

October 25, 2012

TO: Members of the MAG Management Committee

FROM: Eric Anderson, Transportation Director

SUBJECT: MAG TRAFFIC SIGNAL OPTIMIZATION PROGRAM REQUEST FOR
PROJECT APPLICATIONS

MAG is soliciting candidate projects for inclusion in the Traffic Signal Optimization Program (TSOP). The purpose of this program is to provide technical assistance to member agencies for improving traffic signal coordination and optimization. This program could also assist member agencies in the development of computer-based signal network models that are commonly used by agency staff to test and improve signal timing. The technical assistance will be provided by local engineering consulting firms, that are currently under contract with MAG, to provide on-call consulting services.

The TSOP has been championed by the MAG Intelligent Transportation Systems Committee in support of the goal to improve traffic signal operations across the region. Member agencies may submit either projects of a regional scale that involve two or more agencies OR may submit smaller single- or multi-agency projects. Regional projects may cost up to \$60,000 and single-/multi-agency projects may cost up to \$25,000. These projects do not require a local match. A total of \$400,000 was programmed for TSOP in FY 2012. In addition, a balance of \$73,000 was carried over from FY 2011. A previous call for FY 2012 projects in October 2011 resulted in 13 projects that are nearing completion. These projects involved eight (8) jurisdictions, at a total cost of \$230,000. The balance of \$243,000 is currently available for new projects.

If your agency would like to participate in the program, please submit an application for each of your candidate projects using the TSOP project application form provided with this letter (Attachment One). Additional information on the program is provided as a Q & A document (Attachment Two).

Please submit your project applications to MAG by **Friday November 9, 2012**, addressed to:

Traffic Signal Optimization Program
Maricopa Association of Governments
302 N 1st Avenue Suite 300
Phoenix, AZ 85003

Project applications may also be submitted via email to: tsop@azmag.gov. The application form may be downloaded from the MAG website at:
<http://www.azmag.gov/Projects/Project.asp?CMSID=1050&CMSID2=1138>

For additional information or if you have questions, please contact Sarath Joshua at (602) 254-6300.

cc: Intergovernmental Relations
ITS Committee

A Voluntary Association of Local Governments in Maricopa County

**2012 MAG TRAFFIC SIGNAL OPTIMIZATION PROGRAM
PROJECT APPLICATION FORM**

Agency Name		
Project Title		
Project Goal		
Project Description		
Please answer the following questions:		
1. Is this a regional TSOP Project? (YES/NO)		
If "Yes", please list participating MAG member agencies.		
a.	c.	
b.	d.	
2. Is this a single/multi-jurisdictional signal timing project? (YES/NO)		
If "Yes", please list participating MAG member agencies.		
a.	c.	
b.	d.	
3. Is this project limited to traffic data collection for use by agency staff in determining new signal timing? (YES/NO)		
How many weeks following the delivery of traffic data, would your agency staff require to determine new signal timing and to implement them in the field? <i>(This estimate is essential for developing the project schedule)</i>		<i>(max. 12 weeks)</i>
<i>(All stand-alone data collection projects must include a before-and-after study as part of the project scope.)</i>		

4. Please list signalized intersections addressed by the project.	
a. b. c. d. e. f. g. <i>(add more lines if necessary)</i> <i>(Provide a map identifying the intersections included in the project)</i> <i>(signal timing projects may be selected for before-and-after study)</i>	
Road/Corridor	<i>Major arterials along which the project will be located</i>
From	<i>Intersecting major arterial#1</i>
To	<i>Intersecting major arterial#2</i>
From	<i>Intersecting major arterial#3</i>
To	<i>Intersecting major arterial#4</i>
5. When were the intersection signal timing last updated?	
6. Existing conditions at intersections and along the corridors. (ie. LOS at intersections, along corridors, public complaints, traffic flow characteristics, activity centers, signal spacing, etc. For regional projects, please describe the regional significance of the project)	(Attach information)
7. Is this corridor presently coordinated? (YES/NO)	
8. If a 3-day SYNCHRO training is available, how many personnel (whose responsibility is directly related to signal timing) will your agency send to the training?	
9. Estimated project cost?	(\$60,000 budget limit for regional project, \$25,000 budget limit for others)
10. Estimated project duration?	
Agency Project managers (list project managers from each agency involved)	
Agency 1	
Name:	
Title:	
E-mail:	
Phone:	

Agency 2	
Name:	
Title:	
E-mail:	
Phone:	
Agency 3	
Name:	
Title:	
E-mail:	
Phone:	
Agency 4	
Name:	
Title:	
E-mail:	
Phone:	
<p><i>Please send your applications to TSOP@AZMAG.GOV</i></p> <p><i>If there are any questions about this form, please contact:</i></p> <p><i>Leo Luo, P.E., ITS & Safety Engineer, MAG at (602) 452-5072 or lluo@azmag.gov</i></p>	

2012 MAG TRAFFIC SIGNAL OPTIMIZATION PROGRAM

Questions & Answers

What types of projects are eligible for the TSOP?

