

Introduced by _____ Council Bill No. R 262-08

A RESOLUTION

authorizing an agreement with CH2M Hill, Inc. for professional engineering services to prepare conceptual and preliminary design plans for the Historic West Broadway from Garth Avenue to West Boulevard improvement project.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. The City Manager is hereby authorized to execute an agreement with CH2M Hill, Inc. for professional engineering services to prepare conceptual and preliminary design plans for the Historic West Broadway from Garth Avenue to West Boulevard improvement project. The form and content of the agreement shall be substantially as set forth in "Attachment A" attached hereto and made a part hereof as fully as if set forth herein verbatim.

ADOPTED this _____ day of _____, 2008.

ATTEST:

City Clerk

Mayor and Presiding Officer

APPROVED AS TO FORM:

City Counselor

AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
CH2M HILL, Inc.
727 N 1st Street, Suite 400, St. Louis, MO 63102

THIS AGREEMENT made as of sixth day of November, 2008, by and between the City of Columbia, Missouri, hereinafter called the CITY, and CH2M HILL, Inc., of 727 N. 1st Street, Suite 400, St. Louis, Missouri 63102, hereinafter called the ENGINEER.

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

Professional engineering services to be provided during the Conceptual and Preliminary Design of the West Broadway Corridor from Garth Avenue to West Boulevard.

Now, therefore, in consideration of the mutual covenants set out herein the parties agree as follows:

ENGINEER shall serve as CITY's professional engineering consultant in those assignments to which this Agreement applies, and shall give consultation and advice to CITY during the performance of his 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 -~~ ^{Exhibit}

"Scope of Basic Services", dated November 6th, 2008.

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.

<u>Name and Title</u>	<u>Assignment</u>
Tim Nittler, PE	Project Manager
Kevin Nichols, PE	Engineering Lead
Scott Barber, RLA	Landscape Architect
Tim Page, PE	Great Streets Planner
Buddy Desai , PE	Public Involvement Cord.

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

- 3.1.2 Property Procurement Assistance
Provide consultation and assistance on property procurement as related to professional engineering services being performed.
- 3.1.3 Obtaining Services of Others
Provide through subcontract the services or data set forth: Surveying
- 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 6th, 2008. ~~Exhibit~~
- 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 John D. Glascock, P.E., Director of Public Works, as CITY's representative with respect to the services to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define CITY's policies and decisions with respect to materials, equipment,

elements and systems to be used in the PROJECT, and other matters pertinent to the services covered by this Agreement.

4.7 Give prompt written notice to ENGINEER whenever CITY observes or otherwise becomes aware of any defect in the PROJECT.

4.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the PROJECT and such approvals and consents from others as may be necessary for completion of the PROJECT.

4.9 Furnish ENGINEER data such as probings and subsurface explorations, with appropriate professional interpretations; property, boundary, easement, right-of-way, topographic and utility surveys; zoning and deed restriction; and other special data or consultations, all of which ENGINEER may rely upon in performing his services under this Agreement.

SECTION 5 - PERIOD OF SERVICE

5.1 This Agreement will become effective upon the first written notice by CITY authorizing services hereunder.

5.2 This Agreement shall be applicable to all work assignments authorized by CITY subsequent to the date of its execution and shall be effective as to all assignments authorized.

5.3 Services shall be started within 7 calendar days of Notice to Proceed and completed within 120 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" Form No. 1(attached). Such rates include overhead and profit. The schedule is effective to 2010, 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 the Scope of Services described herein **shall not exceed \$104,908.13.**

6.2 Statements: See Notes on the attached "Schedule of Hourly Labor Billing Rates," Form No. 1 (attached).

6.3 Payments

6.3.1 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, pay the ENGINEER for the services rendered within 30 days, 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 and a \$2,000,000 aggregate covering both bodily injury and property damage, including accidental death. Coverage shall not contain any endorsement(s) excluding nor limiting Contractual Liability or Cross Liability. If the contract involves any underground/digging operations, the general liability certificate shall include X, C and U (Explosion, Collapse and Underground) coverage.

