Introduced by		Council Bill No	R 79-13			
A RESOLUTION						
authorizing an agreement for professional engineering services with Jacobs Engineering Group, Inc. for the preliminary design, surveying, geotechnical investigation and the preparation of plans and specifications relating to the construction of a 16-inch water main crossing under I-70 near the Parkade Shopping Center.						
BE IT RESOLVED BY FOLLOWS:	THE COUNCIL OF TI	HE CITY OF COLUMBIA	A, MISSOURI, AS			
SECTION 1. The City Manager is hereby authorized to execute an agreement for professional engineering services with Jacobs Engineering Group, Inc. for the preliminary design, surveying, geotechnical investigation and the preparation of plans and specifications relating to the construction of a 16-inch water main crossing under I-70 near the Parkade Shopping Center. The form and content of the agreement shall be substantially as set forth in "Exhibit A" attached hereto and made a part hereof as fully as if set forth herein verbatim.						
ADOPTED this _	day of		_, 2013.			
ATTEST:						
City Clerk		Mayor and Presiding C	fficer			
APPROVED AS TO FO	RM:					

City Counselor

AGREEMENT

For

PROFESSIONAL ENGINEERING SERVICES Between THE CITY OF COLUMBIA, MISSOURI

THE CITY OF COLUMBIA, MISSOURI And

Jacobs Engineering Group Inc. 501 North Broadway, St. Louis, MO 63102

THIS AGREEMENT made as of ______ day of ______, 2012, by and between the City of Columbia, Missouri, hereinafter called the CITY, and Jacobs Engineering Group, Inc. with an office in St. Louis, Missouri, a corporation organized in the State of Delaware with authority to transact business in the State of Missouri, hereinafter called the ENGINEER.

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

Preliminary Design, Surveying, Geotechnical Investigation, Final Design, and Bid Phase Services for a new 16-inch Water Main under I-70 in the area around Parkade Plaza.

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

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

SECTION 1 - AUTHORIZATION OF SERVICES

- 1.1 ENGINEER shall not undertake to begin any of the services contemplated by this agreement until directed in writing to do so by CITY. CITY may elect to authorize the PROJECT as a whole or in parts.
- 1.2 Authorized work may include services described hereafter as Basic Services or as Additional Services of ENGINEER.

SECTION 2 - BASIC SERVICES OF ENGINEER

- 2.1 General
- 2.1.1 Perform professional engineering services as set forth in Attachment A "Scope of Basic Services", dated November 7, 2012.
- 2.1.2 The ENGINEER will designate the following listed individuals as its project team with responsibilities as assigned. The ENGINEER shall dedicate whatever additional resources are necessary to accomplish the PROJECT within the specified time frame but will not remove these individuals from the assigned tasks for any reason within the control of the ENGINEER without the written approval of the CITY.

Name and Title

<u>Assignment</u>

Keenan Bull, PE

Engineer IV

Kevin Elbert

Project Principal

All of the services required hereunder will be performed by the ENGINEER or under its supervision and all personnel engaged in the work shall be fully qualified and authorized or permitted under state and local law to perform such services.

None of the work or services covered by this Agreement shall be subcontracted without the prior written approval of the CITY and any work or services so subcontracted shall be subject to the provisions of this Agreement.

- 2.2 The ENGINEER shall furnish such periodic reports as the CITY may request pertaining to the work or services undertaken pursuant to this Agreement, the costs and obligations incurred or to be incurred, and any other matters covered by this Agreement.
- 2.3 The ENGINEER shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Agreement and any other records as deemed necessary by the CITY to assure proper accounting for all project funds. These records must be available to the CITY or its authorized representatives, for audit purposes, and must be retained for three (3) years after expiration or completion of this Agreement.

