

## INTELLIGENT TRANSPORTATION APPLICATION

### General Instructions:

This Excel form is to be used to request federal Congestion Mitigation and Air Quality (CMAQ) funding available through the Maricopa Association of Governments (MAG) for Bicycle Projects to be included in the FY2014-FY 2018 MAG Transportation Improvement Program. Funding is available for Federal Fiscal Year (FFY) 2015, 2016 and 2017.

This application form includes:

- Part A - Contact and Project Description,
- PART B - ITS TIP Listing and CMAQ Score Data,
- PART C - ITS project Description,
- Part D - Checklist and Signature Page, and Transmittal Instructions and Schedule.

Each part is a separate tab of this excel file. Please complete Parts A - D. Alternative application forms are available upon request.

### Deadlines and Transmittal Instructions:

Two copies of a printed, complete and signed application must be received in the MAG offices by **10:00 a.m. Wednesday, September 19, 2012**. The application is to be submitted electronically and should include ArcGIS shape files depicting the project location if they are available.

**Detailed transmittal instructions are located in a separate tab** in this excel sheet. Late applications **will not be accepted.**

<mailto:state@azmag.gov>  
<mailto:tkennedy@azmag.gov>  
<mailto:LLuo@azmag.gov>

**All information is required, unless noted by the word - Optional**

### PART A - CONTACT AND PROJECT DESCRIPTION

#### Contact Information

1. Sponsoring Agency	ADOT
2. Contact Name	Reza Karimvand
3. Phone	602-712-7640
4. E-Mail Address	rkarimvand@azdot.gov
5. Mailing Address	2302 W Durango St, Phoenix, AZ 85009

(OPTIONAL)

If the applicant will be providing a GIS coverage (shapefile or geodatabase), please see the tab labeled "GIS Transmittal Instructions)

[GIS Submittal Instructions](#)

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**PART B-ITS TIP Listing and CMAQ Score Data**

This part of the form identifies data to calculate an CMAQ Score and provide the minimum data needed for a listing of the project in the Transportation Improvement Program

**Federal Funding Eligibility**

All ITS projects to be funded with Federal CMAQ funds must be in the 8-Hour Ozone Nonattainment Area. Please use the following link to verify that the map is located in the nonattainment area:

[Link to an 8-Hr Ozone Nonattainment Map on the MAG Website](#)

**1. Traffic Estimate and Roadway Characteristics**

a. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type:

b. Please Describe how the ADT was estimated:

c. When was the ADT estimate developed:

d. Name of the Roadway Section Used for the ADT Estimate:

e. Starting Limit of the Roadway Section:

f. Ending Limit of the Roadway Section:

g. Length (Miles)

h. Total Number of Through Lanes on the Roadway Section:

i. Federal Functional Classification of the Roadway Section:   
[Link to Functional Classification Map on the MAG Website](#)

**2. Traffic Coordination Improvements. If the project improves traffic signal coordination, please do the following:**

a. Enter the pre-improvement (current) traffic speed of the traffic corridor: 23mph (PM, WB)

b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):

	Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed
<input checked="" type="checkbox"/>	Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
<input type="checkbox"/>	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
<input type="checkbox"/>	Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
<input type="checkbox"/>	Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
<input type="checkbox"/>	Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

**3. Other Improvements. Check all that apply:**

- Includes Traffic Signal Improvements for a Single Agency
- Includes Traffic Signal Improvements that Apply to More than One Agency
- Includes FMS Improvements
- The Project Conforms to Local Land Use Plans

Adds Traffic Signals that increase pedestrian crossing time for seniors

**4. Traffic Speed Impacts of the Project (Not required for Traffic Coordination Improvements)**

a. Enter the pre-improvement (current) traffic speed of the traffic corridor:

b. Enter the post-improvement (current) traffic speed of the traffic corridor:

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**PART C -ITS project Description**

