

| <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:  | 158,079  |
| b. Please describe how the ADT was estimated:  | Average volumes for each corridor summed. Includes Gilbert Road (23,203), Val Vista Drive (32,378), Higley Road (26,479), Guadalupe Road (17,520), Warner Road (22,766), Williams Field Road (19,113), Germann Road (16,620).  |
| 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: Gilbert Road, Val Vista Drive, Higley Road, Guadalupe Road, Warner Road, Williams Field Road, Germann Road.  |
| e. Starting limit of the roadway section:  | Gilbert Road (Baseline Road to Ray Road), Val Vista Drive (Baseline Road to Chandler Heights Road), Higley Road (Baseline Road to Hunt Highway), Guadalupe Road (SR87 to Power Road), Warner Road (McQueen Road to Power Road), Williams Field Road (Gilbert Road to Power Road), Germann Road (Gilbert Road to Power Road). |
| f. Ending limit of the roadway section:  | See above  |
| g. Length (miles):   | 51   |
| 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: 35

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) 35

b. Enter the post-improvement average traffic speed of the corridor: 37

| <b>ITS Project Information</b>   |   |
|--|---|
| Enter information in highlighted cells ONLY. Links to various websites are provided for additional information and help. |   |
| <b>1. Project Title &amp; Sponsor</b>  |   |
| a. Project Title   | CCTV and Video Detection Asset Replacement Program - Phase 2  |
| b. Lead Agency   | Town of Gilbert   |
| c. Other Partnering Agencies   | N/A   |
| <b>2. Project Type</b>   |   |
| 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)  |
| <b>3. Project Goals &amp; Objectives</b>   |   |
| a. Project Goals   | Provide asset replacement for important Townwide monitoring and detection infrastructure that supports Town real-time operations. This project is Phase 2 of a replacement program for the Town.      |
| b. Project Objectives  | Replacement of Closed-Circuit Television (CCTV) cameras with similar functionality cameras and upgrade of detection at intersections to Video Detection cameras that provide turning movement counts. |
| <b>4. Project Information</b>  |   |
| a. Project location description  | Devices chosen Townwide that have been identified as reaching life cycle age and/or are not supported anymore by vendor.<br><br>Note: a PDF file of a map must be submitted to MAG as an attachment.  |
| b. Scope of the project  | Replacement of ten CCTV cameras with similar functionality cameras and upgrade of detection at 20 intersections to video detection cameras that provide turning movement counts.                      |

## ITS Project Information

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

| Service Area                 | Addressed in this Project?<br><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.              | 158,079 |
| 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 2021

| 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  | \$ 697,857.72 |                        |               | 100%                   |
| <b>Total</b>  | \$ 697,857.72 | \$ 42,182.28           | \$ 740,040.00 | 100%                   |
| <b>Cost Percentage</b>  | 94.3%         | 5.7%                   |               |                        |

