

---

---

Request for Information

11-808

Addendum #1

9-9-2011

Traffic Signals, Roadway Lighting and Traffic Signage  
Maintenance, Repair, Installation and Engineering

City of Tulsa-Management Review Office

Issued On 8/31/2011  
Responses Due 9/23/2011

## Addendum #1

Please note the following changes which have been made for clarification to this Request for Information.

### Questions & Answers:

**Q1: What types and sizes of bulbs are used for highway and street lighting?**

A1: 100, 150, 200, 250, and 400W HPS. 175, 250, 400 and 1000W MH. 175W MV.

**Q2: What is the tallest fixture that must be accessed?**

A2: The tallest continuous fixtures are 50 feet. The tallest high mast towers are 150 feet.

**Q3: Are signs illuminated by LED or fluorescent lights?**

A3: Neither – they are predominately mercury vapor or metal halide with a few high pressure sodium.

**Q4: Does the city currently maintain all street lighting, or does the area power company maintain the street lights?**

A4: The City maintains all lights on highways and Interstates. The power company maintains all arterial and residential street lighting with the exception of some decorative street lighting, which is maintained by the City. The 6,458 lights referenced in the RFI are those maintained by the City and does not include the arterial and residential lighting. However, the arterial and residential lights are included in the \$1.2 million energy cost referenced in the RFI.

**Q5: Are there any plans to move to one type of controller for traffic signals?**

A5: Yes, we are standardizing on 170E controllers using Bi-Trans 233 software. Some intersections are running 170E in NEMA cabinets using an adapter base.

**Q6: Does the state of Oklahoma provide any assistance for municipalities to help purchase equipment?**

A6: No. The only time ODOT funds are involved is on a new construction project. Other than that there are no funds from the state to purchase equipment for maintenance.

**Q7: Do the traffic signals have LEDs or incandescent bulbs?**

A7: Most are LED's. Those that are not are in the process of being changed to LED's.

**Q8: Are there any CCTV cameras in the system or only VIVDS for the centralized signals?**

A8: There is one CCTV camera though there are plans to install more. However, the images of VIVDS are brought back over the network for all signals that are on-line.

**Q9: Does the city have a rough estimate of traffic signs within the city?**

A9: We do not have an estimate. Though we would take a guess that it would be upwards of

350,000.

**Q10: What is the breakdown of the 15 FTEs noted in the RFI?**

A10: 10 FTE – Traffic signal maintenance and operations  
3 FTE – Roadway lighting maintenance  
2 FTE – Traffic signal inspections and utility locations

**Q11: How many FTEs are on after hour call duty?**

A11: One employee to cover routine after hour issues that arise. If a larger event such as a storm occurs, additional employees are called in as needed.

**Q12: Who owns and services the illumination?**

A12: The City owns and services all the illumination on the highway and Interstate system. The power company owns and services the majority of illumination on arterial and residential streets. The exception is some isolated areas of decorative light, which is owned and serviced by the City. The 6,458 lights referenced in the RFI are those maintained by the City and does not include the arterial and residential lighting. However, the arterial and residential lights are included in the \$1.2 million energy cost referenced in the RFI.

**Q13: Are the lights referred to in the document city-owned?**

A13: Yes, all 6,458 lights referred to are City owned.

**Q14: Are there additional lights that are owned by others (i.e. DOT)?**

A14: The arterial and residential street lights are owned and maintained by the power company. All other lights are owned and maintained by the City. The DOT does not own or maintain any street lights or traffic signals.

**Q15: Have any or all of the streetlights been retrofitted to LED or induction?**

A15: No. We have not found an LED that can operate on the 480V system at the existing mounting height and pole spacing and still provide the required lumens. However, we are in the process of testing some.

**Q16: Have any or all of the traffic signals been retrofitted to LED?**

A16: Yes. Most are already LED and the rest are in the process of being changed out.

**Q17: When sign illumination is mentioned in the RFI, is this referring to highway signs?**

A17: Yes.

## Introduction

---

The City of Tulsa is soliciting responses to this Request for Information (RFI) from interested contractors available and willing to provide traffic signal, highway lighting, streetlight, and traffic signage maintenance, repair, and installation services for the City. The work includes the maintenance and repair of the City's existing and future highway and street lighting systems, traffic controls systems and traffic signage, including the provision of qualified personnel, vehicles, transportation, fuel, materials and equipment necessary to perform the work. The City is also interested in learning about possible traffic engineering services that Contractors may be in a position to provide. Partial responses are welcome.

In general, it is the intent of the City to review the responses to this RFI and consider them in the development of a strategic plan to improve the quality and efficiency of its traffic signals, signage, and roadway lighting operations. This is an opportunity for respondents to provide input to improve the system and ideas that may be used in the development of the specifications for any future procurement involving these operations.