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. City 0 ITS Projects.xls  
 Submit this Excel workbook to MAG via email to: lluo@azmag.gov  
 Please use one worksheet per project, with the tab at the bottom indicating agency priority -- Mesa1, Mesa2,.. etc.  
 Links to various websites are provided for additional information and help  
 The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

Please enter required information in highlighted cells

**A. Project Title & Sponsor**

Lead Agency	ADOT
Other Partnering Agencies	City of Avondale, City of Goodyear, MAG
ITS Project Title:	RCN I-10 Expansion to Avondale and Goodyear
Project Category:	Integrated Corridor Mgmt

<b>Project Categories</b>
Local ITS Plans
ITS Applications that Improve Safety
Integrated Corridor Mgmt
Arterial ITS

**B. Project Goals & Objectives**

<p><b>Project Goals:</b>                  Extend fiber communications coverage on I-10, as part of the ADOT FMS Phase 11A project, to expand Regional Community Network to link two West Valley agencies. This RCN expansion will primarily support transportation applications such as Integrated Corridor Management Systems (ICMS), and I-10 corridor initiatives launched by the Traffic Incident Management (TIM) Coalition.</p> <p><b>Objectives:</b>                  ADOT FMS Phase 11A project is currently planned to extend fiber communications backbone along I-10 up to Dysart Road. This project will expand the FMS Phase 11A scope to include the RCN expansion to City of Avondale (Section 1) and City of Goodyear (Section 2). This project will enable City of Avondale and City of Goodyear to view freeway cameras and respond to irregular traffic conditions due to freeway incidents on I-10 by adjusting signal timing and participate in coordinating traffic management strategies among affected agencies.</p>
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This project will be included as part of the ADOT FMS phase 11A

**C. Project Information**

<p><b>Project Location:</b>                  Segment 1: From I-10 to Avondale Blvd                  Segment 2: From I-10 Dysart Road to Litchfield Road.</p> <p><b>Scope of the project:</b>                  Additional work requiring fiber and conduit will be included as part of the ADOT FMS Phase 11A. This will lead to both the City of Avondale and the City of Goodyear being added to the RCN through follow-up work involving active electronics to be carried out by MAG. The first segment will add fiber communications from ADOT FMS fiber backbone along I-10 at Avondale Blvd to City of Avondale fiber backbone. This section will require the purchase and installation of conduit, pull boxes, branch fiber, and splice cases. Additional labor will be required to splice the fiber branch from ADOT's fiber backbone to the City of Avondale fiber backbone.                  The second segment will extend fiber communication from ADOT FMS fiber backbone along I-10 at Dysart Rd to Litchfield Rd and branch to City of Goodyear fiber backbone at Litchfield Rd. It will require the purchase and installation of backbone fiber, branch fiber, and splice cases. Additional labor will be required for a full cable splice of the ADOT backbone extension at I-10 and Dysart, and to splice the fiber branch from the ADOT extension at Litchfield Rd backbone fiber backbone to the City of Avondale fiber backbone.</p>
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**D. Identify Components in MAG Regional ITS Architecture**

ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS Market Packages <a href="http://www.azmag.gov/ITS/">http://www.azmag.gov/ITS/</a>	Note: Please attach the Architecture Flow Diagram in the application
1. Traffic Management	Yes	ATMS03, ATMS07, ATMS08	
2. Transit Operations Support			
3. Communications	Yes	ATMS01, ATMS03	
4. Traveler Information			
5. Archived Data Management	YES	AD1, AD2	
6. ITS for Safety			
7. ITS Plans			
8. Freeway-Arterial Operations	Yes	ATMS01	

**E. Program Year Preference**

First Choice	<input type="checkbox"/> FY2015	<input checked="" type="checkbox"/> FY2016	<input type="checkbox"/> FY2017
Second Choice	<input type="checkbox"/> FY2015	<input checked="" type="checkbox"/> FY2016	<input type="checkbox"/> FY2017
Third Choice	<input type="checkbox"/> FY2015	<input checked="" type="checkbox"/> FY2016	<input type="checkbox"/> FY2017

