

PART A - CONTACT INFORMATION	
<b>1. Sponsoring Agency</b>	City of Buckeye
<b>2. Contact Name</b>	Jason Mahkovtz, PE, Deputy City Engineer
<b>3. Phone</b>	623-349-6204
<b>4. E-Mail Address</b>	jmahkovtz@buckeyeaz.gov
<b>5. Mailing Address</b>	City of Buckeye, 530 E Monroe Ave, Buckeye, AZ 85326
(OPTIONAL)	
<a href="#">GIS Submittal Instructions</a>	

**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:

b. Please Describe how the ADT was estimated:

Traffic counts performed on September 4, 2014

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 Update at the MAG Website](#)

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

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

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
X	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
	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

**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
- 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:

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

**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

**A. Project Title & Sponsor**

Lead Agency	City of Buckeye
Other Partnering Agencies	
Project Title	City of Buckeye ITS Infrastructure (Various)
Project Category	Arterial ITS

**B. Project Goals & Objectives**

**Project Goals:**  
 Complete current critical system gaps within major corridors to facilitate the future installation of ITS fiber

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**Project Objectives:**  
 Install two (2) - 2" conduits and pull boxes in which to house future ITS fiber throughout three gaps in the current system. Completion of segments will allow the planning of a future incident center adjacent to one of the proposed segments.

**C. Project Information**

**Project Location Description - a PDF file of a map must be submitted to MAG as an attachment:**  
 Project is generally located on Watson and Yuma Roads approximately 1-2 miles south of I-10 within the highest intensity of development within the City of Buckeye.

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**Scope of the Project:**  
 Install two (2) - 2" conduits and pull boxes within the following corridors also described in Exhibit "A":  
 Watson Road from Yuma Road to Lower Buckeye Road; Yuma Road from 247th Ave to Miller Road; and  
 Yuma Road from Dean Road to Verrado Wy

**PART C1 - ITS Project Information**

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

Service Area	Addressed in this Project (Yes or No)	<a href="http://www.azmag.gov/ITS/">Applicable ITS Service Packages http://www.azmag.gov/ITS/</a>
1. Traffic Management	Yes	ATMS03
2. Public Transportation	No	
3. Communications	Yes	ATMS01
4. Traveler Information	No	
5. Archived Data Mgmt	No	
6. ITS for Safety	No	
7. ITS Planning	No	
8. Fwy-Arterial Operations	No	

**NOTE: Insert the relevant Architecture Flow Diagrams in worksheet: Part C-ITSArchFlowDiags**

**E. Program Year Preference (enter FY2018 oor FY2019)**

Preferred program FY

**F. Project Budget**

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$316,835.00	\$20,055.00	\$351,835.00
Cost percentage	90.1%	5.7%	

**G. System Maintenance and Operations**

Current staff resources available to support ITS operations at the local agency (in FTEs)

Additional staff resources required for fully utilizing features added by project (in FTEs)

Agency's estimated current annual ITS operations & maintenance (O&M) budget

Estimated additional annual O & M funds required for features added by this project

Estimated DATE from when required additional local O&M funds will be available

1
0
\$50,000
\$0
n/a

**PART C1 - ITS Project Information****Other comments:**

Please note: Conduit installation will not have an immediate impact on traffic speeds.

**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

City of Buckeye will conform to the "V" diagram process where applicable.

