MARICOPA ASSOCIATION of GOVERNMENTS
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May 3, 2012

TO: Members of the MAG Management Committee

FROM: Charlie Meyer, City of Tempe, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF **REVISED** TENTATIVE AGENDA

Wednesday, May 9, 2012 - 12:00 noon
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue, Phoenix

The agenda has been revised to modify the requested action for agenda item #6, Regional Freeway and Highway Life Cycle Program – 2012 Rebalancing.

The next Management Committee meeting will be held at the MAG offices at the time and place noted above. Members of the Management Committee may attend the meeting either in person, by videoconference or by telephone conference call. The agenda and summaries are also being transmitted to the members of the Regional Council to foster increased dialogue between members of the Management Committee and Regional Council. You are encouraged to review the supporting information enclosed. Lunch will be provided at a nominal cost.

Please park in the garage under the building, bring your ticket, parking will be validated. For those using transit, Valley Metro/RPTA will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Valerie Day at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Members are reminded of the importance of attendance by yourself or a proxy. Any time that a quorum is not present, we cannot conduct the meeting. Please set aside sufficient time for the meeting, and for all matters to be reviewed and acted upon by the Management Committee. Your presence and vote count.

MAG MANAGEMENT COMMITTEE
REVISED TENTATIVE AGENDA
May 9, 2012

	COMMITTEE ACTION REQUESTED
1. Call to Order	
2. Pledge of Allegiance	
3. Call to the Audience An opportunity is provided to the public to address the Management Committee on items that are not on the agenda that are within the jurisdiction of MAG, or non-action agenda items that are on the agenda for discussion or information only. Citizens will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Management Committee requests an exception to this limit. Please note that those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard.	3. Information.
4. Executive Director's Report The MAG Executive Director will provide a report to the Management Committee on activities of general interest.	4. Information and discussion.
5. Approval of Consent Agenda Prior to action on the consent agenda, members of the audience will be provided an opportunity to comment on consent items that are being presented for action. Following the comment period, Committee members may request that an item be removed from the consent agenda. Consent items are marked with an asterisk (*).	5. Recommend approval of the Consent Agenda.

ITEMS PROPOSED FOR CONSENT*

MINUTES

*5A. Approval of April 11, 2012, Meeting Minutes	5A. Review and approval of the April 11, 2012, meeting minutes.

TRANSPORTATION ITEMS

*5B. Enhancement Peer Review Group Round 19 Recommendations

The Enhancement Peer Review Group reviews and recommends a ranked list of Enhancement Fund applications from this region to the State Transportation Enhancement Review Committee (TERC). This year, eight enhancement fund applications for projects on local roads were received totaling $5,353,880 with approximately $9 million available statewide. Two applications for projects on the Arizona Department of Transportation right-of-way were received totaling $1,886,000 with approximately $5 million available statewide. On April 23, 2012, the Enhancement Peer Review Group recommended the list of ranked applications be forwarded to the Arizona Department of Transportation for consideration by the TERC. Please refer to the enclosed material.

5B. Recommend that the list of ranked applications from the MAG Enhancement Peer Review Group be forwarded to the Arizona Department of Transportation for consideration by the State Transportation Enhancement Review Committee.

*5C. Update to the Federal Functional Classification of Tegner Street in Wickenburg

The Town of Wickenburg, at the suggestion of the Arizona Department of Transportation (ADOT) has acted to classify Tegner Street in the Town's boundaries to minor arterial in the federal functional classification system. Previously, this facility was part of the State Highway System and was classified as a principal arterial. MAG concurrence in the reclassification is requested. ADOT procedure requires the concurrence of the regional planning body (e.g., MAG) in the functional classification of facilities. This reclassification will not affect federal funding received by the State or the MAG area and will not affect the eligibility of the facility to receive federal funding. The Transportation Review Committee recommended concurrence on March 29, 2012. Please refer to the enclosed material.

5C. Recommend approval to classify Tegner Street located within the limits of the Town of Wickenburg to a Rural Minor Arterial in the federal functional classification system.

