

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

June 3, 2020

Virtual Meeting, Zoom

MEMBERS ATTENDING

# David Lucas, City of Tempe (Chair)	# Luke Albert, City of Goodyear
# Susan Anderson, ADOT	# April Wire for Nicolaas Swart, Maricopa County
* Raquel Schatz, City of Apache Junction	# Joshua Plumb, City of Maricopa
# Yingyan Lou, ASU	# Tricia Boyer, City of Mesa
# Ward Stanford, City of Avondale	# Steve McKenzie, City of Peoria
# John Willett, City of Buckeye	# Bruce Littleton, City of Phoenix
* Srinivas Goundla, City of Chandler	# Scott Nodes, Pinal County
* Sergeant Stuart McGuffin, DPS	# Marshall Reigel, Town of Queen Creek
# Tessa Wessel, City of El Mirage	# Hong Huo, City of Scottsdale
# Mike Sutton, Town of Gilbert	# Albert Garcia, City of Surprise
* Allan Galicia, City of Glendale	# Steve Chayt, Valley Metro

EX-OFFICIO NON-VOTING MEMBERS ATTENDING

Toni Whitfield, FHWA

OTHERS PRESENT

# Faisal Saleem, MCDOT	# Jeff Jenq, MAG
# Tomas Guerra, OZ Engineering	# Eric Nava, MAG
# David Worley, MAG	# Omar Aboulaban, MAG
# Vladimir Livshits, MAG	

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

1. Call to Order

Chair David Lucas called the meeting to order at 10:09 a.m. and conducted introductions.

2. Approval of the Minutes from ITS Committee meeting held on May 6, 2020

Chair Lucas requested the approval of the meeting minutes from the May 6th ITS Committee meeting as amended. **Scott Nodes with Pinal County moved, Bruce Littleton with City of Phoenix seconded, and it was unanimously carried to approve the minutes of the meeting held on May 6, 2020.**

3. Staff Report

Chair Lucas invited Jeff Jenq with MAG to present the Staff Report. Mr. Jenq addressed the following items in the report:

➤ Federal Updates reported by FHWA

Mr. Jenq invited Toni Whitfield with FHWA to provide an update on the item. Ms. Whitfield provided an update on the USDOT Published Draft Broad Agency Announcement for Complete Trip ITS4US Deployment. FHWA published the draft in May for public comment on phase I and announced that the comment period closed on May 29th, 2020. This initiative will allocate \$40 million to enable communities to showcase innovative business partnerships, technologies, and practices that promote independent mobility for all. For more information, please visit

<https://beta.sam.gov/opp/ef3f589b3d814e528887253a119db4cb/view>.

Ms. Whitfield announced that the FHWA has recently released two YouTube videos, "Executive level Integrated Corridor Management" and "Does Travel Time Reliability Matter?". To view these videos please visit, <https://youtu.be/xWPyzgFlf7w> and <https://www.youtube.com/watch?v=BXblj8MPDD0>.

Ms. Whitfield also announced that the FHWA recently published three documents regarding Safety Analysis Needs Assessment and Safety Performance Analysis of TSMO in cooperation with the Highway Safety Manual Implementation Transportation Pooled-Fund. To view these documents please visit, <https://safety.fhwa.dot.gov/rsdp/hsm.aspx>.

➤ MAG Telework and Public Meeting Policy Update

Mr. Jenq announced that MAG has determined to continue the mandatory teleworking practice of all MAG employees until the end of June. MAG will continue to conduct all meetings on-line. Recently, MAG has migrated the virtual meeting platform from Adobe Connect to ZOOM. MAG will only send the ZOOM meeting links to the committee members or their proxies. In terms of meeting participation, only one member of each agency is expected to join the ZOOM meeting. The additional staff from a jurisdiction and the general public are directed to a designated YouTube channel to view the meeting in real-time.