Professional Liability ENGINEER agrees to maintain Professional (Errors & Omissions) Liability at a limit of liability not less than **\$2,000,000** per claim and in the aggregate. When a self-insured retention (SIR) or deductible exceeds **\$10,000**, the CITY reserves the right, but not the obligation, to review and request a copy of ENGINEER's most recent annual report or audited financial statement. 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 -an Extended Reporting Period during the life of this contract, ENGINEER agrees to exercise the option to purchase a Extended Reporting period with - period - two **(2)** year. -

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 -, 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, teams and trucks; hired automobiles, teams and trucks; and automobiles both on and off the site of work. Coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event ENGINEER does not own automobiles, ENGINEER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation Insurance & Employers' Liability ENGINEER agrees to take out and maintain during the life of this contract, Employers' Liability and Workers' Compensation Insurance for all of their employees employed at the site of the work, and in case any work is sublet, the ENGINEER shall require the subcontractor similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the ENGINEER. Workers' Compensation coverages shall meet Missouri statutory limits. Employers' Liability minimum limits shall be \$1,000,000 each employee, \$1,000,000 each accident and \$1,000,000 policy limit. In case any class of employees engaged in hazardous work under this contract is not protected under the Workers' Compensation Statute, the ENGINEER shall provide and shall cause each subcontractor to provide Employers' Liability Insurance for the protection of their employees not otherwise protected.

Additional Insured ENGINEER agrees to include "CITY of Columbia" as an Additional

Insured with a Commercial General Liability-

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

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

Right to Revise or Reject CITY reserves the right, but not the obligation, to review and revise any insurance requirement, not limited to limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work / specifications affecting the applicability of coverage. Additionally, 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 act or failure to act, negligent or otherwise, 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 named as co-insured for such insurance.

7.2 Professional Responsibility

7.2.1 ENGINEER will exercise reasonable skill, care, and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted good professional engineering practices. If 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.

7.3 Estimates and Projections

Estimates and projections prepared by ENGINEER relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating results are based on ENGINEER's experience, qualifications and judgment as a design professional. Since ENGINEER has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, competitive bidding or market conditions and other factors affecting such estimates or projections, ENGINEER does not guarantee that actual rates, costs, performance, schedules, etc., will not vary from estimates and projections prepared by ENGINEER.

7.4 On-Site Services

PROJECT site visits by ENGINEER during construction shall not make ENGINEER responsible for construction means, methods, techniques, sequences or procedures; for construction safety precautions or programs; or for any construction contractor(s) failure to perform its work in accordance with the plans and specifications.

7.5 Changes

CITY shall have the right to make changes within the general scope of ENGINEER's services, with an appropriate change in compensation, upon execution of a mutually acceptable amendment or change order signed by an authorized representative of 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 therefore, 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, prior to payment of Engineer's final invoice, may withhold any payments due the ENGINEER for the purpose of set-off for the exact amount of damages to the CITY, if any, is determined by independent binding arbitration or legal proceedings.

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 the ENGINEER.

7.9 Nondiscrimination

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

7.9.1. The ENGINEER shall not discriminate against any employee or applicant

for employment because of race, color, religion, sex, age, handicap, or national origin. The 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. The ENGINEER agrees to post notices in conspicuous places, available to employees and applicants for employment.

7.9.2 The ENGINEER shall, in all solicitation or advertisements for employees placed by or on behalf of the ENGINEER, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, handicap, or national origin.

7.9.3 The ENGINEER shall comply with all provisions of State and Federal Laws governing the regulation of Equal Employment Opportunity including Title VI of the Civil Rights Act of 1964.

7.10 Successor and Assigns

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

7.11 Rights and Benefits

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

7.12 Compliance with Local Laws

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

7.13 Entire Agreement

This Agreement represents the entire and integrated Agreement between the 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.

CITY OF COLUMBIA, MISSOURI

BY: _____
H. William Watkins, City Manager

ATTESTED BY:

Sheela Amin, City Clerk

APPROVED AS TO FORM:

Fred Boeckmann, City Counselor

CERTIFICATION: I hereby certify that the above expenditure is within the purpose of the appropriation to which it is charged, Account No. 440 8800-528,40-23,00396, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefore.

Lori B. Fleming, Director of Finance

ENGINEER

CH2M HILL, Inc.