SECTION 3 - ADDITIONAL SERVICES OF ENGINEER

3.1 General

If authorized in writing by CITY, and agreed to in writing by ENGINEER, ENGINEER shall furnish or obtain from others Additional Services of the following types which are not considered normal or customary Basic Services. The scope of Additional Services may include:

3.1.1 Financial Consultation
Consult with CITY's fiscal agents and bond attorneys and provide such engineering data as required for any bond prospectus or other financing requirements

3.1.2Property Procurement Assistance

Provide consultation and assistance on property procurement as related to professional engineering services being performed.

- 3.1.3 Obtaining Services of Others
 Provide through subcontract the services or data set forth in Attachment A.
- 3.1.4 Preliminary or final engineering design of capital facilities except as specifically identified herein.
- 3.1.5 Preparation of reports, data, application, etc., in connection with modifications to FEMA floodplain definition and/or mapping.
- 3.1.6 Extra Services
 Services not specifically defined heretofore that may be authorized in writing by CITY.

SECTION 4 - RESPONSIBILITIES OF CITY

- 4.1 Provide full information as to CITY's requirements for the PROJECT.
- 4.2 Assist ENGINEER by placing at ENGINEER's disposal available information pertinent to the assignment including previous reports and other data relative thereto, including the items outlined in Attachment A "Scope of Basic Services", dated November 7, 2012.
- 4.3 Guarantee access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform his services under this Agreement.
- 4.4 Examine all studies, reports, sketches, estimates, Bid Documents, Drawings, proposals and other documents presented by ENGINEER and render in writing decisions pertaining thereto.

- 4.5 Provide such professional legal, accounting, financial and insurance counseling services as may be required for the PROJECT.
- 4.6 Designate Tomas Zajicek, as CITY's representative with respect to the services to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define CITY's policies and decisions with respect to materials, equipment, elements and systems to be used in the PROJECT, and other matters pertinent to the services covered by this Agreement.
- 4.7 Give prompt written notice to ENGINEER whenever CITY observes or otherwise becomes aware of any defect in the PROJECT.
- 4.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the PROJECT and such approvals and consents from others as may be necessary for completion of the PROJECT.
- Furnish ENGINEER data such as probings and subsurface explorations, with appropriate professional interpretations; property, boundary, easement, right-of-way, topographic and utility surveys; zoning and deed restriction; and other special data or consultations, all of which ENGINEER may rely upon in performing his services under this Agreement.

SECTION 5 - PERIOD OF SERVICE

- 5.1 This Agreement will become effective upon the first written notice by CITY authorizing services hereunder.
- This Agreement shall be applicable to all work assignments authorized by CITY subsequent to the date of its execution and shall be effective as to all assignments authorized.
- 5.3 Services shall be started within ten (10) calendar days of Notice to Proceed and completed within one hundred eighty (180) calendar days from the issuance of the Notice to Proceed. CITY shall have the right to establish performance times for individual phases or elements of the PROJECT by delivering a written schedule setting out the performance times to the ENGINEER.

SECTION 6 - PAYMENTS TO ENGINEER

- 6.1 Amount of Payment
- 6.1.1 For services performed, CITY shall pay ENGINEER the sum of amounts determined as follows:
- 6.1.1.1 For time spent by personnel, payment at the hourly rates indicated in the "Schedule of Hourly Labor Billing Rates", included as Attachment B, dated November 7, 2012. Such rates include overhead and profit. The schedule is effective to September 30, 2013, and may be revised thereafter.
- 6.1.1.2 For outside expenses incurred by ENGINEER, such as authorized travel and subsistence, commercial services, and incidental expenses, the cost to ENGINEER.
- 6.1.1.3 For reproduction, printing, long-distance telephone calls, company vehicle usage, testing apparatus, computer services and computer-assisted drafting (CAD), amounts will be charged according to the ENGINEER's standard rates in effect at the time service is provided.
- 6.1.1.4 For professional services rendered by others as subcontractor(s) to ENGINEER such as surveying, real property descriptions, soil borings, subsurface investigations, laboratory testing, field quality control tests, progress photos, or other activities required or requested by CITY, will be billed at the cost to ENGINEER.
- 6.1.1.5 For time spent by outside individual professional consultants employed by ENGINEER in providing services to CITY, the cost to ENGINEER. Expenses incurred by such outside consultants in service to CITY shall be reimbursable in accordance with 6.1.1.2 above.
- 6.1.2 Total payment for Scope of Services and all other expenses and costs to the City under this agreement and described herein **shall not exceed seventy-eight thousand eight hundred dollars (\$ 78,800.00).**
- 6.2 Payments
- 6.2.1 The ENGINEER shall submit an invoice for services rendered to the CITY not more than once every month. Upon receipt of the invoice and progress report, the CITY will, as soon as practical, pay the ENGINEER for the services rendered, provided the CITY does not contest the invoice, to the extent of ninety-five percent (95%) of the

