

<b>Contact Information</b>	
1. Lead Agency	City of Maricopa
2. Contact Name	Rob Dolson
3. Phone	520-316-6936
4. E-Mail Address	rob.dolson@maricopa-az.gov
5. Mailing Address	39700 W Civic Center Plaza, Maricopa, AZ 85138

**CMAQ 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 facility type:	<input type="text" value="39,709"/>
b. Please describe how the ADT was estimated:	<input type="text" value="ADOT AADT Stations from 2018. This station is at Lakeview and SR347 with peak on 10/9/2018 of 42,371."/>
c. When was the ADT estimate developed:	<input type="text" value="2018"/>
d. Name of the roadway section used for the ADT estimate:	<input type="text" value="SR 347/N John Wayne Pkwy"/>
e. Starting limit of the roadway section:	<input type="text" value="SR 347 &amp; Lakeview"/>
f. Ending limit of the roadway section:	<input type="text" value="SR 347 &amp; Farrell Rd"/>
g. Length (miles):	<input type="text" value="3.9"/>
h. Total number of through lanes on the roadway section:	<input type="text" value="6"/>
i. Federal Functional Classification of the roadway section:	<input type="text" value="Principal Arterial - Other"/> <a href="#">Link to ADOT Functional Classification Maps</a>

**CMAQ Data**

**2. Improvements in Traffic Management & Operations**

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

b. In the table, check the box that best describes the project (Check only one box):

	Before (pre-improvement) condition	After (post-improvement) condition	Expected increase in speed
X	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	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

NOTE: All ITS projects MUST involve eligible infrastructure improvements.

**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
- 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: (populated from #2a)

b. Enter the post-improvement average traffic speed of the corridor:

### ITS Project Information

Enter information in highlighted cells ONLY. Links to various websites are provided for additional information and help.

**1. Project Title & Sponsor**

a. Project Title	SR 347/ N JohnWayne Pwky
b. Lead Agency	City of Maricopa
c. Other Partnering Agencies	Arizona Department of Transportation

**2. Project Type**

Prioritize SMO Buckets for the funding application

First Priority	Bucket #3 – Local Priority Corridors
Second Priority	(Please Select a Bucket)
Third Priority	(Please Select a Bucket)

**3. Project Goals & Objectives**

a. Project Goals  
 Optimize traffic flow by maximizing green time, reducing rear end crashes, emissions, fuel consumption, stops, congestion and delay. Minimize disruption to traffic flow caused by pre-emption equipment. Move away from the continual need to update timing and coordination plans that are of greatest efficiency at a point in time, when there is an even spacing of traffic signals and no capacity restrictions. Augment ADOT traffic engineering staffing with technology. Provide City of Maricopa staff tools to access traffic management of the corridor within City of Maricopa limits.

b. Project Objectives  
 Partner with AZDOT to procure an adaptive system that has the ability to outsource its traffic management to a 3rd party traffic operations center. Update a Master Maintenance Agreement with ADOT concerning traffic management of SR347 in City Limits. Assist ADOT with installation of newly acquired adaptive equipment. Develop a system that will give the City of Maricopa ability to manage traffic flow along the SR347 corridor within City Limits without additional staffing.

**4. Project Information**

a. Project location description  
 State Route 347 Corridor -17 signalized intersections. 1. Queencreek Road & I-10 Diamond Interchange 2. Riggs Road 3. Cal Portland Driveway 4. Casa Blanca Road 5. Cobblestone - Lakeview 6. Cobblestone South 7. Smith Enke - SR238 8. Fry's Driveway 9. Edison Road 10. Hathaway Ave 11. Honeycutt Road 12. Honeycutt Ave 13. Alterra - Desert Cedars Drive 14. Bowlin Road 15. Martian Luther King BLVD 16. Farrell Road 17. Plainview/Honeycutt Road

b. Scope of the project  
 Note: a PDF file of a map must be submitted to MAG as an attachment.  
 Procure adaptive solution all traffic signals named, installation and set up to be done by ADOT and Maricopa Staff 1. Install additional ARID devices to collect before and after travel time 2. Hardware Procurement 3. Hardware Deployment 4. Software Installation 5. Controller/Data Processing Unit Install 6. Detection Reconfiguration 7. Software intergration 8. Adaptive Turn on and Setup 9. Adaptive System Analisys 10. System Training/Testing 11. Measure Travel Time 12. Project Closeout

