PART A - CONTACT INFORMATION	
1. Sponsoring Agency	City of Avondale
2. Contact Name	Chris Hamilton
3. Phone	623-333-4218
4. E-Mail Address	chamilton@avondale.org
5. Mailing Address	11465 W Civic Center Dr

(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: 15009

b. Please Describe how the ADT was estimated: 2014 Annual Traffic Count

c. When was the ADT estimate developed: 2014

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

e. Starting Limit of the Roadway Section: Dysart Road

f. Ending Limit of the Roadway Section: 127th Ave

g. Length (Miles) 0.75

h. Total Number of Through Lanes on the Roadway Section: 5

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: 43

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
	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
X	Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

NOTE: All ITS projects MUST involve elegible infrastructure improvements.

3. Other Improvements. Check all that apply:

X Traffic signal system improvements at a single agency

PART B - CMAQ Score Data

- [ ] Traffic signal system improvements that apply to more than one agency
- [ ] Includes improvements to coordination between arterial and freeway traffic operations
- [x] 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:	43
b. Enter the post-improvement (current) average traffic speed of the corridor:	46

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

Arterial ITS

A. Project Title & Sponsor

Lead Agency	City of Avondale
Other Partnering Agencies	
Project Title	Van Buren St Phase 1 ITS
Project Category	Arterial ITS

B. Project Goals & Objectives

Project Goals:

Install fiber backbone on Van Buren Street from Dysart Rd to 127th Ave. This project will connect fiber installed along Dysart Rd. Avondale will then have fiber connectivity to two additional traffic signals at 10th Street and 127th Avenue.

Project Objectives:

This will expand TMC traffic surveillance and mornitoring capability; Facilitate the coordination of signal timing adjustments in response to real-time traffic conditions.

C. Project Information

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

Van Buren Street from Dysart Road to 127th Avenue.

Scope of the Project:

Procure, Construct and Install: Two (2) new ASC 3 controllers installed to replace existing to provide compatible ITS applications. Fiber backbone will be installed in Van Buren Street roadway right-of-way.

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	Yes	ATMS01, ATMS03, ATMS07
2. Public Transportation	No	
3. Communications	Yes	ATMS01, ATMS03, ATMS07
4. Traveler Information	No	
5. Archived Data Mgmt	No	
6. ITS for Safety	Yes	ATMS07
7. ITS Planning	Yes	ATMS01, ATMS07
8. Fwy-Arterial Operations	Yes	ATMS07

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	$301,477.10	$188,222.90	$489,700.00
Cost percentage	61.6%	38.4%	

G. System Maintenance and Operations

Current staff resources available to support ITS operations at the local agency (in FTEs)	1
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	$50,000
Estimated additional annual O & M funds required for features added by this project	$7,500
Estimated DATE from when required additional local O&M funds will be available	Jul-2019

PART C1 - ITS Project Information

Other comments:

H. Systems Engineering Analysis Requirement

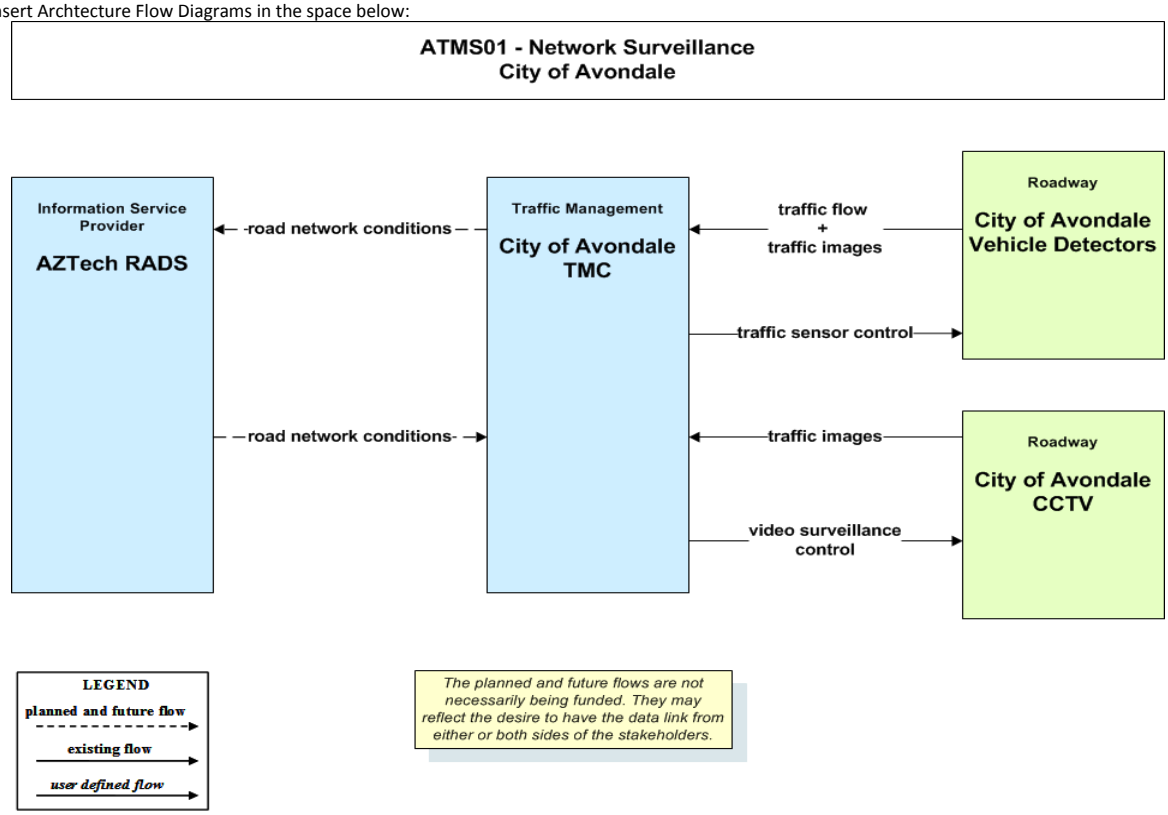
Commitment to address the federal requirement for Systems Engineering Analysis:
Agency's intent to follow the process described in the 'V' diagram
during the project development process