uncontested amount earned. Upon completion and acceptance of the final plans by the CITY, the five percent (5%) of these services retained by the CITY will be paid to the ENGINEER.

SECTION 7 - GENERAL CONSIDERATIONS

7.1 Insurance

7.1.1 ENGINEER'S INSURANCE: ENGINEER agrees to maintain, on a primary basis and at its sole expense, at all times during the life of this contract the following insurance coverages, limits, including endorsements described herein. The requirements contained herein, as well as CITY's review or acceptance of insurance maintained by ENGINEER is not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by ENGINEER under this contract

Commercial General Liability ENGINEER agrees to maintain Commercial General Liability at a limit of liability not less than \$2,000,000 combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death. Coverage shall not contain any endorsement(s) excluding nor limiting Contractual Liability or Cross Liability. If the contract involves any underground/digging operations, the general liability certificate shall include X, C and U (Explosion, Collapse and Underground) coverage.

Professional Liability ENGINEER agrees to maintain Professional (Errors & Omissions) Liability at a limit of liability not less than \$2,000,000 per claim and \$2,000,000 aggregate. For policies written on a "Claims-Made" basis, ENGINEER agrees to maintain a Retroactive Date prior to or equal to the effective date of this contract. In the event the policy is canceled, non- renewed, switched to an Occurrence Form, retroactive date advanced; or any other event triggering the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this contract, ENGINEER agrees to purchase a SERP with a minimum reporting period not less than two (2) years. The requirement to purchase a SERP shall not relieve ENGINEER of the obligation to provide replacement coverage.

Business Automobile Liability ENGINEER agrees to maintain Business Automobile Liability at a limit of liability not less than \$2,000,000 combined single limit for any one occurrence and not less than \$150,000 per individual, covering both bodily injury, including accidental death, and property damage, to protect themselves from any and all claims arising from the use of the ENGINEER's own automobiles, and trucks; hired automobiles, and trucks; and automobiles both on and off the site of work. Coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event

ENGINEER does not own automobiles, ENGINEER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Excess/Umbrella Liability The above liability limits may be satisfied by any combination of primary and excess/umbrella liability policies.

Additional Insured ENGINEER agrees to endorse CITY as an Additional Insured with a CG 2026 Additional Insured – Designated Person or Organization endorsement, or similar endorsement, to the Commercial General Liability. The Additional Insured shall read "City of Columbia." ENGINEER shall not be required to insure the City for the City's own fault.

<u>Waiver of Subrogation</u> ENGINEER agrees by entering into this contract to a Waiver of Subrogation for each required policy herein except professional liability. When required by the insurer, or should a policy condition not permit ENGINEER to enter into an pre-loss agreement to waive subrogation without an endorsement, then ENGINEER agrees to notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition specifically prohibiting such an endorsement, or voids coverage should ENGINEER enter into such an agreement on a pre-loss basis.