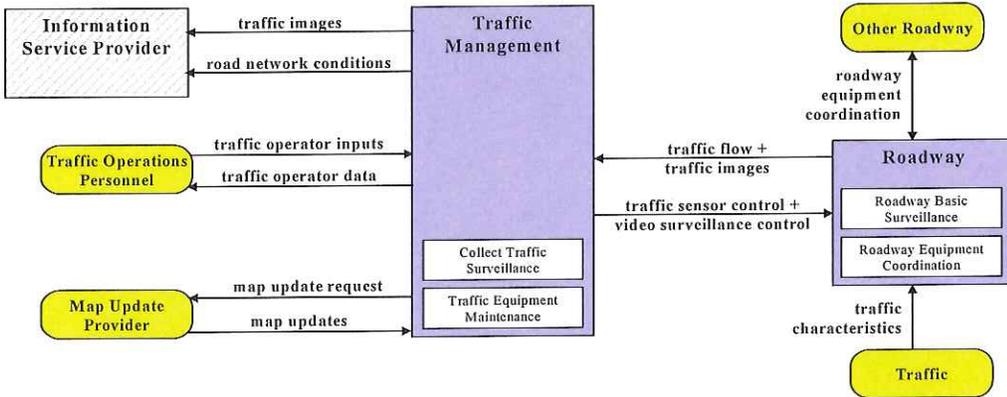
[http://azmag.gov/Documents/ITS\\_2010-11-22\\_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf](http://azmag.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf)

**PART C2 - ITS Architecture Flow Diagrams**

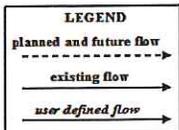
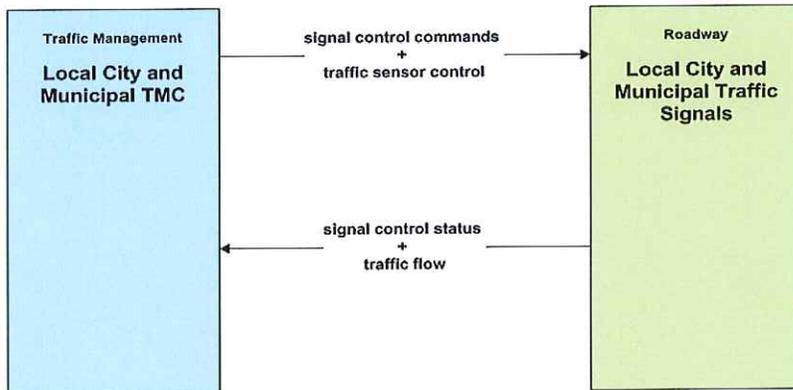
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

Insert Architecture Flow Diagrams in the space below:

**ATMS01 – Network Surveillance**



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



**PART C2 - ITS Architecture Flow Diagrams**

**PART C2 - ITS Architecture Flow Diagrams**



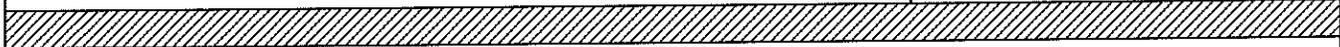
<b>PART D1 - Detailed Cost Estimate</b>					
				\$0	Yes
				\$0	Yes
<b>SUBTOTAL - CONSTRUCTION</b>				<b>\$234,694</b>	<b>\$234,694</b>

**PART D1 - Detailed Cost Estimate**



**2. PROCUREMENT (Insert additional rows if necessary)**

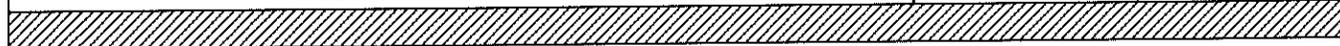
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
				\$0	No
				\$0	No
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
<b>SUBTOTAL - PROCURMENT</b>				\$0	\$0



**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
<b>SUBTOTAL - OTHER CONSTRUCTION LINE ITEMS</b>				\$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?

