Project Name				
Project Name (A short name for the project)	L202 Red Mtn Ramp Meter Upgrade (I-10 to Country Club/SR 87)			
Agency Sponsor Information				
	Lead Agency	**Agency #1**	**Agency #2**	**Agency #3**
Agency Name	ADOT	Select an Agency	Select an Agency	Select an Agency
Manager Name	Susan Anderson			
Manager Title	Systems Technology Group Manager			
Manager Phone	602-712-6910			
Manager Email	SEAnderson@azdot.gov			
Project Description				
SM&O Strategy (The noncompetitive eligible projects identified in the SM&O Funding plan for FY2020-FY2022)	Project #1-Traffic responsive and coordinated ramp metering at all freeway entrance ramps			
Purpose (Describe what the project is supposed to accomplish - e.g. improve emergency response, reduce bottle necks at ramps, etc.)	To control the amount of vehicle entering a freeway section from all ramp meter locations in order to keep the mainline freeway volumes below capacity and operating at optimal speeds and volumes. These upgrades will enable us to implementing an advanced adaptive metering algarithym in the future so we can coordinate entrance ramp meter rates at adjacent interchanges to distribute volumes on the mainline. This will increase speeds and decrease delay to limit vehicle emissions.			
Location (A description of where the project is located and its limits. This may include multiple roadways)	L-202 Red Mountain between Interstate 10 and Country Club Drive/SR 87.			
Scope (Provide a general scope of the project)	To upgrade twenty-seven (27) existing ramp meter controllers with new hardware to enable them to operate as Adaptive Ramp Meters. This includes purchasing the newest and most advanced ramp metering controller with licensing for each.			

Project Description (Continued)	
Schedule (Provide a preliminary schedule for implementing the project)	We plan on implementing the controller upgrades in the MAG 2021 budget year.
Impacts and Remediation (Describe the expected environmental, neighborhood and Title VI impacts of the project, anticipated utility relocations and traffic disruptions of the project and anticipated remediation measures)	These hardware upgrades will not have any impacts on the physical environment or require any sensitive environmental remediation. The work will be scheduled for off peak periods when the ramp meters are routinely turned off, and cause no disruption to traffic.
Public and Interagency Outreach and Coordination (Describe measures to be used to inform and engage the public, businesses and affected public agencies regarding the project. The less mainstream a proposed project or new technology is, the more public outreach should be conducted)	The system users in the Phoenix metro area are very familiar with ramp metering and there are no plans for public awareness efforts.
Annual Project Reporting (Each year a report on the implementation of the project will be presented to the MAG ITS Committee. This report should do the following: 1. Identify scope changes or potential scope changes. 2. Track progress on meeting the project schedule. 3. Provide an overview of the project budget, including expenditures to date. 4. Identify and track key performance measures. Describe the data, measures and process that will be collected, developed and implemented to prepare the annual report.)	We will record the date of implementation and the schedule for changing the ramp meter timing from fixed time to responsive operations
Estimated Total Project Cost	$166,074.00
Estimated Date Complete	6/1/2021

Budget Detail

Item #	Work ID	Agency Responsible	Location of Work	Work to be Performed	Year in TIP	Year Open	Federal/State Source	Federal/State Amount	Agency Match	Cost of Work
#1	1	ADOT	L-202 Red Mountain between Interstate 10 and Country Club Drive/SR 87	Upgrade existing ramp meter controllers with new hardware	2021	2021	CMAQ	$ 156,600	$ 9,474	$ 166,074
#2							None			
#3							None			
#4							None	$ -	$ -	$ -
#5							None	$ -	$ -	$ -
#6							None	$ -	$ -	$ -
#7							None	$ -	$ -	$ -
#8							None	$ -	$ -	$ -
#9							None	$ -	$ -	$ -
#10							None	$ -	$ -	$ -
									Total	$ 166,074

Requested Programming

3. Proposed Programming

Work Phase	Year to be Programmed	Funding Source	Federal/State Amount	Local Amount	Total	Local Share
Construction	2021	CMAQ	156600	9474	166,074	5.7%
None	None	None	0		-	0.0%
None	None	None	0		-	0.0%
None	None	None	0		-	0.0%
None	None	None	0		-	0.0%
Total			156,600	9,474	166,074	

Notes: 1. Funds are available only for 2020 - 2022 2. The minimum local share is 5.7% for federal aid projects.