Certificate(s) of Insurance ENGINEER agrees to provide CITY with Certificate(s) of Insurance evidencing that all coverages, limits and endorsements required herein are maintained and in full force and effect. ENGINEER shall provide policy endorsements that shall include a minimum thirty (30) day endeavor to notify due to cancellation or non-renewal of coverage. The Certificate(s) of Insurance shall name the City as additional insured in an amount as required in this contract and contain a description of the project or work to be performed.

Right to Revise or Reject CITY reserves the right, but not the obligation, to review and revise any insurance requirement, not limited to limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work / specifications affecting the applicability of coverage. Additionally, the CITY reserves the right, but not the obligation, to review and reject any insurance policies failing to meet the criteria stated herein or any insurer providing coverage due of its poor financial condition or failure to operating legally.

7.1.2 HOLD HARMLESS AGREEMENT: To the fullest extent not prohibited by law, ENGINEER shall indemnify and hold harmless the City of Columbia, its directors, officers, agents and employees from and against all claims, damages, losses and expenses (including but not limited to attorney's fees) arising by reason of any negligent act or failure to act, or willful misconduct, of ENGINEER, of any subcontractor (meaning anyone, including but not limited to consultants having a contract with ENGINEER or a subcontractor for part of the services), of anyone directly or indirectly employed by ENGINEER or by any subcontractor, or of anyone for whose acts the ENGINEER or its subcontractor may be liable, in connection with providing these services except as provided in this Agreement. This provision does not, however, require ENGINEER to indemnify, hold harmless or defend the City of Columbia from its own negligence, except as set out herein.

7.1.3 Professional Oversight Indemnification

The ENGINEER understands and agrees that CITY has contracted with ENGINEER based upon ENGINEER's representations that ENGINEER is a skilled professional and fully able to provide the services set out in this Agreement. In addition to any other indemnification set out in this Agreement, ENGINEER agrees to defend, indemnify and hold and save harmless the CITY from any and all claims, settlements and judgments whatsoever arising out of the CITY's alleged negligence in hiring or failing to properly supervise the ENGINEER.

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

7.2 Professional Responsibility

7.2.1 ENGINEER will exercise reasonable skill, care, and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted good professional engineering practices. If the ENGINEER fails to meet the foregoing standard, ENGINEER will perform at its own cost, and without reimbursement from CITY, the professional engineering services necessary to correct

errors and omissions which are caused by ENGINEER's failure to comply with above standard, and which are reported to ENGINEER within one year from the completion of ENGINEER's services for the PROJECT.

- 7.2.2 In addition, ENGINEER will be responsible to CITY for damages caused by its negligent conduct during its activities at the PROJECT site or in the field.
- Festimates and Projections
 Estimates and projections prepared by ENGINEER relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating results are based on ENGINEER's experience, qualifications and judgment as a design professional. Since ENGINEER has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, competitive bidding or market conditions and other factors affecting such estimates or projections, ENGINEER does not guarantee that actual rates, costs, performance, schedules, etc., will not vary from estimates and projections prepared by ENGINEER.
- 7.4 On-Site Services
 PROJECT site visits by ENGINEER during construction shall not make
 ENGINEER responsible for construction means, methods, techniques, sequences or
 procedures; for construction safety precautions or programs; or for any construction
 contractor(s') failure to perform its work in accordance with the plans and specifications.
- 7.5 Changes
 CITY shall have the right to make changes within the general scope of
 ENGINEER's services, with an appropriate change in compensation, upon execution of
 a mutually acceptable amendment or change order signed by an authorized
 representative of the CITY and the President or any Vice President of the ENGINEER.
- 7.6 Suspension of Services
 Should CITY fail to fulfill its responsibilities as provided under Section 4 to
 the extent that ENGINEER is unduly hindered in his services or if CITY fails to make
 any payment to ENGINEER on account of its services and expenses within ninety (90)
 days after receipt of ENGINEER's bill therefor, ENGINEER may, after giving seven (7)
 days' written notice to CITY, suspend services under this Agreement until CITY has
 satisfied his obligations under this Agreement.

