpret intent of rdwy plans/specs		2	2					4
Prepare addendum on behalf of City (incl revisions to plans/specs & letter of explanation) (total of 1)		1	2					3
Provide revised plans in PDF to City for addendum (1).		1	2					3
Attend pre-construction conference (incl travel time)		8						8
Research and comment on VE proposals (assume 1)		2	2					4
Provide construction consultation on behalf of City to interpret intent of rdwy plans/specs		2	2					4
Construction phase utility relocation services and oversight ***by AMA***								0
Construction phase engineering services ***by AMA***								0
Resident Project Representation Services ***by AMA***								0
Certified Payroll Review ***by AMA***								0
Permanent ROW/Esmts monumentation after construction		1	1		12			14
Add'l services (to be authorized by City)								0
Provide project admin during ROW (emails, ph calls, conf calls, invoices, progress reports, budget ctrl)	1	20				4		25
Subtotal Task 5	**1**	**37**	**11**	**0**	**12**	**4**		**65**

Estimate of Utility Locates (Potholes and/or Vacuum Excavations)
Utility Locate Subcontractors TBD
9/20/16

Estimating 4 locates per ¼ Mile, based on experience.
For 0.5 miles of corridor length, 8 total pothole locations anticipated. If more potholes are necessary, this constitutes additional services and the Engineer will make City aware of the additional work prior to proceeding.

Utility Subcontractors are not identified at this time, since the scope and type of potholing will be identified at the time when preliminary design is nearing completion. Appropriate contractors will be contacted for quotes at that time and will be contracted with the stay within the amount shown below.

Experience on similar projects indicates that excavations cost on average about $400/excavation. This includes restoration and pavement patching where needed.

8 Potholes x $400/Pothole = $3,200.00

ALLGEIER, MARTIN and ASSOCIATES, INC.
Consulting Engineers

CONNECTICUT AVENUE WIDENING PROJECT FROM 32ND STREET TO I-44 OVERPASS
SCOPE AND ESTIMATED FEE
FOR ALLGEIER MARTIN AND ASSOCIATES 10/7/2016

	Hours	Position	Rate	Cost		
CONCEPTUAL PHASE						
UTILITY SURVEY						
	6	RLS	$ 166	$ 996		
	24	GPS Survey Crew	$ 181	$ 4,344		
	2	Tech II	$ 95	$ 190		
	4	Eng. III	$ 175	$ 700		
				Subtotal	$	6,230
TITLE SEARCH					$	12,000
EXISTING SITE PLAN (utilizing city resources, utility survey & Title Search)						
	4	RLS	$ 166	$ 664		
	16	Tech II	$ 95	$ 1,520		
	40	Tech III	$ 108	$ 4,320		
	16	Eng. I	$ 140	$ 2,240		
	20	Eng. III	$ 175	$ 3,500		
				Subtotal	$	12,244
REVIEW OF CONCEPTUAL PLANS, ESTIMATES & MEETINGS						
	40	Eng. III	$ 175	$ 7,000		
				Subtotal	$	7,000
Mileage	200	Miles	$ 0.56	$ 112		
				Subtotal	$	112
		CONCEPTUAL PHASE TOTAL			$	37,586
PRELIMINARY DESIGN PHASE- 30%						
BOUNDARY SURVEY & SET TARGETS FOR LIDAR (includes property ownership Map)						
	40	RLS	$ 166	$ 6,640		
	32	GPS Survey Crew	$ 181	$ 5,792		
	72	Tech II	$ 95	$ 6,840		
	4	Eng. I	$ 140	$ 560		
	4	Eng. III	$ 175	$ 700		
				Subtotal	$	20,532
UTILITY REQUIREMENTS (per A1.03 of City Agreement)						
	4	RLS	$ 166	$ 664		
	12	GPS Survey Crew	$ 181	$ 2,172		
	32	Tech III	$ 108	$ 3,456		
	24	Eng. I	$ 140	$ 3,360		
	16	Eng. III	$ 175	$ 2,800		
				Subtotal	$	12,452
REVIEW OF PRELIMINARY PLANS, ESTIMATES & MEETINGS						
	55	Eng. III	$ 175	$ 9,625		
				Subtotal	$	9,625
Mileage	100	Miles	$ 0.56	$ 56		
				Subtotal	$	56
		30% PRELIMINARY PHASE TOTAL			$	42,665
PRELIMINARY DESIGN PHASE- 60%						
RIGHT OF WAY PLANS (inculdes easement & ROW Staking)						
	32	RLS	$ 166	$ 5,312		
	40	GPS Survey Crew	$ 181	$ 7,240		
	40	Tech III	$ 108	$ 4,320		
	4	Eng. I	$ 140	$ 560		
	24	Eng. III	$ 175	$ 4,200		
				Subtotal	$	21,632
Mileage	100	Miles	$ 0.56	$ 56		
				Subtotal	$	56
		60% PRELIMINARY PHASE TOTAL			$	21,688
ALLGEIER MARTIN TOTAL ESTIMATED FEE					$	101,939