Commitments

1. All parties to the project acknowledge that as of the date of this overview the information provided is the most accurate and complete available.
2. All parties to this overview, aggree to work collabartively to implement the project as described in this overview.
3. Changes to this overview and the project it describes, will be approved by all parties and presented to the MAG ITS Committee for approval and recommendation for the approval of the MAG Regional Council.
4. The lead agency for this project will provide a status report to the MAG ITS Committee on the project on an annual basis or more often if needed.
5. It is understood by the sponsoring agencies that any equipment or products resulting from this project will be maintained by the sponsoring agencies.
6. It is recognized that should the parties fail to comply with these commitments or the ITS recommend against continuing the project, MAG may cancel the project.

Date

Date

Date

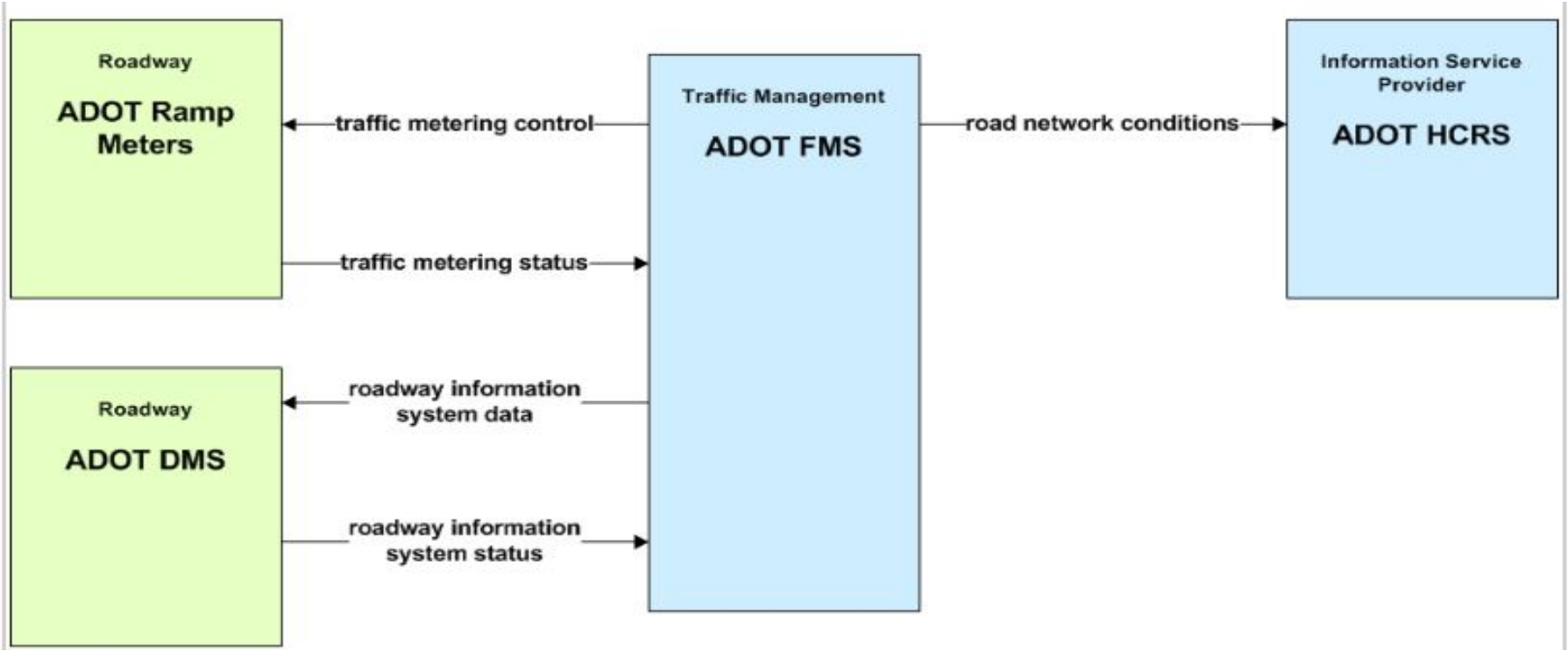
Date

ITS Architecture

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.
See example below.