7.7 Termination

Services may be terminated by the CITY at any time and for any reason, and by the ENGINEER in the event of substantial failure to perform in accordance with the terms hereof by the CITY through no fault of the ENGINEER, by ten (10) days' notice. If so terminated, CITY shall pay ENGINEER all uncontested amounts due ENGINEER for all services properly rendered and expenses incurred to the date of receipt of notice of termination.

7.7.1 In the event of CITY's termination of the Agreement pursuant to the above section, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared under this Agreement, shall at the option of the CITY become its property.

Further, the ENGINEER shall not be relieved of any liability to the CITY for any damages sustained by the CITY by virtue of any breach of this Agreement by ENGINEER and the CITY may withhold any payments due the ENGINEER for the purpose of set-off until such time as the exact amount of damages to the CITY, if any, is determined.

7.8 Publications

Recognizing the importance of professional development on the part of ENGINEER's employees and the importance of ENGINEER's public relations, ENGINEER may prepare publications, such as technical papers, articles for periodicals, and press releases, pertaining to ENGINEER's services for the PROJECT. Such publications will be provided to CITY in draft form for CITY's advance review. CITY will review such drafts promptly and will provide comments to ENGINEER. CITY may require deletion of proprietary data or confidential information from such publications but otherwise will not unreasonably withhold its approval. The cost of ENGINEER's activities pertaining to any such publication shall be paid entirely by ENGINEER.

7.9 Nondiscrimination During the performance of this Agreement, ENGINEER agrees to the following:

7.9.1. ENGINEER shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, handicap, or national origin. ENGINEER shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, age, handicap, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or

recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. ENGINEER agrees to post notices in conspicuous places, available to employees and applicants for employment.

- ENGINEER shall, in all solicitation or advertisements for employees 7.9.2 placed by or on behalf of ENGINEER, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, handicap, or national origin.
- ENGINEER shall comply with all provisions of State and Federal Laws 7.9.3 governing the regulation of Equal Employment Opportunity including Title VI of the Civil Rights Act of 1964.
- 7.10 Successor and Assigns

CITY and ENGINEER each binds himself and his successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement; except as above, neither CITY nor ENGINEER shall assign, sublet or transfer his interest in the Agreement without the written consent of the other.

7.11 Rights and Benefits

ENGINEER's services will be performed solely for the benefit of the CITY and not for the benefit of any other persons or entities.

Compliance with Local Laws 7.12

ENGINEER shall comply with all applicable laws, ordinances and codes of the state and city.

Law; Submission to Jurisdiction Governing. 7.13

This Contract shall be governed by, interpreted and enforced in accordance with the laws of the State of Missouri and/or the laws of the United States, as applicable. The venue for all litigation arising out of, or relating to this Contract Document, shall be Boone County, Missouri or the United States Western District of Missouri. The parties hereto irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of Missouri and waive any defense of forum non conveniens

- Employment of Unauthorized Aliens Prohibited 7.14
- ENGINEER agrees to comply with Missouri State Statute section 285.530 7.14.1 in that they shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.
- As a condition for the award of this contract ENGINEER shall, by sworn 7.14.2

affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. ENGINEER shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

7.14.3 ENGINEER shall require each subcontractor to affirmatively state in its contract with ENGINEER that the subcontractor shall not knowingly employ, hire for employment or continue to employ an unauthorized alien to perform work within the state of Missouri. ENGINEER shall also require each subcontractor to provide ENGINEER with a sworn affidavit under the penalty of perjury attesting to the fact that the subcontractor's employees are lawfully present in the United States.

7.15 Entire Agreement

This Agreement represents the entire and integrated Agreement between ENGINEER and CITY relative to the Scope of Services herein. All previous or contemporaneous agreements, representations, promises and conditions relating to ENGINEER's services described herein are superseded.