**ITS Project Information**

**5. Identify Project Components in MAG Regional ITS Architecture**

Service Area	Addressed in this Project? (Dropdown: Y/N)	Applicable ITS Service Packages
Traffic Management	Yes	ATMS03, ATMS07
Maintenance and Construction		
Public Transportation		
Traveler Information		
Emergency Management		
Archived Data Management		

NOTE: Insert the relevant ITS Architecture flow diagram in the "ITS Architecture" worksheet.

**6. Quantitative Criteria**

Enter Quantitative Criteria for Bucket(s) selected in Section 2 "Project Type"

Average Daily Traffic (ADT) from 'CMAQ Data' tab in this funding application.	39,709
Crashes Per Mile Per Year (MAG Will Complete)	
Maximum Peak Period Travel Time Index (MAG Will Complete)	
Percentage network communication connectivity to traffic signals & ITS devices.	100%
Regional Priority Corridor Ranking (Enter shares of work in "Regional Priority - Top 100")	
Latest year of your agency's Operations/Management Center upgrade.	0

**7. Program Year Preference**

Preferred Program Year

**ITS Project Information**

**8. Project Budget by SMO Strategy**

<b>Strategies for Bucket #1 – ICM Corridors</b>	<b>Federal Cost</b>	<b>Local Match (min 5.7%)</b>	<b>Total Cost</b>	<b>Share of Total Project</b>
2-Real-time CCTV monitoring capabilities at all major-major arterial intersections on ICM corridors				
3-Vehicle and pedestrian actuated detection at all signalized intersections to support signal operations and real-time collection of data collection, including data on turning movement counts				
11-Regional Asset Upgrade/Replace Program - ICM Corridors & Priority Arterials				
<b>Total</b>				
<b>Cost Percentage</b>				
<b>Strategies for Bucket #2 – Regional Priority Arterials</b>	<b>Federal Cost</b>	<b>Local Match (min 5.7%)</b>	<b>Total Cost</b>	<b>Share of Total Project</b>
8-Real-time visual monitoring capability at all major-major intersections on Priority Arterials				
9-Additional detection at signalized intersections for real-time collection of data, including turning movement counts stored by individual agencies and archived in RADS				
10-Reliable communications between TMCs and major-major intersections to facilitate remote management of traffic operations - Adds both fiber and wireless infrastructure				
11-Regional Asset Upgrade/Replace Program - ICM Corridors & Priority Arterials				
<b>Total</b>				
<b>Cost Percentage</b>				
<b>Strategies for Bucket #3 – Local Priority Corridors</b>	<b>Federal Cost</b>	<b>Local Match (min 5.7%)</b>	<b>Total Cost</b>	<b>Share of Total Project</b>
12-Local priority ITS projects	\$ 952,328.63			100%
<b>Total</b>	\$ 952,328.63	\$ 57,563.87	\$ 1,009,892.50	100%
<b>Cost Percentage</b>	94.3%	5.7%		

**ITS Project Information**

**9. System Maintenance and Operations**

a. Current staff resources available to support ITS operations at the local agency (in FTEs)	2
b. Additional staff resources required for fully utilizing features added by project (in FTEs)	0
c. Agency's estimated current annual ITS operations & maintenance (O & M) budget	\$13,600
d. Estimated additional annual O & M funds required for features added by this project	\$30,600
e. Estimated DATE from when required additional local O & M funds will be available	07/2025

f. Other comments

The City of Maricopa has appropriated \$150,000 through its capital improvement program to optimize traffic signals along the SR347 corridor for FY2020. This is Maricopa's first step in directing monies towards traffic management of the corridor. Tasks being paid to 3rd party include development of synco model, data collection and analysis- traffic counts with turning movements, before and after travel time, development of timing and coordination plans, observation and adjustments.

