



SCOPE OF SERVICES

Solicitation Number: CLMP189

Project Name: Traffic Management Center Operations Expansion Project

PROJECT FOR:

CITY OF AUSTIN, AUSTIN TRANSPORTATION DEPARTMENT, THROUGH ITS CONTRACT MANAGEMENT DEPARTMENT

PROJECT TITLE:

City of Austin Transportation Management Center Operations Expansion Project

OBJECTIVES OF THE PROJECT:

The Austin Transportation Department (ATD) seeks a qualified consultant for the staffing and operation of the City of Austin Traffic Management Center (TMC) located at 1501 Toomey Road in the City of Austin, Texas. The Consultant will provide staff and management services to actively manage the City's arterial streets (with an emphasis on downtown and critical arterial streets) and coordinate with transportation partners (e.g., Texas Department of Transportation, Central Texas Regional Mobility Authority) on a daily basis for a one-year period with three (3) one-year renewal options. The Consultant will also deliver standard operating procedures (SOPs) and efficiency/software enhancements (e.g., automated processes) that are compatible with the existing Kimley-Horn Integrated Transportation System (KITS) Advanced Traffic Management System (ATMS), and that facilitate an efficient TMC operation and ultimately, enhanced mobility for Austin's citizens, businesses and visitors. These services will be provided by Consultant personnel in combination with City staff.

The systems engineering and systems management support activities envisioned under this contract include:

- Active management of arterial streets during weekdays, weekends and special events.
- Development and implementation of standard operating procedures and software enhancements that lead to a sustainable and efficient TMC operation. All software enhancements shall be compatible with the existing KITS ATMS.
- Development and on-going administration of arterial performance monitoring, data integrity analyses and statistics reporting.
- KITS ATMS operation and monitoring.
- Signal timing plan development, implementation and assessment for weekdays, nights, weekends and special events including time of day, traffic responsive and adaptive control.
- Adaptive control system corridor monitoring.
- Operations and maintenance planning and program management support.

This project will entail the assignment of multiple professionals, as determined by the Consultant and approved by the City, to staff and manage TMC operations. The Consultant will assign an on-site TMC Manager that will be supported by City Staff and Consultant team. They will provide comprehensive support to the TMC operations staff throughout the duration of this project. It is envisioned that this role will be dynamic in nature and will be actively guided by the needs and priorities of ATD.

BACKGROUND:

As the City of Austin (COA) grows and the transportation infrastructure expands the need for expanded operations at the TMC has been recognized. Studies identify that approximately 110 people are relocating to the Austin region each day. The region also hosts hundreds of thousands of visitors annually. Keeping people and goods moving in this vibrant, fast-growing area is a complex task. This added population has put a strain on the City’s transportation infrastructure. The TMC is the central hub for the monitoring and control of the traffic signals and other traffic monitoring equipment for the City of Austin. The need for expanded operations at the TMC has been recognized. The TMC is currently manned for 11½ hours Monday through Friday and at various additional times during special events. This project will expand the hours of operation during the weekdays and special events and will add operations during the weekends.

ANTICIPATED SERVICES:

1. Administer Project Management

The Consultant will complete activities associated with management and oversight of the project. This includes the following responsibilities and tasks.

- Monthly Meetings
- Budget/Schedule
- Status Reports
- Additional Meetings
- Invoicing

2 Staffing

The TMC will be staffed between Consultant and City staff as shown in the table below. The Consultant will provide the appropriate level of technical expertise to properly manage the TMC, and will include a senior level traffic engineer (On-Site TMC Manager), mid-level operations, and junior-level staff to support operations. The On-Site TMC Manager (Project Professional) will possess a professional engineer license in the State of Texas and will have prior experience working in a TMC. In addition to the ability to post messages on dynamic message signs, adjust cameras, disseminate traveler information, Consultant staff will need to have the expertise to create and modify signal timing plans when City staff are not scheduled (e.g., weekends). Appendix A contains a proposed TMC staffing organizational Chart.