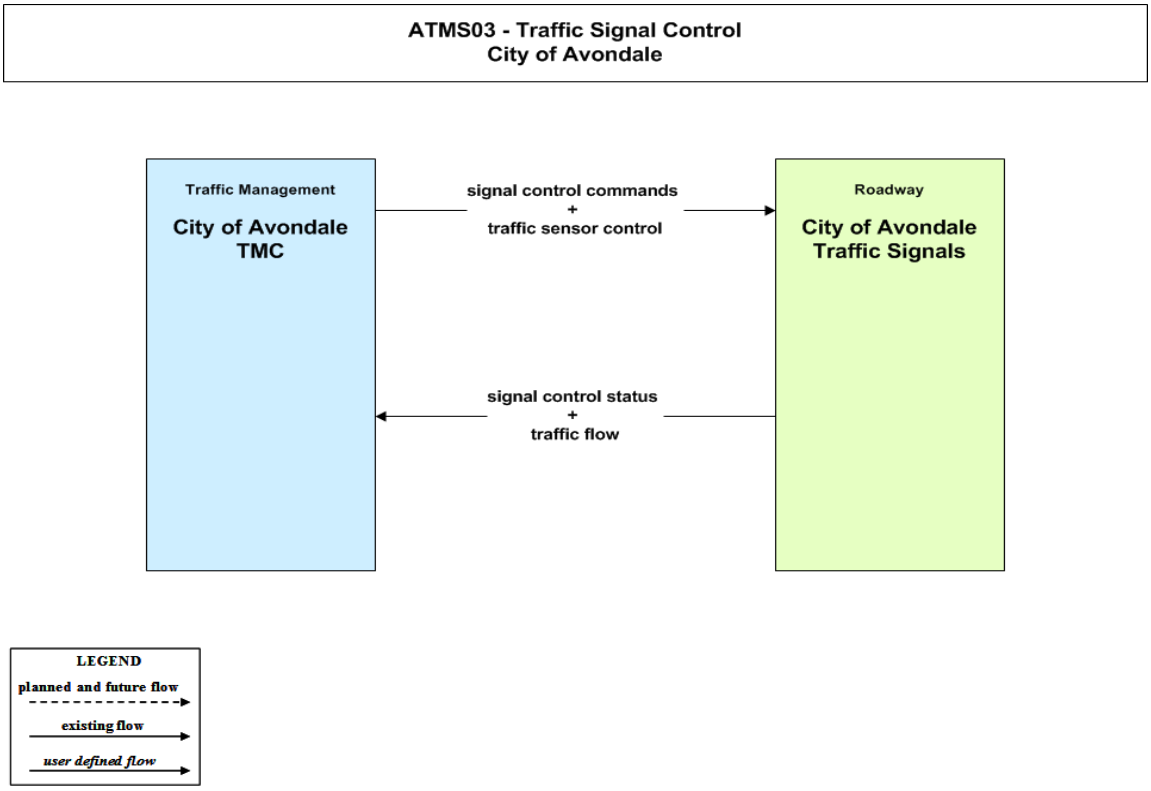
The project sponsor/lead agency City of Avondale intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report, following guidance on the ADOT's System Engineering Checklist provided at:
http://azmag.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf

PART C2 - ITS Architecture Flow Diagrams

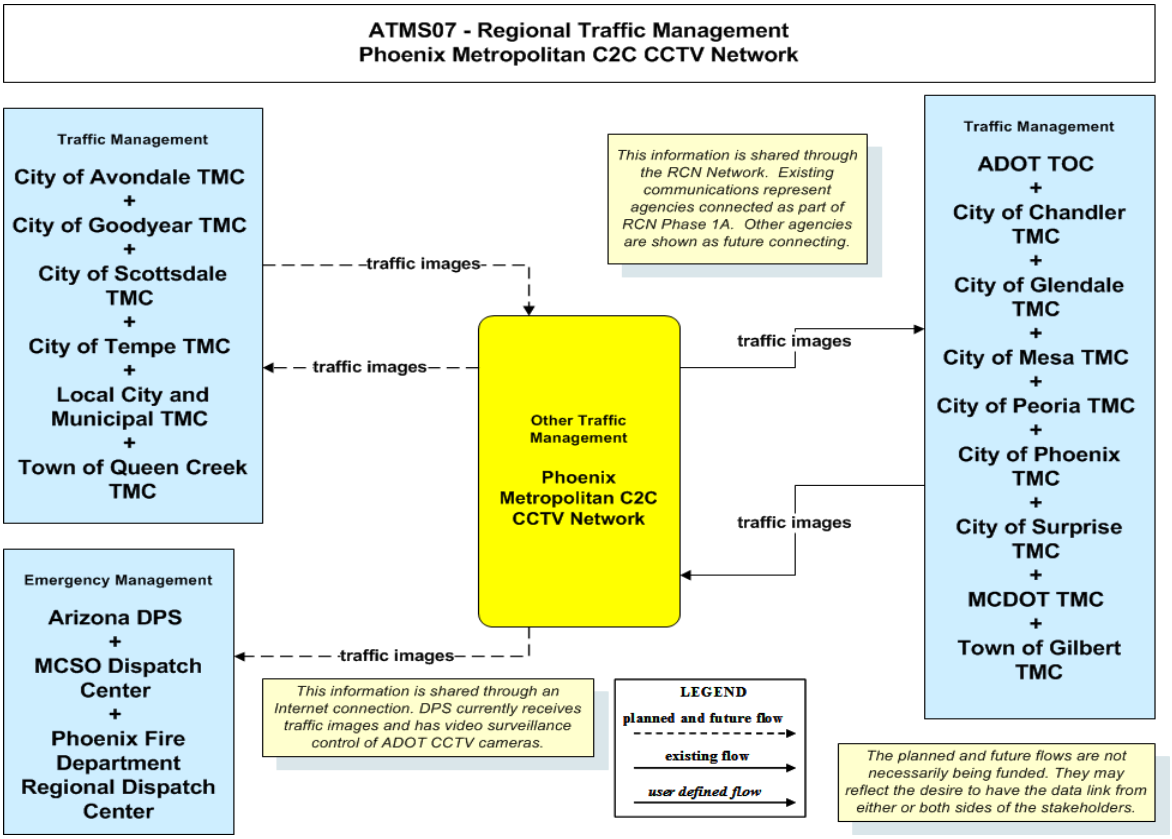
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federaly funded ITS projects.