**F. Project Budget**

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$51,045.00	\$3,086.00	\$54,131.00
Cost percentage	94.3%	5.7%	

Local Match Split  
 Avondale      Goodyear  
 \$860.98      \$2,225.02

**G. Project Schedule**

The table below is provided as a tool to assist local agencies develop a project planning schedule. Column A shows standard project milestones and Column B shows the schedule based on a typical project procurement process. To generate a custom Project Schedule:(1) select applicable milestones in Column C;(2) Enter estimated time to complete milestone measured in months from project development start date in Column D; **NOTE: The project obligation date generated in cell E111 MUST occur before Sept 15th of the programmed fiscal year.** Determine the appropriate **Project Activity Start Date** (by trial-and-error) in order to obligate the project on time.

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date
Apply for ADOT project number				Jul-2014
Receipt of ADOT project number	Sep-2014	yes	0	Jul-2014
Initial DCR	Oct-2014	no		NA
Final DCR	Nov-2014	no		NA
30% Preliminary Plans, Cost Estimate and Report	Jan-2015	no		NA
60% Preliminary Plans, Cost Estimate and Report	Mar-2015	yes	8	Mar-2015
Final Preliminary Plans, Cost Estimate and Report	May-2015	yes	16	Nov-2015
Environmental Clearance	Mar-2015	yes	11	Jun-2015
Utility Clearance	Apr-2015	yes	11	Jun-2015
Right-of-Way Clearance	Jan-2015	yes	11	Jun-2015
Approval of IGA	Jul-2015	yes	11	Jun-2015
Obligation authority of Federal funds	Aug-2015	yes	11	Nov-2015
Advertised Date	Oct-2015	yes	1	Dec-2015
Final Deployment	Apr-2016	yes	12	Dec-2016

< ENTER mm/yyyy -- Project Activity Start Date

**H. System Maintenance and Operations**

Current staff resources available for ITS operations at the local agency (FTEs)  
 Additional staff resources required for fully utilizing features added  
 Estimated current annual ITS operations & maintenance budget  
 Estimated additional annual operations & maintenance funds  
 Estimated DATE from when required additional O&M funds will be

	Avondale	Goodyear	ADOT
Current staff resources available for ITS operations at the local agency (FTEs)	3		17
Additional staff resources required for fully utilizing features added	0	2	0
Estimated current annual ITS operations & maintenance budget		125,000	720,000
Estimated additional annual operations & maintenance funds		500	0
Estimated DATE from when required additional O&M funds will be		Jul-15	N/A

Other comments:

**I. Systems Engineering Analysis Requirement**

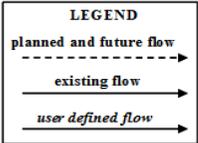
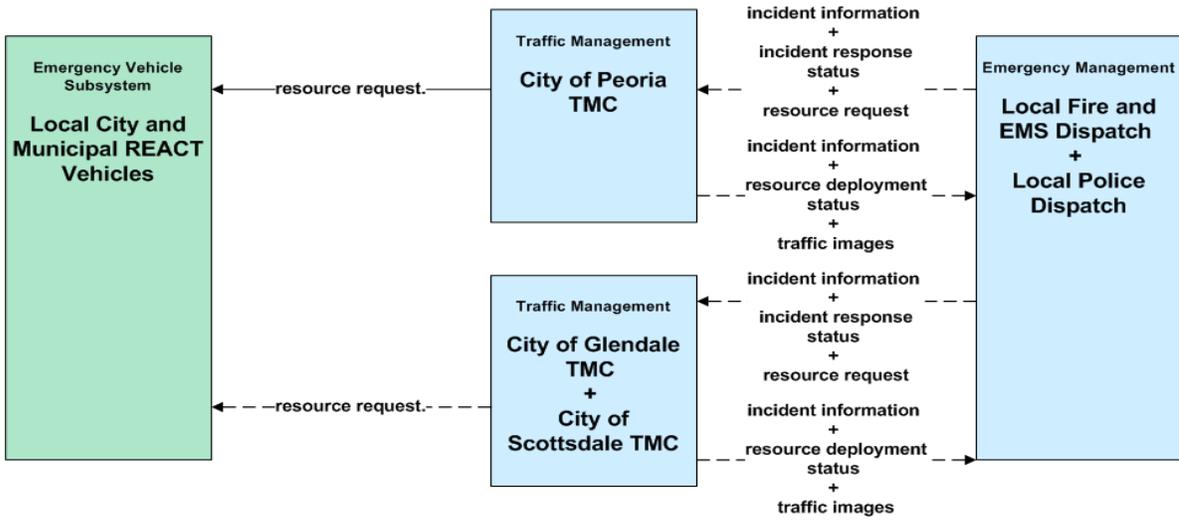
**Commitment to address the federal requirement for Systems Engineering Analysis**

