

<b>Contact Information</b>	
1. Lead Agency	Town of Gilbert
2. Contact Name	Mike Sutton
3. Phone	480-503-6626
4. E-Mail Address	mike.sutton@gilbertaz.gov
5. Mailing Address	900 East Juniper Road, Gilbert, AZ 85234

<b>CMAQ Data</b>	
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.	
<b>Federal Funding Eligibility</b>	
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.	
<b>1. Traffic Estimate and Roadway Characteristics</b>	
a. Current Average Daily Traffic (ADT) on the facility or the nearest parallel facility of a similar facility type:	99,097
b. Please describe how the ADT was estimated:	Average volumes for each corridor summed. Includes Val Vista Drive (36,082), Williams Field Road (23,314), Pecos Road (16,772), and Santan Village Parkway/Greenfield Road (22,929).
c. When was the ADT estimate developed:	Estimate developed in 2019 using 2018 MAG Transportation Data Management System average weekday AADT.
d. Name of the roadway section used for the ADT estimate:	Total for all roadways: Val Vista Drive, Williams Field Road, Pecos Road, and Santan Village Parkway/Greenfield Road.
e. Starting limit of the roadway section:	Val Vista Drive (Williams Field Road to Germann Road), Williams Field Road (1/2 mile west of Val Vista Drive to 1/2 mile east of SR-202L), Pecos Road (1/2 mile west of Val Vista Drive to Greenfield Road), Santan Village Parkway/Greenfield Road (Williams Field Road to Germann Road).
f. Ending limit of the roadway section:	See above
g. Length (miles):	8
h. Total number of through lanes on the roadway section:	6
i. Federal Functional Classification of the roadway section:	Minor Arterial
<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: 30

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
<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	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

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) 30

b. Enter the post-improvement average traffic speed of the corridor: 33

## 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	Santan Area Advanced Traffic Management System
b. Lead Agency	Town of Gilbert
c. Other Partnering Agencies	N/A

### 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	Provide advanced detection and monitoring capability surrounding the Santan Area to support special event, holiday travel, and most congested and unreliable travel time area of the Town.
b. Project Objectives	Install upgraded detection, mid-block detection, Closed-Circuit Television (CCTV) cameras in the Santan Area and acquire Signal Performance Metrics (SPM) software module to supplement existing central signal control system.

### 4. Project Information

a. Project location description	<p>Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.</p> <p>The following 7 intersections will have new CCTV cameras installed:                      - Val Vista Drive at Frye Road, Drivers Way</p>
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ITS Project Information	
	<ul style="list-style-type: none"> <li>- Santan Village Parkway at SanTan Village Mall/Red Robin, Greenfield Road</li> <li>- Pecos Road at Rome Street, WinCo Foods/National Bank of Arizona, Mercy Road</li> </ul> <p>The following 12 intersections will have upgraded detection installed that is capable of turning movement counts:</p> <ul style="list-style-type: none"> <li>- Williams Field Road at Palomino Creek Drive and Greenfield Road</li> <li>- Val Vista Drive at Toledo Street, Drivers Way, Willis Road/Mercy Road</li> <li>- Santan Village Parkway at Coronado Road, SanTan Village Mall/Red Robin, and Pecos Road</li> <li>- Pecos Road at Rome Street, WinCo Foods/National Bank of Arizona, Mercy Road</li> <li>- Market Street at Costco/Jacksons Car Wash</li> </ul> <p>Mid-block locations will be at 13 locations between the following intersections:</p> <ul style="list-style-type: none"> <li>- Williams Field Road between Palomino Creek Drive and Val Vista Drive, between Val Vista Drive and Santan Village Parkway, between Market Street and SR 202 L West, and between SR 202 L East and Greenfield Road</li> <li>- Val Vista Drive between Williams Field Road and Frye Road, between Frye Road and Pecos Road, and between Pecos Road and Drivers Way</li> <li>- Santan Village Parkway between Greenfield Road and Pecos Road, between Williams Field Road and Boston Street, and between Boston Street and Santan Village Parkway</li> <li>- Pecos Road between Mercy Road and Greenfield Road</li> </ul>
	<p>Note: a PDF file of a map must be submitted to MAG as an attachment.</p>
b. Scope of the project	<p>Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.</p>