**10. 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.  
[ADOT Systems Engineering Checklist](#)

The project sponsor/lead agency of this application intends to incorporate the Systems Engineering Analysis in the project's scope of work, following guidance on the ADOT's System Engineering Checklist.

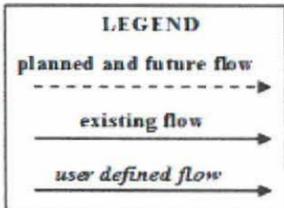
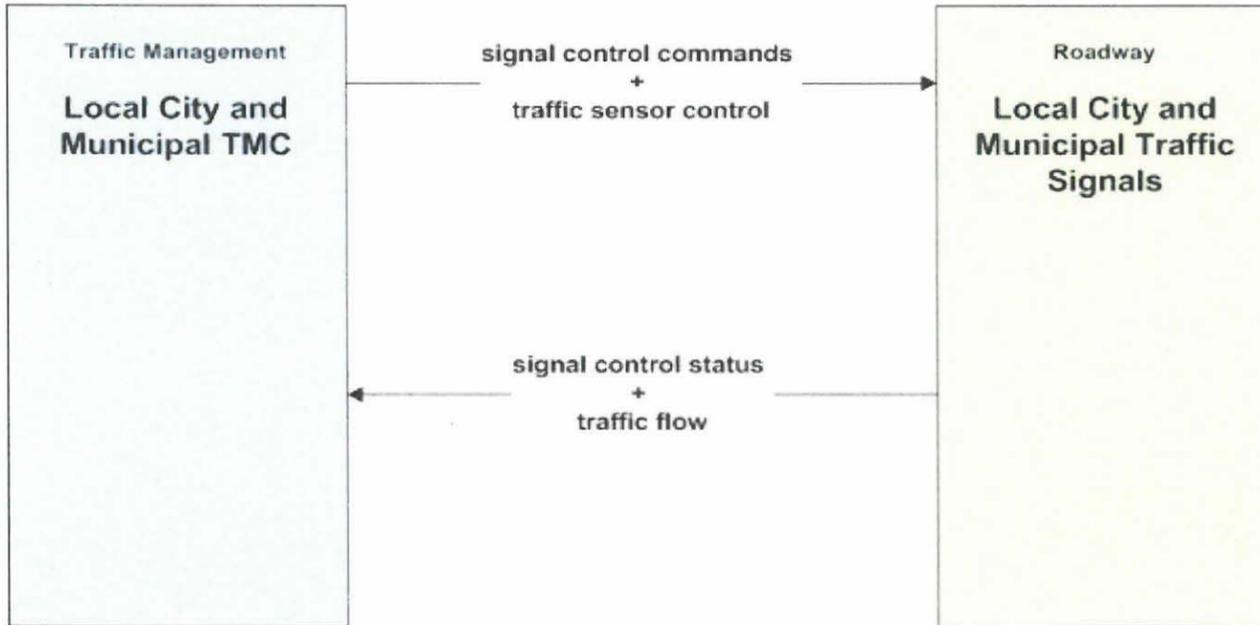
Yes, the agency intends to follow the process.

