

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

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
<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 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 of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
<input checked="" 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

**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

Arterial ITS ▼

**A. Project Title & Sponsor**

<b>Lead Agency</b>	City of Avondale
<b>Other Partnering Agencies</b>	
<b>Project Title</b>	Dysart Rd ITS
<b>Project Category</b>	Arterial ITS

**B. Project Goals & Objectives**

**Project Goals:**  
 Install fiber backbone to connect two existing backbone runs on Dysart Road fiber. This project will connect fiber installed south of Van Buren to fiber installed north of the I-10 Freeway. Avondale will then have fiber connectivity along Dysart Rd from Western Ave to Indian School Road.

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**Project Objectives:**  
 This will expand TMC traffic surveillance and monitoring 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:**  
 Dysart Road from Van Buren Street to north of I-10.

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**Scope of the Project:**  
 Procure, Construct and Install: Three (3) new ASC 3 controllers installed to replace existing to provide compatible ITS applications. Two CCTV cameras will be included for the Van Buren Street and Coldwater North intersections. Fiber backbone will be installed in Dysart Road roadway right-of-way from Van Buren to north of I-10.

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

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

Preferred program FY

**F. Project Budget**

	Federal Cost	Local Match (min 5.7%)	Total Cost
<b>Amount</b>	\$278,279.30	\$159,320.70	\$437,600.00
<b>Cost percentage</b>	63.6%	36.4%	

**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	\$2,500
Estimated DATE from when required additional local O&M funds will be available	Jul-2018

**PART C1 - ITS Project Information**

**Other comments:**

[Empty yellow comment box]

**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

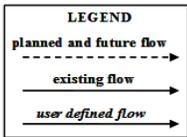
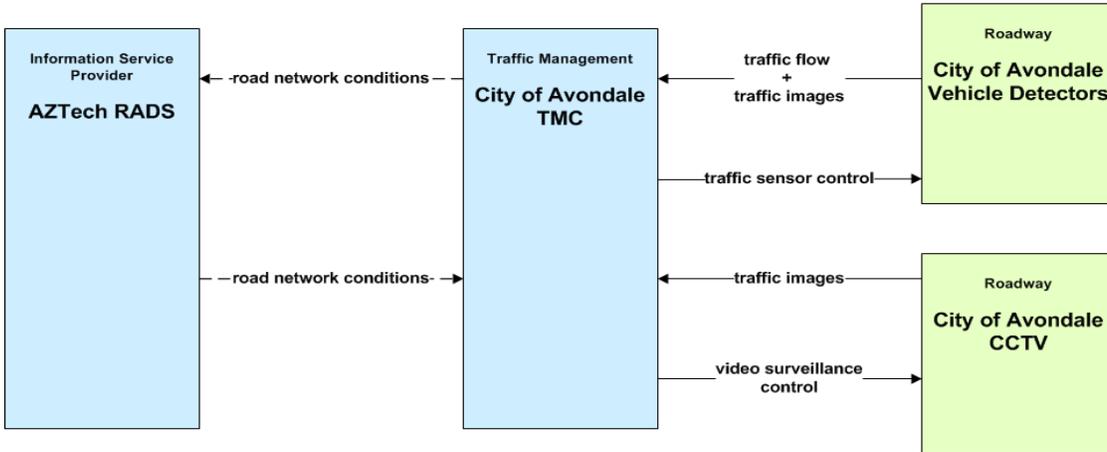
The project sponsor/lead agency City of Avondale intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report, following guidance on the ADOT's System Engineering Checklist provided at:  
[http://azmag.gov/Documents/ITS\\_2010-11-22\\_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf](http://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.

