

INTELLIGENT TRANSPORTATION APPLICATION

General Instructions:

This Excel form is to be used to request federal Congestion Mitigation and Air Quality (CMAQ) funding available through the Maricopa Association of Governments (MAG) for Bicycle Projects to be included in the FY2014-FY 2018 MAG Transportation Improvement Program. Funding is available for Federal Fiscal Year (FFY) 2015, 2016 and 2017.

This application form includes:

- Part A - Contact and Project Description,
- PART B - ITS TIP Listing and CMAQ Score Data,
- PART C - ITS project Description,
- Part D - Checklist and Signature Page, and Transmittal Instructions and Schedule.

Each part is a separate tab of this excel file. Please complete Parts A - D. Alternative application forms are available upon request.

Deadlines and Transmittal Instructions:

Two copies of a printed, complete and signed application must be received in the MAG offices by **10:00 a.m. Wednesday, September 19, 2012**. The application is to be submitted electronically and should include ArcGIS shape files depicting the project location if they are available.

Detailed transmittal instructions are located in a separate tab in this excel sheet. Late applications will not be accepted.

If member agencies need additional information or have questions, they should contact Teri Kennedy or Stephen Tate at (602) 254-6300 or contact them by e-mail at the following addresses:

<mailto:state@azmag.gov>

<mailto:tkennedy@azmag.gov>

<mailto:LLuo@azmag.gov>

All information is required, unless noted by the word - Optional.

PART A - CONTACT AND PROJECT DESCRIPTION

| Contact Information | |
|----------------------|--|
| 1. Sponsoring Agency | Town of Gilbert |
| 2. Contact Name | Erik Guderian |
| 3. Phone | 480-503-6919 |
| 4. E-Mail Address | erik.guderian@gilbertaz.gov |
| 5. Mailing Address | 90 E Civic Center Drive, Gilbert, AZ 85296 |

(OPTIONAL)

If the applicant will be providing a GIS coverage (shapefile or geodatabase), please see the tab labeled "GIS Transmittal Instructions)

GIS Submittal Instructions

ITS Application from Town of Gilbert for 'Town of Gilbert Northwest Fiber Optic Ring (Segment I)'

PART B-ITS TIP Listing and CMAQ Score Data

This part of the form identifies data to calculate an CMAQ Score and provide 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 in the 8-Hour Ozone Nonattainment Area. Please use the following link to verify that the map is located in the nonattainment area:

[Link to an 8-Hr Ozone Nonattainment Map on the MAG Website](#)

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 Map on the MAG Website](#)

2. Traffic Coordination Improvements. If the project improves traffic signal coordination, please do the following:

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

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 |
| <input checked="" type="checkbox"/> | 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 |

3. Other Improvements. Check all that apply:

- Includes Traffic Signal Improvements for a Single Agency
- Includes Traffic Signal Improvements that Apply to More than One Agency
- Includes FMS Improvements
- The Project Conforms to Local Land Use Plans

Adds Traffic Signals that increase pedestrian crossing time for seniors

4. Traffic Speed Impacts of the Project (Not required for Traffic Coordination Improvements)

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

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

ITS Application from Town of Gilbert for 'Town of Gilbert Northwest Fiber Optic Ring (Segment I)'

PART C - ITS project Description

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. City 0 ITS Projects.xls
 Submit this Excel workbook to MAG via email to: lluo@azmag.gov
 Please use one worksheet per project, with the tab at the bottom indicating agency priority -- Mesa1, Mesa2,... etc.
 Links to various websites are provided for additional information and help
 The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

Please enter required information in highlighted cells

A. Project Title & Sponsor

| | |
|---------------------------|--|
| Lead Agency | Town of Gilbert |
| Other Partnering Agencies | |
| ITS Project Title: | Town of Gilbert Northwest Fiber Optic Ring (Segment I) |
| Project Category: | Arterial ITS |

B. Project Goals & Objectives

Project Goals:
 Many of Gilbert's most congested intersections are located in northwest Gilbert. The recently completed Gilbert Fiber Optic Strategic Plan identified the northwest section of Gilbert needing a fiber optic ring. This project, Segment 1 of 2, installs 3.5 miles of fiber optic cable in new and existing conduit, upgrades traffic controllers and installs CCTV cameras at intersections to improve communication from Gilbert's TOC to multiple intersections in northwest Gilbert. The project will help reduce congestions and improve air quality.