**ITS Architecture Flow Diagram**

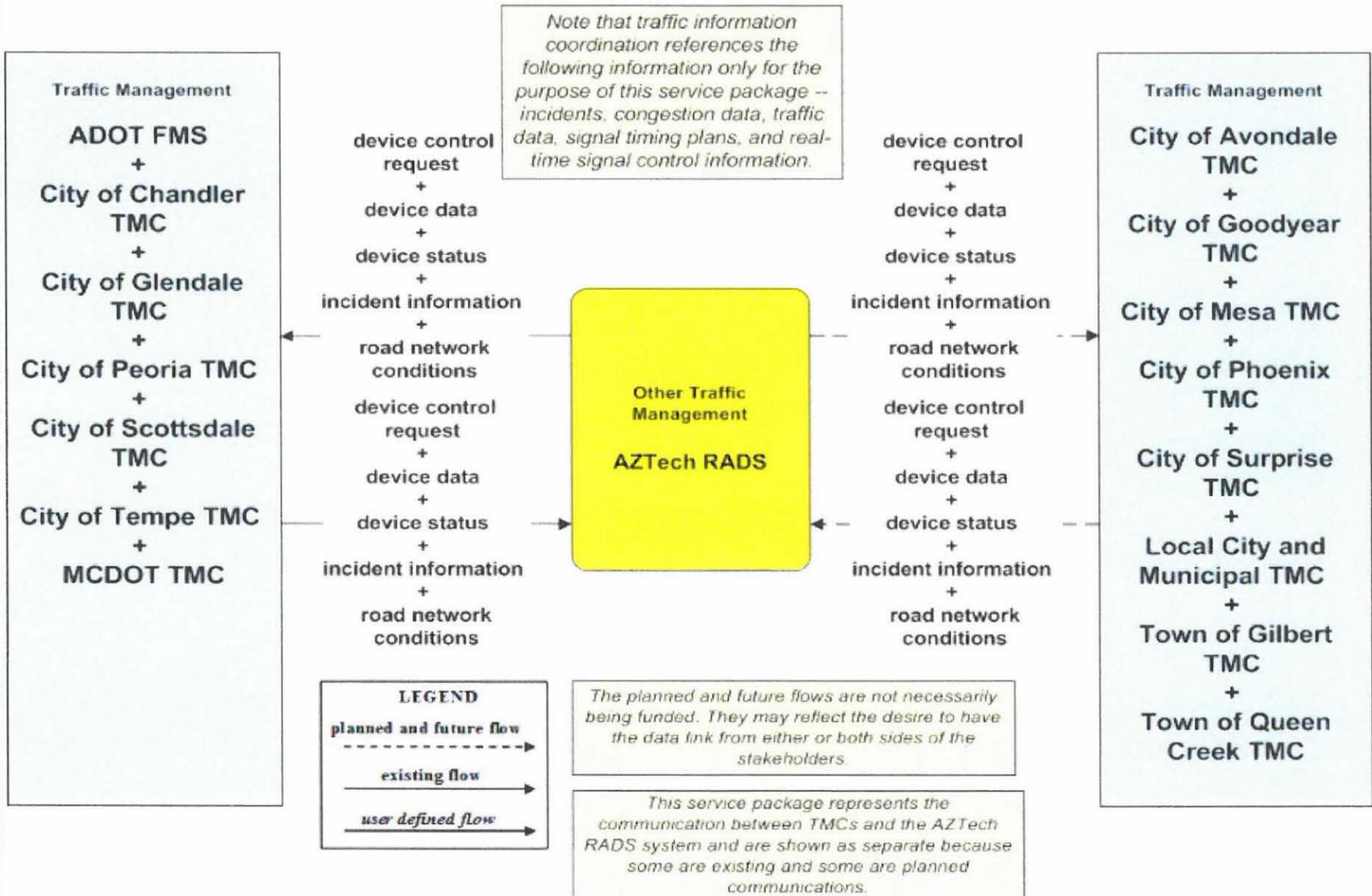
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

Find the relevant Service Packages addressed by the project in the MAG ITS Architecture (found in the link below). Copy and paste the graphic in the space provided.  
[MAG Regional ITS Architecture](#)