PART 2- ADDITIONAL SERVICES

A2.02

A. The following additional services shall be included in the Construction Administration services:
    a. Review of contractor's certified payrolls
    b. Perform wage rate interviews of the contractors during construction

PART 3- PAYMENT

A3.01

A. Payment to Engineer shall be at the hourly labor Rates and Non-Labor Rates set forth in the attached Exhibit A: "RATE SCHEDULE 2016-2017"; with a total compensation ceiling of $91,332, with the estimated maximum fees broken down for respective services in more detail as follows:

Task	Estimated Fee
Utility Coordination per A1.03 and A1.04-E. of City Agreement	$12,452
Construction Phase Engineering Services	$23,000
Resident Project Representation Services	$50,880
Certified Payroll Review	$5,000
Total Estimated Maximum Fee	$91,332

The above fees are based on a construction time of completion schedule of 90 calendar days (3 months). If the contractor is given additional time over the 90 calendar days to complete the project, additional engineering and inspection fees would apply.

EXHIBIT A

ALLGEIER, MARTIN and ASSOCIATES, INC.

Consulting Engineers and Surveyors

RATE SCHEDULE
2016-2017

LABOR RATES

Classification	Hourly Billing Rate 01/01/2016 thru 12/31/2016	01/01/2017 thru 12/31/2017
Principal/Engineer IV	$185	$191
Principal/Engineer III	$170	$175
Project Manager/Engineer II	$150	$155
Project Manager/Engineer I	$135	$140
Designer III/GIS Specialist	$124	$128
Designer/Technician III	$104	$108
Designer/Technician II	$92	$95
Designer/Technician I	$86	$88
Two-Man GPS Survey Crew	$175	$181
One-Man GPS Survey Crew	$135	$140
Three-Man Survey Crew	$190	$201
Two-Man Survey Crew	$150	$155
Registered Land Surveyor II	$160	$166
Registered Land Surveyor I	$140	$145
Survey Party Chief	$86	$88
Survey Crew Member	$69	$72
Right of Way Specialist	$108	$112
Construction Inspector III	$104	$108
Construction Inspector II	$92	$95
Construction Inspector I	$84	$88
Secretary/Assistant	$69	$72
Print Specialist	$69	$72

Note: All pre-approved overtime hours shall be invoiced at 1½ times the hourly billing rate shown above.

NON-LABOR RATES

Item	Rate
Travel	$0.54 per mile (or current IRS rate)
Subsistence	Actual Cost
Lodging	Actual cost
Special Postage or Shipping	Actual cost
Printing	Actual cost
Surveying Materials	Actual cost
Subcontract Specialty Services	Cost + 10%

PALMERTON & PARRISH, INC.