➤ TIP Call for Projects Feedback Working Group Meeting Recap

Mr. Jenq recapped that the meeting was intended to review and solicit feedback on the last SM&O TIP Call for Projects. Mr. Jenq expressed his thanks to the ITS Committee members who spent two hours to share their feedback. Mr. Jenq alluded that this meeting was the first step of our efforts to plan for the next SM&O TIP Call for Projects, expected to take place in Spring 2021. The working group discussions were organized to review the decisions involved in the three major areas that make up the Call for Projects process. In terms of programming rules, there were discussions regarding the cost cap per project, incentive for multi-agency projects, and discussions on how we currently define the priority buckets. In terms of the application form, the working group went through each tab in the current application form and reviewed all the qualitative and quantitative information regarding their intended use and challenges in the measurement. An example is how to provide Average Daily Traffic (ADT) for different types of ITS projects from a linear corridor to scattered locations, to something that has a regional impact. In this case, the need for more guidance was

suggested. In terms of project evaluation, we discussed the concurrent efforts by MAG to revise the Air Quality and Congestion Management-related project evaluation methodologies as well as how some programming rules might affect the odds of project selection. MAG staff will develop a summary list of issues. In the next working group meeting, we plan to prioritize and develop consensus on the potential improvements.

➤ Updates on Statewide Professional Chapter Conferences

Mr. Jenq reported that due to COVID-19, there were many changes to the professional annual meetings in and around the country. The 2020 Arizona Conference on Roads and Streets has been re-scheduled to September 23-25, and it is still going to be an in-person conference. The ITS World Congress originally planned for October 4-8 at Los Angeles has gone virtual. The ITE Joint Western & Mountain Districts Annual Meeting moved from June 28 to July 1 and will be conducted virtually as well. ITS Arizona announced this year's ITS Arizona Annual Conference will be conducted virtually and tentatively planned in late 2020. Mr. Jenq deemed these virtual conferences, especially the regional and national ones, reasonably priced when compared to the typical cost of an in-person conference that involves travel. Mr. Jenq invited Chair Lucas to provide some feedback regarding his involvement with the local ITS and ITE conference planning efforts. Chair Lucas mentioned his understanding of many agencies cutting down their training budgets and reiterated that ITE Joint Western & Mountain Districts Annual meeting is reasonably priced to accommodate. Chair Lucas also reported the ITE International Conference will also be conducted virtually and spread out over three weeks and limited per hours per day to allow people to attend from different locations during business hours. There are many conferences recognizing the cost constraint hindered on agencies and doing their best to accommodate.

4. MCDOT Arterial Traffic Data Integration

Chair Lucas reported that MCDOT has deployed smart traffic sensors across the county to detect the presence of traffic and assist with traffic signal operations. Chair Lucas invited Tomas Guerra with OZ Engineering to present this item.

Mr. Guerra reported that MCDOT has implemented Econolite Video Detection at many of their intersections with one camera pointed at each approach. These cameras use virtually drawn, visual polygons to detect the presence of vehicles and bicycles. These cameras allow lane-by-lane counts that can produce turning movement counts, peak hour factor, ADT and AADT among other measures. Mr. Guerra provided an example of the turning counts summary page that provide key vehicle movement details for each approach. Mr. Guerra also discussed the RADS VDS architecture phase 1 that was completed in April 2019 and reported that it retrieves data from the video detection cameras and archives it into the RADS system every 15 minutes. The next phase will be to develop visualization and reporting elements. Mr. Guerra stressed the importance of the virtual detector zone naming conventions to be consistently used by all people who configure the devices. Mr. Guerra reported that MCDOT has 27 of 115 intersections collecting video detection information. The sample data attributes were shown in the presentation.

Mr. Guerra indicated that several factors may affect the quality of the zone data counts and shown an example that shows a high percentage of through counts in a dedicated left turn lane. Mr. Guerra stated that MCDOT has been sharing their data with MAG, and Dr. Wang Zhang identified an anomaly in the data on some devices where an under-count and then over-count of vehicles was observed.

Mr. Guerra reported working with Jose Bunton of MCDOT and Erik Gunsolley of Econolite, to identify potential causes of the anomalies observed and concluded that advanced detectors should not be used for counts as during times of higher volumes the sensors do not see a separation between vehicles, which would result in undercounting. Additionally, shadows from trees could impact counts and appear to falsely over-count. Mr. Guerra also reported that MCDOT used the video detection data to generate COVID-19 analysis confirming drop in traffic, most significantly in the AM Peak periods between week 1 and week 4. Mr. Guerra asserted that as long as we understand the limitations, this is a valuable tool to use in managing traffic. For any questions, please contact April Wire with MCDOT or Tomas Guerra with OZ Engineering.