*5D. Arterial Life Cycle Program Fiscal Year 2012 Regional Area Road Fund Closeout

The Regional Area Road Fund (RARF) Closeout Process was established in Section 260 of the

*5D. Recommend approval of the Arterial Life Cycle Program (ALCP) project reimbursements for the Fiscal Year (FY) 2012 ALCP Regional Area Road Fund (RARF) Closeout, and amend the FY 2012 Arterial Life Cycle Program, the 2011-2015

Arterial Life Cycle Program (ALCP) Policies and Procedures approved by the MAG Regional Council. A financial analysis of ALCP revenues and expenditures as well as the ALCP bonding program was conducted. On April 26, 2012, the MAG Transportation Review Committee recommended approval of ALCP project reimbursements. Please refer to the enclosed material.

Transportation Improvement Program, and Regional Transportation Plan 2010 Update, as necessary and to allocate any unused RARF Closeout funds to the next project(s) on the list if one or more of the recommended projects fail to meet all ALCP Project Requirements by the established deadlines.

*5E. Project Changes - Amendment and Administrative Modification to the FY 2011-2015 MAG Transportation Improvement Program

The Fiscal Year (FY) 2011-2015 Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) 2010 Update were approved by the MAG Regional Council on July 28, 2010, and have been modified fourteen times, with the latest approval on April 25, 2012. Since then, there is a need to modify projects in the programs. The requested project changes include freeway, highway safety, light rail, roadway, transportation enhancements, transit, and work program projects. The changes included may be categorized as exempt from conformity determinations, and administrative modifications do not require a conformity determination. On April 26, 2012, the MAG Transportation Review Committee recommended approval of the requested changes. Please refer to the enclosed material.

5E. Recommend approval of amendments and administrative modifications to the FY 2011-2015 MAG Transportation Improvement Program, FY 2012 Arterial Life Cycle Program, and as appropriate, to the Regional Transportation Plan 2010 Update.

*5F. Additional FFY 2012 CMAQ Funds Available to Transit Projects

Each year, through the MAG Committee Process, priorities are established on the use all of the federal obligation authority for the current federal fiscal year (FFY); this is generally known as Closeout. On February 22, 2012, the MAG Regional Council approved Scenario #4 to fund projects that will obligate in FFY 2012 at a 50 percent increase of the federal share, up to 100 percent of project costs, with an additional $293,000 of federal funds to CHN12-805, and the remaining balance to be flexed to transit, with projects and priorities developed at a later time. At the time of the recommendation, the amount to

5F. Recommend approval of programming the $25,242,460 of CMAQ for bus purchases in 2013 and 2014, programming related 5307 funds from 2013 and 2014 for preventive maintenance; and the related modifications to the FY 2011-2015 MAG Transportation Improvement Program and as appropriate the Regional Transportation Plan 2010 Update.

be flexed to transit was $25,318,375 in federal Congestion Mitigation and Air Quality (CMAQ) funds. The Transit Committee met in February, March and April to discuss programming options. On April 12, 2012, the MAG Transit Committee recommended approval of programming the $25,242,460 for bus purchases in 2013 and 2014, and then using the freed up 5307 funds for preventive maintenance. On April 26, 2012, the Transportation Review Committee concurred with the Transit Committee's recommendation. The TIP changes and preventive maintenance distribution amounts over the two years are shown in the enclosed material.

AIR QUALITY ITEMS

*5G. Conformity Consultation

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan 2010 Update. The amendment and administrative modification involve several projects, including Arizona Department of Transportation projects, various transit projects including the METRO Central Mesa light rail project, and the programming of FY 2012 CMAQ Closeout funds for transit projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. Comments are requested by May 18, 2012. Please refer to the enclosed material.

5G. Consultation.

*5H. 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency (EPA) in December 2007. In January 2011, the plan was voluntarily withdrawn to address technical

5H. Recommend forwarding the 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality and Environmental Protection Agency.

approvability issues identified by EPA and include new information. While the plan was withdrawn, the measures in the plan continue to be implemented to reduce PM-10. On May 23, 2007, the MAG Regional Council approved that each year, MAG would issue a report on the status of the implementation of the committed measures for this region by the cities, towns, Maricopa County and the State. The report would then be made available to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality and the Environmental Protection Agency. A report has been prepared that provides the implementation status of the committed measures for 2010. In general, the combined implementation results for 2008, 2009, and 2010 meet or exceed the commitments made to implement a majority of the measures in the MAG 2007 Five Percent Plan for PM-10. On April 26, 2012, the MAG Air Quality Technical Advisory Committee recommended forwarding the report to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality, and the Environmental Protection Agency. Please refer to the enclosed material.

