

A REQUEST FOR PROPOSAL FOR PROFESSIONAL SERVICES CONTRACT

Department of Highways Professional Services Procurement Bulletin 2019-11 Statewide Capacity and Safety Analysis

This document constitutes a Request for Proposals for Professional Service Contract from qualified individuals and organizations to furnish those services as described herein for the Commonwealth of Kentucky, Department of Highways.

I. PROJECT DESCRIPTION

Project Description – Consulting services are needed to perform various tasks involving traffic and safety data collection and analysis. Consultant services may be utilized to provide capacity analysis using the latest version of Highway Capacity Software (HCS) and micro-simulation models using software tools such as VISSIM. Consultant services may also utilize Highway Safety Manual (HSM) methodologies to analyze safety performance and to calculate Benefit/Cost ratios. Two (2) consultants will be selected.

II. PROJECT INFORMATION

Project Manager – Tracy Lovell, P.E.

User Division – Division of Highway Design

Approximate Fee – \$400,000 Upset Limit each consultant.

- Two (2) Consultants will be selected to provide services.
- Work will be assigned via Letter Agreement, not to exceed \$100,000 per Letter Agreement (Lump Sum).
- Each Consultant will be assigned specific tasks to perform. Task assignments will be made by Letter Agreement. Various services are anticipated, as indicated in Section V, Scope of Work.

Project Funding – State and Federal

Contract Term – Two (2) years

III. PURPOSE AND NEED

To collect, review, or analyze traffic data that will support project development decisions such as alternative selection and operational improvements. To collect and analyze safety data that will support the decision-making process and improve the effectiveness of countermeasures to reduce the number and/or severity of crashes and to more effectively manage the funds available.

IV. DBE REQUIREMENT

None

V. SCOPE OF WORK

The selected Consultants must possess the expertise and capacity to be able to build, run, and perform all of the traffic engineering tasks listed below:

Traffic Data Analyses and Simulation – This work will involve the utilization of professional traffic engineering expertise to analyze traffic flow in congested or crash prone areas, to provide performance measures for alternative comparison and analysis, and to make recommendations to solve traffic operational problems and/or to improve traffic flow. Procedures and methodologies consistent with the most recent edition of the Highway Capacity Manual (HCM) should be used as the basis for traffic engineering. Typically, peak hour data will be analyzed. The analysis should employ, as necessary, traffic engineering tools (KYTC compatible version), such as the latest version of HCS and may be supplemented with computer simulation models with software tools such as VISSIM to complete this work. The analysis may require traffic data collection, including but not limited to speed, volume, classification, turning movements, travel time, maximum queue lengths, etc.

Congestion and Performance Management – This work may involve the use of professional traffic engineering, data management and operations expertise to develop methodologies to calculate performance measures and calculation of measures; identify and quantify congested segments; and recommend improvements to mitigate congestion. Performance measures, or measures of effectiveness (MOEs), may include volume/capacity ratio, level of service (LOS), vehicular delay, queue length, and travel time or speed. Recommendations should include analysis needed to estimate improvement and quantify Return on Investment. The consultant may be expected to document their findings in report form depending on the level of task assigned.

Model Development Oversight and Training – This work will involve review of traffic models developed by others. The review may include geometrics, signal function & timing, vehicle classification and characteristics, driver behavior characteristics, and other parameters representative of the driving public in the study area. Base condition models will be reviewed after calibration and validated based on field measured volume, driver behavior parameters, vehicle class, travel time, delay, and queueing. Defaults as well as user input values utilized in all models shall be documented. This work may also include training others in the development of traffic models.

Safety and Operational Studies – This work may involve the collection and review of crash data; traffic volume data; roadway/asset inventory; alignment and design data; and the performance of operational and safety analyses. This may range from compilation of general crash data statistics to filtering and categorization of crash data based on crash types, pavement conditions, lighting conditions, time of day, time of year, etc. The goal is to identify any crash trends that could possibly be mitigated through the implementation of a specific countermeasure. The consultant should be able to perform and utilize methodologies in the Highway Capacity and Highway Safety Manuals and related analysis and design software with resources such as the Crash Modifications Factors (CMF) Clearinghouse and the Interactive Highway Safety Design Module (IHSDM). This effort may include field investigations, research, analysis, summarization and/or recommendations regarding the specific issue(s) being reviewed and studied, cost estimates (including costs for Preliminary Engineering, Right of Way, Utility Relocation, and Construction phase costs) and calculation of Benefit-to-Cost for safety improvements. The consultant may be expected to document their findings in report form depending on the level of task assigned. This

work may also include training others and reviewing the work of others in the development of the safety analysis.