[SIGNATURES ON FOLLOWING PAGE]

CITY OF COLUMBIA, MISSOURI

		Ву:	Mike Matthes, City Manager
ATTESTED BY:			
Sheela Amin, City	Clerk		
APPROVED AS T	O FORM:		
Fred Boeckmann,	City Counselor		
CERTIFICATION:	annropriation to which	ı it is ch	nove expenditure is within the purpose of the arged, Account No. 550-7220-881.49-90, and that ance to the credit of such appropriation sufficient to
Director of Fir	ancė		
		ENG	INEER
		Ву:	Jacobs Engineering Croup (Name/Tille)
		Ву:	(Name/Title)
			Ken W J. McMahon Group Vice PresideNT

ATTACHMENT A – SCOPE OF BASIC SERVICES November 7, 2012

New Water Main under I-70 City of Columbia Water and Light Department (CW&L)

Following is a summary of the scope of services for the new water main under I-70.

PROJECT UNDERSTANDING

Jacobs understands that CW&L wishes to install a new 16-inch main under I-70 to connect to an existing distribution main north of the interstate highway. There are several locations along the corridor that could be evaluated to allow an additional or larger line to be installed. It is understood that part of the scope will be to review alternative locations and evaluate the most cost effective and feasible location.

TASK ONE - KICKOFF MEETING

Jacobs will meet with CW&L for a kick off meeting to discuss the project as well as to obtain any additional information or relevant data that would be pertinent to the project. It is currently understood that CW&L has expressed interest in locating a new 16-inch main at the northern end of Park Ade.

TASK TWO-ALTERNATIVE LOCATIONS

Jacobs will review the current Long Range Study to evaluate potential locations for installing a new casing pipe and carrier pipe under I-70. It is understood that CW&L would like to install a 16-inch carrier pipe along with a 24-inch casing pipe to ultimately connect to a transmission or distribution main in a location north of the interstate. Jacobs will review potential locations and then recommend a location for a new main to better serve the northern part of the City. At the completion of the evaluation, a memorandum with related aerial photos, will be developed that will summarize the evaluation of up to three potential crossing locations. The memorandum will describe the advantages and disadvantages of each crossing location, along with conceptual costs of the crossing and a summarized scoring spreadsheet. From that information, Jacobs will provide a recommendation to CW&L.

TASK THREE - PUBLIC INVOLVEMENT PROCESS

Jacobs will provide CW&L with the list of property owners that will be affected by the water main. Jacobs will also assist the City at one public meeting to help address any issues that may be brought up by the affected property owners.

TASK FOUR - TOPOGRAPHIC SURVEY / EASEMENT PREPARATION

Once the location for the crossing has been finalized, Jacobs will arrange for a topographic survey of the proposed alignment to be completed. The topographic survey will include areas within the Interstate 70, as defined in Task 2 and will include the location outside of the area where the bore pits will be located. Missouri One Call will be contacted to mark existing utilities prior to starting the field survey. The topographic survey will include two-foot contours, marked utilities aboveground physical features,

tree lines, individual trees (where isolated), roadways, and existing drainage ditches and storm sewer within the surveyed area. The survey will also include establishment of existing property lines and existing right of way locations. The survey coordinate system will be the same coordinate system used by MoDOT.

Upon the completion and acceptance of the preliminary alignment (Task 6), Jacobs' surveying subconsultant will prepare up to two (2) temporary easement plats and legal descriptions for the locations of the bore pits. CW&L will use that information to acquire the temporary easements for the project.

TASK FIVE - GEOTECHNICAL INVESTIGATION

Jacobs will arrange for a total of three (3) soil borings to be taken along the proposed water main crossing alignment to define the subsurface geotechnical characteristics and to evaluate the potential presence of rock. Where a jack and bore under Interstate 70 is proposed, a boring will be located on each side of the highway. We will attempt to get approval from MoDOT for the third bore to be located within the median, between the east and west bound traffic lanes.