<b>PART D1 - Detailed Cost Estimate</b>					
CONTRACTOR MOBILIZATION	LS	1	\$11,734.00	\$11,734.00	Yes
TRAFFIC CONTROL	LS	1	\$11,734.00	\$11,734.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1	\$11,734.00	\$11,734.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1	\$23,469.40	\$23,469.40	Yes
CONSTRUCTION ADMINISTRATION	LS	1	\$23,469.40	\$23,469.40	Yes
<b>SUBTOTAL – MOBILIZATION &amp; ADMINISTRATION COSTS</b>				\$ 82,141	\$82,141
<b>TOTAL CONSTRUCTION OR IMPLEMENTATION COST</b>				\$ 316,835	\$ 316,835

PART D1 - Detailed Cost Estimate					
<b>D. ADOT Fee for PE Reviews and Staff Charges</b>	LS	1	\$15,000	\$15,000	No
<b>TOTAL ADOT Fee COST</b>				\$15,000	\$0
<b>E. TOTAL PROJECT COST</b>				\$351,835	\$316,835
<b>F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS</b>					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$351,835
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$316,835
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$298,775
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$20,055
LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$35,000

**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).	\$ -	\$ 20,000	\$ 20,000	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ 17,591	\$ -	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 234,694	\$ -	\$ 234,694	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ -	\$ -	\$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 82,141	\$ -	\$ 82,141	
SUBTOTAL	\$ 316,835	\$ -	\$ 316,835	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ 15,000	
<b>Total Project Cost</b>	\$ 316,835	\$ 37,591	\$ 351,835	

**Agency Programming**

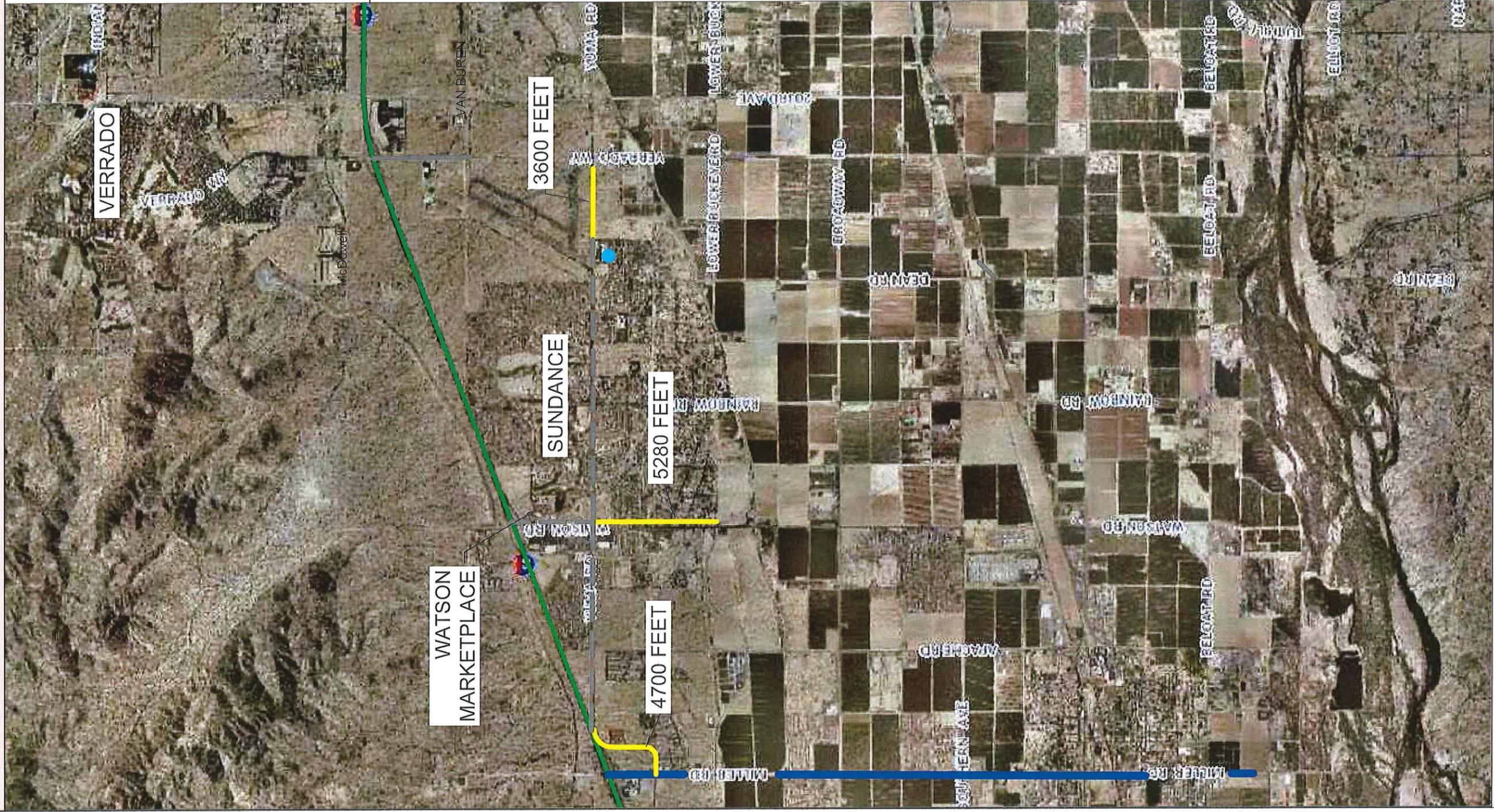
Please describe the programming of the project in the agency's own CIP/TIP.	If funding is obtained, this project will be added to the City's five year CIP currently under development
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Requested MAG TIP Programming	Short Work Description (E.g. Construct 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 2 - 2" conduits for future ITS fiber	2018	\$ 18,060	\$ 298,775	\$ 316,835	6%
<b>Totals</b>			\$ 18,060	\$ 298,775	\$ 316,835	6%

