PART A - CONTACT INFORMATION	
1. Sponsoring Agency	Maricopa County DOT
2. Contact Name	Faisal Saleem, Project Manager; Gail Chimel, Federal Aid Coordinator
3. Phone	602-506-1241; 602-506-795
4. E-Mail Address	faisalsaleem@mail.maricopa.gov; gailchimel@mail.maricopa.gov
5. Mailing Address	2901 West Durango Street, Phoenix, AZ 85009
(OPTIONAL) GIS Submittal Instructions	

PART B - CMAQ Score Data

This part of the form is used to gather project related data to calculate an CMAQ Score and also gather 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 located within a nonattainment area. Please use the map provided in the tab named "Map" to verify that the project is located in a nonattainment area.

1. Traffic Estimate and Roadway Characteristics

a. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type: 27,200

b. Please Describe how the ADT was estimated: ADT was estimated using average of parallel arterials to major freeways. I-17: 35th Ave (Buckeye to Bell Road) and 19th Ave (McDowell to Bell Road). Loop 101 Pima Freeway: Hayden Road /McClintock Drive (SR101 to SR 202). US 60: Baseline Road (I-10 to Meridian) and Southern Avenue (I-10 to Meridian). Loop 101 North: Bell Road (SR 101 east to SR 101 west); Loop 101 Auga Fria: 91st Avenue (I-10 to Cactus Road). I-10: McDowell Road (SR 303 to SR 143) and Van Buren Street (SR303 to SR 143). The following additional arterials also were included as representative samples for arterial ADT: 7th Street, SR 101 to I-10; 7th Avenue, SR 101 to I-10; 51st Avenue, SR101 to I-10; 75th Avenue, SR 101 to I-10; Camelback Road, 91st Avenue to Pima Road; and Northern Avenue, SR 101 to SR 51.

c. When was the ADT estimate developed: d on MAG's published Avg. Weekday Tra

d. Name of the Roadway Section Used for the ADT Estimate: Refer to item 1b above for specific sections and limits

e. Starting Limit of the Roadway Section: Refer to item 1b. above for specific sections and limits

f. Ending Limit of the Roadway Section: Refer to item 1b. above for specific sections and limits

g. Length (Miles) 279.5

h. Total Number of Through Lanes on the Roadway Section: 5, incl. both directions.

i. Federal Functional Classification of the Roadway Section: Minor Arterial

Link to Functional Classification Update at the MAG Website

2. Improvements in Traffic Management & Operations.

a. Enter the pre-improvement (current) avg corridor traffic speed: 35

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
	Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
	Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
X	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
	Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

PART B - CMAQ Score Data

3. Other Improvements. Check all that apply:

- [ ] Traffic signal system improvements at a single agency
- [ ] Traffic signal system improvements that apply to more than one agency
- [X] Includes improvements to coordination between arterial and freeway traffic operations
- [ ] Project conforms to local land use plans
- [ ] Adds features to traffic signals that would better accommodate seniors at pedestrian crossings

4. Traffic Flow Improvement Due to Project (Not required for Traffic Mgmt & Operations Improvements)

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

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

PART C1 - ITS Project Information

Please enter information ONLY in highlighted cells
Links to various websites are provided for additional information and help
The worksheet titled "Part C Example" shows an example on how to enter information

Integrated Corridor Mgmt

A. Project Title & Sponsor

Lead Agency	Maricopa County DOT
Other Partnering Agencies	N/A
Project Title	RADS Expansion and Enhancements
Project Category	Integrated Corridor Management

B. Project Goals & Objectives

Project Goals:

Enhance Regional Archived Data System (RADS) data exchange and information sharing system to support traveler information and agency coordination processes. RADS serves as an important data collection tool, both for real-time information exchanges as well as regional data archiving. This project would add necessary hardware updates and integration requirements to enhance RADS.

Project Objectives:

Improve real-time information exchange capabilities of RADS, support enhanced coordination for incident and event data, and expand multimodal data sharing capabilities.
Enhance RADS to support current and future ICM needs, including considerations for expanded arterial information display needs (such as alternate routing).
Support additional agency connectivity to RADS.