MAG Regional ITS Architecture



Performance Measures for SM&O Annual Report

Purpose and Description	The purpose of annually measuring and reporting on the project overview is to measure how projects are addressing the SM&O Plan and Vision. Performance measures have been identified in the SM&O Plan, shown in the "SM&O PMs" worksheet. The performance measures are organized around the investment categories and identify metrics that will allow MAG to measure SM&O program impacts. MAG will be preparing an annual report on progress toward achieving the SM&O Vision, including the impact of SM&O investments. The lead agency will propose one or more of the following performance measures categories to be reported on for the project: Mobility, Safety, Transit, Data Management & Communications, and Traffic Incident Management. The MAG ITS Committee will review that the proposed performance measures align with the SM&O Plan and Vision. A plan for reporting on the implementation and performance of the project to be presented to the MAG Intelligent Transportation Systems (ITS) Committee on an annual basis. The lead agency will report on the project up to one year after implementation. The lead agency will identify that the project addresses federal performance categories, as required by the FAST Act.

Year	Segment Location	Performance Measure - Mobility				
		Performance Measure #1	Performance Measure #2	Performance Measure #3	Performance Measure #4	Performance Measure #5
2021	L-202 Red Mountain between Interstate 10 and Counrty Club Drive/SR 87.	Travel Time Reliability	Corridor Throughput			

Year	Segment Location	Performance Measure - Safety				
		Performance Measure #1	Performance Measure #2	Performance Measure #3	Performance Measure #4	Performance Measure #5

Year	Segment Location	Performance Measure - Transit				
		Performance Measure #1	Performance Measure #2	Performance Measure #3	Performance Measure #4	Performance Measure #5

Year	Segment Location	Performance Measure - Data Management & Communications				
		Performance Measure #1	Performance Measure #2	Performance Measure #3	Performance Measure #4	Performance Measure #5

Year	Segment Location	Performance Measure - Traffic Incident Management				
		Performance Measure #1	Performance Measure #2	Performance Measure #3	Performance Measure #4	Performance Measure #5

Federal Performance Measures

This project addresses federal performance categories:	Performance Categories							AQ Area	In Program
	PM1	PM2T	PM2N	PM2B	PM3F	PM3S	PM3E		
	Safety	Transit Asset Condition	Pavement Condition	Bridge Condition	Travel Reliability	Non SOV Travel	CMAQ Emissions		
	Yes	No	No	No	Yes	Yes	Yes	Maricopa	SM&O

Air Quality Evaluation Data and Considerations for the Project

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.