Kevin S. Nichols

BY: Kevin S. Nichols,
Geographic Operations Manager

City of Columbia
West Broadway Corridor Improvements
From Garth Avenue to West Boulevard
Preliminary Design
Scope of Work

PROJECT DESCRIPTION

The work of this Scope of Work consists of preparing the Preliminary Plans for the West Broadway Corridor Improvement Project.

The major features of the project are as follows:

- Perform Topographic Survey of project area
- Develop Stakeholder Involvement Program
- Develop Conceptual Corridor Plan
- Establish Land Ownership along the Corridor
- Relocate Utilities
- Reconstruction of West Broadway
- Construction of Bike Lanes
- Construction of Side Walks
- Signalized Intersection Modifications
- Drainage and Detention facilities
- Excavation and handling of excess material
- Drainage and detention facilities
- Staged construction and traffic control

PROJECT DELIVERABLES

- Conceptual Corridor Plan
- Preliminary Plans
 - Title Sheet (1)
 - Typical Section Sheets (1)

- Preliminary Plan/Profile sheets, 1" = 50' (3)
- Preliminary Drainage Plans (3)

TASK 1 - PROJECT MANAGEMENT AND COORDINATION

1.1 Meetings

- 1.1.1 Prepare for and attend monthly Core Team meetings with the City as required by the City's project manager. Project progress meetings may be handled by conference calls or other methods when agreeable to both the City project manager and the Consultant.

Prepare and distribute meeting minutes within one week of the meeting.

Assume one Consultant staff attending 2 core team meetings at Columbia and an additional 1 meeting via conference call.

- 1.1.2 The Consultant will prepare for and attend four (4) Stakeholder Involvement Meetings. Assume 2 Consultant Staff attending 4 meetings in Columbia.

1.2 Day to Day Management

- 1.2.1 Contract and manage Subconsultant to perform project work. Subconsultant for this project will be Allstate Consultants, P.C.

1.3 Administration and Cost Control

- 1.3.1 Administer project contracts and subcontracts. Coordinate requirements with City and project team.
- 1.3.2 Maintain project cost control system to process and track project costs including implementation and coordination of financial reporting requirements and formats; reporting policies and guidelines; and, invoicing and payment of project costs.
- 1.3.3 Prepare monthly progress reports including narrative descriptions, financial reports, expenditures, and progress bar charts indicating the overall percent of project completion as well as the percent completion of individual tasks. The reports will provide all levels of management within City with sufficient, timely financial data so that managerial decisions concerning control of various aspects of the project can be made.
- 1.3.4 Prepare invoicing and payment requests and number submittals sequentially. Attach copy of progress report and bar chart to each invoice

to support the calculation of overall percentage of the contract completed to date.

TASK 2 – Surveying

All work will be completed under the direction of a Professional Land Surveyor licensed and in good standing with the State of Missouri.

2.1 Project Specifications

- 2.1.1 Field Survey and Mapping Accuracy Standards: Horizontal Control work can be performed using either standard Total Station surveying techniques or Global Positioning System (GPS) techniques meeting the specification requirements outlined in this scope.
- 2.1.2 At a minimum, horizontal control work generated using Total Station traverse surveys will comply with and meet or exceed Second Order – Class II standard of accuracy for geodetic control as established by the FGDC Geospatial Positioning Accuracy Standards, Part 4: Standards for Architecture, Engineering, Construction (A/E/C), and Facility Management. For horizontal control surveys performed using GPS technology the relative horizontal accuracy will conform to the FGDC Geospatial Positioning Accuracy Standards, Part 2: National Standard for Spatial Data Accuracy Standards
- 2.1.3 At a minimum, vertical control work generated using Total Station or differential level surveys will comply with and meet or exceed Third Order, as outlined in the FGDC Geospatial Positioning Accuracy Standards, Part 4: Standards for Architecture, Engineering, Construction (A/E/C) and Facility Management. . For vertical control surveys performed using GPS technology the relative vertical accuracy will conform to the FGDC Geospatial Positioning Accuracy Standards, Part 2: National Standard for Spatial Data Accuracy Standards
- 2.1.4 At a minimum, other surveys and the mapping produced from these surveys, including the utility location surveys and the site mapping topographic surveys for this project will meet or exceed FGDC Part 4 Standards
- 2.1.5 The Consultant will provide coordinates of all points X, Y, and Z to the nearest .01 foot. The units of measurement for this project will be in US Survey Feet.