GEOTECHNICAL & MATERIALS ENGINEERS
MATERIALS TESTING LABORATORIES
ENVIRONMENTAL SERVICES

4168 W. KEARNEY ST.
SPRINGFIELD, MO 65803
Ph: (417) 864-6000
www.ppimo.com

Bartlett & West, Inc.
544 Columbia
Lawrence, KS 66049

August 26, 2016

Attn: Herb Bailey, P.E.
herb.bailey@bartwest.com

Proposal for Geotechnical Investigation
Connecticut Avenue Widening
Joplin, Missouri

Palmerton & Parrish, Inc. (PPI) appreciates the opportunity to submit this proposal for a 2 Phase Geotechnical Investigation for widening of the existing Connecticut Avenue between 32nd Street and the Interstate 44 overpass. The final widening alignment is unknown at this time. However, the new alignment is not anticipated to vary much from the existing alignment. Major improvements are anticipated to consist of widening on the east side of Connecticut Ave. for a linear distance of 0.6 miles allowing for construction of two (2) 12-ft wide lanes, with curb/gutter and sidewalk.

It is understood that the existing asphalt will be overlain where possible, and full depth pavement construction will be required within the widening areas. Conceptual design of this project has yet to commence. As a result, this proposal for Geotechnical Investigation includes 2 separate phases, as requested. These 2 phases include a Conceptual Phase and a Preliminary Plan Phase. Each phase is discussed in greater detail below.

PPI understands Bartlett & West has an agreement with the City of Joplin referred to as the Prime Agreement. Where a provision of the Prime Agreement is inconsistent with a provision of this Agreement, the Prime Agreement governs.

Conceptual Phase

Again, it is understood that the widening alignment has not yet been chosen, and design concepts have yet to be prepared. As a result, the Geotechnical Investigation for the Conceptual Phase will include performing a literature review, document research and site reconnaissance. No drilling, sampling or lab testing will be performed during this phase. The main intent of this phase is to review online databases and past work performed by the Design Team in the site area in search for possible issues that would negatively affect roadway design and/or construction. For example, some of the possible issues researched will include possible problem soil types (swelling fat clays or moisture sensitive soils), mine impacted areas and mapped sinkholes or karst features, just to name a few. A cursory site walk/drive will also be performed by a qualified Geotechnical Engineer or Geologist from PPI's staff. PPI will provide the Conceptual Phase scope of services outlined above for a projected cost of Three Thousand Dollars (**$3,000.00**).

Preliminary Plan Phase

Once the Conceptual Design Phase is complete, and a preliminary alignment is chosen, a Preliminary Plan Geotechnical Investigation will be performed. PPI's geotechnical scope of

PALMERTON & PARRISH, INC.

services for this phase will include completion of field drilling, sampling and testing, laboratory testing, analysis of the collected data and performance of a pavement thickness analysis. The following sections of this proposal describes the scope of PPI's services and a cost estimate.

Geotechnical Field Investigation: PPI plans to drill a total of ten (10) geotechnical borings. Seven (7) borings are planned at an approximate spacing of 500 ft. along the project alignment within the existing pavement, while three (3) borings will be drilled within future widening areas. Since the project is anticipated to require only minimal cut and fills, borings will extend to a depth of 10 feet below the existing ground/pavement surface. All borings are projected to extend to specified depths, or auger encounter with bedrock, whichever is shallower. The geotechnical field investigation is based upon the following procedure:

- Core the existing asphalt with a 6-inch diameter core barrel in pavement areas;
- Perform a Dynamic Cone Penetrometer (DCP) test at the ground surface within widening areas, or below pavements in asphalt areas, to determine an in-situ California Bearing Ratio (CBR) value;
- Subsurface borings will be drilled using 4.5-inch O.D. continuous flight augers;
- Soil samples will be collected at 2.5- to 5-foot centers during drilling using a split spoon or Shelby Tube sampler (ASTM D1586 & D1587);
- Groundwater levels measured during drilling;
- Traffic control is anticipated to be required due to the narrow roadway and the presence of overhead electric on the west side of the roadway; and
- The boring backfilled with a hole plug and available auger cuttings and patched with like existing materials.