Agency's intent to follow the process described in the 'V' diagram during the project development process

<http://www.azdot.gov/Highways/TTG/PDF/SystemsEngineeringChecklist.pdf>

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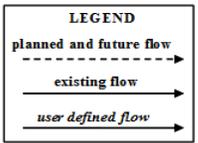
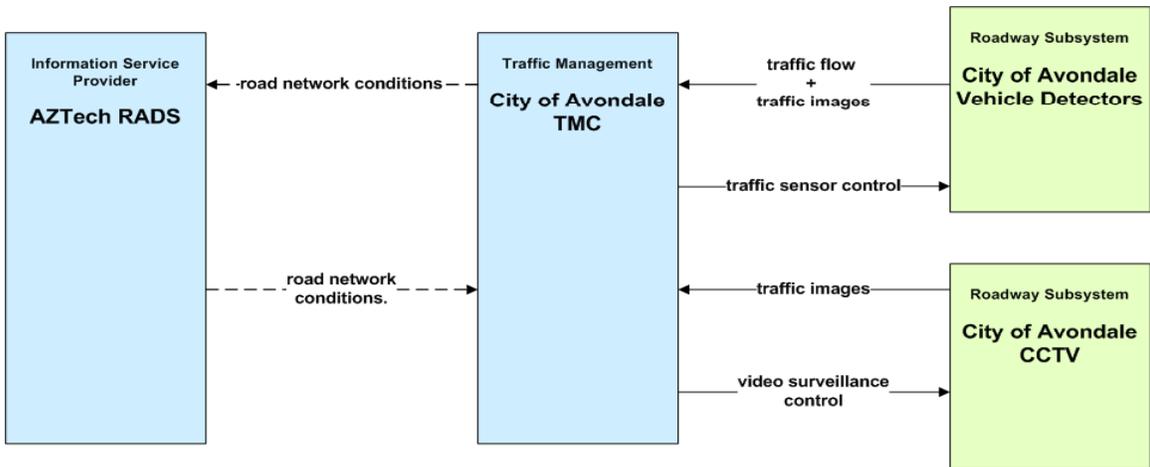
**ATMS08 - Incident Management  
Local Cities and Municipalities (TM to EM)**



The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.