2.2 Control Surveys

- 2.2.1 The City surveyor will require the survey horizontal and vertical control to be based on City data and checked by the City surveyor.

2.3 Topographic Survey

- 2.3.1 The project specifications for the topographic survey include the following:

Provide true three-dimensional (3-D) file of topographical surface showing vertical and horizontal controls (i.e., x-y coordinates and z elevations). A Digital Terrain Model (DTM) will be compatible with Geopak software.

Show elevations as spot elevations and contours. The contour interval will be 1-foot. Contours will be accurate to within one-half the contour interval (i.e., 0.5-foot).

The Consultant will provide all survey coordinates of all points X, Y, to the nearest 0.01 foot. Surface water points will be measured and reported to 1 foot of their true horizontal location. Spot elevations will be measured and reported to the nearest 0.01 foot.

The Consultant will use appropriate 50' survey grid to achieve the performance and accuracy specifications as listed above. Survey grid will be sufficient to develop true and accurate maps and data files adequate for generating a 3-D topographic surface of the specified project limits.

Provide maps and files of topographic surface, existing structures, and other pertinent site information. Project deliverable requirements for base maps, 3-D files of topographical surface (x, y, z format), and ASCII file with x, y, z point inscriptions are specified in a following section of this SOW.

Develop the topographic surface based on physical ground survey, or global positioning survey (GPS) data.

Surveying will include spot elevations, breaklines, water table, bottom elevations of the drainage ditches, and existing structures (e.g., roads, culverts, utility lines, and drainage features, monitor wells, fire hydrants, etc.).

Survey information based on English units (i.e., feet).

Two permanent reference points will be established for the site.

2.4 Project Record Documents and Quality Assurance

The Consultant will maintain a complete, accurate log of survey work as it progresses. Original field notes, computations, and other records for the

purpose of surveying will be recorded in field books. In addition, information collected and stored by use of data loggers will be made available to the City.

Survey and related work will be performed and signed by a qualified land surveyor registered in the State of Missouri.

2.5 Reference Points and Surveys

Topographic surveying will be conducted by the Consultant using State Plane Coordinate System.

2.6 Project Deliverable Requirements

2.6.1 The Consultant will provide the following information to the City:

- 3-D computer file of topographical surface (x, y, z format).
- ASCII file with x, y, z point inscriptions.
- Base maps of final topographic surface, existing structures, and other pertinent site information. Maps be 22-inch by 34-inch minimum size sheets and scale will be 1" = 50'. Submit two sets of base maps, of which one set will be reproducible.
- Each deliverable is due 10 calendar days from completing the field work and 3 days after receiving comments on draft copy.
- Computer files will be on compact discs.
- Provide pdf files for each drawing.

TASK 3 – Roadway Design

3.1 Development of Conceptual Corridor Plan

3.1.1 Stakeholder Group Formation

The Consultant will work with the City to identify essential stakeholders. The stakeholders will serve in an advisory capacity to the Consultant. City staff, elected officials, local business owners, homeowners and other key leaders will be invited to participate.

The purpose of this task is to gain a basic understanding of the existing conditions, the sentiment of local stakeholders, and the collective vision for the new West Broadway. The desired outcome is to have a firm understanding of the existing conditions and stakeholder preferences so as to incorporate them into subsequent concept development.

3.1.2 Preferred Concept Development

The Consultant will draft a concise problem statement for the project based on the key issues previously identified through stakeholders and via field observation. The problem statement will be a maximum 3 pages in length and will identify the key elements within the project area that ought to be addressed by any future improvements. The problem statement will be vetted with the Stakeholders for final endorsement before moving forward with concept development.

The Consultant will draft measurable criteria by which future concept ideas will be evaluated. The criteria will evolve from the Stakeholder feedback and from the Problem Definition Statement.

The Consultant will develop a maximum of five (5) strategies for the new West Broadway. Themes, slogans, general architectural forms for streetscape and buildings, and risk assessments will be concisely packaged in memorandum-format for review and comment from the Stakeholders. After an initial evaluation, three (3) strategies will be selected for further consideration. The three strategies will be evaluated according to the already established criteria. The Consultant will meet with the Stakeholders to discuss the concepts and to build consensus around the preferred strategy.