Laboratory Investigation: Soil samples will be sealed and transported to our Laboratory for further testing. Laboratory testing will include the following:

- Soil Classification Tests: Atterberg Limits (ASTM D4318) and moisture content (ASTM D2216);
- Swell Test (ASTM D4546);
- Unconfined Compressive Strength;
- Particle Size Analysis (ASTM D422); and
- Pocket Penetrometers.

The specific number and types of laboratory tests that will be performed will be influenced by the subsurface conditions encountered in the field and the quality of samples, and will not be determined until the geotechnical borings have been drilled.

Geotechnical Report: Collected field and laboratory data will be analyzed, and a formal Geotechnical Engineering Report will be prepared. An electronic (.pdf) copy of the Report and one (1) original bound copy will be submitted. The Report will include a Site Location Plan, Boring Location Plan, typed Boring Logs showing the results of field and laboratory testing, DCP test results, pavement thickness analysis results and Geotechnical

PALMERTON & PARRISH, INC.

Engineering Recommendations for subgrade and pavement construction, construction planning and site development. Specific Geotechnical Analysis and Recommendations will include:

- Quality and thickness of the existing roadway section;
- Existing subgrade type, quality and stiffness, as well as recommendations for subgrade improvements, if any; and
- Recommendations for new asphalt thickness in overlay and new pavement areas (widening and repair areas, if any).

Cost Projection for Geotechnical Investigation

PPI will perform the above Preliminary Plan Phase Geotechnical Investigation scope of services outlined above for a projected cost of Nine Thousand Eight Hundred Dollars (**$9,800.00**). The projected cost is also based upon the following:

- Right-of-entry, if required, will be obtained by others prior to PPI's mobilizations;
- No clearing or earthwork will be required to access boring locations;
- Boring locations can be accessed with PPI's truck or track mounted drill rigs;
- Boring locations will be staked in the field by PPI using a site plan provided by AMA/Bartlett & West;
- Wheel loadings and traffic frequency for use during the pavement thickness analysis will be provided by the Client, if available from the City of Joplin;
- PPI will notify the Missouri One Call System to locate and mark public utilities;
- **All private utilities, if any, will be located and marked in the field by others prior to PPI's mobilization; and**
- All samples will be stored at PPI's Springfield Laboratory until 30 days after the final report is issued, at which time, the samples will be discarded.

PPI will notify the Client if unanticipated conditions encountered during the field investigation merit a change in scope beyond that discussed in this proposal. In any event, we will not exceed projected costs without your prior approval.

Mining Activities

As you know, the Joplin area is heavily mine impacted. Based upon information provided by the Missouri Department of Natural Resources (MDNR), previous lead and zinc mining activity has occurred in the areas surrounding the proposed roadway improvement. Specifically evaluating the site for the presence of mine shafts or drifts using geophysical or subsurface drilling techniques is outside the scope of this study. Additional investigation required for existing mine features or mine features encountered during this subsurface investigation can be performed by PPI, if desired. These addition investigations will be proposed upon separately on a case-by-case basis.

PALMERTON & PARRISH, INC.

CMT SERVICES

In addition to the Geotechnical Services outlined above, PPI appreciates the opportunity to submit this quote for Construction Materials Testing (CMT) Services for the same project. CMT Services will be provided by a qualified technician mobilized from PPI's Joplin, Missouri office. CMT services anticipated to be required for this project include;

- Observe roadway stripping, undercutting and proof-rollings;
- Perform classification & moisture-density testing on proposed earth fill material;
- Provide recommendations for any subgrade stabilization procedures required;
- Observe fill placement & perform compaction testing using field nuclear density test methods;
- Perform baserock compaction testing using field nuclear density test methods;
- Perform field concrete sampling & testing for pavement;
- Perform asphalt sampling and testing (if required); and
- Perform concrete compressive strength testing upon molded concrete specimens & report results.