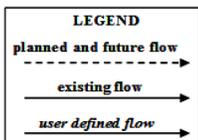
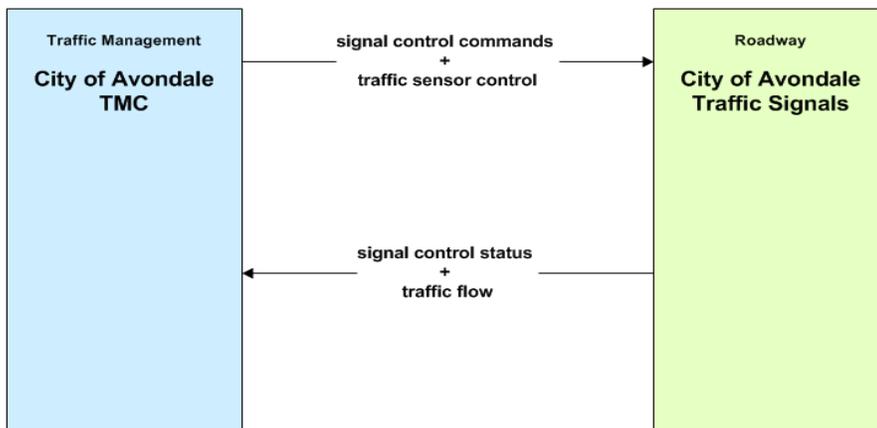
Insert Architecture Flow Diagrams in the space below:

**ATMS01 - Network Surveillance  
City of Avondale**



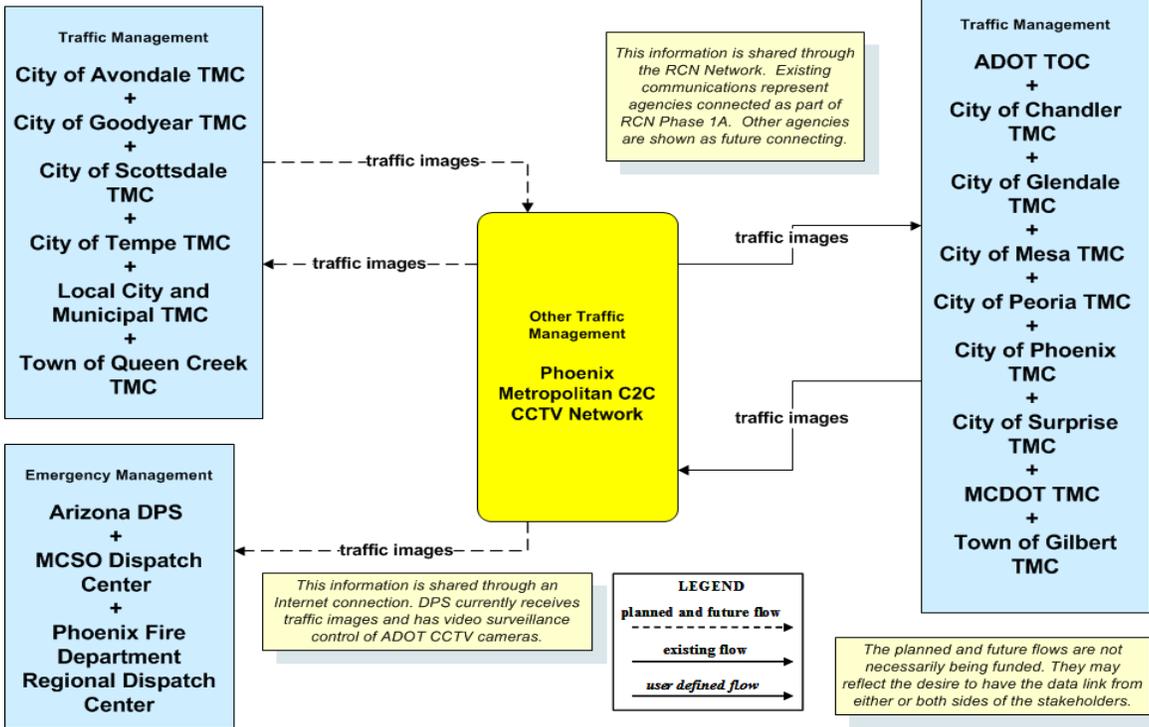
*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*