**ATMS03 - Traffic Signal Control  
Local Cities and Municipalities - Generic**



**ATMS07 - Regional Traffic Management  
AZTech C2C TMS Network**



**PROJECT COST ESTIMATE WORKSHEET**  
(Cost Estimates Are Required Regardless of Programming)

REQUESTED PROGRAMMING (Complete if item will be programmed in the MAG TIP)	Location Description	State Route 347 - I10 Traffic Diamond to Farrell Road in Maricopa							
	Work Description	Procurement and Deployment of Adaptive Signal Control Technology (ASCT) System							
Funding Source	Local								
Preferred Year to Program Work	2021								
COST ESTIMATE FOR DESIGN		UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL	
<b>DESIGN</b> <b>PRELIMINARY ENGINEERING (15% plans)</b> (Required for Budget)	Topographic Survey	LS	1		\$ -	No	-	-	
	Project Assessment Report or Detailed Workplan	LS	1	5,000	\$ 5,000.00	No	-	5,000	
	Systems Engineering Analysis (must address FHWA requirements)	LS	1	5,000	\$ 5,000.00	No	-	5,000	
	Federal Project Environmental Determination	LS	1	10,000	\$ 10,000.00	No	-	10,000	
	HAZMAT Assessment	LS	1		\$ -	No	-	-	
<b>SUBTOTAL - PRELIMINARY ENGINEERING COSTS</b>					<b>\$ 20,000.00</b>			<b>20,000</b>	
<b>FINAL DESIGN (30, 60, 95, 100% plans)</b> (Required for Budget)	Right-of-Way Acquisition	LS	1		\$ -	No	-	-	
	Plans, Specifications, Cost Estimates, Bidding	LS	1	25,000	\$ 25,000.00	No	-	25,000	
	Geotechnical Report	LS	1		\$ -	No	-	-	
	Drainage Report	LS	1		\$ -	No	-	-	
	SWPPP	LS	1		\$ -	No	-	-	
<b>SUBTOTAL - FINAL DESIGN COSTS</b>					<b>\$ 25,000.00</b>			<b>25,000</b>	
<b>TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING</b>					<b>\$ 45,000.00</b>			<b>45,000</b>	
<b>RIGHT OF WAY</b> <b>RIGHT OF WAY (Required for Budget, May be 0 if no ROW)</b>	Appraisals and Title Reports	LS	1		\$ -	No	-	-	
	Road Right of Way	LS	1		\$ -	No	-	-	
	Temporary Construction Easements	LS	1		\$ -	No	-	-	
	Drainage Easement	LS	1		\$ -	No	-	-	
	Utility Easements/Right of Way	LS	1		\$ -	No	-	-	
	Aerial Electrical Easement	LS	1		\$ -	No	-	-	
	Sign Relocations	LS	1		\$ -	No	-	-	
	Relocation Expenses	LS	1		\$ -	No	-	-	
	Site Environmental Assessments	EA	1		\$ -	No	-	-	
	Building Demolition	EA	1		\$ -	No	-	-	
	Other Right of Way Expenses	EA	1		\$ -	No	-	-	
	<b>TOTAL - RIGHT OF WAY COSTS</b>					<b>\$ -</b>			<b>-</b>
	<b>Utilities Section Not Applicable</b>	Relocate 69 kv (+) Poles	EA	1		\$ -	No	-	-
Relocate/Underground 12 kv lines		LF	1		\$ -	No	-	-	