<b>PART E - SIGNATURE AND CHECKLIST</b>	
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: Scott Zipprich	
Title: City Engineer	
Date: 9-17-15	
<b>Checklist - OPTIONAL</b>	
This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.	
<b>PART A - Contacts</b>	<b>Complete?</b>
Contact Information, fields 1 – 5 are complete	Yes
<b>PART B - TIP Listing and CMAQ Score Data</b>	<b>Complete?</b>
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
<b>PART C1 - ITS Project Information</b>	<b>Complete?</b>
Section A is Complete	
Section B is Complete	
Section C is Complete & A PDF file of map will be attached to the submittal to MAG	
Section D is Complete & All relevant Architecture Flow Diagrams have been inserted in the worksheet	
Section E is Complete	
Section F is Complete	
Section G is Complete	
Section H is Complete	
<b>PART C2 - ITS Architecture Flow Diagrams have been inserted</b>	
<b>PART D1 - Detailed Cost Estimate</b>	
<b>PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING</b>	

<b>PART E - SIGNATURE AND CHECKLIST</b>	
<b>PART E - Signature &amp; Checklist</b>	<b>Complete?</b>
Form is signed	
Name, title and date fields are completed.	

# EXHIBIT A: Phase 1 Intelligent Transportation System (ITS) Infrastructure

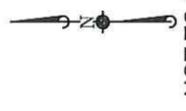


## Legend

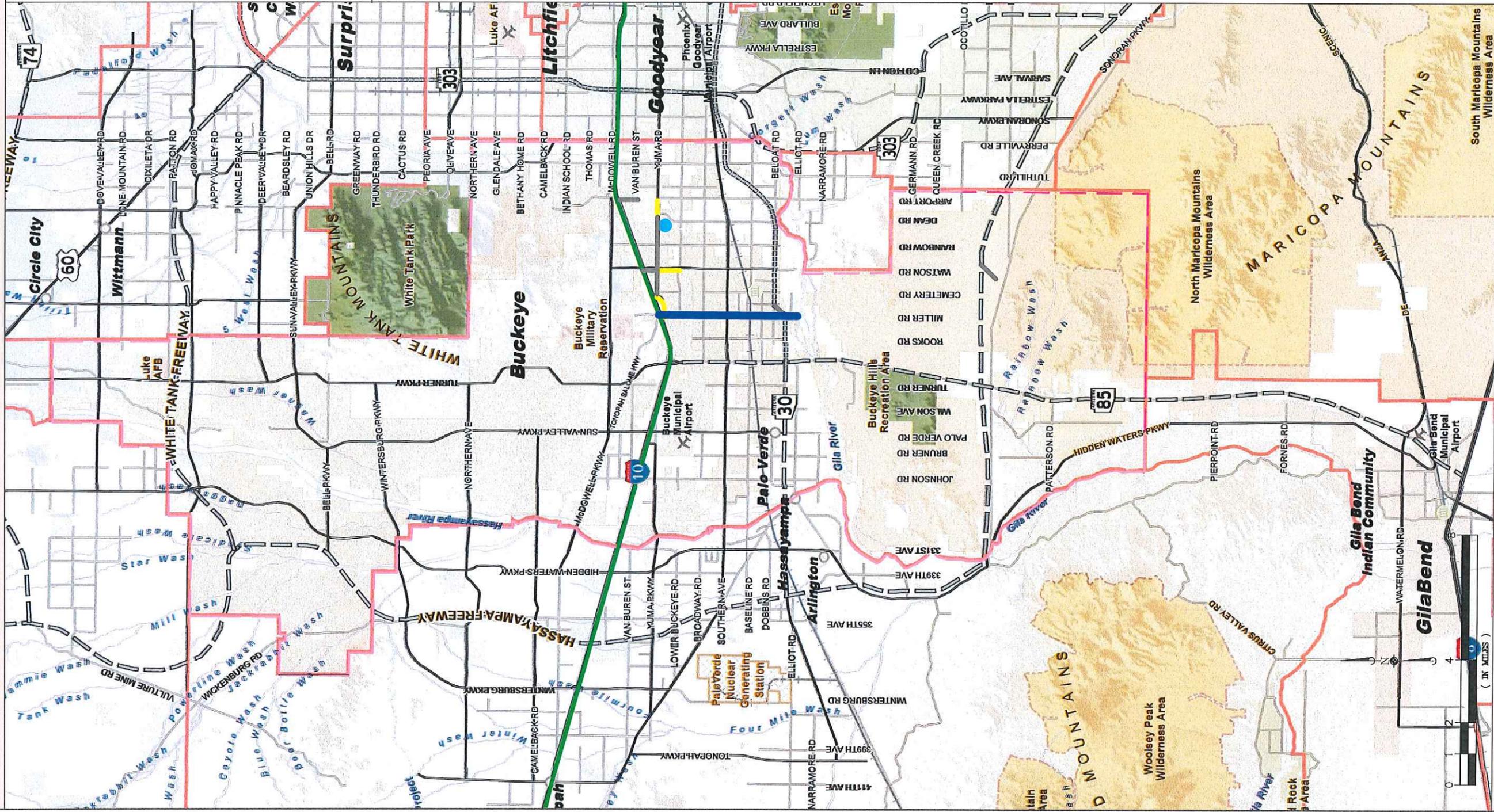
- State Highway
- Proposed ITS Infrastructure
- Existing ITS Infrastructure
- Infrastructure currently in the TIP
- Potential location of a "Traffic Operations Center".

## Notes

1. Total length of proposed ITS infrastructure = 2.57 miles.
2. Estimated cost per linear foot of installed conduit infrastructure = \$15.00



# Phase 1: Intelligent Transportation System (ITS) Infrastructure



## Legend

- State Highway
- Proposed ITS Infrastructure
- Existing ITS Infrastructure
- Infrastructure currently in the TIP
- Potential location of a "Traffic Operations Center".

## Notes

1. Total length of proposed ITS infrastructure = 2.57 miles.
2. Estimated cost per linear foot of installed conduit infrastructure = \$15.00
3. Total estimated cost for the installation of the proposed infrastructure is = \$203,700.00