## Information Response Submissions

---

Responses must be received by 4:00 p.m. on September 23, 2011, by:

**Mandy Molloy**  
**175 E 2<sup>nd</sup> St, Management Review Office,**  
**City Hall, 15<sup>th</sup> Floor**  
**Tulsa, Oklahoma 74103**  
[mmolloy@cityoftulsa.org](mailto:mmolloy@cityoftulsa.org)

Submissions can be mailed or emailed using the above information. If you choose to mail your RFI response, please include two copies.

Please note: It is solely the respondent's responsibility to ensure that the RFI response is received on time.

## Overview of the Current System

---

The City of Tulsa is approximately 186 square miles with a population of approximately 391,900 citizens.

The current inventory of highway and street lighting consists of 105 photo-electric controllers located primarily on state, U. S., and Interstate highways within the corporate limits of Tulsa:

### Highway and Street Lighting- 6,458 Total

Continuous- 4,640

High mast tower lighting- 453

Sign illumination- 713

Underpass (wallpack) lighting- 652

### Traffic Signals- 501 Total – (330 isolated, 171 centralized)

#### Controller Breakdown

- 270 signals- Controller Type 170 running a combination of Bi-Trans 233 and Cold Fire Firmware
- 231 signals- Controller NEMA, primarily Traconex 390CJ

Centralized Signals-The 171 centralized signals are part of the City's Bi-Trans QuicNet 4 signal system.

- 90 signals communicate over twisted pair in the CBD.
- 81 signals communicate over an Ethernet based, hybrid fiber-wireless system.
  - 74 operate in the 5.2 GHz - 5.7GHz spectrum under Motorola Canopy
  - 7 operate on a 2.4 GHz DSSS system.

With the exception of the 90 CBD signals, all signals (isolated and centralized) are fully actuated using either VIVDS or loops. Video is brought back to central for all VIVDS intersections that are on-line over Ethernet.

The City does not have an accurate inventory number for traffic signage across the City.

The City maintains and repairs assets utilizing 15 FTEs, not including engineering support and underground maintenance crews. The annual operations budget, excluding engineering support and underground maintenance crews, is roughly \$3.3 million. This number includes \$1.2 million for electrical energy for highway and street lighting. Traffic signal system energy costs total approximately \$250,000 per year. The City also uses limited contracts for some needed repairs and maintenance. With the current limited resources available to the City, its preventative maintenance is limited to routine checks of the traffic control units. City crews do not re-lamp on a set schedule and highway lighting runs on spot replacements.

## RFI Response Content

---

The City welcomes innovative ideas and strategies from interested respondents. The City is especially interested in those ideas that are based on best practices that have been demonstrated in other municipalities. Specific areas of interest include:

1. Creative ideas regarding preventative maintenance of the assets described in the “Overview of the Current System” section.
2. Strategies to provide the traffic signal, street lighting, and signage maintenance, repair, and installation and services more efficiently and effectively.
3. Ideas on equipment improvements, modifications and technology investments that improve efficiencies, including funding mechanisms.
4. Creative compensation models under which a Contractor would provide such services and/or equipment.
5. Ideas on traffic engineering services provided in support of the traffic signal and highway lighting contract.
6. Address the proposed structure of relationship between the City and firm, implementation, ongoing relationship and future business opportunities.

## RFI Submission

---

The overall goal of this RFI is to solicit ideas and information to improve the efficiency and effectiveness of traffic signal, highway lighting and traffic signage operations. Beyond responses to the questions listed in the previous section, other pertinent information provided by interested respondents will also be considered.

RFI response formats are at the discretion of the respondent, but should be concise and contain the following:

- Introduction of the firm presenting the RFI response, including contact personnel and specific experience with related services.
- Summary of the ideas presented in the RFI Response.
- Specific responses to the items listed in the “RFI Response Content” section of the RFI document.
- Any additional information relevant to the subject matter of this RFI.

**In addition to any specific responses your organization provides, you may also provide examples of bid invitations (or requests for proposal), contracts, terms and conditions, or other documents that address the topic. Include the names and locations of facilities where such bid-related documents have been used.**

## Special Terms & Conditions

---

1. All material submitted as part of the response to this Request for Information will be considered the property of the City of Tulsa.
2. The respondent will not be compensated for any expenses incurred in the process of responding to the RFI or, if requested, in submitting further information.
3. The City makes no guarantees as to how the information provided by respondents will be used, and does not commit to any resulting procurement process.

### Timeline

RFI Issued: 8/31/2011

Deadline for Written Questions: 9/07/2011

Target Date for City Responses to Written Questions: 9/13/2011

RFI Responses Due: 9/23/2011

Project Manager:

Mandy Molloy

175 E 2<sup>nd</sup> St, 15<sup>th</sup> Floor

Tulsa, OK 74103

[mmolloy@cityoftulsa.org](mailto:mmolloy@cityoftulsa.org)

(918) 576-5550

(918) 596-9010