Objectives:
 The objective of this project is to connect eight traffic signals to the Town of Gilbert's traffic signal system and create the first segment of a northwest fiber ring planned for Gilbert's fiber optic network. The fiber optic communication will improve real-time communication to two of the most congested intersections in Gilbert (Cooper/Guadalupe and McQueen/Elliott) from the Town's TOC. The improved communications will improve signal coordination for the arterial network and allow for real-time adjustments to signal timing.

C. Project Information

Project Location:
 The project is located within the Town of Gilbert's boundaries in northwest Gilbert. Fiber optic cable will be installed starting at the Gilbert/Houston (existing fiber) intersection west to the Cooper/Houston intersection, south to the Cooper/Guadalupe intersection, west the McQueen/Guadalupe intersection and south the McQueen/Elliott intersection (see attached map).

Scope of the project:
 This project will connect 8 traffic signals to the Town of Gilbert's fiber optic network and install approximately 3.5 miles of fiber optic cable in existing and new conduit, 3 CCTV cameras, 5 Controllers and other associated equipment.

D. Identify Components in MAG Regional ITS Architecture

| <u>ITS applications</u> | <u>Relevant Applications (ENTER: Yes or No)</u> | <u>Applicable ITS Market Packages</u> http://www.azmag.gov/ITS/ |
|--------------------------------|---|--|
| 1. Traffic Management | Yes | ATMS01, ATMS03 |
| 2. Transit Operations Support | No | |
| 3. Communications | Yes | ATMS03 |
| 4. Traveler Information | No | |
| 5. Archived Data Management | Yes | AD1, AD2 |
| 6. ITS for Safety | No | |
| 7. ITS Plans | No | |
| 8. Freeway-Arterial Operations | No | |

Note: Please attach the Architecture Flow Diagram in the application

E. Program Year Preference

First Choice FY2015 FY2016 FY2017
 Second Choice FY2015 FY2016 FY2017
 Third Choice FY2015 FY2016 FY2017

F. Project Budget

| | Federal Cost | Local Match (min 5.7%) | Total Cost |
|------------------------|--------------|------------------------|--------------|
| Amount | \$549,600.00 | \$33,300.00 | \$582,900.00 |
| Cost percentage | 94.3% | 5.7% | |

G. Project Schedule

The table below is provided as a tool to assist local agencies develop a project planning schedule. Column A shows standard project milestones and Column B shows the schedule based on a typical project procurement process. To generate a custom Project Schedule:(1) select applicable milestones in Column C;(2) Enter estimated time to complete milestone measured in months from project development start date in Column D; NOTE: The project obligation date generated in cell E111 MUST occur before Sept 15th of the programmed fiscal year. Determine the appropriate Project Activity Start Date (by trial-and-error) in order to obligate the project on time.

| Standard Project Milestones | Default Schedule for Process | Applicable Milestones (ENTER - Yes OR No) | Estimated Time to Milestone (ENTER #Months) | Estimated Date |
|---|------------------------------|---|---|----------------|
| Apply for ADOT project number | | | | Apr-2013 |
| Receipt of ADOT project number | Jun-2013 | Yes | 2 | Jun-2013 |
| Initial DCR | Jul-2013 | Yes | 6 | Oct-2013 |
| Final DCR | Aug-2013 | Yes | 8 | Dec-2013 |
| 30% Preliminary Plans, Cost Estimate and Report | Oct-2013 | Yes | 8 | Dec-2013 |
| 60% Preliminary Plans, Cost Estimate and Report | Dec-2013 | Yes | 10 | Feb-2014 |
| Final Preliminary Plans, Cost Estimate and Report | Feb-2014 | Yes | 12 | Apr-2014 |
| Environmental Clearance | Dec-2013 | Yes | 12 | Apr-2014 |
| Utility Clearance | Jan-2014 | Yes | 12 | Apr-2014 |
| Right-of-Way Clearance | Oct-2013 | Yes | 12 | Apr-2014 |
| Approval of IGA | Apr-2014 | Yes | 12 | Apr-2014 |
| Obligation authority of Federal funds | May-2014 | Yes | 20 | Dec-2014 |
| Advertised Date | Jul-2014 | Yes | 3 | Mar-2015 |
| Final Deployment | Jan-2015 | Yes | 6 | Sep-2015 |