C. Project Information

Project Location Description - a PDF file of a map must be submitted to MAG as an attachment:

This is a regional project - RADS connects to several agencies in the County. The attached map represents the RADS coverage area.

Scope of the Project:

This project will enhance the RADS database to allow for additional connectivity of agencies, and expanded capacity for information exchange and archiving. MCDOT and partners will identify required enhancements based on needs of ICM, decision support for arterial-reroutes due to freeway incidents, and other needed capabilities that stakeholders have identified. Requirements will be identified, and MCDOT (and any contractors) will follow the systems engineering process to design, implement, and test the RADS enhancements.

PART C1 - ITS Project Information

D. Identify Project Components in MAG Regional ITS Architecture

Service Area	Addressed in this Project (Yes or No)	Applicable ITS Service Packages http://www.azmag.gov/ITS/
1. Traffic Management	No	(captured in ATMS 07)
2. Public Transportation	No	
3. Communications	Yes	ATMS 07 C2C
4. Traveler Information	Yes	ATIS 01, ATIS02
5. Archived Data Mgmt	Yes	AD 1, AD 2
6. ITS for Safety	No	
7. ITS Planning	No	
8. Fwy-Arterial Operations	Yes	ATMS 07 C2C

NOTE: Insert the relevant Architecture Flow Diagrams in worksheet: Part C-ITSArchFlowDiags

E. Program Year Preference (enter FY2018 oor FY2019)

Preferred program FY: 2019

F. Project Budget

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	$122,590.00	$37,410.00	$160,000.00
Cost percentage	76.6%	23.4%	

G. System Maintenance and Operations

Current staff resources available to support ITS operations at the local agency (in FTEs)	6
Additional staff resources required for fully utilizing features added by project (in FTEs)	0
Agency's estimated current annual ITS operations & maintenance (O&M) budget	$1,400,000
Estimated additional annual O & M funds required for features added by this project	None
Estimated DATE from when required additional local O&M funds will be available	Jul-2020

PART C1 - ITS Project Information

Other comments:

There are no additional staff needed for agency FTE to support these enhancements.

H. Systems Engineering Analysis Requirement

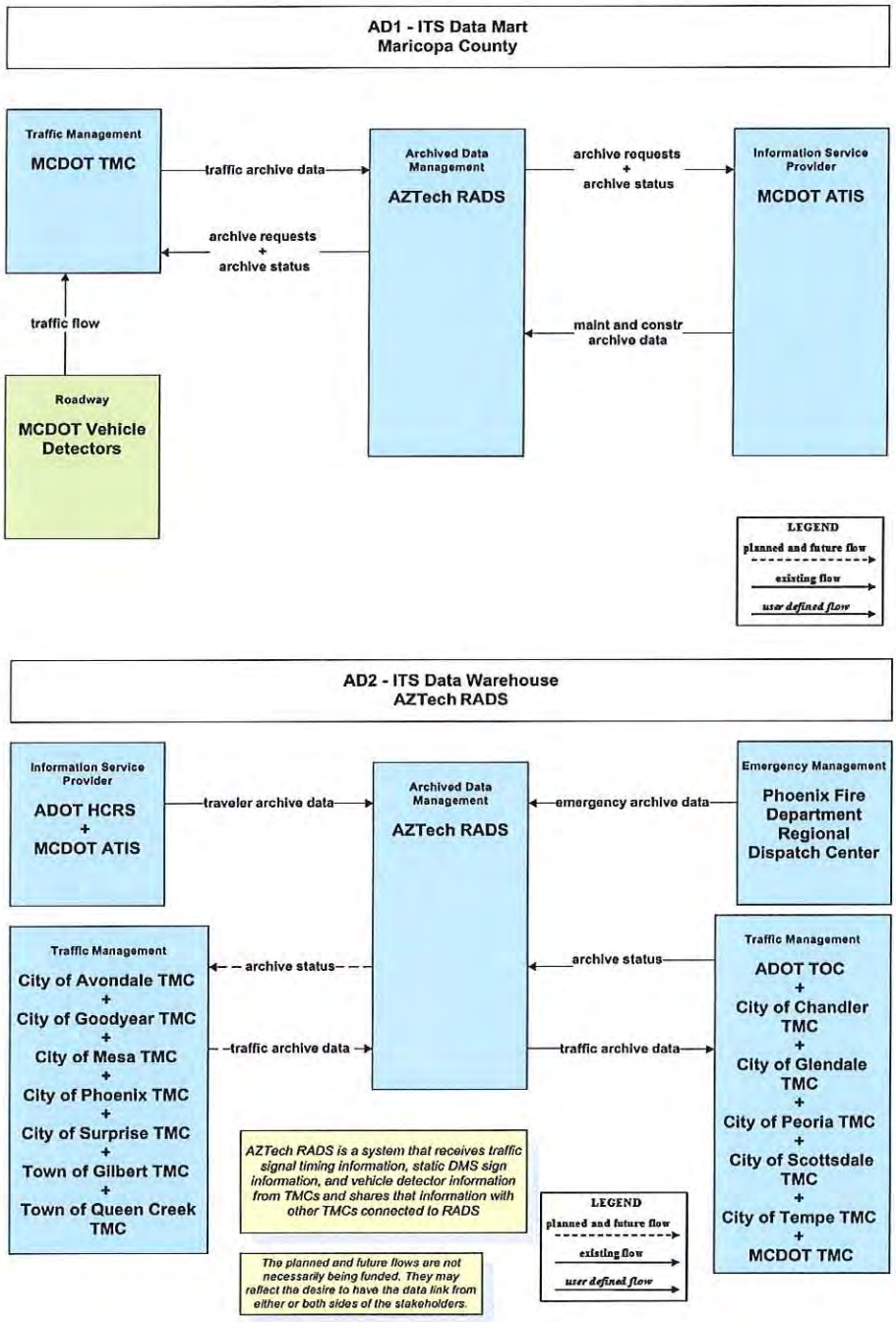
Commitment to address the federal requirement for Systems Engineering Analysis:
Agency's intent to follow the process described in the 'V' diagram
during the project development process