Drilling and sampling operations will be performed in accordance with ASTM standards and other recognized industry procedures. Standard Penetration Tests (SPT) will be taken at 2.5-foot intervals for the borings at each side of the highway crossings. If the third bore in the median of the interstate is not approved by MoDOT, a probe will be inserted to determine the presence of rock and no further sampling will be conducted.

A Jacobs geotechnical engineer will be present during the geotechnical field work. Jacobs geotechnical personnel will prepare the boring logs. The results of the geotechnical field work and laboratory analyses will be summarized in a geotechnical memorandum to CW&L.

TASK SIX - PRELIMINARY ALIGNMENT

At the completion of the topographic survey, Jacobs will develop a preliminary water main crossing alignment drawing. This alignment drawing will be forwarded to the CW&L and MoDOT for review and approval. Upon receipt of comments, the alignment will be finalized and detailed design drawings will be developed.

TASK SEVEN - FINAL DESIGN

Jacobs will prepare the plan & profile drawings and associated details for the water main crossing. In addition, technical specifications associated with the project will be developed. The technical specifications will be in CSI format. In addition, Jacobs will prepare the front end documents for the project. The front end documents will be provided by CW&L or Jacobs will revise the front end documents from a recent project that was completed for CW&L. It is anticipated that the Bid Form will include a bid table with individual unit price line items for the work to be performed.

Jacobs will submit a 75% complete design package to CW&L and MoDOT for review. Jacobs will then attend a project meeting at either CW&L's office or MoDOT's office to discuss the 75% design documents. The comments obtained from CW&L and MoDOT will then be incorporated into the 100% Final Design Documents. Completed (100%) design documents will be submitted to MoDOT for final approval and permitting prior to bidding.

We estimate that the following drawings will be developed:

- Cover Sheet / Location Plan (1)
- Plan and Profile drawings (2)
- Jack and bore details (1)
- Standard details and connection details (2)

TASK EIGHT - BIDDING PHASE SERVICES / COST ESTIMATE

Once 100% design documents are complete, Jacobs will prepare and submit a construction permit application to the Missouri Department of Natural Resources Public Drinking Water Program for the project to obtain a construction permit.

Jacobs will complete a cost estimate of the design documents and provide the estimated amount to CW&L.

Jacobs will conduct a Pre-Bid meeting at CW&L's office and respond to questions from the potential bidders during the bid period. Addenda, if required, will be prepared by Jacobs and forwarded to the CW&L District for distribution to bidders. Jacobs will attend the bid opening. The bids will be reviewed by Jacobs and a written recommendation for award of the contract will be provided to CW&L.

ASSUMPTIONS/CLARIFICATIONS

The following assumptions/clarifications apply to the above referenced Scope of Services:

- Three sets (3) of Design Documents will be provided to CW&L at the 75% design milestone.
- Twelve (12) sets of 100% (Bidding Documents) will be provided to CW&L.
- CW&L will coordinate and arrange the public meeting with affected property owners,
- It is anticipated existing easements will be adequate for the main extension. However, legal descriptions for temporary easement at the bore pits will be prepared and provided to CW&L for them to acquire the easements. We have assumed that up to two (2) temporary easement plats will be prepared. Services for assisting with easement acquisition are not included.
- Jacobs will participate in one public meeting to help address concerns raised by property owners that will be affected by the water main location.
- There are no construction phase field services include in this scope. Jacobs can provide construction phase field services for additional fee.
- CW&L will distribute bidding documents and addenda to prospective bidders.