Each concept will be measured against the predefined evaluation criteria, and a comparison matrix will be prepared to demonstrate the tradeoffs associated with each. These comparisons will be qualitative (not quantitative) in nature. For example, cost comparisons will reflect relative differences between concepts, not specific dollar amounts for each concept. The comparison matrix and additional commentary will be vetted with the Stakeholders for endorsement.

A maximum of twenty (20) E-size exhibits will be prepared that display the various concepts.

The Consultant will prepare a recommendation for the preferred concept based on the aforementioned activities, and will present that recommendation in memo format to the Stakeholders.

3.2 Perform Preliminary Design

3.2.1 The Consultant will use the Conceptual Corridor Plan to begin the design of the West Broadway Project. The Consultant will develop the plan set to an approximate 30% level. The Preliminary Plan Set will include Title Sheet, Typical Sections, Preliminary Plan/Profile Sheets, Preliminary Drainage design, and Preliminary Cross Section Sheets.

3.2.2 The Preliminary Plan Set will be submitted to the City for Review.

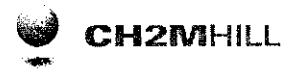
3.3 Opinion of Cost

- 3.3.1 At the Preliminary Design Stage, develop an opinion of cost using Bid Tabs Professional.

3.4 Plotting and Miscellaneous Deliverables

- 3.4.1 Provide the City with five complete sets of the Conceptual Corridor Plan on half size (11"X17") paper plots of the conceptual sheets.
- 3.4.2 Provide the City with five complete sets of the Preliminary Plans on half size (11" x 17") paper plots of the preliminary plans sheets. Provide the City with preliminary opinion of cost printed on 8 ½" x 11" paper and then bound

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

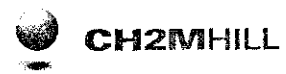
Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
Top Task 01 -					
Task 01.01.01 - Core Team Meetings					
Project Manager	5	HOURS	10	49.40	494.00
Project Manager	5	HOURS	10	51.38	513.80
Project Engineer	4	HOURS	10	46.36	463.60
Project Engineer	4	HOURS	10	48.21	482.10
			40		1,953.50
Total Overhead					3,426.44
					3,426.44
			40		5,379.94
					5,379.94
Miscellaneous Travel Exp.		DOLLARS	40	1.00	40.00
Travel to Meetings		MILES	204	0.59	119.34
					159.34
					5,539.28
Profit/Fee on Labor					591.86
					591.86
					591.86
					6,131.14
Task 01.01.02 - Utility Meetings					
Project Manager	5	HOURS	6	49.40	296.40
Project Engineer	4	HOURS	6	46.36	278.16
			12		574.56
Total Overhead					1,007.78
					1,007.78
			12		1,582.34
					1,582.34
Misc. Travel Exp		DOLLARS	20	1.00	20.00
Travel to Columbia		MILES	152	0.59	88.92
					108.92
					1,691.26
Profit/Fee on Labor					174.04
					174.04
					174.04
					1,865.30

Schedule of Hourly Billing Rates

Form No. 1

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
Task 01.01.05 - Stakeholder Involvement Meetings					
Project Manager	5	HOURS	24	49.40	1,185.60
Project Engineer	4	HOURS	24	46.36	1,112.64
			Subtotal for Labor		2,298.24
Total Overhead					4,031.11
					Subtotal for Overhead
					4,031.11
			Subtotal for Labor	48	6,329.35
					Subtotal for Labor and Overhead
					6,329.35
Air Travel		DOLLARS	400	1.00	400.00
Mileage for 3 meetings		MILES	456	0.59	266.76
Misc Travel Exp		DOLLARS	60	1.00	60.00
					Subtotal for Travel
					726.76
					Subtotal for Costs
					7,056.11
Profit/Fee on Labor					696.17
					Subtotal for Profit/Fee
					696.17
					Subtotal for Markup
					696.17
					Subtotal for 01.01.05 - Stakeholder Involvement Meetings
					7,752.28
Task 01.02.01 - Subconsultant Management					
Project Manager	5	HOURS	8	49.40	395.20
			Subtotal for Labor		395.20
Total Overhead					693.18
					Subtotal for Overhead
					693.18
			Subtotal for Labor	8	1,088.38
					Subtotal for Labor and Overhead
					1,088.38
					Subtotal for Costs
					1,088.38
Profit/Fee on Labor					119.70
					Subtotal for Profit/Fee
					119.70
					Subtotal for Markup
					119.70
					Subtotal for 01.02.01 - Subconsultant Management
					1,208.08
Task 01.02.02 - Utility Coordination					
Project Manager	5	HOURS	2	49.40	98.80
Senior Engineer	3	HOURS	3	71.63	214.89
Engineer	7	HOURS	24	33.87	812.88
			Subtotal for Labor		1,126.57
Total Overhead					1,976.01
					Subtotal for Overhead
					1,976.01