< ENTER mm/yyyy -- Project Activity S

H. System Maintenance and Operations

Current staff resources available for ITS operations at the local
 Additional staff resources required for fully utilizing features added by
 Estimated current annual ITS operations & maintenance budget
 Estimated additional annual operations & maintenance funds required
 Estimated DATE from when required additional O&M funds will be

| |
|-----------|
| 3.5 |
| 0 |
| \$150,000 |
| \$5,000 |
| Jul-2015 |

Other comments:

I. 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 Town of Gilbert intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. Details on the ADOT System Engineering Checklist can be found at:
<http://www.azdot.gov/Highways/TTG/PDF/SystemsEngineeringChecklist.pdf>

PART D - 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: 

Name: Patrick Banger

Title: Town Manager

Date: September 18, 2012

WILL FILL OUT AFTER QUESTIONS APPROVED.

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 and Project Description Fields | 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 complete | |
| 2. Traffic Coordination Improvements - as applicable table is complete | Yes |
| 3. Other Improvements - As applicable all fields are completed | Yes |
| PART C - Total Project Schedule and Budget Including All Segment Fields | Complete? |
| Section A is Complete | Yes |
| Section B is Complete | Yes |
| Section C is Complete | Yes |
| Section D is Complete | Yes |
| Section E is Complete | Yes |
| Section F is Complete | Yes |
| Section G is Complete | Yes |
| Section H is Complete | Yes |
| Section I is Complete | Yes |
| PART D - Signature Page Fields | Complete? |
| Form is signed | |
| Name, title and date fields are completed. | Yes |

MAG CMAQ Project

Intelligent Transportation Systems Project

| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|------------------|------|--------|-------------|-------|--------------------|
|------------------|------|--------|-------------|-------|--------------------|

A. SCOPING (15% Preliminary Engineering Design)
(Non-infrastructure projects: Only #2 applies).

| | | | | | |
|--|----|---|-------------|-------------|-----|
| 1. SITE TOPOGRAPHIC SURVEY | LS | 1 | \$10,000.00 | \$10,000.00 | 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 | \$10,000.00 | \$10,000.00 | No |
| 5. HAZMAT ASSESSMENT | LS | 1 | \$0.00 | \$0.00 | No |
| SUBTOTAL – PROJECT SCOPING COSTS | | | | \$20,000.00 | \$0 |

B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E
(Not applicable to non-infrastructure projects)