ATTACHMENT B – SCHEDULE OF HOURLY BILLING RATES November 7, 2012

New Water Main under I-70 City of Columbia Water and Light Department (CW&L)

Classification	Hourly Labor Billing Rate
Project Principal	\$163.00
Environmental Engineer VIII	\$190.00
Environmental Engineer VII	\$160.00
Environmental Engineer VI	\$134.00
Environmental Engineer V	\$110.00
Environmental Engineer IV	\$94.00
Environmental Engineer III	\$78.00
Environmental Engineer II	\$64.00
Geotechnical Engineer V	\$120.00
Senior CAD Technician	\$118.00
Junior CAD/GIS Technician	\$83.00
Cost Estimator VIII	\$184.00
Project Controls	\$130.00
Administrative	\$61.00

Source: Water & Light

Agenda Item No:

To: City Council

From: City Manager and Staff

Council Meeting Date:

Apr 15, 2013

Re: Engineering Services Agreement - Water Main Design Services

EXECUTIVE SUMMARY:

Staff has prepared for Council consideration a resolution authorizing the City Manager to execute an agreement with Jacobs Engineering Group of St. Louis, Missouri in an amount not to exceed \$78,800.00 to provide professional engineering services for the preparation of plans and specifications for the construction of a 16" water main crossing under Interstate 70 in the area of the Parkade Shopping Center.

DISCUSSION:

The 2008 Long Range Water Study identified the need for a large water main crossing under Interstate 70 near the location of an abandoned 6-inch water main crossing at Parkade Boulevard to provide additional water distribution capacity to areas north of Interstate 70 in the primary pressure zone. The existing 6-inch crossing under Interstate 70 represents one of a limited number of water main crossings of Interstate 70 serving the primary pressure zone. This water main was removed from service when a break occurred within the the Interstate 70 right of way. The existing 6-inch cast iron main was direct buried in soil without a casing pipe at the time of the construction of Interstate 70 and was abandoned in-place when the water main broke and was unable to be repaired.

The intent of this water main replacement project is to construct a 16-inch carrier pipe installed within a 24-inch encasement installed by jack and bore methods. The casing pipe will prevent any future leaks from occurring within the highway right of way and will allow future servicing of the main in the event a failure occurs. This proposed water main crossing will provide water transmission to a proposed 16-inch water main on Texas Avenue supplying bulk water north of the Interstate 70 in the primary pressure zone and to a future Prathersville Water Tower.

The proposed scope of services, as defined in Attachment "A" of the engineering services agreement, includes preliminary design, surveying, permitting, and geotechnical investigations together with the development of the final design plans and specifications for bid phase services. Jacobs Engineering Group is pre-qualified to perform engineering services for the City of Columbia. Jacobs Engineering has historically displayed their expertise in producing quality products and services for the City of Columbia.

FISCAL IMPACT:

The proposed contract with Jacobs Engineering is not to exceed \$78,800.00 for design of this 16-inch water main crossing with an estimated time of completion of 180 calendar days. Funding for this project comes from 2008 water revenue bonds and is programmed under project WT0153 of the current Capital Improvement Program.

VISION IMPACT:

http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php

This Project was identified in the 2008 Long Range Water Study as a needed improvement in order to supply water to the primary pressure zone north of Interstate 70.

SUGGESTED COUNCIL ACTIONS:

Approval this resolution authorizing the City Manager to execute an agreement with Jacobs Engineering Group for engineering services related to the 16-inch water main crossing of Interstate 70.

FISCAL and VISION NOTES:							
City Fiscal Impact Enter all that apply		Program Impact		Mandates			
City's current net FY cost	\$78,800.00	New Program/ Agency?	No	Federal or State mandated?	No		
Amount of funds already appropriated	\$378,000.00	Duplicates/Expands an existing program?	No	Vision Implementation impact			
Amount of budget amendment needed	\$0.00	Fiscal Impact on any local political subdivision?	No	Enter all that apply: Refer to Web site			
Estimated 2 year net costs: Resources Requ		uired	Vision Impact?	Yes			
One Time	\$0.00	Requires add'l FTE Personnel?	No	Primary Vision, Strategy and/or Goal Item #	5.1		
Operating/ Ongoing	\$0.00	Requires add'l facilities?	No	Secondary Vision, Strategy and/or Goal Item #			
		Requires add'l capital equipment?	No	Fiscal year implementation Task #			