



Department of Public Works

REQUEST FOR QUALIFICATIONS

FOR

*Engineering Design Services –
Whitecliff Service Bridge over Gravois
Creek*
STP-5602(609)

June 2009

One Detjen Drive Crestwood, Missouri 63126 • 314-729-4720 • Fax 314-729-4729
<http://www.ci.crestwood.mo.us>

**Request for Qualifications for
Engineering Design Services –
Whitecliff Service Bridge over Gravois Creek
City of Crestwood, MO**

The City of Crestwood, MO is soliciting qualifications for Whitecliff Service Bridge over Gravois Creek Design Services. This project has been selected for federal funding through the Transportation Improvement Program administered by the East-West Gateway Council of Governments.

SCOPE OF WORK

1. Design criteria and project planning will be in accordance with *Standard Specifications for Highway Bridges* and *A Policy on Geometric Design of Highways and Streets* as promulgated by the American Association of Highway and Transportation Officials (AASHTO) and as contained in the *Local Public Agency Manual* maintained by the Missouri Department of Transportation. The latest version of *Missouri Standard Specifications for Highway Construction* will be used for contract specifications, with appropriate modifications thereto by the Engineer.
2. The existing bridge is to be removed at the optimal time period to minimize traffic impacts during the project.
3. The Engineer will provide the Local Agency with professional engineering services hereinafter detailed for the planning and design for the replacement of said structure

I. Programming Phase

- A. Provide information and complete a Programming Data FIG III-1 LPA along with a project location map. The submittal letter should include a statement requesting that the project be classified as a categorical exclusion under the criteria in 23 CFR771. (If not completed by the City or MoDOT).
- B. Additional Forms and information that will be required to be submitted include the following:
 1. “Cultural Resources Assessment Questionnaire Form” and “Bridge Inventory Survey Form” to be submitted to the Missouri Department of Natural Resources.
 2. Complete the required information for the State Historic Preservation Officer assuming a new alignment and a construction cost over \$150,000.00. Section 106 coordination will involve a check with the State Historic Preservation Officer and Missouri State Historical Survey for any adjacent National Register of Historic Places (NHRP) properties as well as any known archaeological sites.
 3. Complete “Form AD-1006” to be submitted to the Soil Conservation Services.
 4. Complete and submit a U.S. Army Corps of Engineers “404 Permit” application form. An application for Section 401 Water Quality Certification Permit shall be completed and submitted to the Missouri

Department of Natural Resources. A letter shall also be submitted to the Missouri Department of Conservation requesting their review of the project area. (IF NECESSARY)

5. Complete and submit the required form and provide the support documentation, with assistance from the City, to request a "Section 4F" clearance from MoDNR for the use of the City's park land for this bridge replacement project. (A 4F clearance is needed if federal funds were used in the past to obtain any of the park property needed for the project.)

II. Field Surveys and Data Collection Phase

- A. Existing right-of-way and property lines shall be located.
- B. A survey baseline (and/or construction centerline) shall be established and be tied to the nearest section corner.
- C. Creek profile information, a minimum of 300 feet upstream and downstream of the bridge, shall be surveyed.
- D. Topography survey covering area sufficient for replacement of bridge.
- E. Roadway cross-sections shall be obtained at 25-foot intervals, a sufficient distance beyond the construction limits shall be used to determine drainage patterns and any other necessary cross-sections.
- F. Existing visible and marked utilities shall be located.
- G. Vertical Control: a project bench mark shall be established and tied to nearest USGS bench mark. Project elevations shall be issued on this newly established bench mark.
- H. Horizontal Control: at least three horizontal control points shall be established.

III. Preliminary Design Phase

After all field survey data has been obtained and platted, the Engineer shall provide drawings on 22" x 34" plan sheets containing the following information.