ITEMS PROPOSED TO BE HEARD

6. Regional Freeway and Highway Life Cycle Program - 2012 Rebalancing

In 2009, the Regional Freeway and Highway Program was reviewed and the Regional Council approved the Tentative Scenario to balance an estimated $6.6 billion shortfall due to cost over runs and revenue shortfalls. Based upon MAG and ADOT estimates, the Program is projected to have an additional $390 million shortfall due to even lower revenue projections in the Proposition 400 Regional Area Roadway Fund (RARF). Following presentations in April to the Management Committee, Transportation Policy Committee, and MAG Regional Council of four scenarios for balancing the additional $390 million from the Program, the preference has been to consider the scenario that balances the program by repositioning projects to improve the Program's cash flow; transfer funding in the SR-303L corridor, remove $300 million from the budget in

6. Recommend approval of 2012 Rebalancing Scenario 10B, where the MAG Regional Freeway and Highway Program meets the projected $390 million shortfall by repositioning the SR-202L/South Mountain Freeway and Interstate 10/Maricopa Freeway projects to improve the Program's cash flow; transfer funding from the SR-303L segment between US-60 and Interstate 17 to the SR-303L segment between Interstate 10 and MC-85, but retain funding for a grade separated interchange at the existing El Mirage Rd intersection; remove $300 million from the Program's budget for the Interstate 17/Black Canyon Freeway corridor; and to encourage ADOT to focus upon cost-effective solutions that will provide opportunities to return projects to the Program in the future; and incorporate the revised program in the next update of the MAG Transportation Improvement Program and the Regional Transportation Plan.

the Interstate 17/Black Canyon Freeway corridor, and to encourage ADOT to focus upon cost-effective solutions that will provide opportunities to return projects to the Program in the future. On April 26, 2012, the Transportation Review Committee recommended approval of 2012 Rebalancing Scenario 10B. Please refer to the enclosed material.

7. Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

The new MAG 2012 Five Percent Plan for PM-10 is designed to meet the requirements of Section 189(d) of the Clean Air Act and address the technical approvability issues with the prior 2007 Five Percent Plan identified by the Environmental Protection Agency. The plan contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. While the 2007 Five Percent Plan was withdrawn to include new information, a wide range of control measures in that plan that continue to be implemented to reduce PM-10 will be resubmitted. The plan demonstrates that the measures will reduce emissions by five percent per year and demonstrates attainment of the PM-10 standard as expeditiously as practicable, which is 2012.

As required by the Clean Air Act, the 2012 Five Percent Plan for PM-10 also includes contingency measures, which achieve emissions reductions beyond those measures relied upon for the five percent reductions in emissions and attainment of the standard. The contingency measures were implemented early and include PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt.

On April 12, 2012, a public hearing was conducted on the Draft MAG 2012 Five Percent Plan for PM-10. Following the consideration of public comments, the MAG Air Quality Technical

7. Recommend adoption of the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area.

Advisory Committee recommended adoption of the Draft MAG 2012 Five Percent Plan for PM-10 on April 26, 2012. The complete Draft MAG 2012 Five Percent Plan for PM-10 is posted on the MAG website at: http://www.azmag.gov/Documents/EP_2012-03-09_Draft-MAG-2012-Five-Percent-Plan-for-PM10_Main-Plan-and-Appendices.pdf. Please refer to the enclosed material.

8. Legislative Update

An update will be provided on legislative issues of interest.

8. Information, discussion, and possible action.

9. Off Highway Vehicle (OHV) Dust Task Force

The Arizona Department of Environmental Quality's Off Highway Vehicle (OHV) Dust Task Force consists of agencies that regulate OHVs or the land used by OHVs. Members of the task force include agencies such as: Arizona Department of Environmental Quality, Arizona Game and Fish Department, State Trust Land, State Parks, Maricopa County Parks, Tonto National Forest, Bureau of Land Management and Maricopa County Air Quality Department. On June 5, 2012, the OHV Dust Task Force will be conducting a meeting to educate local law enforcement agencies on the impact of improper OHV use on air quality and the ordinances available to control illegal OHV use. A focus of this discussion will be on the emphasis of education prior to enforcement and the goal of having multiple agencies enforce in a similar manner. The Maricopa County Air Quality Department is requesting that MAG member agencies send high-ranking law enforcement representatives to the scheduled meeting. The meeting will be held from 1:00 to 2:00 p.m. at the Arizona Game and Fish Headquarters, located at 5000 W. Carefree Highway, Phoenix, 85086.

