



December 5, 2017

TO: Members of the MAG Intelligent Transportation Systems Committee

FROM: Chris Hamilton, City of Avondale, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

**Wednesday, December 13, 2017 - 9:30 a.m.**  
MAG Office Building, 2<sup>nd</sup> Floor, Ironwood Room  
302 North First Avenue, Phoenix

The ITS Committee has been scheduled at the time and place noted above. Committee members or their proxies may attend **in person or by video conference or by telephone conference call**. Those attending by telephone conference call please contact MAG offices for conference call instructions.

Please park in the garage under the MAG building, bring your ticket, parking will be validated. For those using transit, Valley Metro/RPTA will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

In 1996, the Regional Council approved a simple majority quorum for all MAG advisory committees. If the ITS Committee does not meet the quorum requirement, members who have arrived at the meeting will be instructed a legal meeting cannot occur and subsequently be dismissed. Your attendance at the meeting is strongly encouraged.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Leila Gamiz at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

If you have any questions regarding the meeting, please contact Sarath Joshua at (602) 254-6300.

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50 Years of Serving the Region

## TENTATIVE AGENDA

### COMMITTEE ACTION REQUESTED

1. Call to Order

For the December 13, 2017 meeting, the quorum requirement is 11 committee members.

2. Approval of minutes from the ITS Committee meeting held on November 8, 2017

2. Review and approve minutes of the meeting held on November 8, 2017.

3. Call to Audience

An opportunity will be provided to members of the public to address the ITS Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the ITS Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity when the item is heard.

3. For information and discussion.

4. Program Managers Report

The following items will be discussed:

- FY2018 TSOP Projects
- FY2018 New Projects/Studies
- FMS Implementation Update

4. For information and discussion.

5. MAG Study on Evaluating Traffic Sensors

This study is currently included in the FY2018 MAG Work Program based on a recommendation from the committee. The draft scope of work for this was developed and circulated to a Working Group for review. The current scope of work seeks to produce a statistically valid methodology that could be utilized by local agency staff for testing and validating traffic detectors. It has been suggested that the study would provide more value if the scope is enhanced to

5. For information and discussion.

include a field evaluation component involving at least two cities involving possibly four test locations. The committee will discuss this option for modifying the scope of the study.

6. City of Phoenix Request for RCN Connectivity

The City of Phoenix Information Technology Department has submitted an application to MAG, requesting a no-cost service addition to the Regional Community Network (RCN) that would provide ethernet connectivity via the MAG RCN between Phoenix Calvin Goode building and the Phoenix Emergency Operations Center/Multi Agency Coordination Center (EOC/MACC). Establishing this connectivity will provide the EOC/MACC with high-speed access to regional resources such as traffic cameras and networks during planned and un-planned events. See Attachment One.

7. Reports by Committee Members

Members will be provided an opportunity to share information related to ongoing ITS project activities in their jurisdictions.

8. Request for Future Agenda Items

Topics or issues of interest that members would like to have considered for discussion at a future meeting will be requested.

9. Next Meeting Date and Place

The next meeting is scheduled to be held at 10:00 a.m. on Wednesday, January 3, 2018. It will be held in the Ironwood Room on the 2<sup>nd</sup> Floor of the MAG office building.

Adjournment

6. For information, discussion and possible action to recommend approval of the requested RCN no-cost service addition.

7. For information and discussion.

8. For information and discussion.

9. For information.

**DRAFT MINUTES OF THE  
MARICOPA ASSOCIATION OF GOVERNMENTS  
INTELLIGENT TRANSPORTATION SYSTEMS COMMITTEE**

November 8, 2017

MAG Ironwood Room, 2nd Floor  
302 North First Avenue  
Phoenix, Arizona

MEMBERS ATTENDING

Chris Hamilton, City of Avondale (Chair)	Faisal Saleem for Nicolaas Swart, Maricopa County
Susan Anderson, ADOT	Trisha Boyer, City of Mesa
# Raquel Schatz, City of Apache Junction	* Steve McKenzie, City of Peoria
* Yingyan Lou, ASU	Bruce Littleton, City of Phoenix
* Tammy Valdez Paz, City of Buckeye	# Jamie Bennett for Mohamed Youssef, Town of Queen Creek
Mike Mah, City of Chandler	# Leslie Bubke, City of Scottsdale
Sergeant Jesus Gastelum, DPS	Albert Garcia, City of Surprise
Bryce Christo, City of El Mirage	David Lucas, City of Tempe
# Rajnish Gupta, Town of Gilbert	* Jay Yenerich, Valley Metro
# Allan Galicia for Debbie Albert, City of Glendale	
# Luke Albert, City of Goodyear	