Jeff Jenq with MAG commented recognizing the periodic data sharing with the MAG Data Program and expressed his thanks to MCDOT and Mr. Guerra for these efforts. Hong Hoe with City of Scottsdale asked, whether the cameras have radar detectors to detect speed. Mr. Guerra replied, there are no radar detectors, the speed is estimated strictly visually and there are uncertainties regarding the accuracy of the speed and occupancy data.

5. ADOT Statewide Traffic Data Collection Program

Chair Lucas described that ADOT is currently developing a statewide traffic collection program and are seeking to understand local agencies traffic counting programs and essential use of traffic information from local ITS sensors. Chair Lucas invited Jothan Samuelson with Works Consulting to present the item.

Mr. Samuelson stated that ADOT started the project to develop a coordinated Statewide Traffic Data Collection Program this past month and expect to work on this through to the end 2020. This presentation will describe some of the work where we expect Tomas Guerra with OZ Engineering to assist in coordinating with local agencies and members of the MAG ITS Committee. Mr. Samuelson provided a high-level overview of the project, the map and mileage numbers shown in the presentation reflects the total traffic data collection burden in Arizona. For Highway Performance Monitoring System (HPMS) reporting purposes, the data collection burden touches essentially all roads, though specific requirements vary by road classification. An important distinction exists between state and local roadways, and HPMS traffic count data reporting gaps are overwhelmingly on the local agency roadway network. Efforts with this project are focused largely on improving coordination between state and local agencies to address HPMS traffic count data reporting gaps. In terms of traffic counting, one of the greatest opportunities for increasing and improving count data is in leveraging video detection from intersection traffic sensors. Many of these sensors are capable of collecting quality traffic count data. Mr. Guerra spoke previously about experience with MCDOT Econolight traffic sensors, and traffic volume estimates that are being collected from these. Mr. Samuelson would like to see investigation into these types of traffic sensors in other MAG jurisdictions as well. There is a

precedent for using this kind of intersection traffic volume information in other parts of Arizona, and in other states. There are currently no intersection camera sites in the MAG region where traffic counts are being utilized by ADOT for HPMS reporting. One of the objectives as it relates to coordination of any and all traffic count data is to see raw counts loaded to the MS2 Traffic Count Data System or <https://magtrans.org>. These two online traffic count data modules are important for sharing data with ADOT to support HPMS reporting and other planning activities that may affect local agencies. Some of the HPMS traffic data assembly and processing steps are integrated with these modules. These online databases are also important in sharing count data with neighboring jurisdictions and others. In conclusion, some of the objectives of the project are: providing guidance in describing the traffic data collection needs, for federal reporting through HPMS and for other reasons, provide guidance of roles and responsibilities at state, regional, and local levels, and how these pieces can ideally coordinate one with another. Good collaboration between agencies will be critical to the success of this project; research and collaboration will also take place in understanding emerging technologies that can be leveraged in improving traffic monitoring activities. The specific subtask of this project that relates to this group is the Intersection Data Integration Auto-poling Pilot. The target of this pilot is to take a small sample of intersection traffic sensors and work through steps in getting the raw count data loaded to the <https://magtrans.org> online traffic count database, and to establish that as an automated process. This auto-poling pilot is limited in scope and, as a statewide project, it's not clear the extent to which the pilot would or could be implemented in the MAG region specifically. A prerequisite to any data integration, will be in developing an inventory of intersection traffic sensors. Mr. Guerra has just shared relevant information about MCDOT intersection sensors and traffic count data coming from these. Mr. Samuelson would like to gather further information through coordination with MAG and the MAG ITS Committee to locate and describe intersection sensors across the region.