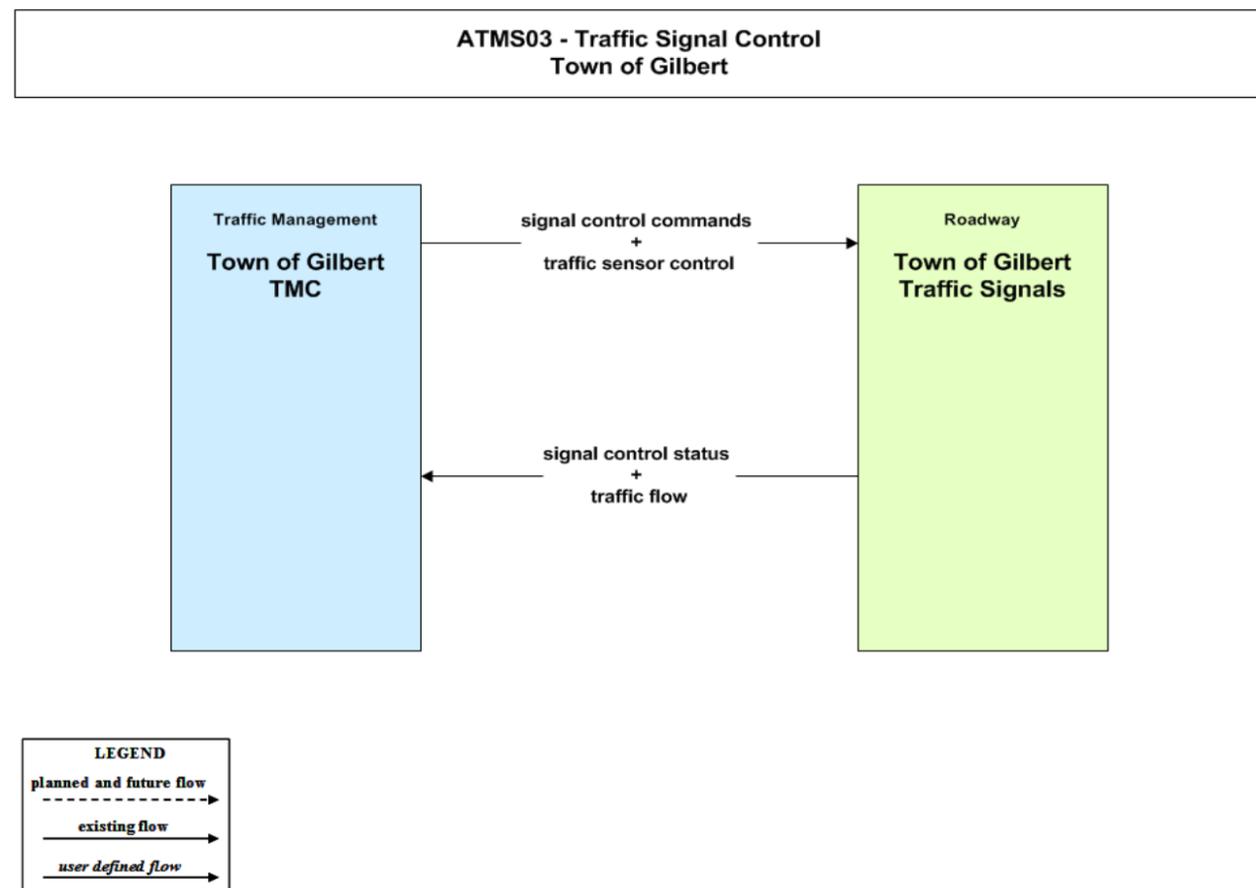
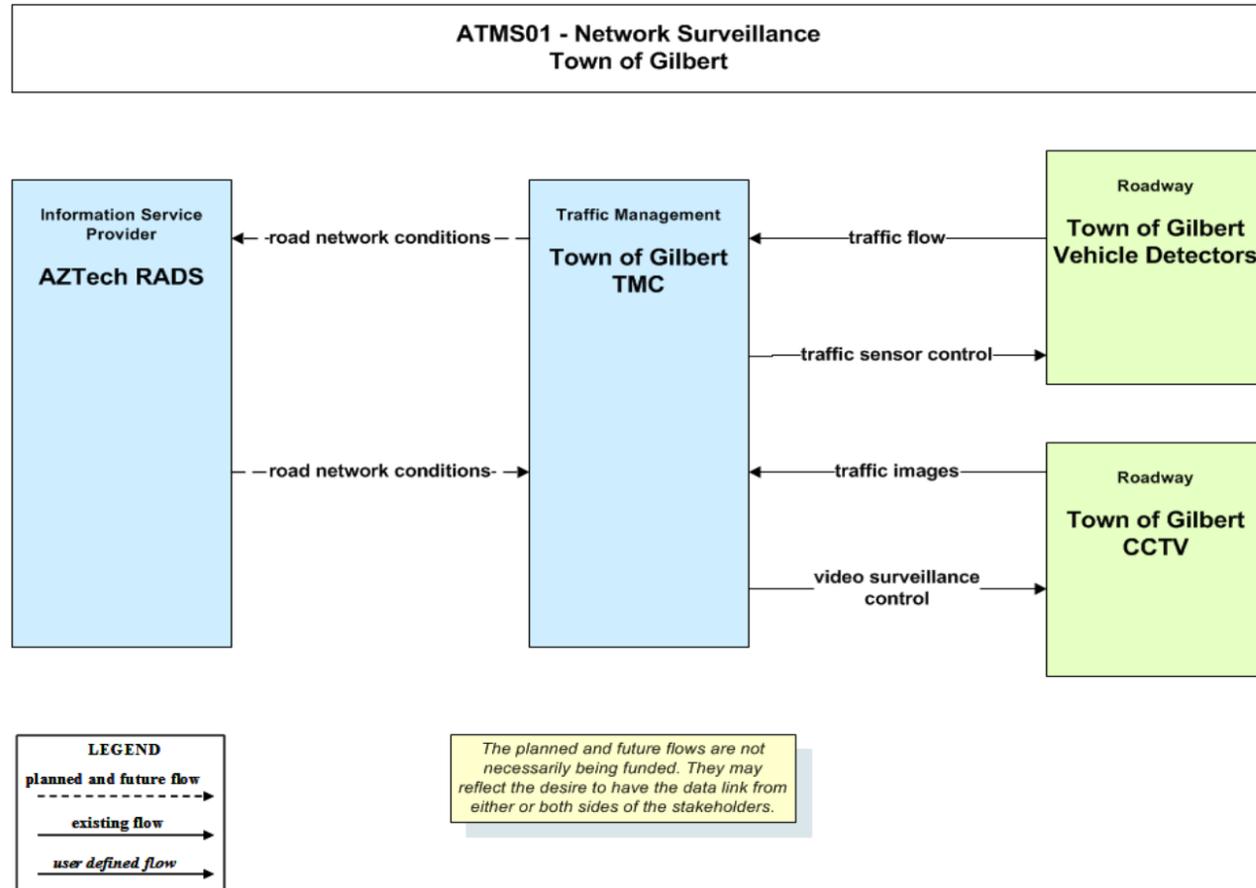
| <b>ITS Project Information</b>  |   |
|---|---|
| <b>9. System Maintenance and Operations</b>   |   |
| a. Current staff resources available to support ITS operations at the local agency (in FTEs)  | 4   |
| b. Additional staff resources required for fully utilizing features added by project (in FTEs)  | None  |
| 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  | \$0   |
| e. Estimated DATE from when required additional local O & M funds will be available   | N/A   |
| f. Other comments   | Replacement of outddated and unsupported devices will be incorporated into the Town's existing annual operations and maintenance budget with no new staffing anticipated. |
| <b>10. Systems Engineering Analysis Requirement</b>   |   |
| <p><b>Commitment to address the federal requirement for Systems Engineering Analysis:</b><br/>                     Agency's intent to follow the process described in the 'V' diagram during the project development process.<br/> <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 intents to follow the process.  |