## ITS Project Information

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

Service Area	Addressed in this Project? <small>(Dropdown: Y/N)</small>	<a href="#">Applicable ITS Service Packages</a>
Traffic Management	Yes	ATMS01, ATMS03
Maintenance and Construction		
Public Transportation		
Traveler Information		
Emergency Management		
Archived Data Management	Yes	AD1

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.	99,097
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.	2017

### 7. Program Year Preference

Preferred Program Year 2022

ITS Project Information				
8. Project Budget by SMO Strategy				
Strategies for Bucket #1 – ICM Corridors	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
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>				
Strategies for Bucket #2 – Regional Priority Arterials	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
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>				
Strategies for Bucket #3 – Local Priority Corridors	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
12-Local priority ITS projects	\$ 1,816,574.08			100%
<b>Total</b>	<b>\$ 1,816,574.08</b>	<b>\$ 109,803.52</b>	<b>\$ 1,926,377.60</b>	<b>100%</b>
<b>Cost Percentage</b>	<b>94.3%</b>	<b>5.7%</b>		

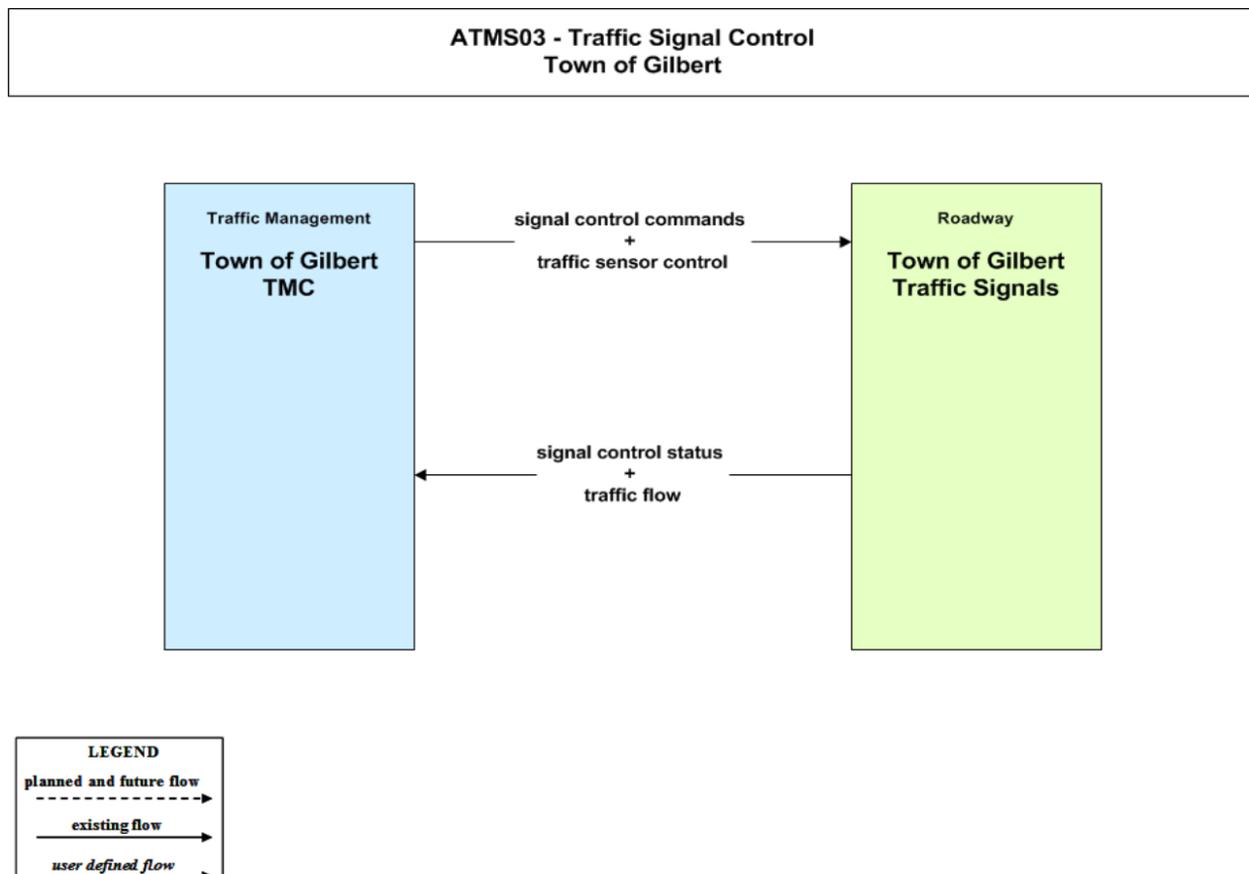
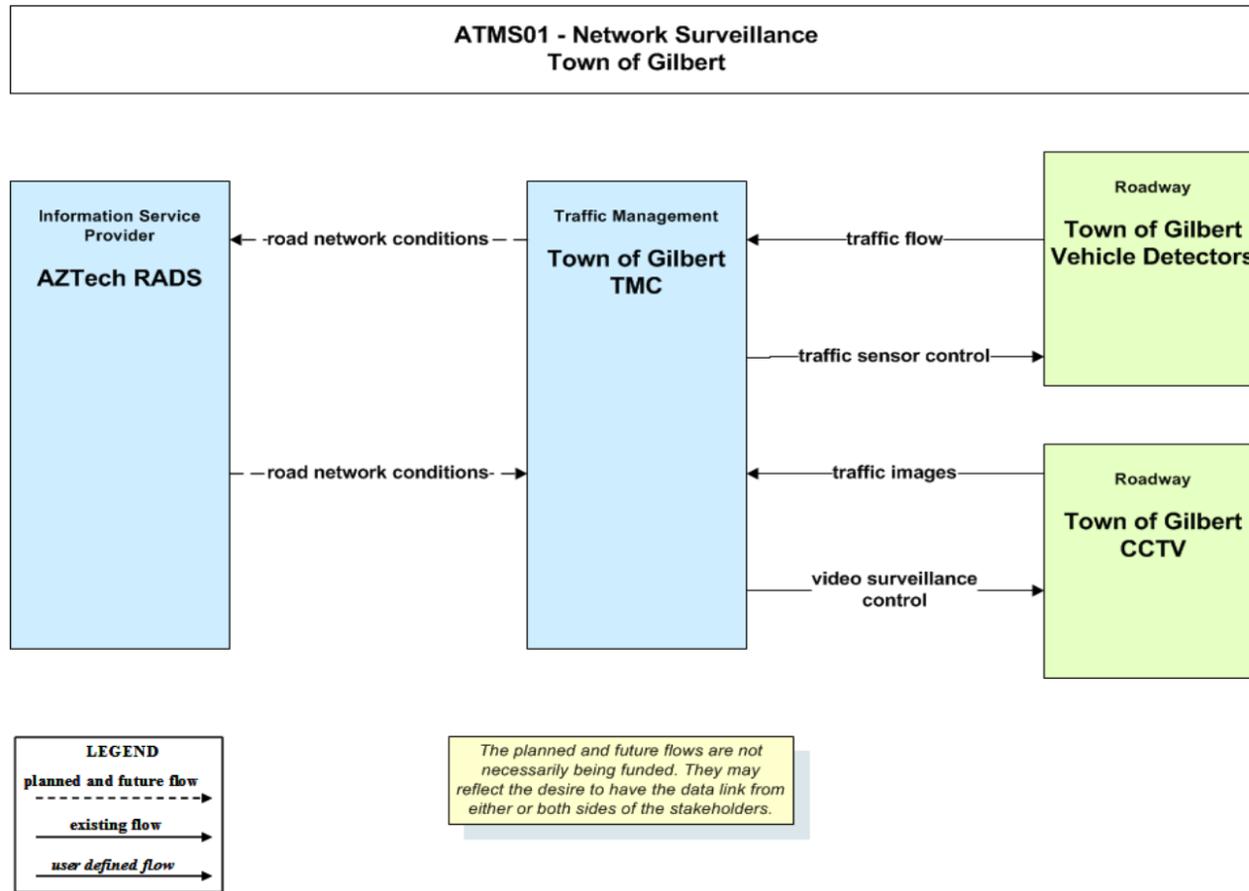
<b>ITS Project Information</b>	
<b>9. System Maintenance and Operations</b>	
a. Current staff resources available to support ITS operations at the local agency (in FTEs)	4
b. Additional staff resources required for fully utilizing features added by project (in FTEs)	1
c. Agency's estimated current annual ITS operations & maintenance (O & M) budget	\$2,000,000
d. Estimated additional annual O & M funds required for features added by this project	\$16,000
e. Estimated DATE from when required additional local O & M funds will be available	07/2020
f. Other comments	One new FTE position that will support the O&M of this project is being funded internally. O&M estimated for the project includes: - 12 upgraded detection locations = \$0 O&M because they are incorporated into the Town's existing annual budget. - 16 new devices = \$1,000 O&M per year per device = \$16,000 per year
<b>10. Systems Engineering Analysis Requirement</b>	
<p><b>Commitment to address the federal requirement for Systems Engineering Analysis:</b>                      Agency's intent to follow the process described in the 'V' diagram during the project development process.  <a href="#">ADOT Systems Engineering Checklist</a></p>	
<p><b>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.</b></p>	<input checked="" type="checkbox"/> Yes, the agency intends to follow the process.