Insert Archtecture Flow Diagrams in the space below:





PART C2 - ITS Architecture Flow Diagrams



PART 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	$20,000.00	$20,000.00	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	$10,000.00	$10,000.00	No
5. HAZMAT ASSESSMENT	LS	1	$5,000.00	$5,000.00	No
SUBTOTAL – PROJECT SCOPING COSTS				$55,000.00	$0
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E					
Item Description	**Unit**	**Quant.**	**Unit Prices**	**Total**	**Eligible for CMAQ?**
1. Right-of-Way Acquisition	LS	1	$0.00	$0.00	No
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	1	$75,000.00	$75,000.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	1	$5,000.00	$5,000.00	No
4. DRAINAGE REPORT	LS	1		$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	1	$5,000.00	$5,000.00	No
SUBTOTAL – PROJECT DESIGN COSTS				$85,000.00	$0
C. CONSTRUCTION OR IMPLEMENTATION					
1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)					
Item Description	**Unit**	**Quant.**	**Unit Prices**	**Total**	**Eligible for CMAQ?**
Electrical Conduit (2")	*LF*	*100*	*$35*	*$3,500*	Yes
Electrical Conduit (2-2")	*LF*	*50*	*$35*	*$1,750*	Yes
Electrical Conduit (2-2", 2-4")	*LF*	*2,750*	*$25*	*$68,750*	Yes
Electrical Conduit (2-2", 2-4" bridge mounted)	*LF*	*1,250*	*$40*	*$50,000*	Yes
Electrical Conduit (4-inch, 3-Cell, Geotextile Innerduct)	LF	4,000	$5	*$20,000*	Yes
Pull Box (No. 7)	EA	7	$500	*$3,500*	Yes
Pull Box (Avondale No. 9 Vault)	EA	2	$2,500	*$5,000*	Yes
Single Mode Fiber Optic Cable (12-Strand)	LF	150	$3	*$450*	Yes
Single Mode Fiber Optic Cable (96-Strand)	LF	4,000	$3	*$12,000*	Yes
Fiber Optic Splice Closure (ITS)	EA	2	$2,000	*$4,000*	Yes
Controller (ASC/3)	EA	2	$4,000	*$8,000*	Yes
Electrical System (CCTV)	EA	1	$1,500	*$1,500*	Yes
Miscellaneous Electrical (ITS As-Builts)	L.Sum	1	$5,000	*$5,000*	Yes
Force Account Work (Pullbox & Conduit Reconditioning)	L.Sum	1	$5,000	*$5,000*	Yes

PART D1 - Detailed Cost Estimate					
Force Account Work (landscaping Restoration & Irrigation Repair)	L.Sum	1	$10,000	*$10,000*	Yes
Miscellaneous Work (GigE Switch)	EA	2	$1,500	*$3,000*	Yes
				$0	Yes
				$0	Yes
				$0	Yes
SUBTOTAL - CONSTRUCTION				$201,450	$201,450

PART D1 - Detailed Cost Estimate

2. PROCUREMENT (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Example: ATMS Server Software	LS			$0	No
Example: TMC Workstations	LS			$0	No
Example: VIDS, 3 approaches	EA			$0	Yes
Example: VIDS, 4 approaches	EA			$0	Yes
Example: CCTV (IP w/ pan/zoom/tilt)	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				$0	$0

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

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?