**ATMS03 - Traffic Signal Control  
City of Avondale**



**PART C2 - ITS Architecture Flow Diagrams**

**ATMS07 - Regional Traffic Management  
Phoenix Metropolitan C2C CCTV Network**



PART D1 - Detailed Cost Estimate					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
<b>A. SCOPING (15% Preliminary Engineering Design)</b>					
1. SITE TOPOGRAPHIC SURVEY	LS	1	\$15,000.00	\$15,000.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$10,000.00	\$10,000.00	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	\$7,500.00	\$7,500.00	No
<b>SUBTOTAL – PROJECT SCOPING COSTS</b>				\$47,500.00	\$0
<b>B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&amp;E</b>					
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	\$55,000.00	\$55,000.00	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
<b>SUBTOTAL – PROJECT DESIGN COSTS</b>				\$65,000.00	\$0
<b>C. CONSTRUCTION OR IMPLEMENTATION</b>					
<b>1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)</b>					
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	3,300	\$25	\$82,500	Yes
Electrical Conduit (4-inch, 3-Cell, Geotextile Innerduct)	LF	3300	\$5	\$16,500	Yes
Pull Box (No. 7)	EA	5	\$500	\$2,500	Yes
Pull Box (Avondale No. 9 Vault)	EA	3	\$2,500	\$7,500	Yes
Single Mode Fiber Optic Cable (12-Strand)	LF	150	\$3	\$450	Yes
Single Mode Fiber Optic Cable (96-Strand)	LF	3,300	\$3	\$9,900	Yes
Fiber Optic Splice Closure (ITS)	EA	3	\$2,000	\$6,000	Yes
Controller (ASC/3)	EA	3	\$4,000	\$12,000	Yes
Electrical System (CCTV)	EA	2	\$1,500	\$3,000	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
Force Account Work (landscaping Restoration & Irrigation Repair)	L.Sum	1	\$10,000	\$10,000	Yes
Miscellaneous Work (GigE Switch)	EA	3	\$1,500	\$4,500	Yes

<b>PART D1 - Detailed Cost Estimate</b>					
					Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
<b>SUBTOTAL - CONSTRUCTION</b>				\$170,100	\$170,100



<b>PART D1 - Detailed Cost Estimate</b>					
CONTRACTOR MOBILIZATION	LS	1	\$25,000.00	\$25,000.00	Yes
TRAFFIC CONTROL	LS	1	\$55,000.00	\$55,000.00	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	\$10,000.00	\$10,000.00	Yes
<b>SUBTOTAL – MOBILIZATION &amp; ADMINISTRATION COSTS</b>				\$ 125,000	\$125,000
<b>TOTAL CONSTRUCTION OR IMPLEMENTATION COST</b>				\$ 295,100	\$ 295,100

<b>PART D1 - Detailed Cost Estimate</b>					
<b>D. ADOT Fee for PE Reviews and Staff Charges</b>	LS	1	\$30,000	\$30,000	No
<b>TOTAL ADOT Fee COST</b>				\$30,000	\$0
<b>E. TOTAL PROJECT COST</b>				\$437,600	\$295,100
<b>F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS</b>					
<b>TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION</b>					<b>\$437,600</b>
<b>TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT</b>					<b>\$295,100</b>
<b>TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)</b>					<b>\$278,279</b>
<b>LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)</b>					<b>\$16,821</b>
<b>LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT</b>					<b>\$142,500</b>

**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.

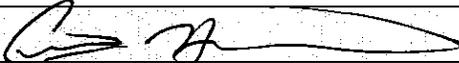
**Section 1 - Total Project Budget**

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).	\$ -	\$ 47,500	\$ 47,500	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ 65,000	\$ 65,000	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 170,100	\$ -	\$ 170,100	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ -	\$ -	\$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 125,000	\$ -	\$ 125,000	
SUBTOTAL	\$ 295,100	\$ -	\$ 295,100	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ 30,000	
<b>Total Project Cost</b>	\$ 295,100	\$ 112,500	\$ 437,600	