MCDOT is well versed with the Systems Engineering process and will conform to SEA analysis for this project, including planning and concept development in advance of the funding from the MAG TIP.
http://azmag.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf

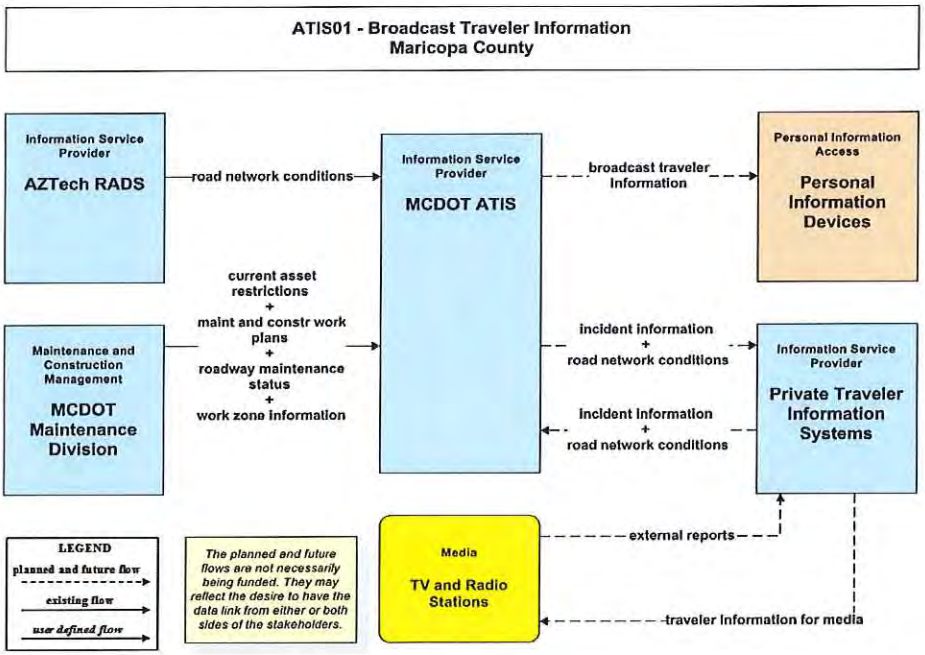
PART C2 - ITS Architecture Flow Diagrams

