

PART A - CONTACT INFORMATION	
1. Sponsoring Agency	City of Goodyear
2. Contact Name	Hugh Bigalk
3. Phone	623-882-7514
4. E-Mail Address	hugh.bigalk@goodyearaz.gov
5. Mailing Address	14455 W Van Buren Street, Suite D101, Goodyear, Arizona, 85338
(OPTIONAL) GIS Submittal Instructions	

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
	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	
<input type="checkbox"/> Traffic signal system improvements that apply to more than one agency	
<input type="checkbox"/> Includes improvements to coordination between arterial and freeway traffic operations	
<input checked="" type="checkbox"/> Project conforms to local land use plans	
<input type="checkbox"/> 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:	<input style="width: 80px;" type="text" value="37"/>
b. Enter the post-improvement (current) average traffic speed of the corridor:	<input style="width: 80px;" type="text" value="45"/>

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

Lead Agency	City of Goodyear
Other Partnering Agencies	
Project Title	Phase 2: Cotton Ln - Estrella Pkwy to Lower Buckeye Rd; Estrella Pkwy - Elliot Rd to Cotton Ln; Elliot Rd - San Gabriel Dr to Estrella Pkwy
Project Category	Arterial ITS

B. Project Goals & Objectives

Project Goals:
 Implement the ability to efficiently manage traffic under normal, congested and incident conditions for the City of Goodyear. Cotton Lane is a key truck route in the City of Goodyear, and this project will improve traffic flow and signal coordination on this corridor.

Project Objectives:
 Expand Traffic Management Center (TMC) traffic surveillance and monitoring capability by connecting to three existing traffic signals and two near term traffic signals; Facilitate the adjustment of traffic signal timing at these locations, which includes a key truck route (Cotton Lane) in the City of Goodyear, 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:
 Phase 2: Cotton Lane from Estrella Parkway to Commerce Drive and from Elwood Street to Lower Buckeye Road, Estrella Parkway from Elliot Road to Cotton Lane and Elliot Road from San Gabriel to Estrella Parkway. Intersection 1 - San Gabriel & Elliot Road, Intersection 2 - Estrella Parkway & Elliot Road, Intersection 3 - Estrella Parkway & Development Drive (Near Elliot), Intersection 4 - Cotton Lane & Lower Buckeye Road.

Scope of the Project:
 Purchase and install approximately 3,030 LF of 2-2" conduits, 330 LF of 3" conduit, 25,000 LF of 96 strand SMFO cable, 3,300 LF of 12 strand SMFO cable, 5 fiber optic splice enclosures, 4 field hardened ethernet switches, 4 video codecs and 4 CCTV cameras. The project will connect the City of Goodyear TMC to the four traffic signals along Cotton Lane, Estrella Parkway and Elliot Road.

PART C1 - ITS Project Information

D. Identify Project Components in MAG Regional ITS Architecture

Service Area	Addressed in this Project (Yes or No)	Applicable ITS Service Packages http://www.azmag.gov/ITS/
1. Traffic Management	Yes	ATMS01,ATMS03
2. Public Transportation	No	
3. Communications	Yes	ATMS07
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	\$301,482.00	\$18,224.00	\$319,706.00
Cost percentage	94.3%	5.7%	

G. System Maintenance and Operations

Current staff resources available to support ITS operations at the local agency (in FTEs)	2
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	\$140,000
Estimated additional annual O & M funds required for features added by this project	\$15,000
Estimated DATE from when required additional local O&M funds will be available	Jul-2017

PART C1 - ITS Project Information

Other comments:

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

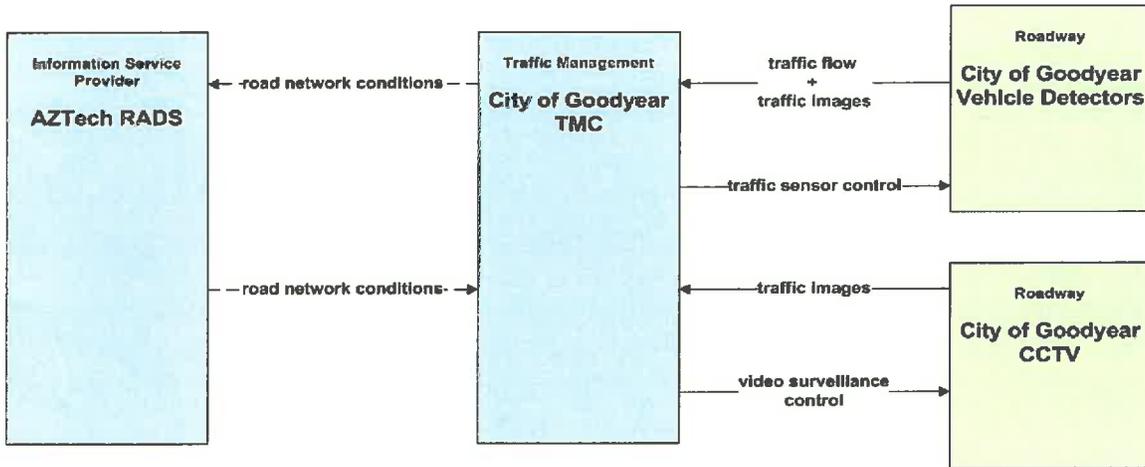
The City of Goodyear will conform to the Systems Engineering Analysis for this project.
http://azmag.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf

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.

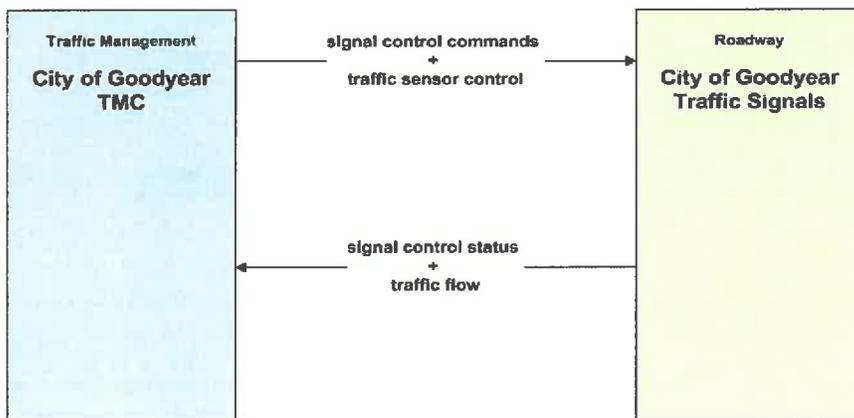
Insert Architecture Flow Diagrams in the space below:

**ATMS01 - Network Surveillance
City of Goodyear**



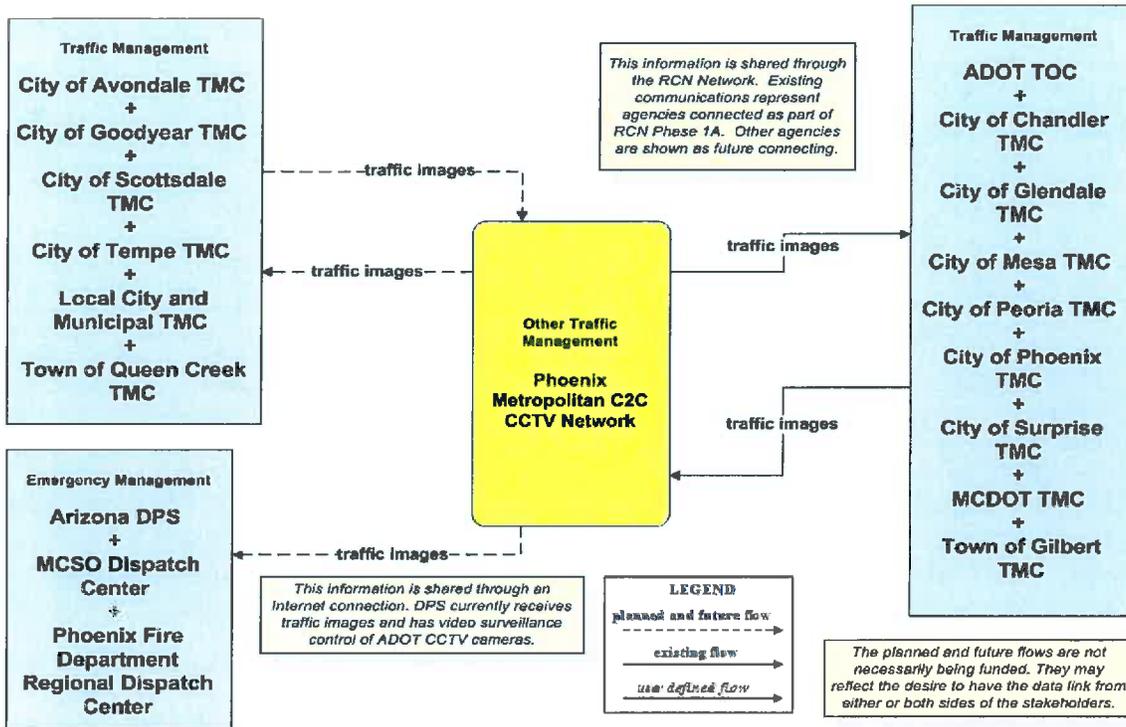
The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.

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



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?
A. SCOPING (15% Preliminary Engineering Design)					
1. SITE TOPOGRAPHIC SURVEY	LS	1	\$0.00	\$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$0.00	\$0.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	\$0.00	\$0.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$0.00	\$0.00	No
5. HAZMAT ASSESSMENT	LS	1	\$0.00	\$0.00	No
SUBTOTAL – PROJECT SCOPING COSTS				\$0.00	\$0
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E					
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	\$0.00	\$0.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	1	\$0.00	\$0.00	No
4. DRAINAGE REPORT	LS	1	\$0.00	\$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	1	\$0.00	\$0.00	No
SUBTOTAL – PROJECT DESIGN COSTS				\$0.00	\$0
C. CONSTRUCTION OR IMPLEMENTATION					
1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
ELECTRICAL CONDUIT (2-2" and 1-3")(HDPE)(DIRECTIONAL BORE)	L.F.T.	330	\$45	\$14,850	Yes
ELECTRICAL CONDUIT (2-2")(PVC)	L.F.T.	2,700	\$10	\$27,000	Yes
PULL BOX (NO. 9)	EACH	14	\$2,800	\$39,200	Yes
SINGLE MODE FIBER OPTIC CABLE (12 FIBERS, PRETERMINATED)	L.F.T.	3300	\$5	\$16,500	Yes
SINGLE MODE FIBER OPTIC CABLE (96 FIBERS)	L.F.T.	25,000	\$3	\$62,500	Yes
FIBER OPTIC SPLICE CLOSURE (RESEALABLE)	EACH	5	\$2,500	\$12,500	Yes
ELECTRICAL SYSTEM (FIELD ETHERNET SWITCH)	EACH	5	\$2,200	\$11,000	Yes
ELECTRICAL SYSTEM (SINGLE MODE FIBER OPTIC PATCH CORD)	EACH	8	\$65	\$520	Yes
ELECTRICAL SYSTEM (SINGLE CHANNEL VIDEO CODEC)	EACH	4	\$2,200	\$8,800	Yes
CCTV FIELD EQUIPMENT	EACH	4	\$5,000	\$20,000	Yes
MISCELLANEOUS WORK (AS BUILT DRAWINGS)	LS	1	\$5,000	\$5,000	Yes

PART D1 - Detailed Cost Estimate					
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL - CONSTRUCTION				\$217,870	\$217,870

