

# Memorandum

## City of Lawrence

### Public Works

TO: Dave Corliss, City Manager  
FROM: Shoeb Uddin, City Engineer  
CC: Chuck Soules, James Risner, David Woosley, James Wisdom, John Williams  
Date: November 18, 2009  
Re: **6<sup>th</sup> Street ITS project, City Project No. PW0823**  
**Engineering Services Agreement**

#### Introduction

Intelligent Transportation system (ITS) is a relatively new technology which has been effective in improving safety and efficiency of the transportation system. The fundamental philosophy of ITS is that the roadway infrastructure and the traffic (vehicles, pedestrians and bicyclists) perform as an integrated system.

The main objective of the 6<sup>th</sup> Street ITS project is to develop a closed loop traffic signal system along certain main thoroughfares in the city including 6<sup>th</sup> street (from Massachusetts to Iowa) and Iowa street (from 6<sup>th</sup> to 23<sup>rd</sup>). The purpose of the closed-loop traffic signal system is to monitor and optimize traffic flow. The project will also include installation of central control hardware/software, video screens, Building modifications and related Intelligent Transportation Devices. The fiber optic communication system will assist and improve the emergency response by Police and Fire. [See ITS memo, dated March 03, 2009 for details]

#### Project History / Status

- On July 22, 2008, the City Commission approved Resolution 6778 ordering the improvements for the 6<sup>th</sup> street ITS project and authorizing the issuance of General Obligation Bonds for the maximum principal amount of \$250,000.00.
- ITS Set-Aside Project Agreement between KDOT and the City of Lawrence was executed on March 12, 2009.
- In June, 2009, city staff received Statement of Qualifications from 5 consulting engineering firms to provide Engineering Design Services for this project.
- September 08, 2009 – City Commission authorized staff to negotiate an Engineering Services Agreement with Olsson and Associates.

#### Engineering Design Services - Scope and Fees

The major items in the scope of Engineering Design Services include Engineering Design, Preparation of Construction Plans & Project Specifications, and Construction Cost Estimates. In discussion with the consultant regarding scope of services and the associated fees, staff identified several areas where consultant services can be complemented by city staff. With that understanding, the scope of services was modified and fee was reduced by \$21,836.00 [Exhibit A shows details of reduction in fees through negotiation with the consultant]. The tasks identified in the consultant's scope of services are listed below.

- Project Meetings and Coordination
- Field Investigation / Inventory
- Multiple Users Evaluation
- Traffic Control Software
- Traffic Operation Center (TOC) Evaluation
- Infrastructure Design / Plans Package Preparation
- Fiber / Network Design
- CCTV Evaluation and Design
- Technical Specifications
- Bidding Phase Services
- Construction Administration Services

Total negotiated Fee for Engineering Design Services (consisting of the above mentioned tasks) is \$57,124.00 (12.69 % of the net construction cost) and is within the acceptable range for projects of similar scope and complexities. KDOT has reviewed consultant's proposal and has determined the Scope of Work and Fees to be "in the ball park for consultant fees for an ITS project."

### **Project Schedule**

- Engineering Design and Construction Plans complete by March 2010
- Bid in April / May, 2010
- Construction Begin: June / July, 2010
- Construction Completion: Oct. / Nov. , 2010

### **Project Cost/ Funding**

Total estimated cost for this project, including construction and engineering design services, is \$500,000.00 and will be financed through a 50/50 contribution by KDOT and the city. Therefore, city's matching share for this project is \$250,000.00. The cost of Engineering Design Services is part of City's 50% matching funds.

City staff has been in contact with the County and KU officials and has discussed the potential for partnership, cost-sharing and extending the scope of this project. Cities in the Kansas City metro area have successfully forged partnership among public agencies providing the benefits of fiber optic communication to all partners. During the Design phase, the potential for such partnership with KU, DG County and other public / private entities will be fully explored.

### **Action Request**

Authorize the City Manager to execute an Agreement with Olsson and Associates for \$57,124.00 to provide Engineering Design Services for 6<sup>th</sup> Street ITS project.

### **Attachments**

- Exhibit A - Scope and Fee Negotiation Summary
- Exhibit B - Project Location Map
- Exhibit C - ITS memo, dated March 03, 2009

# **Exhibit A**

## **Scope and Fee Negotiation**

- **Project Meetings and Coordination:** In discussion with the consultant, it was determined that city staff would assist the consultant in QA/QC and coordinating the project with KDOT resulting a reduction of \$5,887.00 in the Design Fees.
- **Field Investigation / Inventory:** City staff will provide all existing inventory information to the consultant. Consultant fee for this work seems reasonable; no reduction in Fees.
- **Multiple Users Evaluation:** Staff will lead this task by taking on the responsibilities of contacting other agencies, conducting meetings and scope out the details of agreements as to the sharing of the Fiber Optic infrastructure. As a result, the consultant reduced the Design Fee by \$6,147.00
- **Traffic Control Software:** Staff will assist the consultant in performing this task. Reduction in fees: \$1,576.00
- **Traffic Operation Center (TOC) Evaluation:** Reduction in fees: \$840.00
- **Infrastructure Design / Plans Package Preparation:** Staff will perform some of the tasks listed under this item, e.g. Compiling GIS Base Mapping, Coordinating with Utility companies etc. with a corresponding reduction of \$1,748.00 in Design Fees.
- **Fiber / Network Design:** This is a very important step in the design process. Design fee for this item seems appropriate and reasonable. No reduction in fees.
- **CCTV Evaluation and Design:** Reduction in Fees: \$200.00
- **Technical Specifications:** Fee seems reasonable; no Reduction in Fees.
- **Bidding Phase Services:** Reduction in Fees: \$1,051.00. Bidding for this project will be led by City Staff with some assistance from the consultant.
- **Construction Administration Services:** Reduction in fees \$2,817.00. Construction Contract will be administered by city staff. Consultant fees for this item will only be needed if there are issues / concerns during construction requiring significant modifications / revisions to the Engineering Design.
- **Mileage and Printing:** Reduction in fees: \$1,570.00

**Total Reduction in Fees: \$21,836.00**