## ITS Architecture Flow Diagram

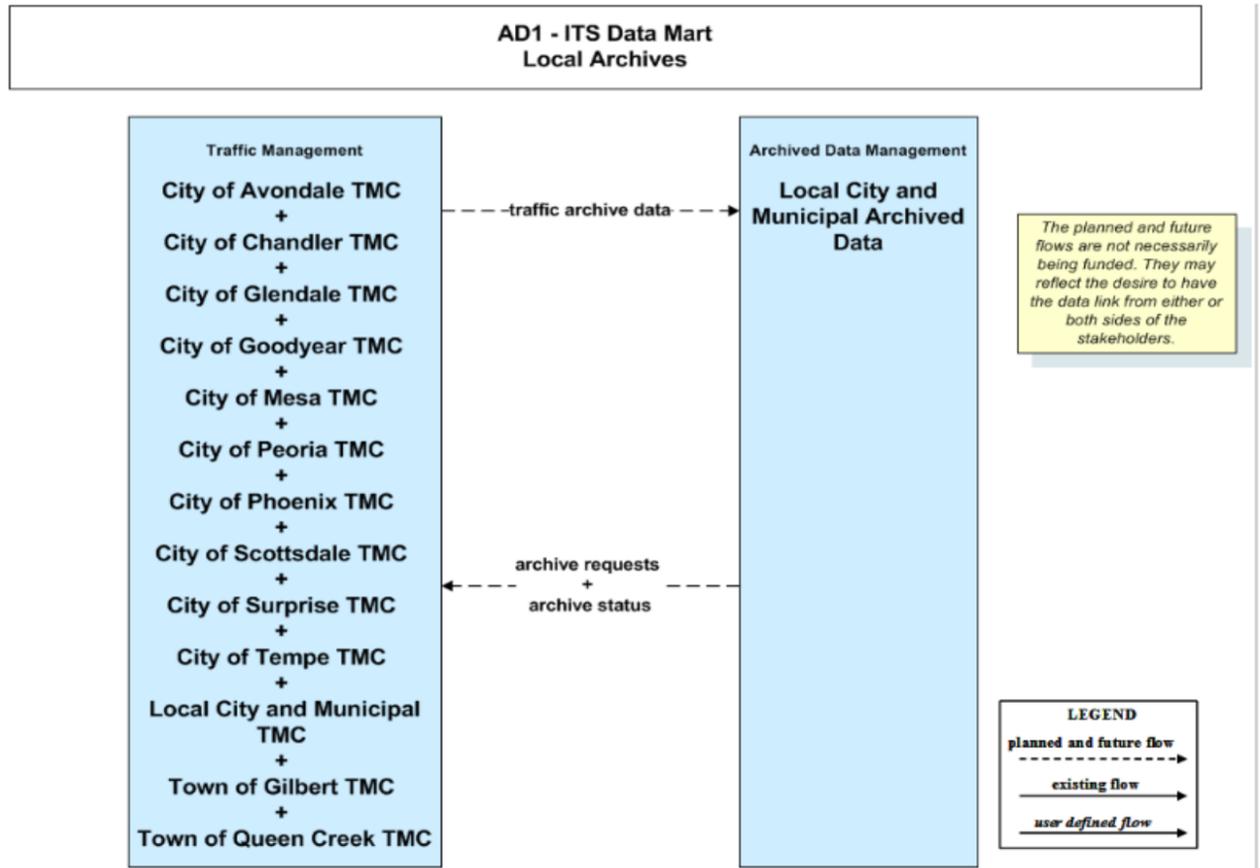
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