It is envisioned that the following minimum staffing levels will be utilized during these time frames:

Time of Week	Consultant Staff	City Staff
Weekday Peaks: 6am-10am, 4pm-8pm	2 operators, 1 manager	1 operator
Weekday Off-Peaks: 10am-4pm	1 operator, 1 manager	1 operator
Saturday: 9am-6pm	1 operator, 1 on-call manager	None
Sunday: 10am-6pm	1 operator, 1 on-call manager	None
Special Events	1 operator, 1 on-call manager	1 operator

3. Daily Activities

On a day-to-day basis, the Consultant will actively manage arterials and coordinate with partners. Activities include system monitoring and detection of system related malfunctions and traffic related incidents and respond in real-time, coordinating with partners operating freeways, transit, toll facilities, etc. Consultant shall make real-time signal timing adjustments, post traveler information on DMS and social media, track trouble calls, and prepare performance monitoring reports.

3.1 Traffic Signal Monitoring

- Monitor and actively manage traffic signal operations with focus on Central Business District (CBD), critical arterials as defined by the City, and frontage roads aligned with the major freeways.
- Monitor Adaptive Signal Control Corridors and adjust parameters in KITS as needed.

3.2 Traffic Signal Timing

- Make real-time adjustments to signal operations to reduce congestion and improve mobility.
- Under direction of COA Traffic Signal Systems Engineer, develop, implement, test and monitor new timing plans. For incident management, special events, construction and recurring congestion, this may involve the use of traffic signal optimization software such as Synchro.
- Assist with timing plan changes for special events as needed.
- Assist with development and implementation of traffic responsive and adaptive signal operations.

- Incident management including responding to, detecting and verifying incidents, emergency lane closures, coordinating with partners (e.g., TxDOT, Austin Police Department (APD), CTRMA).

3.3 Traveler Information

- Monitor, change and post new messages on DMS signs as appropriate.
- Post relevant traveler information on social media such as Twitter, Facebook and/or Instagram.

3.4 Maintenance Tracking

- Assist in tracking maintenance calls related to failed equipment, weather related failures, new construction activities, or routine maintenance. Monitor system and device performance and create log of performance issues for maintenance activities.

3.5 Performance Monitoring

- Prepare monthly, annual and as-needed performance reports that convey (1) actions taken by TMC to enhance mobility and (2) benefits to traveling public. These reports are expected to be easily interpreted using dash boards, infographics, charts, tables, etc.
- Analyze data to support decision making that leads to improved mobility and safety.

4. Special Events

During times of Special Events, a minimum of two (2) operators and one (1) on-call manager will be present at the TMC. Special Events will include at least the following:

- | | |
|-------------------------------------|------------------------------------|
| ▪ South by Southwest (SXSW) Events | ▪ Trail of Lights |
| ▪ UT Football Home Games | ▪ Friday after Thanksgiving |
| ▪ Austin City Limits Festival (ACL) | ▪ July 4 th Celebration |
| ▪ Formula 1 Race | |

5. Develop and Implement Standard Operating Procedures (SOPs) and Efficiency/Software Enhancements

The Consultant will work with the City to develop, document and implement refined processes and procedures that will address day-to-day operations, special events, and

incident response. This activity will be determined by the priorities identified by both the City and the Consultant and may include the following:

5.1 Daily Operations Procedures:

The existing TMC is operating based on a legacy of daily work activities (responding to citizen requests, programming signal controllers, etc.) with limited time available for active transportation management and documenting related procedures. The Consultant will develop and implement a complete document that defines day-to-day TMC operations.

5.2 Incident Standard Operations Procedures:

Complementary to the standard day-to-day operations is how the TMC staff addresses incidents. An example of an incident would be a major crash on I-35. This particular manual would identify the role/actions of the TMC and how the TMC supports regional response teams, such as identifying alternate routes around the incident, or implementing pre-planned signal timing plans. Coordination with other transportation partners such as TxDOT, APD, CTRMA is expected for this task.

5.3 Special Event Standard Operations Procedures:

Complementary to the standard day-to-day operations is how the TMC staff addresses special events, both planned and un-planned. An example of planned events would be SXSW, which is planned well in advance of the event. An example of an un-planned event could be a major public gathering blocking Congress Avenue. This particular manual would identify the role/actions of the TMC and how the TMC supports regional response teams, such as identifying alternate routes around an event, or implementing pre-planned signal timing plans. Coordination with other transportation partners such as TxDOT, APD, CTRMA is expected for this task.

5.4 Performance Measure Development, Tracking and Monitoring:

An annual report and monthly briefing will be developed documenting the benefits and costs of the TMC. It is envisioned that a third party, such as the University of Texas – Center for Transportation Research (UT-CTR), will develop the benefit-cost methodology in coordination with the Consultant for Consultant implementation.