9. Information and discussion.

10. Approval of the Draft FY 2013 MAG Unified Planning Work Program and Annual Budget and the Member Dues and Assessments

    Each year MAG develops a Unified Planning Work Program and Annual Budget. This year, draft budget presentations were held and incremental information on the budget was presented beginning in January 2012 through April 2012. The total dues and assessments for FY 2013 continue to be reduced by 50 percent. As adjustments to the budget were made, the draft budget document was updated and presented to the Management Committee, Regional Council Executive Committee, and Regional Council. The Work Program and Annual Budget was reviewed and discussed by state and federal agencies at the March 27, 2012, Intermodal Planning Group meeting. The Draft FY 2013 MAG Unified Planning Work Program and Annual Budget is being presented for approval. Please refer to the enclosed material.

    10. Recommend approval of the resolution adopting the Draft FY 2013 MAG Unified Planning Work Program and Annual Budget and the member dues and assessments.

11. Request for Future Agenda Items

    Topics or issues of interest that the Management Committee would like to have considered for discussion at a future meeting will be requested.

    11. Information and discussion.

12. Comments from the Committee

    An opportunity will be provided for Management Committee members to present a brief summary of current events. The Management Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

    12. Information.

Adjournment

MINUTES OF THE
MAG MANAGEMENT COMMITTEE MEETING
April 11, 2012
MAG Office - Saguaro Room
Phoenix, Arizona

MEMBERS ATTENDING

Charlie Meyer, Tempe, Chair
* David Cavazos, Phoenix, Vice Chair
# George Hoffman, Apache Junction
Charlie McClendon, Avondale
* Stephen Cleveland, Buckeye
# Gary Neiss, Carefree
* Usama Abujbarah, Cave Creek
Rich Dlugas, Chandler
Dr. Spencer Isom, El Mirage
* Phil Dorchester, Fort McDowell Yavapai Nation
Ken Buchanan, Fountain Hills
Rick Buss, Gila Bend
* David White, Gila River Indian Community
Marc Skocypec for Patrick Banger, Gilbert
Brent Stoddard for Ed Beasley, Glendale
Brian Dalke, Goodyear
* Bill Hernandez, Guadalupe
* Darryl Crossman, Litchfield Park
Christopher Brady, Mesa
Jim Bacon, Paradise Valley
Susan Thorpe for Carl Swenson, Peoria
John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
David Richert, Scottsdale
Chris Hillman, Surprise
Reyes Medrano, Tolleson
Joshua Wright, Wickenburg
Lloyce Robinson, Youngtown
Floyd Roehrich for John Halikowski, ADOT
John Hauskins for David Smith, Maricopa County
Bryan Jungwirth for Steve Banta, Valley Metro/RPTA

* Those members neither present nor represented by proxy.
# Participated by telephone conference call. + Participated by videoconference call.

1. Call to Order

The meeting was called to order by Chair Charlie Meyer at 12:00 p.m.

2. Pledge of Allegiance

The Pledge of Allegiance was recited.

Chair Meyer welcomed Brian Dalke, the Acting City Manager for Goodyear, to the Management Committee. He noted that George Hoffman and Gary Neiss were participating in the meeting by teleconference.

Chair Meyer announced that public comment cards were available to members of the public who wish to comment. Chair Meyer noted that parking validation was available from staff and transit tickets were available from Valley Metro/RPTA for those using transit to come to the meeting.

3. Call to the Audience

Chair Meyer stated that Call to the Audience provides an opportunity to the public to address the Management Committee on items that are not on the agenda that are within the jurisdiction of MAG, or non-action agenda items that are on the agenda for discussion or information only. Chair Meyer noted that those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard. Public comments have a three minute time limit. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Committee requests an exception to this limit.