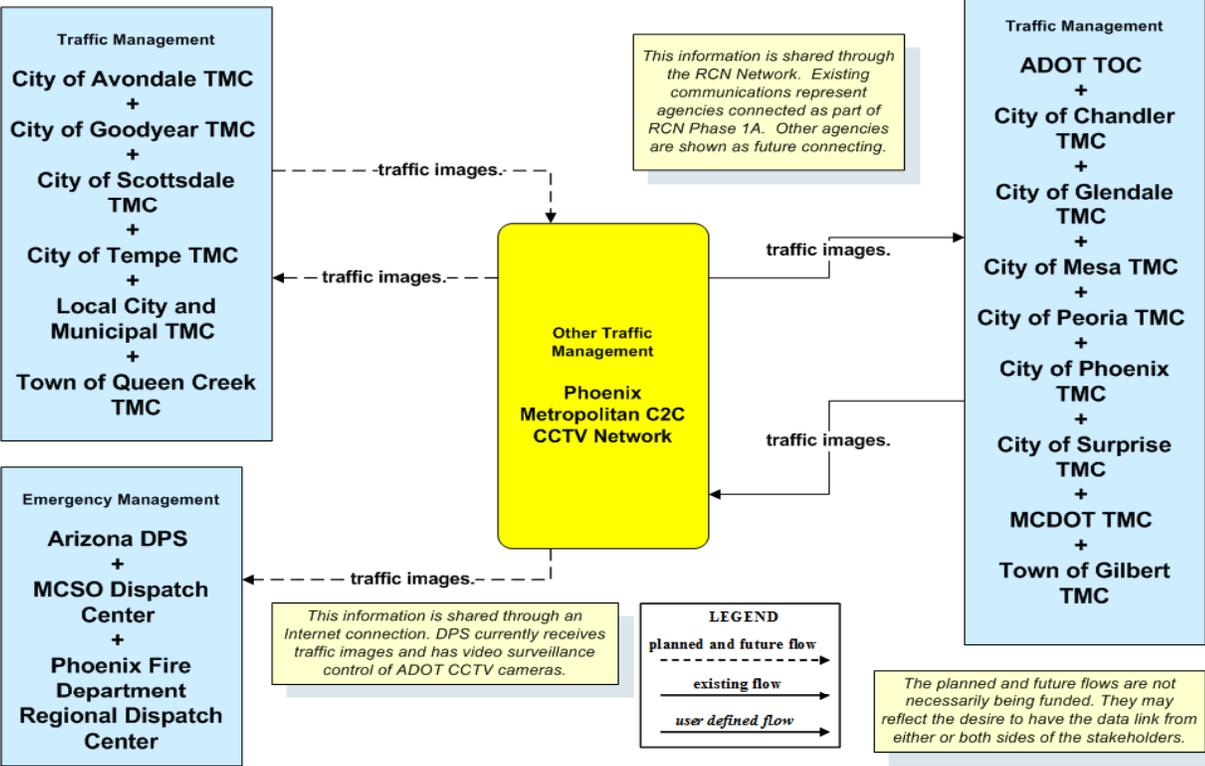
This market package represents the direct information flow between TMCs and their respective public safety agencies rather than a transfer of information from one TMC through an Emergency Management agency to another TMC. TMCs are represented in different boxes due to the status of those information flows

**ATMS01 - Network Surveillance  
City of Avondale**

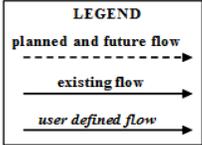
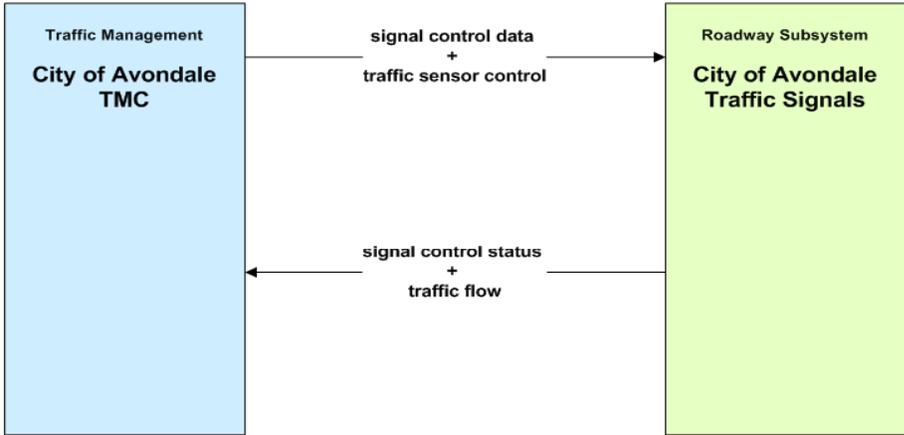


The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.