PART D1 - Detailed Cost Estimate					
CONTRACTOR MOBILIZATION	LS	1	$25,000.00	$25,000.00	Yes
TRAFFIC CONTROL	LS	1	$50,000.00	$50,000.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1	$10,000.00	$10,000.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1	$25,000.00	$25,000.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1	$8,250.00	$8,250.00	Yes
SUBTOTAL – MOBILIZATION & ADMINISTRATION COSTS				$ 118,250	$118,250
TOTAL CONSTRUCTION OR IMPLEMENTATION COST				$ 319,700	$ 319,700

PART D1 - Detailed Cost Estimate

D. ADOT Fee for PE Reviews and Staff Charges	LS	1	$30,000	$30,000	No
			TOTAL ADOT Fee COST	$30,000	$0
E. TOTAL PROJECT COST				$489,700	$319,700

F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS	
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION	**$489,700**
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT	**$319,700**
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)	**$301,477**
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)	**$18,223**
LOCAL AGENCY FUNDS NOT ELIGIBLE FOR FEDERAL REIMBURSEMENT	**$170,000**

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).	$ -	$ 55,000	$ 55,000	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	$ -	$ 85,000	$ 85,000	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	$ 201,450	$ -	$ 201,450	
2. PROCUREMENT	$ -	$ -	$ -	
3. OTHER ITEMS	$ -	$ -	$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	$ 118,250	$ -	$ 118,250	
SUBTOTAL	$ 319,700	$ -	$ 319,700	
D. ADOT Fee for PE Reviews and Staff Charges	$ -	$ -	$ 30,000	
Total Project Cost	$ 319,700	$ 140,000	$ 489,700	

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	Install fiber optics	2019	$ 188,222	$ 301,477	$ 489,699	38%
Totals			$ 188,222	$ 301,477	$ 489,699	38%