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



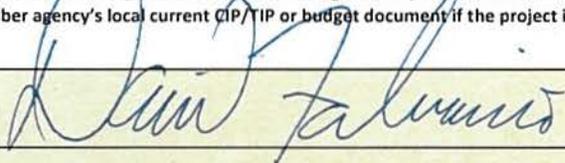
| PROJECT COST ESTIMATE WORKSHEET<br>(Cost Estimates Are Required Regardless of Programming) |  |                                |  |          |               |               |                  |         |        |  |
|--|--|--------------------------------|--|----------|---------------|---------------|------------------|---------|--------|--|
| DESIGN   | REQUESTED PROGRAMMING<br>(Complete if item will be programmed in the MAG TIP)              | Location Description           |  |          |               |               |                  |         |        |  |
|  |  | Work Description               |  |          |               |               |                  |         |        |  |
|  |  | Funding Source                 |  |          |               |               |                  |         |        |  |
|  |  | Preferred Year to Program Work |  |          |               |               |                  |         |        |  |
|  | COST ESTIMATE FOR DESIGN   |                                | UNITS  | QUANTITY | UNIT COST     | TOTAL         | USES FEDERAL AID | FEDERAL | LOCAL  |  |
|  | PRELIMINARY ENGINEERING<br>(15% plans)<br>(Required for Budget)                            |                                |  |          |               | \$ -          | No               | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | No               | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | No               | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | No               | -       | -      |  |
|  | SUBTOTAL - PRELIMINARY ENGINEERING COSTS   |                                |  |          |               | \$ -          |                  | -       | -      |  |
| FINAL DESIGN<br>(30, 60, 95, 100% plans)<br>(Required for Budget)                          |  |                                |  |          | \$ -          | No            | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | No            | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | No            | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | No            | -                | -       |        |  |
| SUBTOTAL - FINAL DESIGN COSTS  |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING                    |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| PROCUREMENT  | REQUESTED PROGRAMMING  | Location Description           | Devices chosen Townwide that have been identified as reaching life cycle age and/or are not supported anymore by vendor.   |          |               |               |                  |         |        |  |
|  |  | Work Description               | Replacement of ten CCTV cameras with similar functionality cameras and upgrade of detection at 20 intersections to Video Detection cameras that provide turning movement counts. |          |               |               |                  |         |        |  |
|  |  | Funding Source                 | CMAQ   |          |               |               |                  |         |        |  |
|  |  | Preferred Year to Program Work | 2021   |          |               |               |                  |         |        |  |
|  | COST ESTIMATE FOR PROCUREMENT  |                                | UNITS  | QUANTITY | UNIT COST     | TOTAL         | USES FEDERAL AID | FEDERAL | LOCAL  |  |
|  | PROCUREMENT COSTS  | CCTV Camera                    | EA   | 10       | 6,500         | \$ 65,000.00  | Yes              | 61,295  | 3,705  |  |
|  |  | Video Detection System (4 Leg) | EA   | 20       | 33,752        | \$ 675,040.00 | Yes              | 636,563 | 38,477 |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
| TOTAL - PROCUREMENT  |  |                                |  |          | \$ 740,040.00 |               | 697,858          | 42,182  |        |  |
| CONSTRUCTION   | REQUESTED PROGRAMMING<br>(Complete only if Construction will be programmed in the MAG TIP) | Location Description           |  |          |               |               |                  |         |        |  |
|  |  | Work Description               |  |          |               |               |                  |         |        |  |
|  |  | Funding Source                 |  |          |               |               |                  |         |        |  |
|  |  | Preferred Year to Program Work |  |          |               |               |                  |         |        |  |
|  | COST ESTIMATE FOR CONSTRUCTION   |                                | UNITS  | QUANTITY | UNIT COST     | TOTAL         | USES FEDERAL AID | FEDERAL | LOCAL  |  |
|  | UTILITY RELOCATIONS<br>(Required for Budget,<br>May be 0 if no Utilities)                  |                                |  |          |               | \$ -          | No               | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          |               | \$ -          | Yes              | -       | -      |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
| SUBTOTAL - UTILITY RELOCATION COSTS  |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| CONSTRUCTION<br>(Required for Budget)  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  |  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
| SUBTOTAL - CONSTRUCTION COST   |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| MOBILIZATION AND ADMINISTRATION COSTS  | CONTRACTOR MOBILIZATION (Typically 8% of construction cost)                                |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  | TRAFFIC CONTROL (0-8% of construction cost)  |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  | CONSTRUCTION SURVEY & LAYOUT (Typically 1% of construction cost)                           |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  | CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)                             |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
|  | CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)                           |                                |  |          | \$ -          | Yes           | -                | -       |        |  |
| SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS   |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING                             |  |                                |  |          | \$ -          |               | -                | -       |        |  |
| 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  |  |                                |  |          | \$ 771,060    |               | 697,858          | 73,202  |        |  |