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
			Subtotal for Labor		3,102.58
			29		
			Subtotal for Labor and Overhead		3,102.58
			Subtotal for Costs		3,102.58
Profit/Fee on Labor					341.31
			Subtotal for Profit/Fee		341.31
			Subtotal for Markups		341.31
			Subtotal for 01.02.02 - Utility Coordination		3,443.89
Task 01.03.01 - Administer Contract and Subcontract					
Project Manager	5	HOURS	5	49.40	247.00
Project Engineer	4	HOURS	2	46.36	92.72
Contract Administrator	6	HOURS	8	41.78	334.24
Accountant	19	HOURS	3	23.87	71.61
			Subtotal for Labor		745.57
Total Overhead					1,307.73
			Subtotal for Overhead		1,307.73
			Subtotal for Labor	18	2,053.30
			Subtotal for Labor and Overhead		2,053.30
			Subtotal for Costs		2,053.30
Profit/Fee on Labor					225.86
			Subtotal for Profit/Fee		225.86
			Subtotal for Markups		225.86
			Subtotal for 01.03.01 - Administer Contract and Subcontract		2,279.16
Task 01.03.02 - Cost Control System					
Project Manager	5	HOURS	5	49.40	247.00
Accountant	19	HOURS	6	23.87	143.22
			Subtotal for Labor		390.22
Total Overhead					684.45
			Subtotal for Overhead		684.45
			Subtotal for Labor	11	1,074.67
			Subtotal for Labor and Overhead		1,074.67
			Subtotal for Costs		1,074.67
Profit/Fee on Labor					118.20
			Subtotal for Profit/Fee		118.20
			Subtotal for Markups		118.20
			Subtotal for 01.03.02 - Cost Control System		1,192.87
Task 01.03.03 - Monthly Progress Report					

Schedule of Hourly Billing Rates

Form No. 1

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

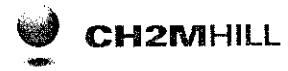
Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
Project Manager	5	HOURS	1	49.40	49.40
Accountant	19	HOURS	2	23.87	47.74
		Subtotal for Labor	3		97.14
Total Overhead					170.39
		Subtotal for Overhead			170.39
		Subtotal for Labor	3		267.53
		Subtotal for Labor and Overhead			267.53
		Subtotal for Costs			267.53
Profit/Fee on Labor					29.42
		Subtotal for Profit/Fee			29.42
		Subtotal for Markups			29.42
		Subtotal for 01.03.03 - Monthly Progress Report			296.95
Task 01.03.04 - Monthly Invoices					
Project Manager	5	HOURS	1	49.40	49.40
Accountant	19	HOURS	2	23.87	47.74
		Subtotal for Labor	3		97.14
Total Overhead					170.39
		Subtotal for Overhead			170.39
		Subtotal for Labor	3		267.53
		Subtotal for Labor and Overhead			267.53
		Subtotal for Costs			267.53
Profit/Fee on Labor					29.42
		Subtotal for Profit/Fee			29.42
		Subtotal for Markups			29.42
		Subtotal for 01.03.04 - Monthly Invoices			296.95
		Subtotal for 01			24,466.62
Top Task 02 -					
Task 02.02 - Control Survey					
Allstate Consultants LLC - Surveying Subcontract		DOLLARS	2,253	1.00	2,253.00
		Subtotal for Subcontract			2,253.00
		Subtotal for Costs			2,253.00
		Subtotal for 02.02 - Control Survey			2,253.00
Task 02.03 - Topographic Survey					
Allstate Consultants LLC - Surveying Subcontract		DOLLARS	18,642	1.00	18,642.00
		Subtotal for Subcontract			18,642.00
		Subtotal for Costs			18,642.00