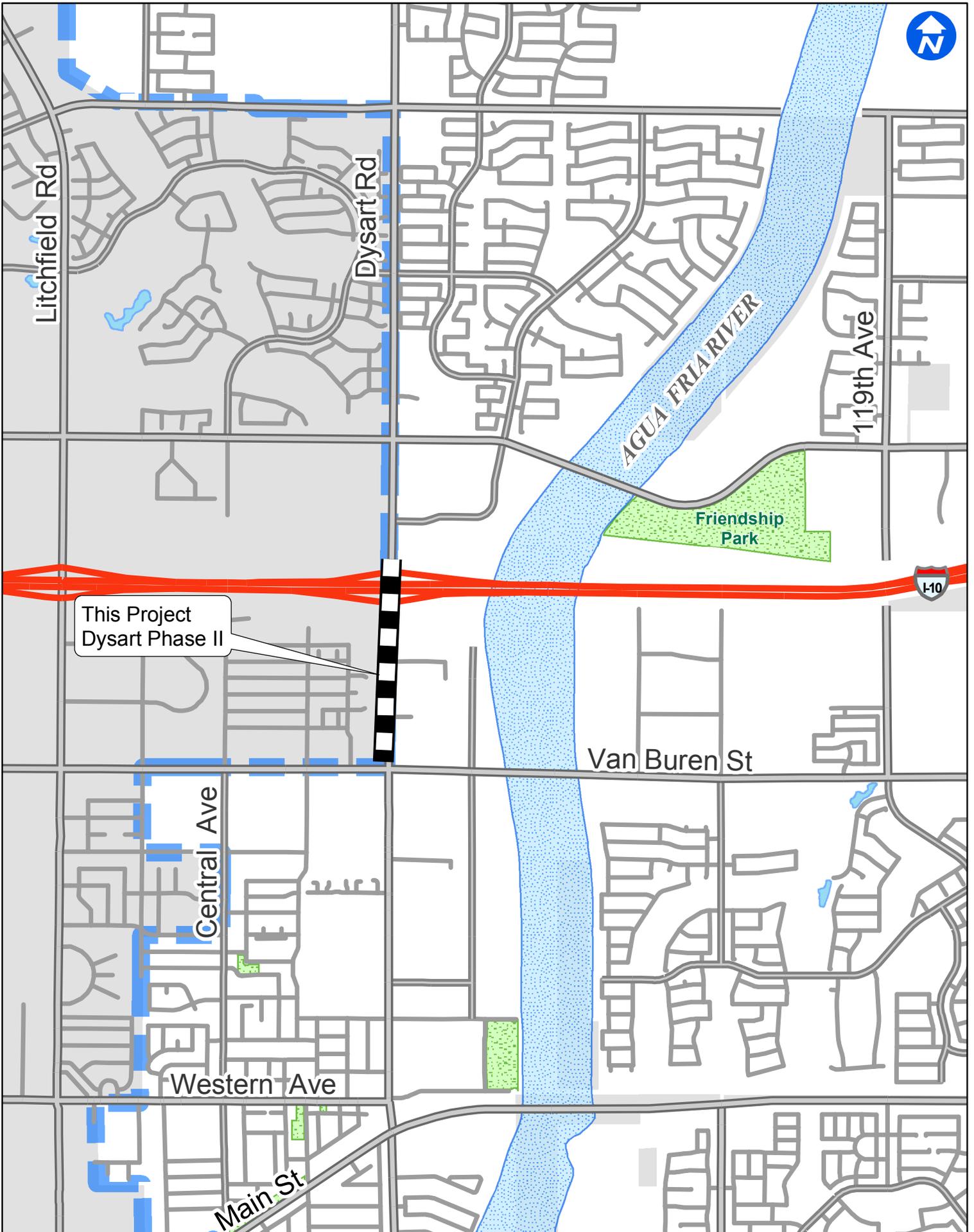
**Agency Programming**

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	Dysary Rd fiber installation	2018	\$ 159,320	\$ 278,279	\$ 437,599	36%
<b>Totals</b>			\$ 159,320	\$ 278,279	\$ 437,599	36%

<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: Chris Hamilton	
Title: Engineering Project Manager	
Date: 9-21-2015	
<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	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
<b>PART C2 - ITS Architecture Flow Diagrams have been inserted</b>	YES
<b>PART D1 - Detailed Cost Estimate</b>	YES
<b>PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING</b>	YES
<b>PART E - Signature &amp; Checklist</b>	<b>Complete?</b>
Form is signed	YES
Name, title and date fields are completed.	YES





This Project  
Dysart Phase II

Vicinity Map  
Dysart ITS Phase II