EX-OFFICIO NON-VOTING MEMBERS ATTENDING

Toni Whitfield, FHWA

OTHERS PRESENT

Lisa Burgess, Kimley-Horn	BriAnne Turpin, Michael Baker
Dan Hartig, Aryes & Associates	Mike Blankenship, Greenlight Traffic Engineering
Jim Schoen, Kittelson	Sandy Thoms, Jacobs
Alyssa Mittelhauser, Greenlight Traffic Engineering	Amy Garinger, Kimley-Horn
Skye Gentile, Parsons	Deanna Haase, Kimley-Horn
Keith Winney, United Civil Group	Sarath Joshua, MAG
Don Wiltshire, YSMA	Eric Nava, MAG
Simon Ramos, City of Phoenix	Mohammad Shaheed, MAG

- \* Not present or represented by proxy
- # Participated by teleconference
- + Participated by videoconference

1. Call to Order

Vice Chair David Lucas called the meeting to order at 9:32 a.m. and conducted introductions. Chair Chris Hamilton joined the meeting shortly after starting.

2. Approval of the Minutes from ITS Committee meeting held on October 11, 2017

Chair Hamilton requested approval of the meeting minutes from the October 11<sup>th</sup> ITS Committee meeting. **Bruce Littleton with City of Phoenix moved, Albert Garcia with City of Surprise seconded, and it was unanimously carried to approve the minutes of the meeting held on October 11, 2017.**

3. Call to Audience

Chair Hamilton made a call to the audience providing an opportunity for any members of the public to address the ITS Committee. No comments were received.

4. Program Manager's Report

Chair Hamilton invited Sarath Joshua with MAG to present the Program Manager's Report. Mr. Joshua addressed the following items in the report:

➤ FY 2018 Traffic Signal Optimization Program Projects

The list of 12 projects for the FY 2018 Traffic Signal Optimization Program (TSOP) was approved by MAG Regional Council on October 25, 2017. Task orders for each of the projects are being developed. Task orders will be issued in December and January. Project work will begin in January 2018.

➤ New MSAG Study Evaluating Traffic Sensors

A new FY 2018 MAG Study will develop a statistically valid method to evaluate the accuracy of traffic sensors. Local member agencies would be able to use the developed method to test the accuracy of agency-owned traffic sensors. Mohammad Shaheed with MAG was asked by Sarath Joshua to provide a brief overview of the project's objective. The project will also explore the feasibility to develop a testbed to test the accuracy of new traffic detectors. The budget of the study is \$30,000 and the duration of the project will be 3 to 4 months. The scope of work is being developed and the ITS Committee was asked to provide input to Mohammad Shaheed that members would consider important to their traffic operation needs.

➤ 2018 ITS Committee Meeting Schedule

The 2018 ITS Committee meeting schedule was distributed to committee members. Sarath Joshua stated that the ITS Committee may possibly begin meeting every other month instead of every month. This will depend on what ITS Committee-related activities will be active in the coming year.

➤ 2018 Transportation Research Board Annual Meeting

MAG was invited to present at the Transportation Research Board (TRB) Annual Conference in Washington D.C. The presentation at the TRB session is titled "Reducing Incident Clearance Time by Co-locating Response Resources: A Natural Experiment", and it will highlight the benefit-cost analysis method used to evaluate the DPS co-location pilot project.