Chair Meyer recognized public comment from Dianne Barker, a resident of Phoenix. Ms. Barker remarked that multimodal feels good. She noted that the TPC is looking at multimodal options for the Broadway curve and I-10 but she did not see an item on the Management Committee agenda regarding this issue. Ms. Barker stated that there was a lot of testimony and opposition at the Transportation Policy Committee meetings regarding the South Mountain Freeway for various reasons, including cost, Native American interests, and transit interests. She stated that Congressman Ed Pastor assured her that the alternatives analysis for the corridor of light rail into South Phoenix would include various modes. Ms. Barker encouraged that the TPC convene a Town Hall type of meeting to get input from the community on how we can get around here, including an elevated, fast, bifueled, solar train.

Chair Meyer thanked Ms. Barker for her comments and noted that the Broadway curve and I-10 was on the agenda today and would be discussed under agenda item #7, Regional Freeway and Highway Life Cycle Program Update.

4. Executive Director's Report

Dennis Smith reported on items of interest in the MAG region. Mr. Smith expressed appreciation to those who submitted entries for the Desert Peaks Awards. Mr. Smith stated that 20 entries had been received for the categories of Public Partnership, Public Private Partnership, Professional Service, Regional Partnership, Regional Excellence, and the new category, Outstanding Economic Development Champion. He reported that the judging panel will select the award recipients in mid-April and the awards will be presented at the Desert Peaks Awards ceremony on June 27, 2012, at the Downtown Phoenix Sheraton, following the annual Regional Council meeting.

Mr. Smith stated that a resolution of support for Arizona's ports of entry resulted from discussions of the Joint Planning Advisory Council in response to the competitive trading disadvantage of Arizona with Texas. He noted that the resolution was adopted by the MAG Regional Council on March 28, 2012, the Central Arizona Association of Governments (CAAG), the Flagstaff Metropolitan Planning Organization (FMPO), the Pima Association of Governments (PAG), the SouthEastern Arizona Governments Organization (SEAGO), and Yuma Metropolitan Planning Organization (YMPO) Mr. Smith noted that adoption of the resolution by the Central Yavapai

Metropolitan Planning Organization (CYMPO), the Western Arizona Council of Governments (WACOG) and the Intertribal Council are pending.

Mr. Smith noted that the adoption of this resolution is timely, with the Executive Order issued on January 19, 2012, by President Obama to establish Visa and foreign visitor processing goals and the Task Force on Travel and Competitiveness. He stated that reports and materials developed by the Thunderbird School of Global Management will be posted on the MAG FTP site and he would be sending the link to members after the meeting. Mr. Smith displayed a graph that showed the a comparison between wages in China and Mexico and he noted that wages started out lower in China than in Mexico, but are increasing. Mr. Smith noted that the second graph showed that the manufacturing cost index for India and Mexico balance out as China's wages increase and other costs are added on.

Mr. Smith displayed a graph that showed the dollar amounts of imports from Mexico to Texas, California, and Arizona from 2004 to 2010. He noted that imports to Texas have risen sharply while imports to Arizona have remained virtually flat. Mr. Smith referenced a recent editorial in *The Arizona Republic* that Texas welcomes Mexican nationals.

Mr. Smith stated that the North American Center for Transborder Studies at Arizona State University did a study called *Realizing the Full Value of Crossborder Trade with Mexico*. He said that the study included the following key facts: (1) In 2010, Mexico invested an unprecedented five percent of its GDP in infrastructure. (2) In 2011, the World Bank ranked Mexico the easiest place in Latin America to do business. (3) Goldman Sachs research on the Next 11 Emerging Markets estimates the Mexican economy will become the world's fifth largest economy by 2050. (4) In 2010, the Mexican economy grew by 5.4 percent. (5) Mexico's official national unemployment rate is 5.4 percent. (6) Since NAFTA, exports to Mexico from the U.S. have increased by 220 percent. (7) Top U.S. states trading with Mexico: #1 - Texas, #2 - California, #3 - Michigan, #4 - Illinois and #5 - Arizona. Mr. Smith noted that Arizona used to be #4 and Illinois was #5. He remarked that having an economic development staff person fluent in Spanish provides an opportunity for a jurisdiction to work with Mexico. Mr. Smith added that Mexico has a group similar to GPEC and they have expressed they would like to come to an Economic Development Committee meeting and discuss economic development.