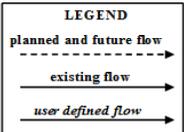
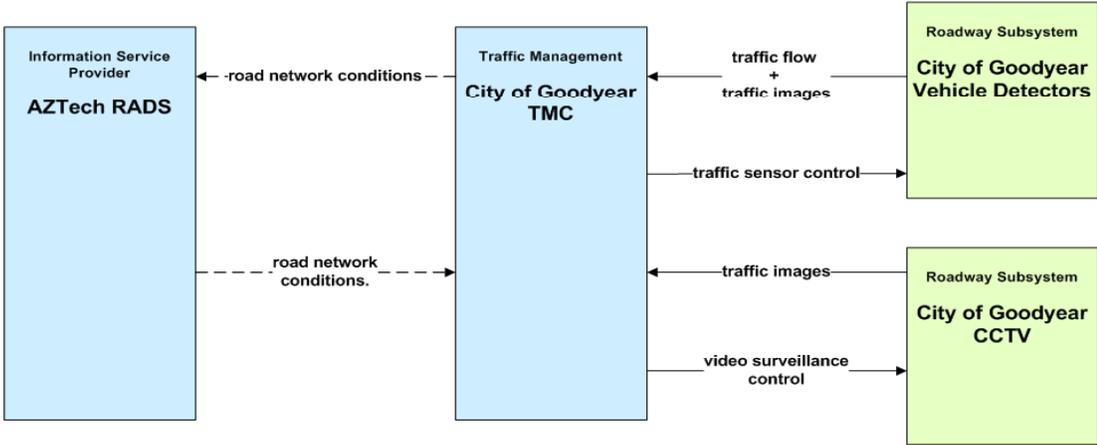
**ATMS07 - Regional Traffic Management  
Phoenix Metropolitan C2C CCTV Network**



**ATMS03 - Surface Street Control  
City of Avondale**

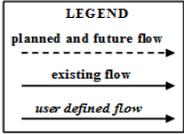
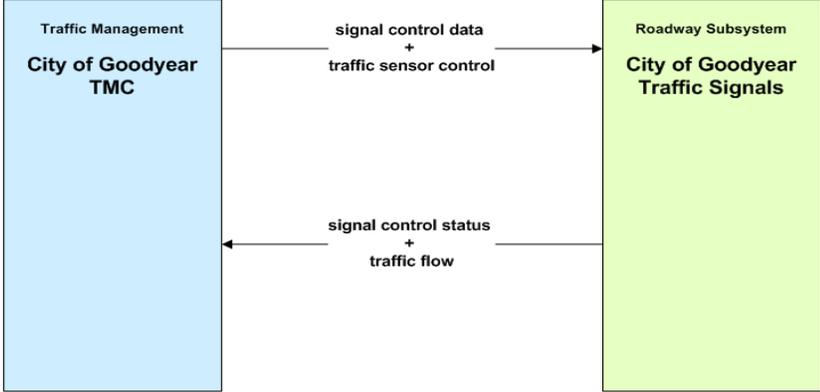


**ATMS01 - Network Surveillance  
City of Goodyear**



*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*

**ATMS03 - Surface Street Control  
City of Goodyear**



**PART D - SIGNATURE AND CHECKLIST**

As the jurisdiction's manager/administrator or designated representative, I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.

Signature:

*R. Karimvand*

Name:

*REZA KARIMVAND*

Title:

*Assistant STATE Engineer*

Date:

*9/18/2012*

WILL FILL OUT AFTER QUESTIONS APPROVED

**Checklist - OPTIONAL**

This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.