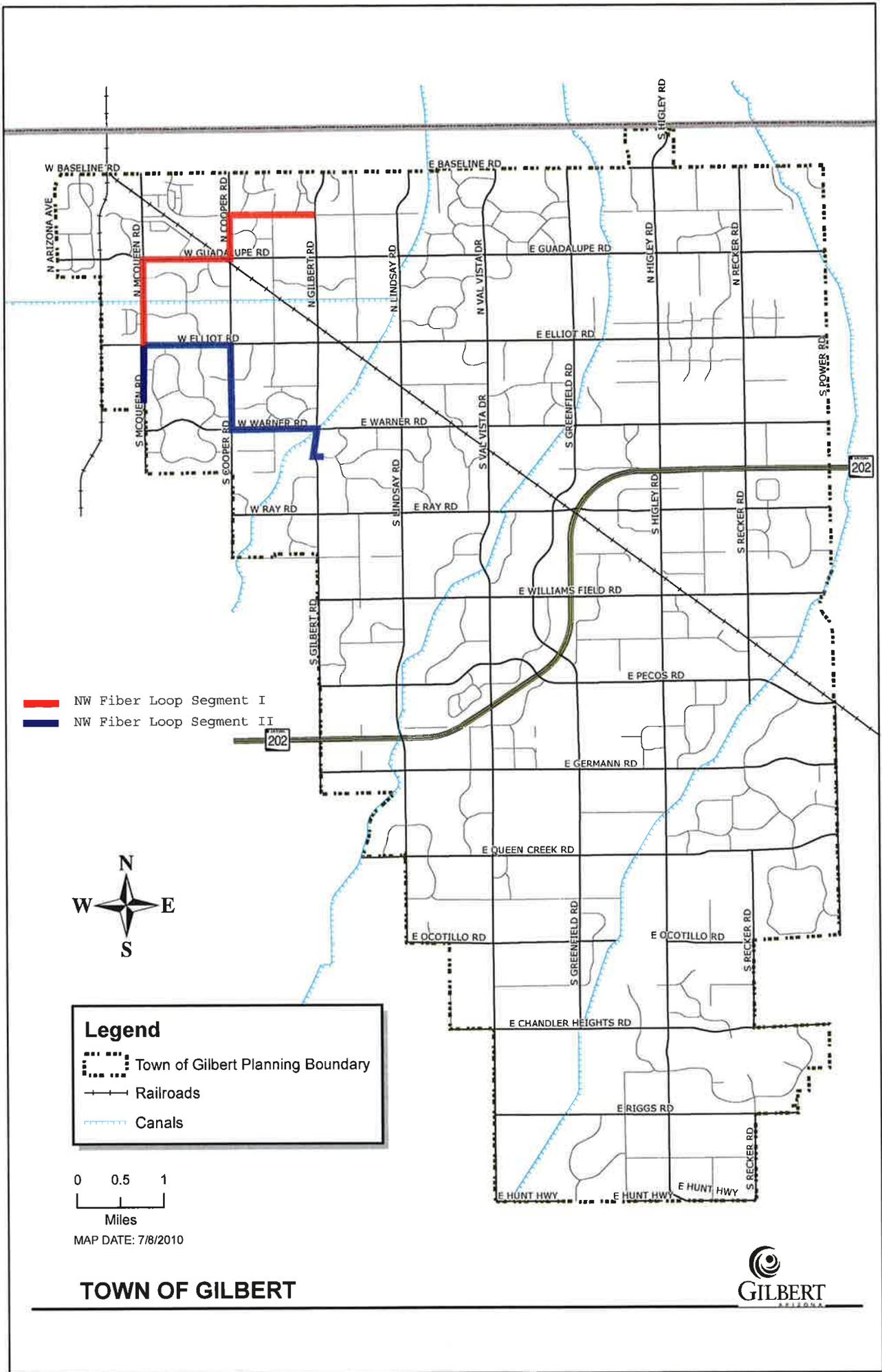
| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|--|------|--------|--------------|--------------|--------------------|
| 1. Right-of-Way Acquisition | LS | 1 | \$0.00 | \$0.00 | No |
| 2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules. | LS | 1 | \$100,000.00 | \$100,000.00 | 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 | | | | \$100,000.00 | \$0 |

C. CONSTRUCTION OR IMPLEMENTATION

For non-infrastructure projects (no ground disturbing activities), address only parts 2, 3 and D.

1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)

| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|---|------|--------|-------------|-----------|--------------------|
| E. TOTAL PROJECT COST (All <u>subtotals</u> + ADOT local projects review fee) | | | | \$717,820 | \$582,820 |
| F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS | | | | | |
| TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION | | | | | \$717,820 |
| TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT | | | | | \$582,820 |
| TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above) | | | | | \$549,599 |
| LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above) | | | | | \$33,221 |



MAG CMAQ Project

Intelligent Transportation Systems Project

| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|------------------|------|--------|-------------|-------|--------------------|
|------------------|------|--------|-------------|-------|--------------------|

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(Non-infrastructure projects: Only #2 applies).

| | | | | | |
|--|----|---|-------------|-------------|-----|
| 1. SITE TOPOGRAPHIC SURVEY | LS | 1 | \$10,000.00 | \$10,000.00 | 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 | \$10,000.00 | \$10,000.00 | No |
| 5. HAZMAT ASSESSMENT | LS | 1 | \$0.00 | \$0.00 | No |
| SUBTOTAL – PROJECT SCOPING COSTS | | | | \$20,000.00 | \$0 |

B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E
(Not applicable to non-infrastructure projects)

| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|--|------|--------|--------------|--------------|--------------------|
| 1. Right-of-Way Acquisition | LS | 1 | \$0.00 | \$0.00 | No |
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| 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 | | | | \$100,000.00 | \$0 |

C. CONSTRUCTION OR IMPLEMENTATION

For non-infrastructure projects (no ground disturbing activities), address only parts 2, 3 and D.

| |
|---|
| 1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary) |
|---|

| Item Description | Unit | Quant. | Unit Prices | Total | Eligible for CMAQ? |
|---|------|--------|-------------|-----------|--------------------|
| E. TOTAL PROJECT COST (All <u>subtotals</u> + ADOT local projects review fee) | | | | \$717,820 | \$582,820 |
|  | | | | | |
| F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS | | | | | |
| TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION | | | | | \$717,820 |
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