6. Regional Arterial Traffic Data Collection Opportunities

Chair Lucas summarized, arterial traffic data are primarily collected through contracted data collection services. Due to the laborious nature, the cost prohibits an extended period of data collection. With more smart sensors deployed by the MAG member agencies, opportunities arise to coordinate a regional approach for collecting, storing, and disseminating the arterial traffic data. Chair Lucas invited Jeff Jenq with MAG to present this item.

Mr. Jenq explained that arterial traffic data is essential to all planning, design, and operations of our infrastructure. For those who manage traffic, the turning movement counts at the intersection are essential for re-timing the traffic signals. Due to the high cost, agencies typically rely on contracted traffic counting services to afford the data for a very short period of time. Mr. Jenq stressed the need to leverage the current and future ITS investments. The MAG SM&O Investment Plan provided millions in funding member agencies to deploy the smart traffic sensors that support signal operations and real-time data collection, including data on turning movement counts. Mr. Jenq described, many devices that we deploy in the roadway produce mainly two types of data. The first type is volume at a location and origin and destination data. The second type is for the operations or control of the device. For example, traffic signal status, timing data. Mr. Jenq deemed the traffic volume data as the most essential in arterial data. What

makes the systematic data collection possible is the modern Smart Sensors. In the near past, arterial traffic sensors were mostly used for detecting the presence of traffic to assist the traffic signal operations and since traffic volume has no direct use to the signal operations, volume data is not typically collected. Today we have modern smart sensors deployed by the MAG member agencies that are video-based, radar-based, 360-degree fish eye cameras, and old conventional inductive loops according to spec are capable of collecting the traffic volume and/or the turning movement counts. However, the main challenge is the different provision by the vendor in terms of data type, formats, and method of collection, storage, and user access. Some devices might require additional integration efforts such as those we just heard in the MCDOT presentation. Data are pulled periodically from the field devices for central storage. And additional programming is needed, in the case of MCDOT, that turning movement counts data are assembled from 4 different cameras. In conclusion, despite the differences in technologies, data can be pulled by the TMC and centrally stored and accessed. The MAG region is fortunate in having the Regional Community Network (RCN). A regional fiber backbone that is dedicated for transportation and public safety applications. The RCN is a logical candidate for regionally collecting the traffic volume data. Similar approach has been used for sharing CCTV video, centrally collecting incidents and construction event data, and ATSPM data over the RCN. The possible approach is to pull those traffic data over the RCN via the connected TOCs to a central hosting location. To make this a sustainable regional data collection system, we need to explicitly develop data governance, addressing areas like the ownership, accessibility, security, knowledge, and quality. In some cases, perhaps a dedicated data accuracy verification effort is needed to explore and document the limitations associated with the data use. Mr. Jenq considers the logical first step is to develop an inventory of smart sensors and document the requirements and opportunities. MAG being the largest metropolitan area in the state, any developments in the MAG region should also work with the statewide applications. In spirit of collaboration, Mr. Jenq suggested using the MAG ITS committee as a conduit to assist with ADOT's smart sensor inventory efforts.

Chair Lucas commented, in the past there was discussion in developing an ITS inventory and these efforts can tie in closely. Chair Lucas signified the importance of keeping track on a regular basis and keeping the inventory maintained as having an aggregate inventory of the smart sensors deployed through the region would be beneficial. Mr. Jenq replied, the ITS inventory effort is still in our plan with a broader range of devices and capability. Mr. Jenq stressed that this is something that needs to be strategized for the regional application and must identify what is the specific intended uses of regional ITS inventory.

7. Reading of public comments

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

8. Request for Future Agenda Items

Chair Lucas called on members to request future agenda items. There were no requests. Any

future requests should be provided to the MAG staff.

9. Comments from the ITS Committee Members

Chair Lucas called on members to report items of interest to the committee. No reports were received.

10. Next Meeting Date and Place

Chair Lucas announced that the next meeting of the Intelligent Transportation Committee will be held at 10:00 a.m. on Wednesday July 01, 2020 via virtual conference unless otherwise notified.

11. Adjournment

Chair Lucas called for motion to adjourn the meeting 11:19 a.m. Albert Garcia with City of Surprise moved, Scott Nodes with Pinal County seconded, and the meeting was adjourned by Chair Lucas.