PART D1 - Detailed Cost Estimate					
CONTRACTOR MOBILIZATION	LS	1	\$28,550.00	\$28,550.00	Yes
TRAFFIC CONTROL	LS	1	\$20,000.00	\$20,000.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1	\$0.00	\$0.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1	\$13,321.00	\$13,321.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1	\$37,299.00	\$37,299.00	Yes
SUBTOTAL – MOBILIZATION & ADMINISTRATION COSTS				\$ 99,170	\$99,170
TOTAL CONSTRUCTION OR IMPLEMENTATION COST				\$ 319,705	\$ 319,705

PART D1 - Detailed Cost Estimate					
D. ADOT Fee for PE Reviews and Staff Charges					
	LS	1	\$30,000	\$30,000	No
TOTAL ADOT Fee COST				\$0	\$0
E. TOTAL PROJECT COST					
				\$319,705	\$319,705
F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$319,705
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$319,705
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$301,482
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$18,224
LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$0

**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).	\$ -	\$ -	\$ -	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ -	\$ -	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 217,870	\$ -	\$ 217,870	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ 2,665	\$ -	\$ 2,665	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 99,170	\$ -	\$ 99,170	
SUBTOTAL	\$ 319,705	\$ -	\$ 319,705	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ -	
Total Project Cost	\$ 319,705	\$ -	\$ 319,705	

Agency Programming

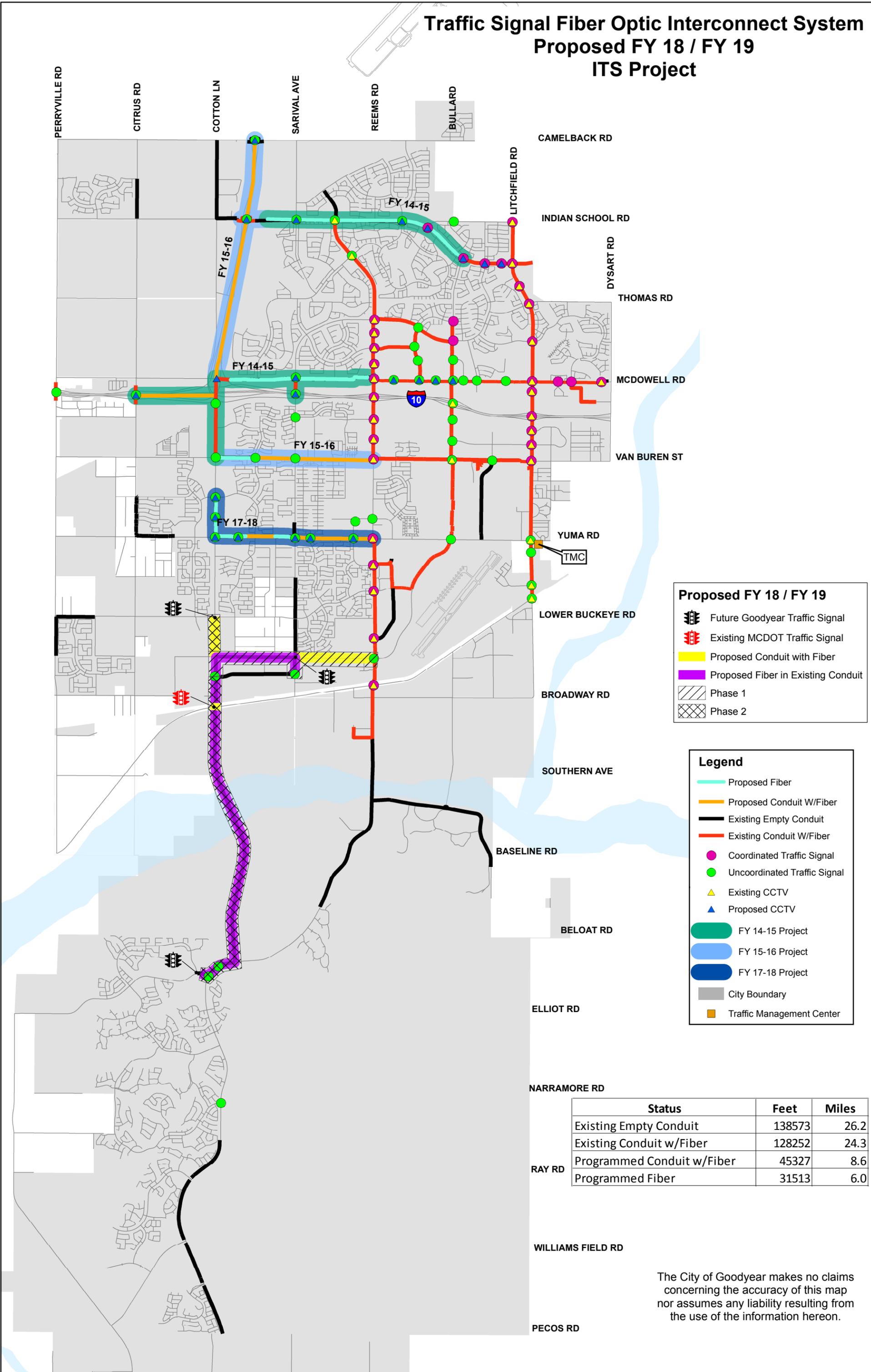
Please describe the programming of the project in the agency's own CIP/TIP.	Following approval of Federal funding and inclusion in the MAG TIP, the City will program the project in the appropriate fiscal year through the City's annual CIP process.
---	---