5. Connected and Autonomous Vehicles & Infrastructure Readiness

Chair Hamilton invited Sarath Joshua with MAG to address the committee on this topic. Sarath Joshua gave a brief introduction to the topic of connected vehicles (CV) and autonomous vehicles (AV) in the region and the dependency on information from roadway infrastructure.

Sarath Joshua invited Eric Nava with MAG to give background of the ITS infrastructure necessary for communicating with CVs. Eric Nava presented on the vehicle-to-infrastructure (V2I) and vehicle-to-vehicle (V2V) technology called Dedicated Short Range Communication (DSRC) and the application of such technology. DSRC is a two-way, short-to-medium range wireless communication technology with a high rate of data transmission that is primarily used for V2I and V2V communication. Applications with V2V and V2I communication using DSRC technology would be for public safety, traffic management, mobility and convenience. DSRC technology provides designated, licensed bandwidth, fast network acquisition, low latency, high reliability in connectivity, priority for safety applications, ensures interoperability using widely accepted standards, and security and privacy in message transmission.

Eric Nava invited Committee members to speak to any efforts that are currently implementing DSRC technology. Faisal Saleem with Maricopa County DOT spoke up that an important component to the conversation is messaging and communication technology national standards.

DSRC uses standard messaging protocols to send and receive information between vehicle and infrastructure. The basic safety message and signal request message are sent from the vehicle. The signal phasing and timing message, MAP data message, traveler information message, signal status message are sent from the infrastructure when a request from the vehicle is made. Faisal Saleem mentioned another message would currently being worked on is the basic infrastructure message which broadcasts infrastructure status message.

The Signal Phasing and Timing (SPaT) Challenge was initiated to encourage state and local public sectors to deploy and implement DSRC technology to broadcast SPaT and MAP messages to vehicles that are enabled to receive such information. The goal of the challenge is to implement DSRC technology in 20 intersections in all 50 states. The SPaT Challenge has been accepted throughout various locations in the United States, including Utah DOT and Maricopa County DOT. Examples of Utah DOT and Maricopa County DOT implementations were presented.

Additional considerations of DSRC technology were presented, including cost considerations, cyber security, initial requirements and accuracy of the broadcasted MAP data message, and consideration of other advancing technology that may compete with DSRC technology. Faisal Saleem mentioned that cost estimations that were not included were costs of DSRC units within fleet vehicles if transit applications were the focus of such work. Another cost to consider is the cost of software. The Committee discussed the MAP data requirements, cost of mapping and its application when broadcasting the SPaT data message. The Committee also discussed any future plans of DSRC technology applications for local agencies. Bruce Littleton with City of Phoenix stated that the City was initially installing DSRC devices for a project, but due to changes in the project it is no longer the case. In discussion of other emerging technology, Faisal Saleem stated that another new technology being developed is “C2VX” which would be a hybrid between DSRC and 5G technology.

6. City of El Mirage Request for Project Change

Chair Hamilton invited Bryce Christo with City of El Mirage to speak to the proposed changes of FY 2018 project ELM18-460. New project limits were proposed on El Mirage Road from Olive Avenue to Thunderbird Road. The new project limits will result in installing approximately 3.7 miles of fiber with one connection to a City facility. The project will also install 5 CCTV cameras and interconnect six traffic signals, as originally proposed.

**Albert Garcia with City of Surprise moved, Bruce Littleton with City of Phoenix seconded, and it was unanimously carried to recommend approval of the requested project change.**

7. Reports by Committee Members

Chair Hamilton called on members to report items of interest to the committee.

Bruce Littleton with City of Phoenix announced a new staff member, Simon Ramos, has taken the position of ITS Engineer. Simon Ramos will be the City’s ITS Committee representative in future meetings.

Leslie Bubke with City of Scottsdale stated that the City will soon be advertising ITS Analyst position with civil engineering EIT background.

8. Request for Future Agenda Items

Chair Hamilton called on members to request future agenda items. There were no requests. Any future requests should be provided to MAG staff.

9. Next Meeting Date and Place

Chair Hamilton noted that the next meeting will be held at 9:30 a.m. on Wednesday, December 13, 2017, in the Ironwood Room (2<sup>nd</sup> floor) at MAG. This meeting will be followed by a 10:30 a.m. meeting of the Technical Advisory Group for the Systems Management and Operations Study. MAG staff will coordinate with Committee members to establish quorum.

