

SCT-ITS-3

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**.

If member agencies need additional information or have questions, they should contact Teri Kennedy or Stephen Tate at (602) 254-6300 or contact them by e-mail at the following addresses:

<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	City of Scottsdale
2. Contact Name	Steven Ramsey
3. Phone	480-312-7935
4. E-Mail Address	sram@scottsdaleaz.gov
5. Mailing Address	7447 E. Indian School Rd., Ste. 205 Scottsdale, AZ 85251

(OPTIONAL)

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

[GIS Submittal Instructions](#)

ITS Application from City of Scottsdale for 'Highway Advisory Radio Deployment'

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:

Sum of MAG established ADTs on all major arterials within project area divided by sum of segments lengths of same arterials. Worksheet attached

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:

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 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 checked="" 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:

ITS Application from City of Scottsdale for 'Highway Advisory Radio Deployment'

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	City of Scottsdale
Other Partnering Agencies	ADOT, SRPMIC, Fountain Hills, Paradise Valley, Tempe
ITS Project Title:	Highway Advisory Radio Deployment
Project Category:	Arterial ITS

B. Project Goals & Objectives

Project Goals:

- * Inform a wider range of the traveling public of significant traffic and emergency events in the Scottsdale Area.
 - * Provide them with alternate route and other critical information.
 - * Reduce Congestion in effected areas and improve overall safety. *
- Systematically reduce number of deployed DMSs in Scottsdale.

Objectives:

- * Support greater mobility and enhanced traffic flow by warning drivers of unexpected congestion in time for them to take alternate routes.
 - * Support regional environmental objectives by reducing emissions generated by unexpected congestion.
 - * Support various emergency management agencies in deciminating emergency information in a timely matter. *
- Reduce operation and maintenance costs associated with existing DMSs.

C. Project Information

Project Location:

All of Scottsdale and portions of surround agencies. From Scottsdale Rd. & Carefree Highway to Hayden Rd. & McKellips and eastward along the Shea Blvd. corridor to 136th St.

Scope of the project:

Highway Advisory Radio (HAR) uses low power, short range, AM broadcast radio to advise the public on a variety of important travel and safety related information. Typical range of a single HAR unit is about a 5 mile radius. This project would utilize 4 - 5 such transmission units plus approximately 60 flashing advisory signs with a message such as; [TUNE TO 610AM FOR VITAL INFORMATION WHEN FLASHING]. The transmission sites will be connected to and receive data from the Scottsdale TMC via existing the fiber-optic network. The Flashing Advisory signs will be activated through special functions already available through the City's interconnected Signal System.

D. Identify Components in MAG Regional ITS Architecture

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<u>ITS applications</u>	Relevant Applications (ENTER: Yes or No)	Applicable ITS Market Packages
1. Traffic Management	Yes	ATMS06, ATMS07, ATMS08, ATMS09, ATMS11, ATMS17,
2. Transit Operations Support	No	
3. Communications	Yes	
4. Traveler Information	Yes	ATIS01, ATIS10
5. Archived Data Management	No	
6. ITS for Safety	Yes	EM03, EM06, EM07, EM08, EM09, EM10
7. ITS Plans	No	
8. Freeway-Arterial Operations	Yes	

Note: Please attach the Architecture Flow Diagram in the application

E. Program Year Preference

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

F. Project Budget

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$379,005.00	\$38,000.00	\$417,005.00
Cost percentage	90.9%	9.1%	

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				Sep-2013
Receipt of ADOT project number	Nov-2013	Yes	2	Nov-2013
Initial DCR	Dec-2013	Yes	4	Jan-2014
Final DCR	Jan-2014	Yes	5	Feb-2014
30% Preliminary Plans, Cost Estimate and Report	Mar-2014	Yes	6	Mar-2014
60% Preliminary Plans, Cost Estimate and Report	May-2014	Yes	8	May-2014
Final Preliminary Plans, Cost Estimate and Report	Jul-2014	Yes	10	Jul-2014
Environmental Clearance	May-2014	Yes	11	Aug-2014
Utility Clearance	Jun-2014	Yes	12	Sep-2014
Right-of-Way Clearance	Mar-2014	Yes	12	Sep-2014
Approval of IGA	Sep-2014	No		NA
Obligation authority of Federal funds	Oct-2014	Yes	13	Oct-2014