## ITS Architecture Flow Diagram

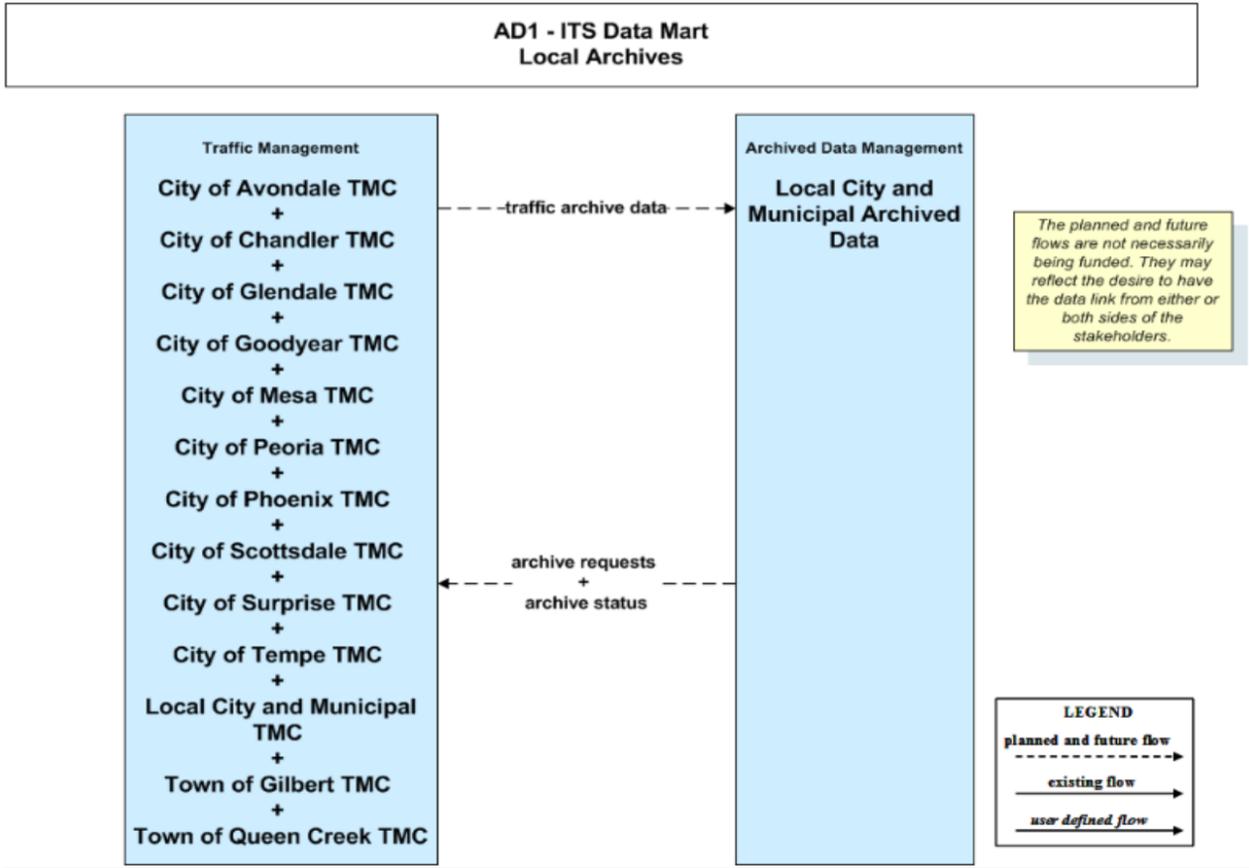
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