Traffic Estimate and Roadway Characteristics

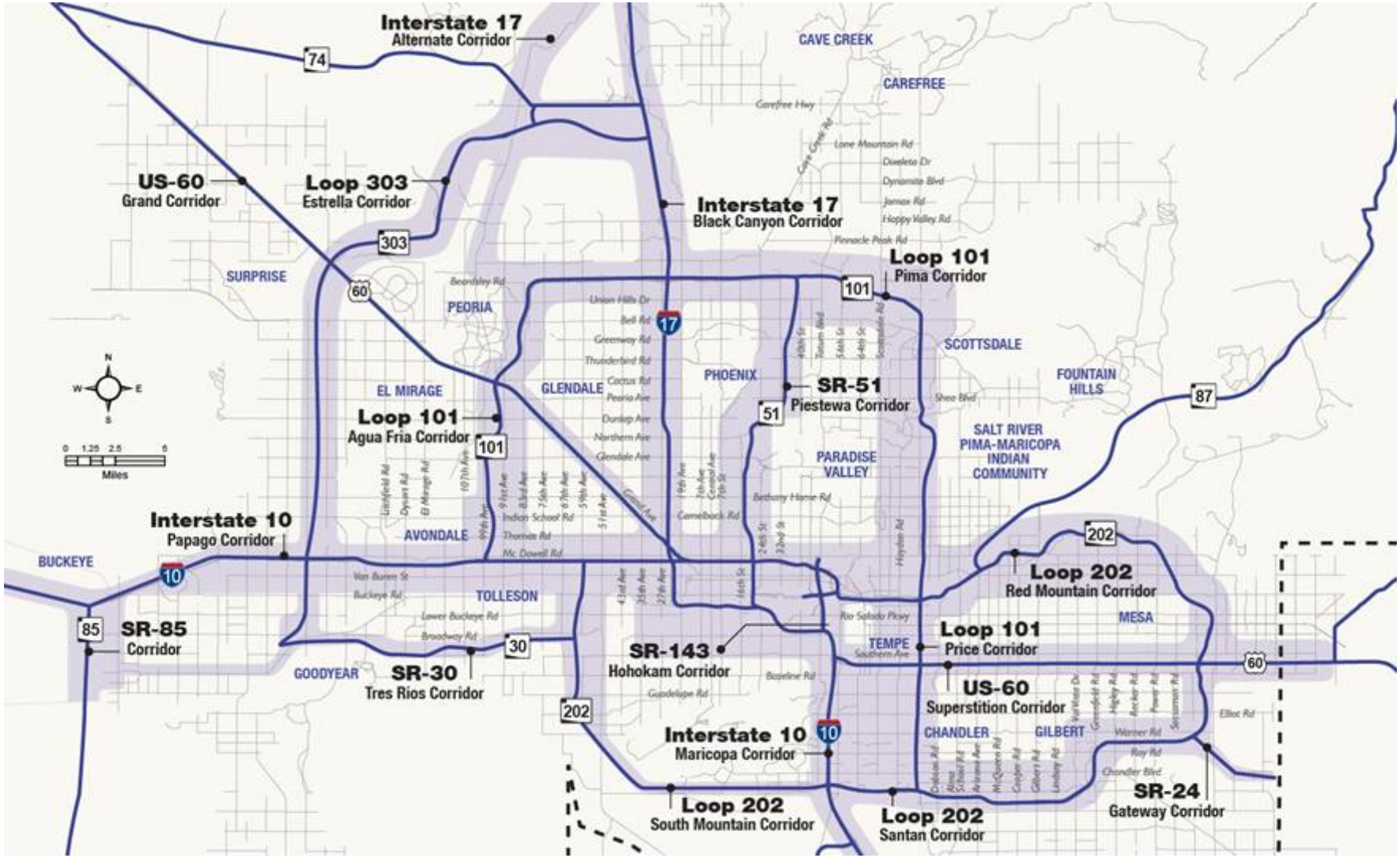
a. Current Average Daily Traffic (ADT) on the facility or the nearest parallel facility of a similar facility type:	201,238
b. Please describe how the ADT was estimated:	ADOT HPMS Report
c. When was the ADT estimate developed:	2016
d. Name of the roadway section used for the ADT estimate:	L202
e. Starting limit of the roadway section:	I-10/SR-51
f. Ending limit of the roadway section:	Country Club/SR87
g. Length (miles):	13
h. Total number of through lanes on the roadway section:	4 GPL + 1 HOV
i. Federal Functional Classification of the roadway section:	Freeway

Link to ADOT Functional Classification Maps

Traffic Speed Improvements: Please complete Subsection #1 or #2.			
Subsection #1: Traffic Signal Coordination Improvements			
Current pre-improvement (current) average traffic speed	**Choose the best condition that describes the Before/After Condition of the project**		
	Before Improvement Condition	**After Improvement Condition**	**Benefit**
	Select Current Condition	None	None

Subsection #2: Traffic Improvements For Other Project Types	
a. Enter the pre-improvement (current) average traffic speed	51.3
b. Enter the post-improvement average traffic speed of the corridor:	53.3

Map of ICM Corridors Identified in the SM&O Plan



Systems Management & Operations Plan Performance Measures		
Investment Category	**Performance Measure**	**Relevant Performance Metrics**
Integrated Corridor Management	Incident Management	Freeway clearance time
		Annual number of secondary crashes
	Travel Time Reliability	95% planning time index
		Truck Travel Time Reliability (TTTR) Index
		Vehicle miles traveled (VMT)/year
	Corridor Throughput	Person throughput/year
		Transit route on-time performance
	Safety	Total fatal and injury crashes/year
		Annual crash rate
Regional Priority Arterials	Travel Time Reliability	95% planning time index
	Corridor Throughput	Vehicle miles traveled (VMT)/year
		Person throughput
	Safety	Total fatal and injury crashes/year
		Annual crash rate
	Transit Mobility	Transit route on-time performance
		Transit ridership
Regional Operations Priorities	After-hours TMC Operations	Frequency of response to after-hours traffic incidents
	Freeway Service Patrol	Number of assists per year
	Traveler Information and Alerts	Travel time coverage (miles)
		Regional mobile application subscribers