VI. SPECIAL INSTRUCTIONS

Two (2) firms will be selected to provide these services for a period of two (2) years with no new work assigned after the two year period, although the contract may be extended for time to complete work already assigned. Contracts will have an upset limit of \$400,000. Once the upset limit is reached or the two year term has expired, services will be re-advertised and no additional Letter Agreements will be executed under the contract. Contracts will not be modified to increase the upset limit or extended for time to assign new work. No Letter Agreement shall exceed \$100,000 without written approval from the State Highway Engineer.

The Selection Committee will randomly draw from the pool of selected Consultants and list in consecutive order to determine the initial order for which projects will be assigned. Projects will generally be assigned on a rotational basis. The Department reserves the right to select one of the firms outside of the assignment order for a particular project if it is to the benefit of the Department. That firm, if selected out of order, will be skipped in the rotation when their turn comes and the regular order will be followed thereafter. The Division of Highway Design reserves the right to group multiple projects together as one offering if it is advantageous to the Department. The Department may also add additional work to an existing Letter Agreement, if needed. A firm will not be offered an additional project until the remaining firms on the list have been offered a project. If a firm declines to accept a project or does not respond to an invitation to perform services for a project within five (5) days, or the Department and Consultant cannot agree on reasonable scope of work and fee for services, documentation shall be placed in the project files and the next firm on the rotating list shall be offered the project.

The Department may retain any of the services advertised in this document to be performed by in-house state forces.

Instructions for Response to Announcement can be found at:

<https://transportation.ky.gov/ProfessionalServices/Pages/Respond-to-an-Announcement.aspx>

VII. ADDITIONAL INFORMATION

Selected Consultants must have the capability to collect and analyze the data as well as the capability to work with the Department's Highway Information System (HIS) database and GIS database. In general, the data may be transmitted electronically in standard KYTC formats. It is expected that frequent coordination between the consultant and the Department's User Division will be necessary for each specific task.

VIII. PREQUALIFICATION REQUIREMENTS

To respond to this project, the Consultant project team must be prequalified in the following areas by the response due date of this advertisement.

ROADWAY DESIGN

- Advanced Traffic Engineering Design & Modeling
- Rural Roadway Design
- Urban Roadway Design

TRANSPORTATION PLANNING

- Traffic Data Collection
- Traffic Forecasting

IX. PROCUREMENT SCHEDULE

Dates other than Response Date are tentative and provided for information only.

- Advertisement Date – May 14, 2019
- Response Date – June 5, 2019 by 4:30 PM ET (Frankfort Time)
- First Selection – June 10, 2019
- Final Selection – June 26, 2019
- Contract Scoping Conference – July 3, 2019
- Notice to Proceed – August 22, 2019

X. PROJECT SCHEDULE

Individual project schedules will be by Letter Agreement on a project-by-project basis.

XI. EVALUATION FACTORS

1. Relative experience of consultant personnel assigned to project team with traffic engineering projects for KYTC and/or for federal, local or other state governmental agencies. (20 points)
2. Past record of performance on project of similar type and complexity. (15 points)
3. Project approach and proposed procedures to accomplish the services for the project. (10 points)
4. Capacity to comply with project schedule. (10 points)
5. Knowledge of the locality and familiarity of the general geographic area. (2 points)

XII. SELECTION COMMITTEE MEMBERS

1. Tracy Lovell, P.E., User Division
2. Jill Asher, P.E., User Division
3. Wendy Southworth, P.E., Secretary's Pool
4. Dane Blackburn, P.E., Secretary's Pool
5. Cole Mitcham, P.E., Governor's Pool