Once preliminary plans are prepared, and possibly a construction schedule, a cost estimate for CMT services can be provided.

Closure

To authorize this proposal, please sign one copy, and return a fully executed copy to our office. As you know, PPI has a Master Services Agreement with Bartlett & West, and this project, if authorized, will be performed under this agreement. Please call our Springfield office at (417) 864-6000 if you have any questions regarding this proposal or if you need additional information.

PALMERTON & PARRISH, INC.
By:



_____
Brandon R. Parrish, P.E.
Vice President

Attachments: Estimated Cost for Preliminary Plan Geotechnical Investigation

PALMERTON & PARRISH, INC.

CLIENT AUTHORIZATION:

_____
Authorizing Signature

_____
Please Print Name & Title

_____
Date

PALMERTON & PARRISH, INC.

Projected Cost for Geotechnical Services

NO.	ITEM DESCRIPTION	UNIT COST		UNITS	EXTENSION
	ENG. EVALUATION, RECOMMENDATIONS & REPORT:				
1	Geologist to Stake Borings	$90.00	/hr.	4.00	$360.00
2	Geologist Truck Mileage	$0.67	/mi.	50.00	$33.50
3	Prepare Site Plan, Boring Logs & DCP's	$90.00	/hr.	3.00	$270.00
4	Type Report	$58.00	/hr.	2.00	$116.00
5	Engineer to Prepare Report / Proj. Mgr	$145.00	/hr.	8.00	$1,160.00
6	Engineer to Notify One-Call System	$145.00	/hr.	0.50	$72.50
7	Engineer to Coordinate Traffic Control	$145.00	/hr.	2.00	$290.00
8	Engineer to Perform Pavement Analysis	$145.00	/hr.	4.00	$580.00
9	Principal to Review Report	$195.00	/hr.	0.50	$97.50
	SUBTOTAL; ENG. EVALUATION, RECOMMENDATIONS & REPORT				**$2,979.50**
	BORINGS, DRILLING & SAMPLING METHODS:				
1	Drill Rig Mobilization	$3.10	/mi.	120.00	$372.00
2	Support Truck Mileage	$1.18	/mi.	150.00	$177.00
3	6" Asphalt Core	$6.70	/in.	56.00	$375.20
4	Drill Crew to Perform DCP Test	$120.00	/hr.	3.00	$360.00
5	Soil Drilling (4.5" O.D. CFA)	$9.30	/ft.	100.00	$930.00
6	Split Spoon Testing	$26.00	/ea.	20.00	$520.00
7	3-inch Diameter Shelby Tube	$32.90	/ea.	10.00	$329.00
8	Traffic Control (Flagmen + Signs)	$1,750.00	L.S.	1.00	$1,750.00
9	DCP Rental	$207.00	/day	1.00	$207.00
10	Backfill Boring	$20.00	/ea.	10.00	$200.00
	SUBTOTAL; BORINGS, DRILLING & SAMPLING METHODS				**$5,220.20**
	LABORATORY TESTING PROGRAM:				
1	Moisture Content Test	$8.25	/ea.	27.00	$222.75
2	Atterberg Limits Test	$82.50	/ea.	5.00	$412.50
3	Swell Test	$181.25	/ea.	2.00	$362.50
4	Grain Size	$65.50	/ea.	3.00	$196.50
5	Unconfined Compressive Strength	$67.50	/ea.	3.00	$202.50
6	Pocket Penetrometer	$5.75	/ea.	27.00	$155.25
	SUBTOTAL; LABORATORY TESTING PROGRAM				**$1,552.00**
	ESTIMATED COST				**$9,751.70**

FINAL LUMP SUM COST	**$9,800.00**