< ENTER mm/yyyy -- Project Activity S

Advertised Date	Dec-2014	Yes	2	Dec-2014
Final Deployment	Jun-2015	Yes	6	Jun-2015

H. System Maintenance and Operations

Current staff resources available for ITS operations at the local	5
Additional staff resources required for fully utilizing features added by	0
Estimated current annual ITS operations & maintenance budget	\$695,000
Estimated additional annual operations & maintenance funds required	\$9,950
Estimated DATE from when required additional O&M funds will be	May-2015

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>

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:

Name:

Title:

Date:

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	
PART B - TIP Listing and CMAQ Score Data	Complete?
1. Traffic Estimate and Roadway Characteristics - Fields a - I are complete	
2. Traffic Coordination Improvements - as applicable table is complete	
3. Other Improvements - As applicable all fields are completed	
PART C - Total Project Schedule and Budget Including All Segment Fields	Complete?
Section A is Complete	
Section B is Complete	
Section C is Complete	
Section D is Complete	
Section E is Complete	
Section F is Complete	
Section G is Complete	
Section H is Complete	
Section I is Complete	
PART D - Signature Page Fields	Complete?
Form is signed	
Name, title and date fields are completed.	

ITS Application from City of Scottsdale for 'Highway Advisory Radio Deployment'

September 14, 2012

Teri Kennedy, Transportation Improvement Program Manager
Maricopa Association of Governments
302 N. 1st Avenue, Suite 300
Phoenix, AZ 85003

Dear Ms. Kennedy,

This letter is to document the City of Scottsdale's, commitment to developing and completing the federal funded project: Scottsdale City-Wide Highway Advisory Radio System in accordance with the attached schedule.

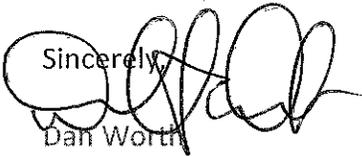
The total project budget is outlined below, which includes all work phases, the local and federal costs already incurred and planned to incur. The project funding is further committed as included in the City of Scottsdale, Capitol Improvement Project Budget Plan, which was approved on July 1 2012, in accordance with the CIP 5 year plan. A copy of the project as funded in the City of Scottsdale, Capitol Improvement Project Budget Plan is attached as well.

Work Phase	Year	Type of Local Funding	Local Costs	Federal Costs	Other Costs	Total Project Cost
Design location for 4 HAR transmission sites and 65 sets of Flashing Advisory Signs	2014	Sales Tax	\$38,000.00	\$ -	\$	\$38,000.00
All installation with take place within City ROW	2014		\$ 0	\$ -		
Construct the 4 HAR transmission sites and 65 set of Flashing Advisory Signs	2015	CMAQ	\$ 0	\$ 379,005.00	\$	\$417,005.00

The City of Scottsdale's staff that is responsible to adhering to the project development schedule is Steven Ramsey, Sr. ITS Engineer.

As the City Manager, I commit that the project as explained in the letter has sufficient local funding as documented in the current CIP/TIP or budget, and staff time in order to develop the project to federal standards according to the schedule that is provided.