10. Adjournment

Chair Hamilton adjourned the meeting at 10:25 a.m.

# RCN Policy on Applications for No-Cost Service Additions

## No Cost Additions of Applications

**Policy:** The TAG and ITS committees will approve no cost additions of applications that respect the funding requirements, technical limitations, regional nature and equitable use of the RCN.

**Purpose:** This policy allows the timely addition of applications to the RCN while providing for fair accommodation to participating agencies.

**Applicability:** This policy applies only to no cost application additions by existing participants in the RCN.

**Evaluation:** The TAG and ITS committees will review all requests that seek to add additional applications based on the following criteria.

Area	Description
Compatibility with funding requirements	Transportation uses must be given priority because construction of the facilities relies on federal transportation funding. Additional uses are permitted as long as they do not affect the transportation use. Projects must demonstrate that they are either compatible with the transportation use or that they will not impact that use in order to be considered.
Bandwidth Usage	The proposed use should be shown to not exceed the available bandwidth of the network, including burst traffic.
Regional Use	Regional uses of the network for interagency communication should be given preference over individual use.
Agency Distribution	The project should reflect a reasonable distribution of bandwidth among agencies.
Cost	Agencies should demonstrate that there will be no additional costs borne by the RCN for the implementation of the application. The agency will have the option of doing this by assuming the costs associated with implementation.

Requests for applications must include the understanding that non-transportation applications may have to be removed from the network in the future or may have to upgrade equipment to maintain the ability to execute transportation related applications.

A request must be approved by both committees before the additional application is added to the RCN.

**Application Procedure:** Requesting agencies will submit the attached form to MAG with supporting information as necessary. All applications will be reviewed by the RCN Working Group and a recommendation generated for TAG and ITS committees for consideration.

# RCN Application for No-Cost Service Additions

<b>Agency requesting service:</b>	<b>City of Phoenix</b>
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<b>Description of the service being requested:</b>
Ethernet connectivity between City of Phoenix Calvin Goode building and City AHQ2 facility which is where the City's Emergency Operations Center is located. This will allow the EOC to have high-speed access to regional resources (cameras, networks, etc.) for special events and emergencies.

<b>Description of the transportation use of this service:</b>
This would give the EOC access to traffic cameras across region for monitoring special events and emergencies

<b>Estimated bandwidth required:</b>	<b>2GB</b>
<b>Estimated peak bandwidth required:</b>	<b>3GB</b>
<b>Method used to determine bandwidth (Please include relevant supporting documentation):</b>	
Based on estimates for the EOC required to access cameras in facilities across the region. These include highway and intersection cameras, Convention Center cameras, Sky Harbor Airport cameras, sports facility cameras and others.	

<b>Description of the regional benefit associated with this service:</b>
This will allow agencies across the region use the EOC to monitor special events and emergencies. This includes Police, Fire, Public Works, Facilities Streets and other functions throughout the region.

<b>List of agencies that will benefit from this use now and in the future:</b>
Just about any City, County, State or Federal agency, department or division would be able to benefit from this service. The EOC is a multi-agency facility that allows public safety and other officials monitor and provide direction related to traffic, deployment of personnel and response related to management emergencies and special events.

Please initial the following statements to affirm your understanding of the following RCN restrictions:

- IWT If this is not a transportation use, I understand that my agency may have to mitigate or terminate our use of the service if it impacts the core transportation use.
- IWT I acknowledge that the RCN does not have a guaranteed service level at this time and that the proposed use is consistent with this level of availability.
- IWT I agree that our agency will bear any costs associated with the implementation of this service and that if it results in additional network management costs, those costs will be borne by our agency.

# RCN Application for No-Cost Service Additions

Applicant's Signature:

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Name	Title
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Agency	
<hr/>	
Date	

Return this application to: Ryan Gish, MAG – [rgish@azmag.gov](mailto:rgish@azmag.gov)