Relocate/Underground Irrigation Canal		LF	1		\$ -	No	-	-	
SWG Relocations		LS	1		\$ -	No	-	-	
Telephone/Cable TV Relocations		LS	1		\$ -	No	-	-	
Upgrade Railroad Crossings		LS	1		\$ -	No	-	-	
Other Utilities		LS	1		\$ -	No	-	-	
Other Utilities		LS	1		\$ -	No	-	-	
<b>SUBTOTAL - UTILITY RELOCATION COSTS</b>					<b>\$ -</b>			<b>-</b>	
<b>CONTRACTOR MOBILIZATION (Typically 8% of construction cost)</b>					<b>\$ -</b>	No	-	-	
<b>TRAFFIC CONTROL (0-8% of construction cost)</b>					<b>\$ -</b>	No	-	-	
<b>CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)</b>					<b>0 \$</b>	No	-	-	
<b>CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)</b>					<b>0 \$</b>	No	-	-	
<b>SUBTOTAL - MOBILIZATION &amp; ADMINISTRATION COSTS</b>					<b>\$ -</b>			<b>-</b>	
<b>TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING</b>									
<b>PROCUREMENT</b>	Adaptive system hardware	EA	17	30,000	\$ 510,000.00	Yes	480,930	29,070	
	Detection Intergration	EA	17	5,000	\$ 85,000.00	Yes	80,155	4,845	
	Pedestrian Intergration	EA	13	5,000	\$ 65,000.00	Yes	61,295	3,705	
	Data Controller Processing Unit	EA	1	3,000	\$ 3,000.00	Yes	2,829	171	
	Keyboard and Monitoring Kit	EA	2	800	\$ 1,600.00	Yes	1,509	91	
	Onsite Development	LS	1	25,000	\$ 25,000.00	Yes	23,575	1,425	
	Camera Mounting Kit	EA	55	325	\$ 17,875.00	Yes	16,856	1,019	
	Cables, Twisted pair, Accessories	EA	22	1,100	\$ 24,200.00	Yes	22,821	1,379	
	System Support	LS	1	75,000	\$ 75,000.00	Yes	70,725	4,275	
	Equipment Spares (10%)	LS	1	80,668	\$ 80,667.50	Yes	76,069	4,598	
	Shipping and Handling	EA	17	150	\$ 2,550.00	Yes	2,405	145	
	Contingency (15%)	LS	1	120,000	\$ 120,000.00	Yes	113,160	6,840	
	<b>TOTAL - PROCUREMENT</b>					<b>\$ 1,009,892.50</b>		<b>952,329</b>	<b>57,564</b>
	<b>ADOT REVIEW FEE</b>	Please enter 'Yes' if your agency is certified accepted by ADOT for construction		No					
		<b>ADOT REVIEW FEE</b>	<b>AGENCY TYPE</b>	<b>RATE</b>	<b>HOURS</b>	<b>TOTAL</b>	<b>USES FEDERAL AID</b>	<b>FEDERAL</b>	<b>LOCAL</b>
Contracts and Specs \ Advertise Project		Non CA	55	100	\$ 5,500	No	-	5,500	
District \ Review Stage Submittals		Non CA	50	40	\$ 2,000	No	-	2,000	
Environmental Planning \ Issue Clearance		All	50	40	\$ 2,000	No	-	2,000	
Compliance Review \ Compliance Review		Non CA	175	40	\$ 7,000	No	-	7,000	
Project Management Group \ Project Management	Non CA	120	100	\$ 12,000	No	-	12,000		
					<b>\$ 28,500</b>			<b>28,500</b>	
<b>TOTAL COST ESTIMATE</b>					<b>\$ 1,083,393</b>		<b>952,329</b>	<b>131,064</b>	