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: Chris Hamilton

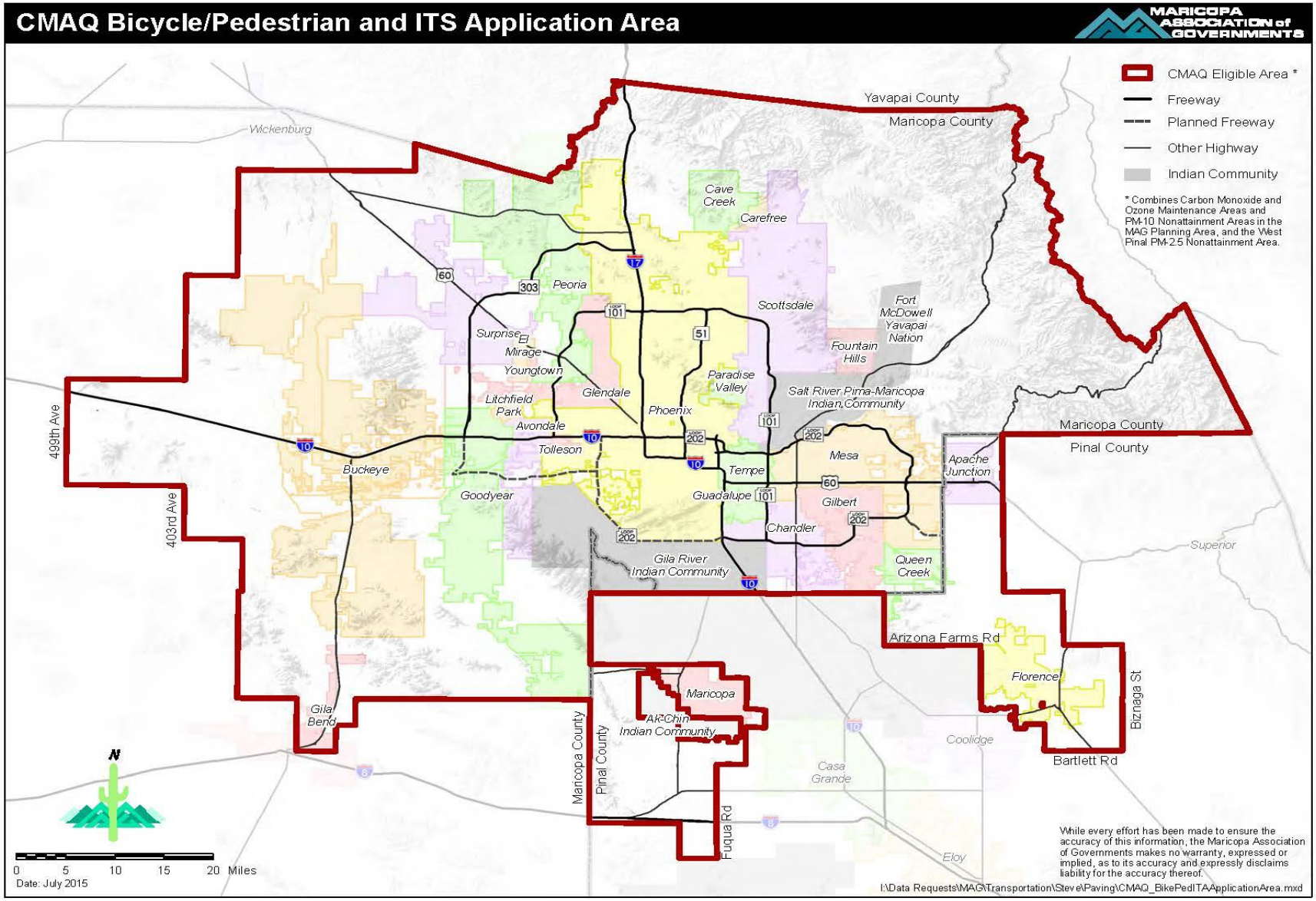
Title: Engineering Project Manager

Date: 9-21-2015

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	YES
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