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](#)



# ITS Architecture Flow Diagram



PROJECT COST ESTIMATE WORKSHEET (Cost Estimates Are Required Regardless of Programming)									
DESIGN	REQUESTED PROGRAMMING (Complete if Item will be programmed in the MAG TIP)	Location Description	Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.						
		Work Description	Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.						
		Funding Source	Local						
		Preferred Year to Program Work	2021						
	COST ESTIMATE FOR DESIGN		UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL
	PRELIMINARY ENGINEERING (15% plans) (Required for Budget)	Project Assessment Report with 15% Plans	EA	1	106,000	\$ 106,000.00	No	-	106,000
		Systems Engineering Analysis (to address FHWA Requirements)	EA	1	5,000	\$ 5,000.00	No	-	5,000
						\$ -	No	-	-
	SUBTOTAL - PRELIMINARY ENGINEERING COSTS					\$ 111,000.00	-	-	111,000
	FINAL DESIGN (30, 60, 95, 100% plans) (Required for Budget)	100% Plans, Specifications, Cost Estimates	EA	1	496,000	\$ 496,000.00	No	-	496,000
					\$ -	No	-	-	
					\$ -	No	-	-	
SUBTOTAL - FINAL DESIGN COSTS					\$ 496,000.00	-	-	496,000	
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING					\$ 607,000.00	-	-	607,000	
PROCUREMENT	REQUESTED PROGRAMMING (Complete only if Construction will be programmed in the MAG TIP)	Location Description	Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.						
		Work Description	Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.						
		Funding Source							
		Preferred Year to Program Work							
	COST ESTIMATE FOR PROCUREMENT		UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL
	PROCUREMENT COSTS					\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
					\$ -	Yes	-	-	
					\$ -	Yes	-	-	
					\$ -	Yes	-	-	
TOTAL - PROCUREMENT					\$ -	-	-	-	
CONSTRUCTION	REQUESTED PROGRAMMING (Complete only if Construction will be programmed in the MAG TIP)	Location Description	Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.						
		Work Description	Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.						
		Funding Source	CMAQ						
		Preferred Year to Program Work	2022						
	COST ESTIMATE FOR CONSTRUCTION		UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL
	UTILITY RELOCATIONS (Required for Budget, May be 0 if no Utilities)					\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
						\$ -	Yes	-	-
					\$ -	Yes	-	-	
SUBTOTAL - UTILITY RELOCATION COSTS					\$ -	-	-	-	
CONSTRUCTION (Required for Budget)	CCTV Camera	EA	7	6,500	\$ 45,500.00	Yes	42,907	2,594	
	Video Detection (4 Leg)	EA	12	33,752	\$ 405,024.00	Yes	381,938	23,086	
	Quarter-Mile Mid-Block Detection (includes 2 for each direction and wireless communications infrastructure and street light power to connect back to signal)	EA	11	76,080	\$ 836,880.00	Yes	789,178	47,702	
	Half-Mile Mid-Block Detection (includes 2 for each direction and communications infrastructure to connect back to signal)	EA	2	26,000	\$ 52,000.00	Yes	49,036	2,964	
	SPM Initial Set Up	EA	1	9,580	\$ 9,580.00	Yes	9,034	546	
	SPM System Service for One Year	EA	3	9,000	\$ 27,000.00	Yes	25,461	1,539	
					\$ -	Yes	-	-	
					\$ -	Yes	-	-	
					\$ -	Yes	-	-	
					\$ -	Yes	-	-	
SUBTOTAL - CONSTRUCTION COST					\$ 1,375,984.00	-	1,297,553	78,431	
MOBILIZATION AND ADMINISTRATION COSTS	CONTRACTOR MOBILIZATION (Typically 8% of construction cost)			110,079	\$ 110,078.72	Yes	103,804	6,274	
	TRAFFIC CONTROL (0-8% of construction cost)			110,079	\$ 110,078.72	Yes	103,804	6,274	
	CONSTRUCTION SURVEY & LAYOUT (Typically 1% of construction cost)			13,760	\$ 13,759.84	Yes	12,976	784	
	CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)			68,799	\$ 68,799.20	Yes	64,878	3,922	
	CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)			247,677	\$ 247,677.12	Yes	233,560	14,118	
SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS					\$ 550,393.60	-	519,021	31,372	
TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING					\$ 1,926,377.60	-	1,816,574	109,804	
ADOT REVIEW FEE	Please enter 'Yes' if your agency is certified accepted by ADOT for construction		No						
	ADOT REVIEW FEE		AGENCY TYPE	RATE	HOURS	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL
	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
	Right of Way \ Issue Clearance		Non CA	55	24	\$ 1,320	No	-	1,320
	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
	Project Management Group \ Project Management		CA Only	120	60	\$ -	No	-	-
	Utilities and Railroad Sections \ Issue Clearance		Non CA	50	24	\$ 1,200	No	-	1,200
TOTAL COST ESTIMATE					\$ 2,564,398	-	1,816,574	747,824	