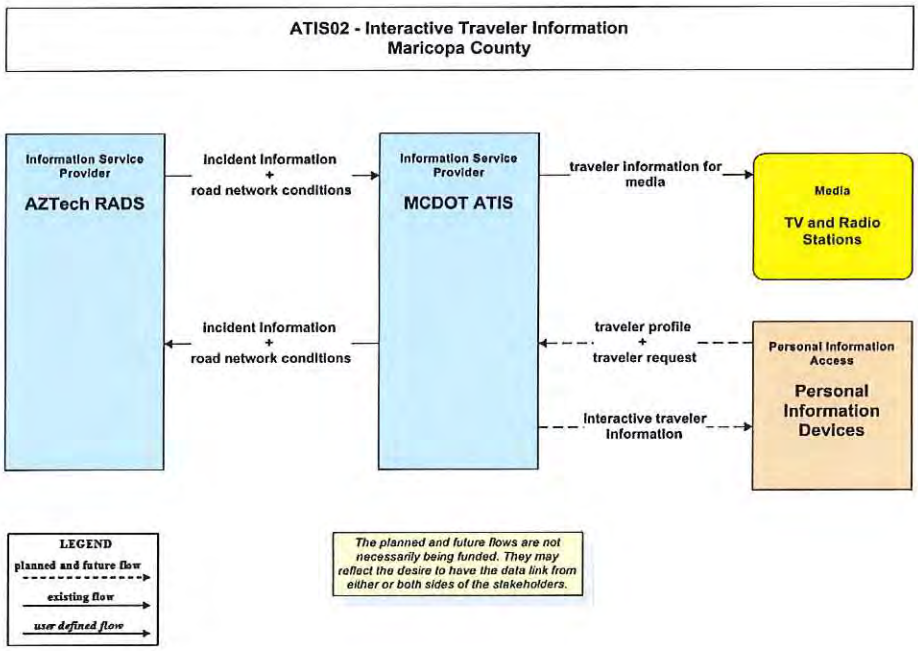
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federaly funded ITS projects.

Insert Archtecture Flow Diagrams in the space below:

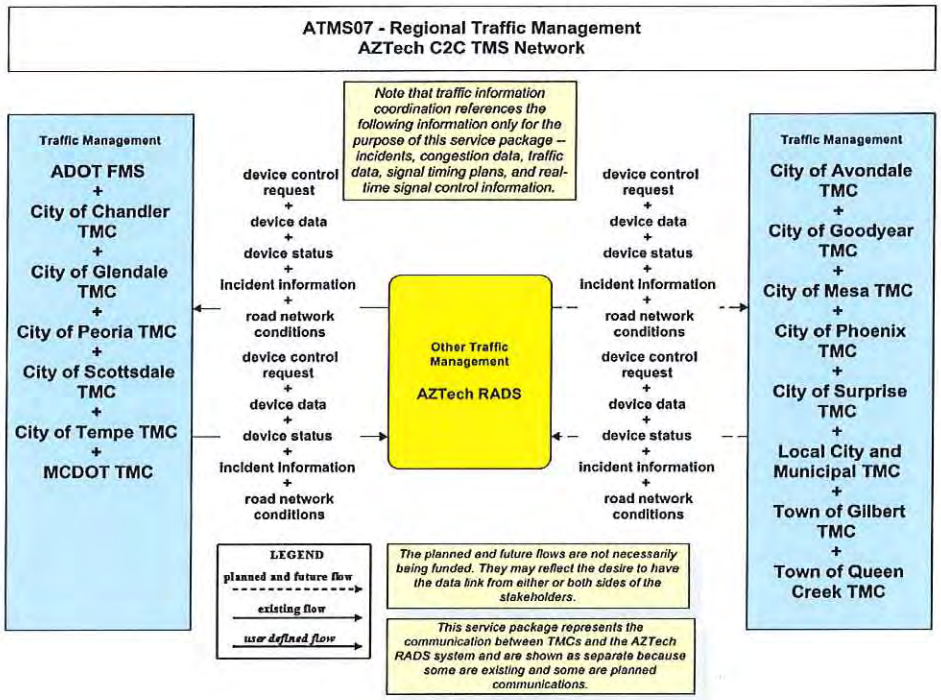


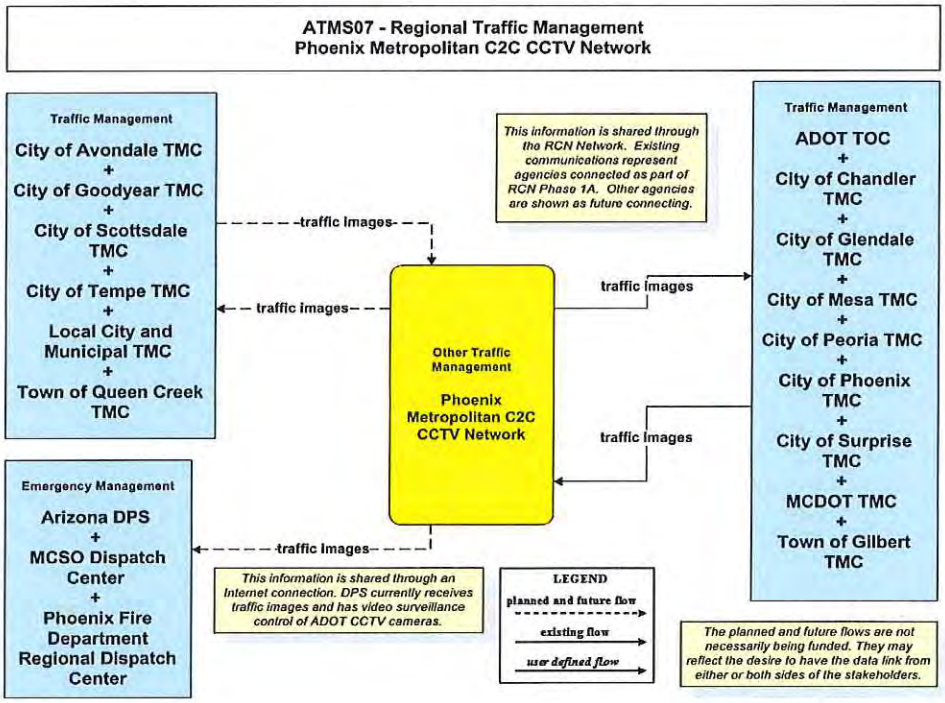
PART C2 - ITS Architecture Flow Diagrams





PART C2 - ITS Architecture Flow Diagrams





PART D1 - Detailed Cost Estimate

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
A. SCOPING (15% Preliminary Engineering Design)					
1. SITE TOPOGRAPHIC SURVEY	LS	1		$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	$15,000.00	$15,000.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	$5,000.00	$5,000.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1		$0.00	No
5. HAZMAT ASSESSMENT	LS	1		$0.00	No
SUBTOTAL – PROJECT SCOPING COSTS				$20,000.00	$0

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E					
1. Right-of-Way Acquisition	LS	1		$0.00	No
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	1		$0.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	1		$0.00	No
4. DRAINAGE REPORT	LS	1		$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	1		$0.00	No
SUBTOTAL – PROJECT DESIGN COSTS				$0.00	$0

C. CONSTRUCTION OR IMPLEMENTATION

1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Example: Pull Boxes removal/replace	*EA*			*$0*	Yes
Example: Fiber	*LF*			*$0*	Yes
Example: New Conduit	*LF*			*$0*	Yes
Example: Intersection conduit work				*$0*	Yes
Example: Wireless Communication Link	EA			*$0*	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes

PART D1 - Detailed Cost Estimate					
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
SUBTOTAL - CONSTRUCTION				$0	$0

PART D1 - Detailed Cost Estimate

2. PROCUREMENT (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Server and Hardware Enhancements	EA	1	$35,000	$35,000	Yes
Software Integration	EA	1	$85,000	$85,000	Yes
Training and documentation on new features	EA	1	$10,000	$10,000	Yes
	EA			$0	Yes
	EA			$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
				$0	Yes
SUBTOTAL – PROCURMENT				$130,000	$130,000