| Budget and Signature Page |  |  |                       |                |                   |                  |                   |             |
|---------------------------|--|--|-----------------------|----------------|-------------------|------------------|-------------------|-------------|
| Phase                     | Location Description   | Work Description   | Year to be Programmed | Funding Source | Federal Amount    | Local Amount     | Total             | Local Share |
| Procurement               | Devices chosen Townwide that have been identified as reaching life cycle age and/or are not supported anymore by vendor. | Replacement of ten CCTV cameras with similar functionality cameras and upgrade of detection at 20 intersections to Video Detection cameras that provide turning movement counts. | 2021                  | CMAQ           | \$ 697,858        | \$ 42,182        | \$ 740,040        | 5.7%        |
|                           |  |  |                       |                |                   |                  |                   |             |
|                           |  |  |                       |                |                   |                  |                   |             |
| Total Programmed          |  |  |                       |                | \$ 697,858        | \$ 42,182        | \$ 740,040        | 5.7%        |
| ADOT Design Review Fee    |  |  |                       |                | \$ -              | \$ 31,020        | \$ 31,020         | 100.0%      |
| <b>Total Cost</b>         |  |  |                       |                | <b>\$ 697,858</b> | <b>\$ 73,202</b> | <b>\$ 771,060</b> | <b>9.5%</b> |

**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 TIP/TIP or budget document if the project is selected for federal funding.

Signature:



Name:

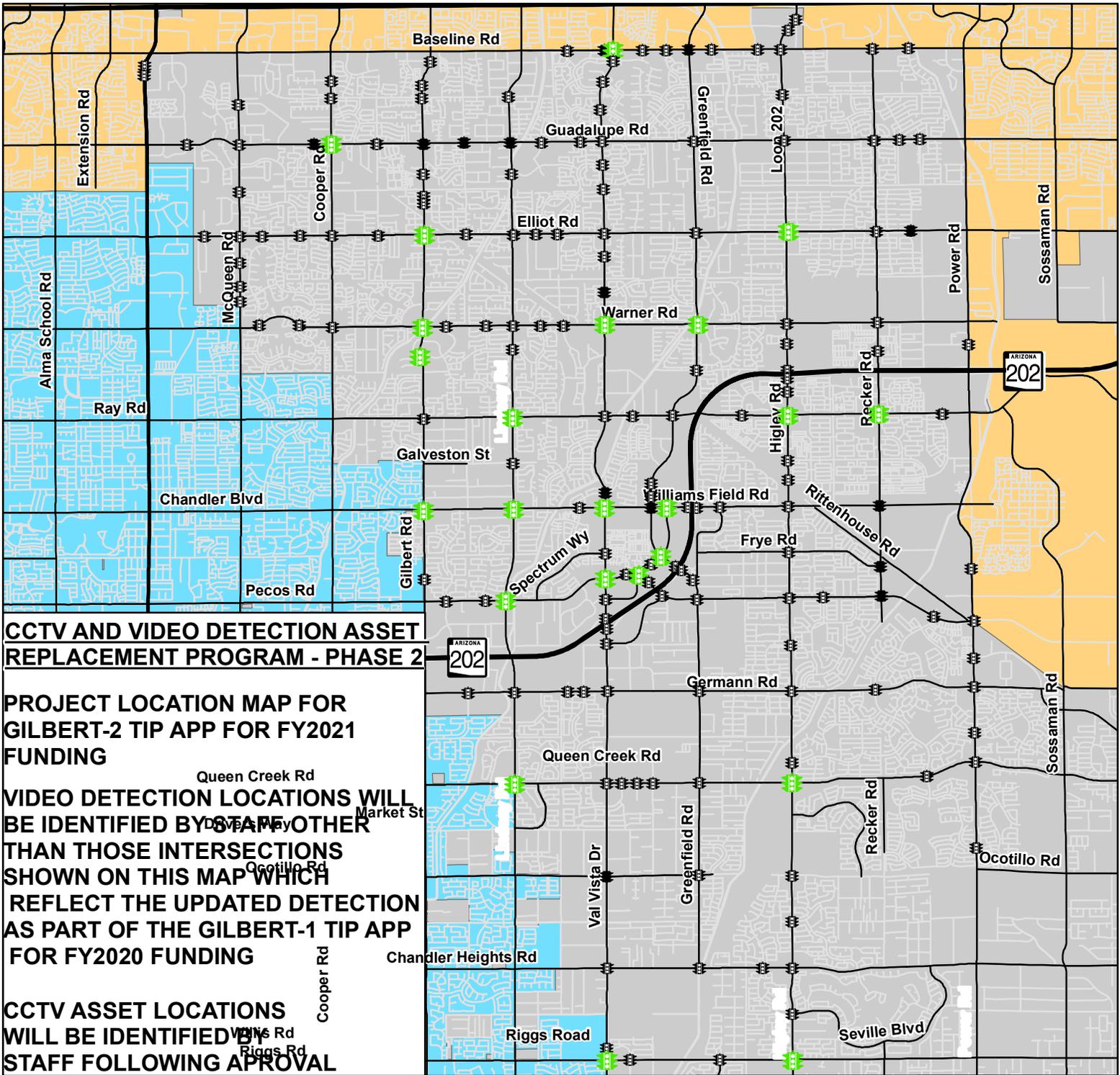
DAVID S. FABIANO, PE, PWLF

Title:

TOWN ENGINEER

Date:

16 SEPT 2019



**CCTV AND VIDEO DETECTION ASSET REPLACEMENT PROGRAM - PHASE 2**

**PROJECT LOCATION MAP FOR GILBERT-2 TIP APP FOR FY2021 FUNDING**

**VIDEO DETECTION LOCATIONS WILL BE IDENTIFIED BY STAFF OTHER THAN THOSE INTERSECTIONS SHOWN ON THIS MAP WHICH REFLECT THE UPDATED DETECTION AS PART OF THE GILBERT-1 TIP APP FOR FY2020 FUNDING**

**CCTV ASSET LOCATIONS WILL BE IDENTIFIED BY STAFF FOLLOWING APPROVAL**

- FY2021 Device Replacement Candidates
- FY2020 Updated Devices
- Freeways
- Arterials
- Other Streets

**Jurisdiction**

- Chandler
- Mesa
- Maricopa County

0 0.5 1 2 Miles