Appropriate surveillance tools to proactively monitor system performance and device performance will be identified in collaboration with City staff. This project will develop special tools to automate routine processes, such as identifying trends in Critical Arterial operations (travel time reliability, stops, and/or number of malfunctions or service calls), that can be used to improve travel.

5.5 Data Management and Integrity Analyses:

The Consultant will develop a methodology and processes for validating the integrity of field data gathered by the ATMS. There is limited automation currently in place to confirm data availability and reliability. This task will aim to confirm functionality of the devices used to determine arterial health and validate integrity of data including detection, travel time, signal operations, DMS and CCTV. The Consultant will also explore opportunities to automate data management components. This may also include providing GIS services to support City staff during the project.

5.6 Maintenance Needs & Resolution Procedures Tracking:

The Consultant will work with the City to implement recommended maintenance activities, processes and procedures, and tracking/reporting functions. For example, the Consultant can help track maintenance calls related to failed equipment, weather related failures, new construction activities, or routine maintenance.

6 Software Enhancements

6.1 Software:

As determined on a case-by-case basis by City Staff, the Consultant will deliver desired software enhancements that will improve the operational efficiency of the TMC. Software enhancements or modifications shall be compatible with the KITS ATMS system.

7 Support

7.1 Meetings:

The Consultant will support existing and future City efforts to effectively managing traffic in the region. This will be accomplished by providing staff time to attend and participate as an extension of City staff at meetings with local agencies with the goal of coordinating efforts in the best possible way to increase mobility.

8 Potential Additional Tasks

8.1 Freeway and Arterial ITS Integration Support:

The Consultant may be asked to provide integration support services to the City to expand existing transportation management infrastructure and ITS devices. Areas of focus may include expanding existing infrastructure to include more signals, cameras,

travel time sensors, dynamic message signs, vehicle detection, additional workstations, remote access, etc.

8.2 Planning, Design, and Integration Assistance for New Technology:

The Consultant may be asked to work with City to assist with the planning, design, deployment and integration of new technology. For example, the Consultant may include cost/benefit reviews of the proposed system features/functionality, guidance on project phasing and overall system integration schedule, as well as general project oversight and guidance. The Consultant will be available to provide technical assistance when requested by the City.

PROPOSED PROJECT SCHEDULE:

This project is for an initial one year term contract with three (3) one year renewal options.

PROPOSED PROCUREMENT SCHEDULE

Pre-Response Meeting: September 14, 2015

Submittals Due: September 28, 2015

Interviews: October 28 or 29, 2015

City Council: November 19, 2015

Contract Executed: January 7, 2015

COST ESTIMATE:

The anticipated annual cost for these services is estimated at \$1.5M. The three (3) one year renewal options are contingent upon future operating budgets of Austin Transportation Department. The total not to exceed contract amount including the initial term and all renewal options is \$6M.

MAJOR AND OTHER SCOPES OF WORK:

Below is a list of the major scopes of work that the City has identified for this project.

****There must be representation for all major scopes of work listed in the prime's statement of qualifications. The experience of the firms listed to perform the Major Scopes of Work, whether a subconsultant or prime firm, will be evaluated under Consideration Item 6 – Major Scopes of Work – Comparable Project Experience.***

If the prime consultant intends to enter into a subconsulting agreement on a scope of work not listed below, the prime consultant is required to contact SMBR and request an updated availability list of certified firms in each of the scopes of work for which the prime consultant intends to utilize a subconsultant.

*** Major Scopes of Work**

Traffic and Transportation Engineering

Notes:

- Construction Inspection and Public Information and Communications are **NOT** a subconsultant opportunity . These services will be performed in-house or under a separate contract, if needed, and will be determined when project assignment is made.
- Participation at the prime or subconsultant level may create a conflict of interest and thus necessitate exclusion from any contracts resulting from the work performed in the design phase.
- If the City determines that a conflict of interest exists at the prime or subconsultant level, the City reserves the right to replace/remove the prime or instruct the prime consultant to remove the subconsultant with the conflict of interest and to instruct the prime consultant to seek a post-award change to the prime consultant's compliance plan as described in City Code § 2-9B-23. Such substitutions will be dealt with on a case-by-case basis and will be considered for approval by Small and Minority Business Resources (SMBR) in the usual course of business. The City's decision to remove a prime or subconsultant because of a conflict of interest shall be final.
- A consultant performance evaluation will be performed on all professional services contracts.
- Passing a Criminal Background Investigation will be required for all personnel working on this project.