3. OTHER ITEMS
(Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
				$0.00	Yes
SUBTOTAL - OTHER CONSTRUCTION LINE ITEMS				$0.00	$0

PART D1 - Detailed Cost Estimate

4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only. If Section 1 is filled out, please fill out this section)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
CONTRACTOR MOBILIZATION	LS	1		$0.00	Yes
TRAFFIC CONTROL	LS	1		$0.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1		$0.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1		$0.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1		$0.00	Yes
SUBTOTAL – MOBILIZATION & ADMINISTRATION COSTS				$ -	$0
TOTAL CONSTRUCTION OR IMPLEMENTATION COST				$ 130,000	$ 130,000

PART D1 - Detailed Cost Estimate

D. ADOT Fee for PE Reviews and Staff Charges	LS	1	$10,000	$10,000	No
			TOTAL ADOT Fee COST	$10,000	$0
E. TOTAL PROJECT COST				$160,000	$130,000

F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS	
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION	**$160,000**
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT	**$130,000**
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)	**$122,590**
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)	**$7,410**
LOCAL AGENCY FUNDS NOT ELIGIBLE FOR FEDERAL REIMBURSEMENT	**$30,000**

PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING
(All Items are Required, Unless Identified as 'Optional')"

Please provide a cost and programming estimate for the total project (e.g. the cost to complete all planned segment improvements). The design for the project should be programmed at least 1 year, preferably 2 years, prior to construction.

Section 1 - Total Project Budget

Cost Estimate for the Project from Part D1	Eligible Federal Cost	Local Cost Only	Total Cost	(Optional) Additional Notes
A. SCOPING (15% Preliminary Engineering Design) (Non-infrastructure projects: Only #2 applies).	$ -	$ 20,000	$ 20,000	This is the cost of a ConOps and SE analysis
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	$ -	$ -	$ -	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	$ -	$ -	$ -	
2. PROCUREMENT	$ 130,000	$ -	$ 130,000	
3. OTHER ITEMS	$ -	$ -	$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	$ -	$ -	$ -	
SUBTOTAL	$ 130,000	$ -	$ 130,000	
D. ADOT Fee for PE Reviews and Staff Charges	$ -	$ 10,000	$ 10,000	
Total Project Cost	$ 130,000	$ 30,000	$ 160,000	

Agency Programming

Please describe the programming of the project in the agency's own CIP/TIP.	

Requested MAG TIP Programming	Short Work Description (E.g. Construct HAWK)	Year (Choose One)	Local Cost	CMAQ Cost	Total Cost	Local Share
1. Scoping and PE (Optional)				$ -	$ -	
2. Other (Optional)				$ -	$ -	
3. Other (Optional)				$ -	$ -	
4. Construction or Implementation	Enhance RADS to support additional agency integration and expanded data sources	2019	$ 37,410	$ 122,590	$ 160,000	23%
Totals			$ 37,410	$ 122,590	$ 160,000	23%

PART E - 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:

Name: Jennifer Toth, P.E.

Title: Director/County Engineer

September 18, 2015

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	**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 - i are completed	Yes
2. Improvements in Traffic Management & Operations	Yes
3. Other Improvements - As applicable all fields are completed	Yes
4. Traffic Flow Improvement Due to Project	No
PART C1 - ITS Project Information	**Complete?**
Section A is Complete	Yes
Section B is Complete	Yes
Section C is Complete & A PDF file of map will be attached to the submittal to MAG	Yes
Section D is Complete & All relevant Architecture Flow Diagrams have been inserted in the worksheet	Yes
Section E is Complete	Yes
Section F is Complete	Yes
Section G is Complete	Yes
Section H is Complete	Yes
PART C2 - ITS Architecture Flow Diagrams have been inserted	Yes
PART D1 - Detailed Cost Estimate	Yes
PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING	Yes
PART E - Signature & Checklist	**Complete?**
Form is signed	Yes
Name, title and date fields are completed.	Yes

LEGEND

Maricopa County and County Boundary

MCDOT 2—RADS Enhancements

N