Sincerely,

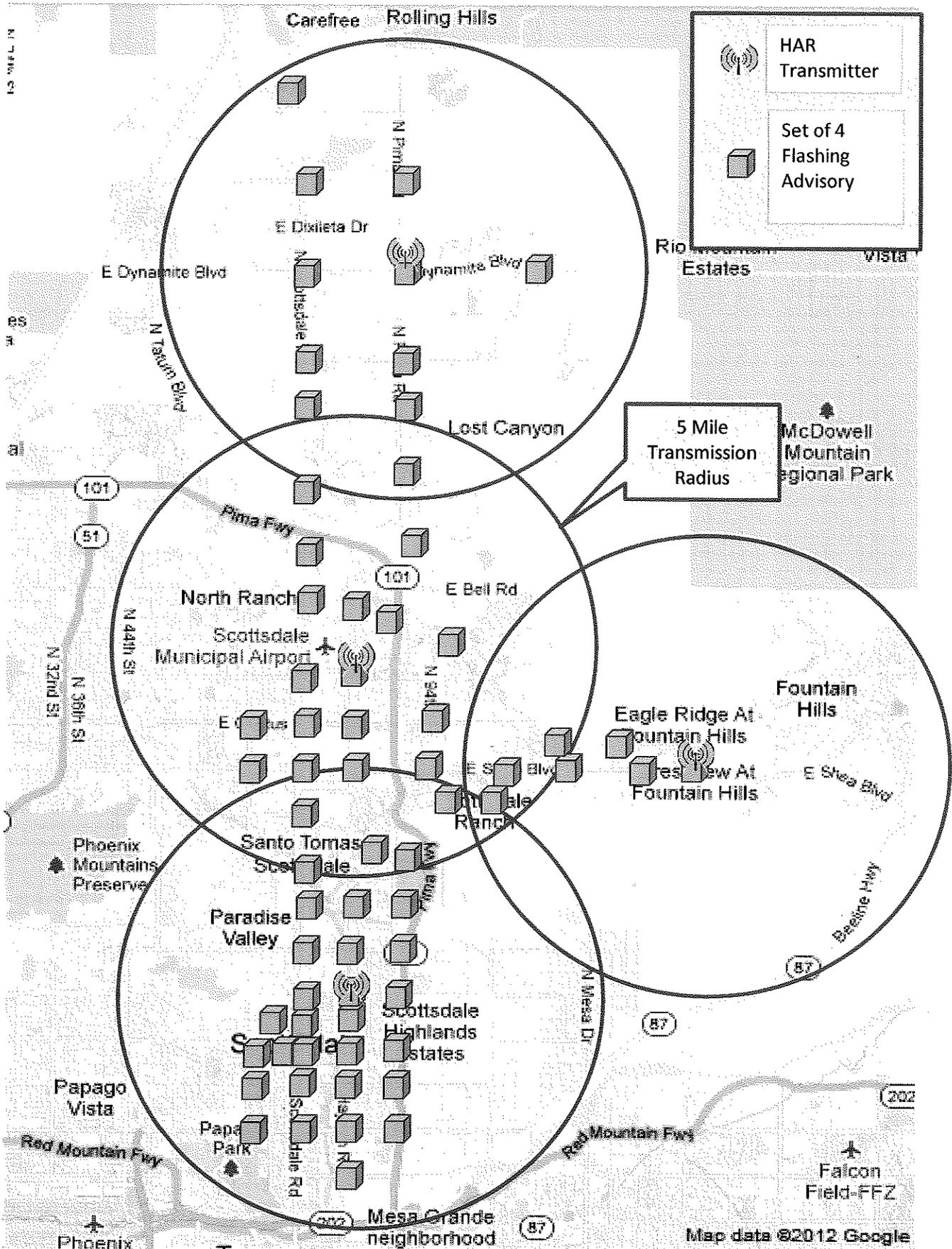


Dan Worth

Acting City Manager

Schedule Information: Please enter anticipated dates for completing the steps in the process for obtaining the FHWA commitment (e.g. obligation) to fund the projects. If the step is not applicable - e.g. right-of-way clearance for an ITS procurement project - please enter "Not Applicable".