The goal of this program is to improve traffic signal operations. Therefore, only projects that will result in improvements to traffic operations through optimized signal timing and training will be considered. Four types of projects will be carried out under this program:

- 1. Regional TSOP Projects** – Projects of a regional scale will receive the highest priority during project review. The scope for these projects must be developed collaboratively by two or more agencies and the application must be submitted by one of the agencies. These projects would involve data collection, new signal timing and field implementation. One or more of these projects may be designated for a before-and-after evaluation by an independent consultant.
- 2. Single/Multi-Agency TSOP Projects:** An agency may submit ONLY one single-agency TSOP project. However, an agency may participate in any number of multi-agency or regional TSOP projects. Each single/multi-agency project that is not of a regional scale must be less than \$25,000 in estimated cost.

Types of Projects:

Single/Multi-Agency Signal Timing Projects: These projects could involve data collection, new signal timing and field implementation. These projects may be designated for a before-and-after evaluation by an independent consultant.

Single-Agency Traffic Data Collection Projects: An agency may request a project that is limited to the collection of traffic data for the purpose generating new signal timing using agency staff. For such projects, the project application must indicate within how many weeks, from the end of data collection the agency intends to implement new signal timing in the field (maximum 12 weeks allowed). The scope of work for such data collection projects must include a before-and-after evaluation.

SYNCHRO Network Development Projects: An agency may request a project to develop a SYNCHRO network. For such projects, data collection, optimized signal timings and field implementation must be included on selected corridor(s) within the SYNCHRO network. These projects may be designated for a before-and-after evaluation by an independent consultant.

- 3. Before-and-After Evaluation Projects:** These projects, to be developed by MAG, will involve independent before-and-after evaluations of designated

Regional TSOP projects, all data collection projects and any other project designated for evaluation by the ITS Committee.

How will projects be selected?

Candidate projects will be evaluated by the MAG ITS Committee, supported by MAG staff, and a recommendation generated based on the goals of the Traffic Signal Optimization Program.

Who will carry out the projects?

All projects will be carried out by qualified engineering consultants under contract with MAG to provide on-call consulting services.

What about on-going construction?

TSOP projects should not be proposed for any areas that would be impacted by current or planned construction activities.

What is included in a Before-and-After Study?

The “before” condition refers to the existing timing setting operated in the field prior to the project. The “after” condition refers to the signal timing settings following final field adjustments. The floating car method is the common practice for conducting before-and-after study. Travel time, number of stops and travel speed for the coordinated phases on both directions during all the analysis periods shall be collected. Other measurements such as queue lengths, intersection delays for all movements including side streets may be collected for more comprehensive analysis. The estimated reductions in fuel consumption and emissions will be generated using the SYNCHRO model.

What are Local Agency Responsibilities?

Local agencies that are involved in a project must:

- 1) Provide agency staff time to review and approve project deliverables per the project schedule,
- 2) Provide agency staff time to utilize consultant assistance in implementing timing plans, and
- 3) Commit to completing the project within six (6) months of the project kickoff date.

How will projects be initiated?

All TSOP applications will be evaluated by the MAG ITS Committee to generate a recommendation that will go through the formal review process at MAG with final approval by the MAG Regional Council. Once the projects are approved, the MAG

Project Manager assigned to a project will coordinate with the designated agency staff member and a Consultant assigned to the project by MAG, to develop and finalize the project's scope of work. A Task Order for performing project tasks, under the terms of the MAG on-call services contract, will be developed and executed by MAG. A project kickoff meeting will be coordinated by the MAG Project Manager and will be held either at the agency offices or at MAG.

How will these projects be managed?

Each agency will appoint a project manager who will be responsible for coordinating with the MAG Project Manager and the Consultant. Following the project kickoff meeting that will be coordinated by the MAG Project Manager, the Consultant will work directly with the agency. The agency will be responsible for ensuring the delivery of services by the Consultant, as specified in the scope of work, the planned project schedule and the implementation of the signal timings. Consultant's invoices and progress reports related to project tasks will be received by MAG. When necessary, MAG will consult with the agency Project Manager to confirm project progress prior to payment of invoices. If any problems arise during the execution of a project, the agency will promptly notify the MAG Project Manager.

MAG will not be responsible for any work performed by the Consultant that falls outside the approved project scope of work, as described in the Task Order.