Mr. Smith noted that on March 28, the MAG Regional Council adopted a resolution supporting Arizona being designated as a national test range to integrate unmanned aircraft systems into the national airspace system. He reported that the resolution is in the process of being signed by Regional Council and Economic Development Committee members.

Mr. Smith said that the Peer Exchange on Transportation Planning by Metropolitan Planning Organizations for Megaregions is scheduled for May 9-10, 2012, at the MAG Office Meeting Center. He noted that federal agencies who will be attending include the U.S. Department of Transportation (DOT) Office of the Secretary, the U.S. DOT Volpe Center, the Federal Highway Administration (FHWA) Office of Planning, the Federal Transit Administration (FTA) Region IX, and the FHWA Arizona Division. Mr. Smith stated that peer regions scheduled to attend include Atlanta, San Diego, Buffalo, Colorado Springs, Delaware Valley, and Albuquerque, in addition to state, regional, and local agencies.

Mr. Smith then introduced a shortened version of the air quality video that had been requested by the Regional Council. He stated that the video will be sent to municipal cable channels. Mr. Smith stated that the video will help citizens understand about air quality improvement efforts in the region and that air quality has improved.

Chair Meyer thanked Mr. Smith for his report. No questions for Mr. Smith were noted.

5. Approval of Consent Agenda

Chair Meyer stated that agenda items #5A, #5B, #5C, #5D, #5E, #5F, #5G, and #5H were on the Consent Agenda. No requests for public comment were received.

Mr. Bacon moved to recommend approval of #5A, #5B, #5C, #5D, #5E, #5F, #5G, and #5H. Mr. Wright seconded. Chair Meyer asked if there was any discussion of the motion. Being none, the vote on the motion passed unanimously.

5A. Approval of March 14, 2012, Meeting Minutes

The MAG Management Committee, by consent, approved the March 14, 2012, meeting minutes.

5B. Arterial Life Cycle Program Status Report

The Arterial Life Cycle Program (ALCP) Status Report provides an update on ALCP projects scheduled for work and/or reimbursement in the current fiscal year, program deadlines, revenues, and finances for the period between October 2011 and March 2012.

5C. Project Changes - Amendment and Administrative Modification to the FY 2011-2015 MAG Transportation Improvement Program

The MAG Management Committee, by consent, recommended approval of amendments and administrative modifications to the FY 2011-2015 MAG Transportation Improvement Program, the FY 2012 Arterial Life Cycle Program and to the Regional Transportation Plan 2010 Update, as appropriate. The Fiscal Year (FY) 2011-2015 Transportation Improvement Program (TIP) and Regional Transportation Plan 2010 Update, were approved by the MAG Regional Council on July 28, 2010 and have been modified 13 times with the last amendment approved by the Regional Council on March 28, 2012. Since then, there have been requests from Arizona Department of Transportation (ADOT), cities, and Maricopa County to modify projects in the program. The attachment listings in Table A (modifications to the TIP) and Table B (non-TIP) are for the FY 2012 Arterial Life Cycle Program (ALCP) that includes changes to the Northern Parkway project which Maricopa County is requesting to advance construct Phase II. All changes to Northern Parkway relate to an updated cost and work schedule. The fiscal balance for funds programmed for this project per year are maintained. These adjustments are necessary for the project to move forward. Table C in the attachment are project change requests from ADOT, Mesa, Phoenix, and Scottsdale which contain clerical and minor adjustments to financial information on several projects, one project deletion, one project split, one new design project, and two pavement preservation projects. Table D in the attachment are project change requests from ADOT that meet

the MAG Regional Freeway Program definition of Material Cost Changes. All of the projects to be added and modified may be categorized as exempt from conformity determinations and administrative modifications do not require a conformity determination.