**PART A - Contacts and Project Description Fields**

**Complete?**

Contact Information, fields 1 – 5 are complete

Yes

**PART B - TIP Listing and CMAQ Score Data**

**Complete?**

1. Traffic Estimate and Roadway Characteristics - Fields a - l are complete

Yes

2. Traffic Coordination Improvements - as applicable table is complete

Yes

3. Other Improvements - As applicable all fields are completed

Yes

**PART C - Total Project Schedule and Budget Including All Segment Fields**

**Complete?**

Section A is Complete

Yes

Section B is Complete

Yes

Section C is Complete

Yes

Section D is Complete

Yes

Section E is Complete

Yes

Section F is Complete

Yes

Section G is Complete

Yes

Section H is Complete

Yes

Section I is Complete

Yes

**PART D - Signature Page Fields**

**Complete?**

Form is signed

Yes

Name, title and date fields are completed.

Yes

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## TRANSMITTAL INSTRUCTIONS and SCHEDULE

**The due date and time for project applications to be submitted to MAG is Wednesday, September 19, 2012 by 10:00 a.m.**

### Member agencies are to:

**1) Transmit the application and all attachments electronically, and**

To transmit the application electronically, please save the excel file, and then send the application and all attachments to Teri Kennedy, Transportation Programming Manager. Please send graphic attachments in PDF form. Click cell below to send e-mail.

<mailto:MAG Staff>

**2) Submit two printed, signed, and complete applications to MAG.**

To submit two printed, signed, and complete applications to MAG, the applicant can mail **(at MAG offices by Wednesday September 19, 2012 at 10:00 a.m.** or drop off application to:

Maricopa Association of Governments  
ATTN: Teri Kennedy,  
302 N. 1st Avenue, Suite #300,  
Phoenix, AZ 85003.

Or, the applicant can scan a printed and signed application and transmit it via e-mail or fax to: [tkennedy@azmag.gov](mailto:tkennedy@azmag.gov) or 602.254.6300 by Thursday September 19th @ 10:00 a.m. If the applicant is transmitting a scanned, printed, and signed application via e-mail or fax, the applicant will mail or drop off the original printed application by Wednesday, September 26, 2012.

### Application Workshops and Open Working Group Meeting Schedule\*

Monday, August 13, 2012 from 9:00-11:00 AM	Workshop on MAG Transportation Programming and Federal Fund Project Applications
Monday, August 27, 2012 from 1:00-3:30 PM	Open Working Group - Federal Fund Project Applications
Monday, September 10, 2012 from 8:30-11:00 AM	Open Working Group - Federal Fund Project Applications

\* All meetings will be held on the 2nd Floor of the MAG Offices at 302 North 1st Ave, Suite 300, Phoenix, Arizona 85003

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## MAG CMAQ Project

### Intelligent Transportation Systems Project

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
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**A. SCOPING** (15% Preliminary Engineering Design)  
(Non-infrastructure projects: Only #2 applies).

1. SITE TOPOGRAPHIC SURVEY	LS	0	\$0.00	\$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	0	\$0.00	\$0.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	0	\$0.00	\$0.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$2,990.00	\$2,990.00	Yes
5. HAZMAT ASSESSMENT	LS	0	\$0.00	\$0.00	No
<b>SUBTOTAL – PROJECT SCOPING COSTS</b>				\$2,990.00	\$2,990

**B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E**  
(Not applicable to non-infrastructure projects)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
1. Design	LS	1	\$2,990.00	\$2,990.00	Yes
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	0		\$0.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	0		\$0.00	No
4. DRAINAGE REPORT	LS	0		\$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	0		\$0.00	No
<b>SUBTOTAL – PROJECT DESIGN COSTS</b>				\$2,990.00	\$2,990

**C. CONSTRUCTION OR IMPLEMENTATION**

**For non-infrastructure projects (no ground disturbing activities), address only parts 2, 3 and D.**

<b>1. CONSTRUCTION ELEMENTS</b> (Insert additional rows if necessary)
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Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
<b>E. TOTAL PROJECT COST</b> (All <u>subtotals</u> + ADOT local projects review fee)				\$54,131	\$54,131
					
<b>F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS</b>					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$54,131
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$54,131
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$51,045
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$3,085

# RCN Expansion : I-10 West Valley