- A. Utility companies will be contacted to obtain copies of their individual record facility plans. Underground utilities will be field located by the utility companies and their locations picked up by the ENGINEER as part of topographic survey.
- B. A hydraulic study for the 25 and 100 year floods and the applicable waterway opening requirements. The hydraulic analysis will consist of gathering existing Gravois Creek data, modeling existing and proposed conditions, and developing a report to document the hydraulic analysis. Write a hydraulic report to record the hydraulic analysis performed on the bridge. The hydraulic reports and all hydraulic models will be submitted to MoDOT and MSD for approval. Complete a FEMA No-Rise Certificate based on the 100-year hydraulic study performed and the existing FEMA DATA, certifying that the proposed improvement will not

increase the FEMA calculated base flood elevation (if required). A single span structure will be designed.

- C. Typical structure and roadway sections showing the roadway width and side slopes.
- D. Review various sub- and super-structure bridge options providing the required hydraulic bridge opening.
- E. Assist the City with one (1) open-house style public meeting for this project. Staff the meeting and provide a PowerPoint presentation for use at the meeting, if required.
- F. Preliminary plan and profile at a scale that shows the plan clearly. Said plan to include the following:
 - 1. Field Survey Data, including detailed measurements of the existing bridge in the event that rehabilitation of the existing bridge is the most economical solution.
 - 2. Topographic information of the existing roadway and the creek.
 - 3. Existing property lines and easements (based on existing documents and field surveys).
 - 4. Existing utilities, including any known wells and individual waste systems.
 - 5. Proposed improvements.
 - 6. Creek channel modifications, if any.
 - 7. Preliminary roadway profile and creek flow line changes, if any.
 - 8. Roadway and channel cross-sections.
- F. Perform a scour analysis according to FHWA criteria for an off-system bridge.
- G. Apply to MoDOT for any required design variances. (If Necessary).
- H. Submit preliminary drawings to Local Agency and MoDOT for review and comment.
- I. Arrange for geotechnical investigation as required to determine foundation/footing requirements; cost to be included in estimated cost of proposed services.
- J. Provide Local Agency with preliminary estimate of construction cost. If the anticipated project costs are greater than the LOCAL AGENCY's budgeted amount, alternatives will be recommended, at no additional charge, for reducing project costs. The integration of the selected alternatives into the design shall be considered a part of this Contract.

IV. Final Design Phase

After receipt of approval of the preliminary plans from Local Agency and MoDOT, the Engineer shall prepare the final design. The final design shall include the following information.

- A. Cover Sheet with location map, sheet index, and legend of symbols.
- B. Plan and profile sheet at a scale of 1" = 20' horizontally and 1" = 5' vertically, showing existing topography, the proposed improvements including roadway reconnection, all existing and proposed easements, existing utilities and relocations, if required, creek channel modifications, construction limits, profile grade and creek flow line, and incorporate review comments from Local Agency, Army Corps of Engineers, and Missouri Department of Transportation.
- C. Typical creek channel sections (if modifications are required).
- D. Complete structure plans per AASHTO bridge design criteria, for HS 20-44 loading.
- E. All permanent and temporary easements and new right-of-way are to be shown on the plans.
- F. Final cross-sections of the proposed improvements at a scale of 1" = 10' horizontally and vertically at 50 foot intervals.
- G. Provide technical specifications including tabulations of bid quantities. Signed and sealed by a Professional Engineer.
- H. Submit final P,S&E, (Plans, Technical Specifications and Estimates) to Local Agency and MoDOT for review and approval.
- I. Provide a complete structural inventory data sheet and rating of the new structure with the P,S&E, including signed and sealed load rating calculations, and new Plate 14.
- J. Incorporate final comments from MoDOT and Local Agency into the plans and technical specifications.
- K. Utilities: The Engineer shall contact utilities that may be affected by this project, and shall ask utilities to make arrangements as necessary (temporary or permanent), that said utilities will not impede the contractor when he begins the project. Local Agency will help coordinate with utilities. This item shall be completed prior to advertising for construction bids.
- L. Final estimate of construction costs will be prepared along with final plan quantities. A complete record of the back up quantity calculations will be made available to LOCAL AGENCY.
- M. Plans to include "B" Sheet showing the breakdown of quantity locations.