5D. FY 2012 Section 5310 Elderly Individuals and Individuals with Disabilities Transportation Program Priority Listing of Applicants

The MAG Management Committee, by consent, recommended forwarding the priority listing of applicants for the FY 2012 FTA Elderly Individuals and Individuals with Disabilities Transportation Program to the Arizona Department of Transportation. The Federal Transit Administration (FTA) provides Section 5310, Elderly Individuals and Individuals with Disabilities Transportation Program funding, to the Arizona Department of Transportation (ADOT). These capital assistance awards support agencies and public bodies that provide transportation services for older adults and persons with a disability. The councils of governments, including MAG, prepare priority listings of applications for ADOT to be used when determining awards. Approximately $3.9 million is available statewide for this year's projects. On March 21, 2012, the MAG Ad Hoc Elderly and Persons with Disabilities Transportation Committee recommended forwarding the priority listing of applicants for FY 2012 Section 5310 Elderly Individuals and Individuals with Disabilities Transportation Program to ADOT.

5E. Amendment to the FY 2012 MAG Unified Planning Work Program and Annual Budget to Accept $250,000 of FHWA State Planning and Research Funds From the Pima Association of Governments for the Activity-Based Model Development Project and Amendment of the Corresponding Contract With Parsons Brinckerhoff, Inc.

The MAG Management Committee, by consent, recommended approval of an amendment to the FY 2012 MAG Unified Planning Work Program and Annual Budget to accept $250,000 of FHWA State Planning and Research Funds from the Pima Association of Governments for the Activity-Based Model Development Project and amendment of the corresponding MAG contract with Parsons Brinckerhoff, Inc., to reflect additional scope and budget designated for the PAG portion of the model development and related improvements to the model. The FY 2012 MAG Unified Planning Work Program and Annual Budget, approved by the MAG Regional Council in May 2011, includes the Activity-Based Model (ABM) Development Project - Phases 2 and 3. The ABM is a next generation regional travel demand forecasting model that will allow addressing of emerging planning needs. MAG and the Pima Association of Governments (PAG) have established a mutual agreement for Phases 2 and 3 of the ABM. This collaboration will allow MAG to increase dramatically the quality of travel demand forecasts along the I-10 corridor. The corresponding Memorandum of Agreement between MAG and PAG was executed by MAG on June 21, 2011. MAG and PAG resolved to collaborate on the development and implementation of the ABM and ensure that the work is completed in accordance with and subject to all provisions of the MAG contract with PB Americas, Inc. (currently Parsons Brinckerhoff, Inc.) and subsequent amendments. In accordance with the agreement, PAG has transferred $250,000 of its Federal Highway Administration (FHWA) State Planning and Research (SPR) funds to MAG and proceeded with collaborative work on the project. An amendment to the contract was prepared in order to reflect additional scope and budget designated for the PAG portion of the model development and related improvements to the model.

5F. Conformity Consultation

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan 2010 Update. The amendment and administrative modification involve several projects, including modifications to Maricopa County Northern Parkway projects in the Arterial Life Cycle Program, and revisions to several Arizona Department of Transportation projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. Comments are requested by April 20, 2012.

5G. Status of Remaining MAG Approved PM-10 Certified Street Sweeper Projects That Have Not Requested Reimbursement

A status report is being provided on the remaining PM-10 certified street sweeper projects that have received approval, but have not requested reimbursement. To assist MAG in reducing the amount of obligated federal funds carried forward in the MAG Unified Planning Work Program and Annual Budget, MAG is requesting that street sweepers be purchased and reimbursement be requested by the agency within one year plus ten calendar days from the date of the MAG authorization letter.

5H. Financial Auditor Selection for the Maricopa Association of Governments

The MAG Management Committee, by consent, recommended selecting CliftonLarsonAllen, LLP to perform the MAG annual financial audit for fiscal year 2012 with four one-year options to renew through 2016. The Maricopa Association of Governments requested proposals from qualified firms of certified public accountants to audit MAG's financial statements for five consecutive years beginning in fiscal year 2012. In response to the Request for Proposals released in February 2012, MAG received six proposals from qualified certified public accountant firms. A multi-agency proposal evaluation team reviewed the proposals and met on March 22, 2012. The proposal evaluation team recommended to MAG that CliftonLarsonAllen, LLP be selected to perform the financial audit at MAG for the period beginning FY 2012 with four one-year options to renew through FY 2016.