**Budget and Signature Page**

Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Federal Amount	Local Amount	Total	Local Share
Procurement	State Route 347 - I10 Traffic Diamond to Farrell Road in Maricopa	Procurement and Deployment of Adaptive Signal Control Technology (ASCT) System	2021	CMAQ	\$ 952,329	\$ 57,564	\$ 1,009,893	5.7%
Design, excludes ADOT review fees	State Route 347 - I10 Traffic Diamond to Farrell Road in Maricopa	Procurement and Deployment of Adaptive Signal Control Technology (ASCT) System	2021	Local	\$ -	\$ 45,000	\$ 45,000	100.0%
<b>Total Programmed</b>					\$ 952,329	\$ 102,564	\$ 1,054,893	9.7%
<b>ADOT Design Review Fee</b>					\$ -	\$ 28,500	\$ 28,500	100.0%
<b>Total Cost</b>					\$ 952,329	\$ 131,064	\$ 1,083,393	12.1%

**Signature: To be signed and scanned with PDF copy that is sent to MAG via email**

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

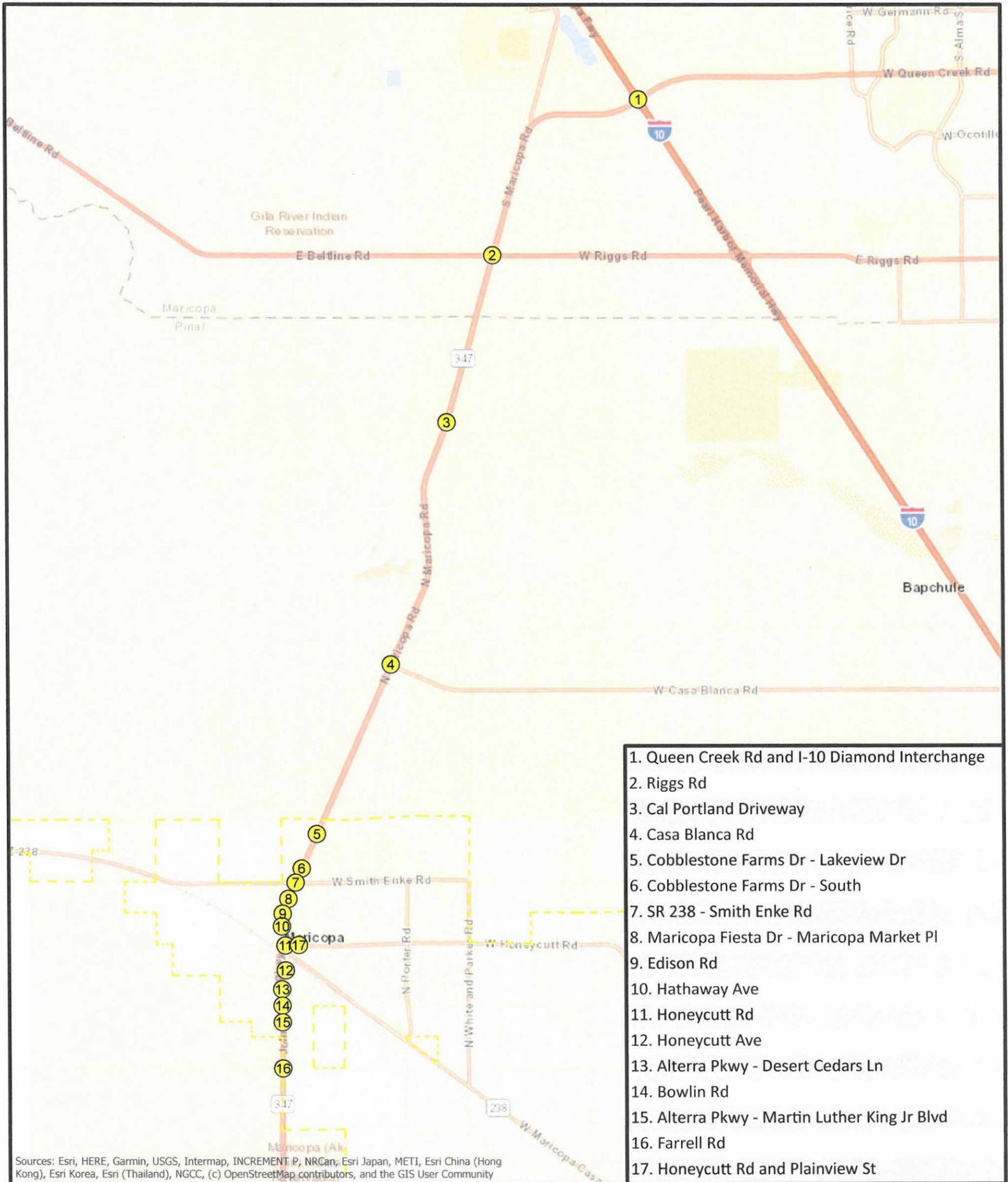
Signature: 

Name: Kazi Haque

Title: Development Services Director

Date: 9/16/2019

# SR 347 / N John Wayne Pkwy



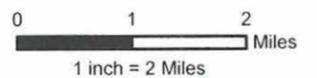
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Information shown on this map is for general reference and should be verified using recorded documents. It should not be used to replace a site survey.

9/12/2019

8.5" x 11"

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September 2019

**Arizona Department of Transportation  
Transportation Systems Management and Operations (TSM&O)  
ITS Project Application, City of Maricopa Adaptive System joint  
application, FY 2020, 2021, 2022**

**Rob Dolson  
Special Projects Manager  
City of Maricopa**

Dear Rob,

Per our discussion regarding Adaptive Traffic Signal System deployment on SR 347, ADOT is in full support of this application to procure and implement an Adaptive System on 347, from I-10 to Plainview/Honeycutt.

The traffic volumes taken in 2018 were 43,500 VPH. The truck traffic accounted for approximately 15% of that volume. These counts were taken south of Riggs, on SR 347.

Please let me know if there is anything you need from us to continue this process.

Sincerely,



**Bruce Dressel  
Signal Timing Manager  
ADOT/TSMO  
2302 W. Durango St.  
MD PM02  
Phoenix, AZ. 85009**