- N. Provide an electronic copy of the Final Plans and Specifications to the Local Agency.
- O. Copies of plans, specifications, and bid documents for bidding shall be provided as a reimbursable expense.
 - Provide up to twenty (20) bound sets of full-size (22" x 34") plans sealed and signed by a Professional Engineer registered in the State of Missouri for bidding, construction and Local Agency use.
 - Provide three (3) sets of half-size (11" x 17") plans sealed and signed by a Professional Engineer registered in the State of Missouri, two bound and one unbound for Local Agency use.
 - One copy of the estimate of probable construction cost.
 - One copy of the list of bid items and estimated quantities.
 - Up to twenty (20) bound copies of the Project Specification for bidding and construction.
 - One unbound and reproducible copy of the Project Specifications including Job Special Provisions.
- P. Complete County Elevation Certificate.
- Q. Compile a list of qualified bidders, and inform them of the project.
- R. Answer contractors' questions during bidding and issue addenda (if required).
- S. Review submitted contractor bids, investigate low bidder(s) as required to evaluate their competency, and consult with Local Agency on award of bid.

RESPONSIBILITY OF THE CITY

1. Make available all pertinent project information
2. Provide the design consultant with the project requirements
3. Designate an authorized representative of the City
4. Render decisions on design issues as not to unreasonably delay the design consultant
5. Collect all necessary easements from property owners including temporary and access easements
6. Provide multiple copies of project manual and other bid documents (created by consultant) to bidders
7. Advertise for bids, release documents to bidders and evaluate bids
8. Furnish an on-site inspector for the project

EVALUATION CRITERIA

1. Project Approach (25%)

- a. Identify the necessary stages of each phase of the project. Including, but not exclusively:
 - i. Approach to data collection and analysis
 - ii. Informational meetings that might be necessary
 - iii. Project schedule, which concurs with the timeframes established above
2. Organizational Information (40%)
 - a. List of similar projects completed by the firm involving federal funds and coordination with members of the MoDOT Local Roads Team
 - b. List of firm staff, principals and associates that will be assigned to the project.
 - i. List of similar projects completed by each staff member (while with current or previous firm), specifically those involving federal funds and coordination with members of the MoDOT Local Roads Team
 - c. Identification and qualifications of other consultants or subcontractors
 - d. Staff availability chart for the proposed timeframe of the project
3. Professional Services Qualifications (25%)
 - a. Qualifications of staff assigned to project
 - b. Potential for continuity of staff throughout the contract
4. Other (10%)
 - a. A preliminary evaluation of the project site.
 - i. Potential alignment, design speed or other concepts
 - ii. Potential problem areas that may require additional detail of design which is not readily identified
 - b. Any information regarding the firm's capabilities or special experience, other than that listed above, that is to be included in the evaluation process

SUBMITTAL REQUIREMENTS

Submit one (1) copy of the qualifications including at a minimum all of the items outlined in the evaluation criteria above. RFQ response shall be limited to five single-sided 8-1/2" x 11" pages with a minimum font size of 10. No elaborate special presentation brochures, color pictures, etc. are expected.

CONTRACT APPROVALS

Approval of a final contract between the City and the design consultant, pursuant to this Request for Qualifications and the firm's response, is subject to the approval of the Crestwood Board of Aldermen. A copy of the City's standard contract form is attached to this proposal. The selected firm's fee proposal will be attached as an exhibit to this contract. The format of this contract is not negotiable.

SUBMITTAL DATE

Response to this Request for Qualifications should be submitted by 4:00 PM, Tuesday, June 30, 2009 to:

Dzenana Mruckovski
City of Crestwood
1 Detjen Drive
Crestwood, MO 63126

Attn: Whitecliff Park Service Bridge over Gravois Creek

CONTRACT AWARD

The City of Crestwood Department of Public Works will evaluate and rank responses to the Request for Qualifications based on the established evaluation criteria. Finalists may be invited to interview prior to a recommendation for selection. Recommendation for contract award will be contingent on successful negotiation of contract terms and approval by supervising agencies.

The City of Crestwood reserves the right to award a contract to the firm or firms that, in the opinion of the City, is most responsive to this RFQ and best meets the City's requirements. The City reserves the right to reject any and all proposals and to waive any formality. If a fee cannot be successfully negotiated with the selected firm, the City reserves that right to negotiate with the next firm listed in the qualifications rankings.