Schedule of Hourly Billing Rates

Form No. 1

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
Subtotal for 02.03 - Topographic Survey					18,642.00
Task 02.04 - Record Documents					
Allstate Consultants LLC - Surveying Subcontract		DOLLARS	12,645	1.00	12,645.00
Subtotal for Subcontract					12,645.00
Subtotal for Costs					12,645.00
Subtotal for 02.04 - Record Documents					12,645.00
Task 02.05 - Reference Points					
Allstate Consultants LLC - Surveying Subcontract		DOLLARS	1,422	1.00	1,422.00
Subtotal for Subcontract					1,422.00
Subtotal for Costs					1,422.00
Subtotal for 02.05 - Reference Points					1,422.00
Task 02.06 - Survey Deliverables					
Allstate Consultants LLC - Surveying Subcontract		DOLLARS	1,116	1.00	1,116.00
Subtotal for Subcontract					1,116.00
Subtotal for Costs					1,116.00
Subtotal for 02.06 - Survey Deliverables					1,116.00
Subtotal for 02					36,078.00
Top Task 03 -					
Task 03.01.01 - Stakeholder Group Formation					
Project Manager	5	HOURS	1	49.40	49.40
Land Scape Architect	5	HOURS	8	41.75	334.00
Public Involvement Specialist	3	HOURS	16	60.00	960.00
Subtotal for Labor					1,343.40
Total Overhead					2,356.33
Subtotal for Overhead					2,356.33
Subtotal for Labor					25
Subtotal for Labor and Overhead					3,699.73
Subtotal for Costs					3,699.73
Profit/Fee on Labor					407.04
Subtotal for Profit/Fee					407.04
Subtotal for Markups					407.04
Subtotal for 03.01.01 - Stakeholder Group Formation					4,106.77
Task 03.01.02 - Preferred Concept Development					
Project Manager	5	HOURS	8	49.40	395.20
Project Engineer	4	HOURS	80	46.36	3,708.80

West Broadway Corridor Improvements - Preliminary Design



Total Price Detail

Chargeable Tasks, All Budgets, without Budget Subtotals, without Period
Subtotals, without Estimating Frequency Subtotals

Description	Per Diem Code	Unit	Quantity	Rate	Price
Land Scape Architect	5	HOURS	40	41.75	1,670.00
Cadd Technician	13	HOURS	40	22.12	884.80
Public Involvement Specialist	3	HOURS	8	60.00	480.00
		Subtotal for Labor	176		7,138.80
Total Overhead					12,521.46
		Subtotal for Overhead			12,521.46
		Subtotal for Labor	176		19,660.26
		Subtotal for Labor and Overhead			19,660.26
		Subtotal for Costs			19,660.26
Profit/Fee on Labor					2,162.78
		Subtotal for Profit/Fee			2,162.78
		Subtotal for Markups			2,162.78
		Subtotal for 03.01.02 - Preferred Concept Development			21,823.04
Task 03.02.01 - Develop Preliminary Plans					
Project Manager	5	HOURS	8	49.40	395.20
Project Manager	5	HOURS	8	51.38	411.04
Project Engineer	4	HOURS	9	46.36	417.24
Project Engineer	4	HOURS	9	48.21	433.89
Engineer	7	HOURS	20	33.87	677.40
Engineer	7	HOURS	20	35.22	704.40
Junior Engineer	9	HOURS	24	23.89	573.36
Junior Engineer	9	HOURS	24	24.85	596.40
Cadd Technician	13	HOURS	40	22.12	884.80
Cadd Technician	13	HOURS	40	23.00	920.00
		Subtotal for Labor	202		6,013.73
Total Overhead					10,548.08
		Subtotal for Overhead			10,548.08
		Subtotal for Labor	202		16,561.81
		Subtotal for Labor and Overhead			16,561.81
POSTAGE&FREIGHT-CAN		DOLLARS	50	1.00	50.00
		Subtotal for Other Direct Expenses			50.00
		Subtotal for Costs			16,611.81
Profit/Fee on Labor					1,821.89
		Subtotal for Profit/Fee			1,821.89
		Subtotal for Markups			1,821.89
		Subtotal for 03.02.01 - Develop Preliminary Plans			18,433.70
		Subtotal for 03			44,363.51
		Grand Total			104,908.13

Schedule of Hourly Billing Rates

Form No. 1

Source
John Glascock



TO: CITY COUNCIL

FROM: City Manager and Staff



DATE: November 10, 2008

SUBJECT: Professional Engineering Services Agreement for the Historic West Broadway from Garth Avenue to West Boulevard Project

Fiscal Impact

- Yes
- No

Other Info.