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)	ADOT Fees included in Phase 1	2016	\$ -	\$ -	\$ -	
2. Other (Optional)				\$ -	\$ -	
3. Other (Optional)				\$ -	\$ -	
4. Construction or Implementation	Construct Fiber Optic Project	2018	\$ 18,224	\$ 301,482	\$ 319,706	6%
Totals			\$ 18,224	\$ 301,482	\$ 319,706	6%

PART E - SIGNATURE AND CHECKLIST	
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:	<i>Brian Dalke</i>
Name:	<i>Brian Dalke</i>
Title:	<i>City Manager</i>
Date:	<i>9/16/15</i>
Checklist - OPTIONAL	
This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.	
PART A - Contacts	Complete?
Contact Information, fields 1 – 5 are complete	Yes
PART B - TIP Listing and CMAQ Score Data	Complete?
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
PART C1 - ITS Project Information	Complete?
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
PART C2 - ITS Architecture Flow Diagrams have been inserted	Yes
PART D1 - Detailed Cost Estimate	Yes
PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING	

PART E - SIGNATURE AND CHECKLIST	
PART E - Signature & Checklist	Complete?
Form is signed	
Name, title and date fields are completed.	

Traffic Signal Fiber Optic Interconnect System Proposed FY 18 / FY 19 ITS Project



Proposed FY 18 / FY 19

- Future Goodyear Traffic Signal
- Existing MCDOT Traffic Signal
- Proposed Conduit with Fiber
- Proposed Fiber in Existing Conduit
- Phase 1
- Phase 2

Legend

- Proposed Fiber
- Proposed Conduit W/Fiber
- Existing Empty Conduit
- Existing Conduit W/Fiber
- Coordinated Traffic Signal
- Uncoordinated Traffic Signal
- Existing CCTV
- Proposed CCTV
- FY 14-15 Project
- FY 15-16 Project
- FY 17-18 Project
- City Boundary
- Traffic Management Center

Status	Feet	Miles
Existing Empty Conduit	138573	26.2
Existing Conduit w/Fiber	128252	24.3
Programmed Conduit w/Fiber	45327	8.6
Programmed Fiber	31513	6.0

The City of Goodyear makes no claims concerning the accuracy of this map nor assumes any liability resulting from the use of the information hereon.