CMAQ Bicycle/Pedestrian and ITS Application Area
MARICOPA ASSOCIATION of GOVERNMENTS
CMAQ Eligible Area *
Freeway
Planned Freeway
Other Highway
Indian Community
* Combines Carbon Monoxide and Ozone Maintenance Areas and PM-10 Nonattainment Areas in the MAG Planning Area, and the West Pinal PM-2.5 Nonattainment Area.
Yavapai County
Maricopa County
Pinal County
Wickenburg
Cave Creek
Carefree
Peoria
Scottsdale
Fort McDowell Yavapai Nation
Fountain Hills
Surprise
El Mirage
Youngtown
Glendale
Litchfield Park
Avondale
Phoenix
Paradise Valley
Salt River Pima-Maricopa Indian Community
Tolleson
Buckeye
Goodyear
Tempe
Guadalupe
Mesa
Gilbert
Chandler
Apache Junction
Queen Creek
Gila River Indian Community
Superior
Arizona Farms Rd
Florence
Maricopa
Ak-Chin Indian Community
Gila Bend
Coolidge
Casa Grande
Bartlett Rd
Biznaga St
Fuqua Rd
Eloy
499th Ave
403rd Ave
N
0 5 10 15 20 Miles
Date: July 2015
While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.
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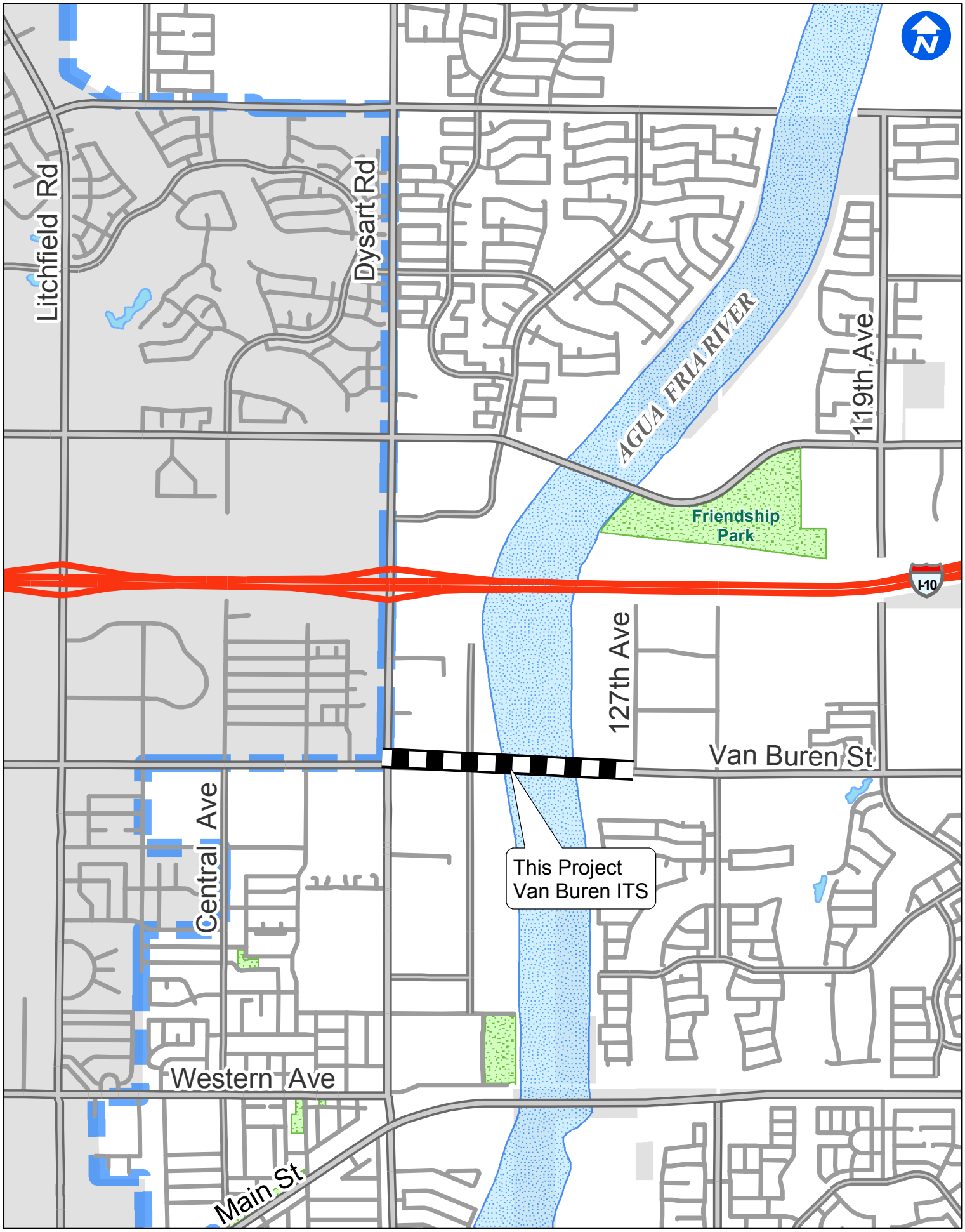
City of Avondale



Vicinity Map
Van Buren ITS