Executive Summary

Staff has prepared for Council consideration a resolution authorizing the City Manager to execute an agreement with CH2MHill Consulting Engineers in the amount of \$104,908.13 to provide professional engineering services necessary to obtain preliminary plans for the improvements to West Broadway from Garth Avenue to West Boulevard.

The scope of services for Phase 1 includes three tasks which include: Project Management and Coordination, Surveying, and Roadway Design.

Discussion

The West Broadway corridor from Garth Avenue westward has had a long history among citizens as to what improvements, if any, are needed for possible upgrades. There have been past attempts by the City to propose changes to the current road configuration and cross section, however public sentiment has generally been to leave the road in its current condition.

In the March 6, 2006 Council meeting, representatives of the Neighbors of Historic West Broadway made a presentation to Council concerning numerous issues the neighborhood had faced the previous ten years. The issues involved public infrastructure in the neighborhood such as sidewalks, sanitary and storm sewers, and bike lanes/pedways. The Neighborhood wanted to take a proactive approach to dealing with these issues by presenting their vision of what the Historic West Broadway corridor should entail. The representatives had gathered signatures from 24 of the 30 neighbors in a three block area supporting the vision. They pointed out that due to the infrastructure repairs and City's award of a federal non-motorized grant they felt it was the appropriate time to bring the project forward.

A report on the project was prepared by staff and presented at the August 7, 2006 City Council meeting requesting that a Public Hearing be held. At the meeting it was determined that the project needed to be funded as a capital project and set the public hearing for September 18, 2006.

At the public hearing, staff reported meeting with the neighbors and their proposal for the improvement. Staff reported that they had received other proposals indicating the need for the improvements to include a five lane section. During the meeting several residents spoke in favor of a three lane section, and others felt the corridor needed to be widened to a five lane road to function more like a thoroughfare. After Council discussion, staff was directed to perform a traffic study to determine the appropriate width based upon engineering traffic analysis.

In January 2007, the City contracted with Crawford, Bunte, Brammeier (CBB) to perform the traffic study. The final report was completed in July, 2007 analyzing the entire Broadway corridor from Garth Avenue out to Fairview Road. The report broke the corridor into four different sections based upon geographic boundaries and those roadway sections likely to fit those sections. The four sections included: Garth Avenue to West Boulevard; West Boulevard to Clinkscapes; Clinkscapes to Stadium; and Stadium to Fairview. The report was posted on the City website and copies were made available to the public.

At the November 19, 2007 Council meeting, representatives of the Historic West Broadway Neighborhood spoke on behalf of the neighbors and presented a formal response to the traffic study. They indicated a positive response and offered minor revisions, mainly recommending a cross section slightly different than recommended in the study, such as grass strips behind the curbs and a narrower median.

In preparing the 2008 budget, monies from a previously identified West Broadway sidewalk (McBaine to West Boulevard) project were reallocated for this corridor project. In April, 2008, the Public Works Department sent out request for proposals to begin the design phase of project. The department interviewed four firms and selected CH2MHill based upon their understanding of the requirements of the project, their quality of work on previous City of Columbia projects, and their experience with similar projects. City staff has been negotiating with the firm and with Council concurrence, have agreed to a contract to perform services to provide preliminary engineering plans. The budget for the project is \$105,000.00 from Capital Improvements Sales Tax funds. The contract for the Phase I scope of work is \$104,908.13. The second phase which will complete final design and prepare bid ready documents is estimated at \$350,000.00 and will also include design to relocate the utilities. A funding source for phase II has not yet been identified.

SUGGESTED COUNCIL ACTION

Approval of the resolution.