Phase	Step	Planned Date		Actual Date		Status	Notes
		Start	End	Start	End		
Design	Preliminary Project Assessment	Nov - 2013	Dec - 2013				
	Design Concept Report	Dec - 2013	Jan - 2014				
	30 Percent Plans	Mar - 2014	May - 2014				
	60 Percent Plans	May - 2014	June - 2014				
	95 Percent Plans	June - 2014	July - 2014				
	PS&E Package	July - 2014	Aug - 2014				
	Hazmat Report	n/a					
Environmental	Biological Report	n/a					
	Cultural Report	n/a					
	Environmental Document/Clearance	May 2014					
	Inventory/Appraisals Made	n/a					
	Acquisitions Completed	n/a					
Right-of-Way	ROW Clearance	Mar - 2014					
	Utilities Clearance	June - 2014					
Other	Materials Memo	n/a					
	IGA/JPA	n/a					
	Authorize Project	Oct - 2014	Nov - 2014				



	HAR Transmitter
	Set of 4 Flashing Advisory

5 Mile Transmission Radius

Schedule Information: Please enter anticipated dates for completing the steps in the process for obtaining the FHWA commitment (e.g. obligation) to fund the projects. If the step is not applicable - e.g. right-of-way clearance for an ITS procurement project - please enter "Not Applicable".

Phase	Step	Planned Date		Actual Date		Status	Notes
		Start	End	Start	End		
Design	Preliminary Project Assessment	Nov - 2015	Dec - 2015				
	Design Concept Report	Dec - 2015	Jan - 2016				
	30 Percent Plans	Mar - 2016	May - 2016				
	60 Percent Plans	May - 2016	June - 2016				
	95 Percent Plans	June - 2016	July - 2016				
	PS&E Package	July - 2016	Aug - 2016				
Environmental	Hazmat Report	n/a					
	Biological Report	n/a					
	Cultural Report	n/a					
	Environmental Document/Clearance	May 2016					
	Inventory/Appraisals Made	n/a					
	Acquisitions Completed	n/a					
Right-of-Way	ROW Clearance	Mar - 2016					
	Utilities Clearance	June - 2016					
Other	Materials Memo	n/a					
	IGA/JIPA	n/a					
	Authorize Project	Oct - 2016	Nov - 2016				

MAG CMAQ Project - Scottsdale Highway Advisory Radio (HAR)

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	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$5,000.00	\$5,000.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	\$1,000.00	\$1,000.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	0	\$0.00	\$0.00	No
5. HAZMAT ASSESSMENT	LS	0		\$0.00	No
SUBTOTAL – PROJECT SCOPING COSTS				\$6,000.00	\$0

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. Right-of-Way Acquisition	LS	0		\$0.00	No
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	0	\$0.00	\$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
SUBTOTAL – PROJECT DESIGN COSTS				\$0.00	\$0

C. CONSTRUCTION OR IMPLEMENTATION

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

1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
<i>Antenna</i>	EA	4	\$9,995	\$39,980	Yes
<i>Vertical Profile Antenna</i>	EA	4	\$2,595	\$10,380	Yes
<i>Flashing Alert Sign Panel</i>	EA	260	\$595	\$154,700	Yes
<i>Remote Controle & Power Unit</i>	EA	65	\$2,195	\$142,675	Yes
<i>FCC license Package</i>	EA	1	\$1,195	\$1,195	Yes
<i>Transmitter Site Preparation</i>	EA	1	\$4,500	\$4,500	Yes
<i>Electronics Installation</i>	EA	1	\$2,500	\$2,500	Yes
<i>On-Site Training & FCC required signal study</i>	EA	1	\$4,650	\$4,650	Yes
<i>Radio Synchronization Units</i>	EA	4	\$3,000	\$12,000	Yes
<i>Rack Cabinet and Distribution Amp</i>	EA	2	\$995	\$1,990	Yes
<i>Lifetime Product Support</i>	EA	8	\$495	\$3,960	Yes
<i>Package & Handling</i>	EA	8	\$65	\$520	Yes
<i>Software Suite</i>	EA	1	\$990	\$990	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL - CONSTRUCTION				\$380,040	\$380,040



2. PROCUREMENT (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
					No
					No
					Yes
					Yes
					Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL - PROCURMENT				\$0	\$0



3. OTHER ITEMS
(Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
E. TOTAL PROJECT COST (All <u>subtotals</u> + ADOT local projects review fee)				\$401,040	\$380,040



F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS

TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION	\$401,040
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT	\$380,040
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)	\$358,378
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)	\$21,662