**Budget and Signature Page**

Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Federal Amount	Local Amount	Total	Local Share
Design, excludes ADOT review fees	Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.	Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.	2021	Local	\$ -	\$ 607,000	\$ 607,000	100.0%
Construction	Project is located at 15 intersections and the 13 mid-blocks between them in the surrounding Santan Area.	Install upgraded detection at 12 intersections, mid-block detection at 13 locations, new CCTV cameras at 7 intersections in the Santan Area. Project will also include acquisition of SPM software module to supplement existing central signal control system.	2022	CMAQ	\$ 1,816,574	\$ 109,804	\$ 1,926,378	5.7%
<b>Total Programmed</b>					\$ 1,816,574	\$ 716,804	\$ 2,533,378	28.3%
ADOT Design Review Fee					\$ -	\$ 31,020	\$ 31,020	100.0%
<b>Total Cost</b>					\$ 1,816,574	\$ 747,824	\$ 2,564,398	29.2%

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

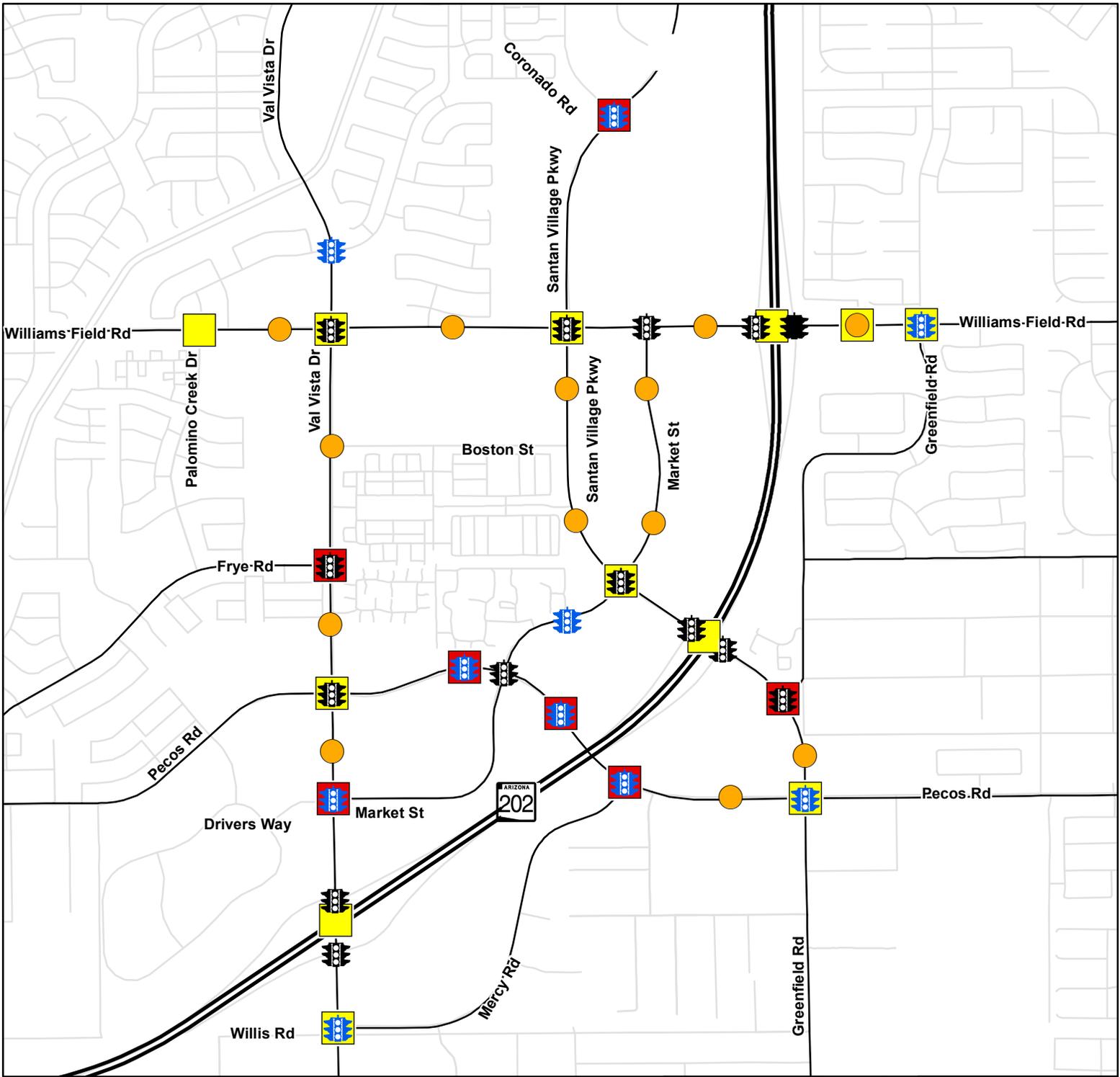
As the jurisdiction's manager/administrator or designated representative, I certify that the information contained in this application is accurate and complete and that the local funds for this project will be included in the sponsoring MAG member agency's local current CIP/TIP or budget document if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

Signature: 

Name: **DAVID S. FABIANO, PE, PWF**

Title: **TOWN ENGINEER**

Date: **16 SEPT 2019**



### Santan Area Advanced Traffic Management System (Gilbert-4) Project Location Map

-  Existing
-  Upgraded Detection with TMCs
-  Existing CCTV
-  New CCTV
-  Mid-Block Detection
-  Freeways
-  Arterials
-  Other Streets