6. SR-202L/South Mountain Freeway Corridor Design Review

Bob Hazlett, MAG Senior Engineer, stated that the Arizona Department of Transportation (ADOT) has been planning the SR-202L/South Mountain Freeway corridor through the Environmental Impact Statement (EIS) and Location/Design Concept Report (L/DCR) process since 2001. He explained that as part of this process, ADOT has developed cost opinions of approximately $2.4 billion for constructing the 22-mile freeway corridor. Mr. Hazlett stated that the current Regional Freeway and Highway Program estimate for the corridor is $1.9 billion as approved by the Regional Council through the October 2009 rebalancing effort.

Mr. Hazlett stated that MAG engaged Burgess and Niple, Inc., to do an independent cost review of the SR-202L/South Mountain corridor to determine if the ADOT cost opinions were reasonable and whether savings could be realized through alternative designs to bring the estimate closer to the program amounts. He began his presentation by saying that when the rebalancing effort took place in 2009, there were $6.6 billion in cost overruns due to increased right-of-way, construction material, and labor costs and the largest item, more than $3.5 billion in scope growth, due to design decisions.

Mr. Hazlett reviewed how the cost estimates for the SR-202L/South Mountain Freeway have increased over time: In 2002, $48.7 million per mile for a total estimated cost of $1.1 billion; in 2006, $78.7 million per mile for a total estimated cost of $1.7 billion; in 2008, $97.6 million per mile for a total estimated cost of $2.1 billion; in 2010, $100.3 million per mile for a total estimated cost of $2.1 billion; in 2011, $109.2 million per mile for a total estimated cost of $2.4 billion. Mr. Hazlett remarked that even though the cost has doubled, this is not the most expensive freeway in the U. S., the Big Dig in Boston, Massachusetts, has that distinction.

Mr. Hazlett stated that the Burgess and Niple consultant team included staff with expertise from the California, Florida, Ohio, and Texas Departments of Transportation. He also noted that this team had minimal expertise with ADOT practices to prove a true independent review of the proposed freeway corridor design and costs.

Mr. Hazlett stated that the budget analysis showed that right-of-way accounts for approximately one-third of the project cost and raw construction costs represent about 38 percent of the project cost. He noted that about 40 percent of the right-of-way has been acquired already by ADOT.

Mr. Hazlett stated that one important thing is to take the cost opinions and apply for contingencies to account for unforseen expenses. He said that ADOT is a conservative agency and wants to deliver the project successfully, so it used a combined design contingency of 75 percent at this level of design. Mr. Hazlett stated that the team thought this was too high because a typical contingency for new corridors around the country is in the range of 30 to 40 percent at this level of design.

Mr. Hazlett stated that the consultants looked at the design of the facility and compared it to other states and to the AASHTO Policy or Geometric Design, known as the Green Book. He said that these design guidelines range from the absolute minimum to meet safety standards, to desirable. Mr. Hazlett stated that ADOT's design standards are beyond the desirable range. He said that someone from the review team stated that public infrastructure projects should be in the Ford Taurus design range, but ADOT's design standards were in the Ferrari range. Mr. Hazlett stated that one of the recommendations of the analysis was to change the design approach to see if cost savings could be realized. He said that the design approach is optimized for functionality, safety, and cost.

Mr. Hazlett stated that safety would not be compromised at all. He stated that the alignment could be optimized by using broader horizontal and vertical geometric standards to not use as much land area, but still be safe for motorists and to coordinate with other disciplines, such as drainage, utilities, and right-of-way.

Mr. Hazlett stated that the consultants reviewed the design standards. He said that ADOT designs for high speeds on system interchanges, whereas other states and the AASHTO guidelines have lower design speeds to slow down traffic. Mr. Hazlett displayed an aerial photo of I-10 and 59th Avenue using a tighter ramp design that still conforms to the safety guidelines and leaves more land for development.

Mr. Hazlett then displayed possible design alternatives that could provide the most benefit for the money. He stated that the consultants identified approximately $500 million to $650 million that could be shaved from the budget. Mr. Hazlett stated that these cost savings have been provided to ADOT for review and they will get back to MAG.

Mr. Hazlett then reviewed the remaining steps of the draft environmental impact statement (EIS). He said that the draft EIS is in the final review stage and ADOT anticipates having it ready for a 90-day public review period by July, after which the comments will be incorporated and issues mitigated. Mr. Hazlett indicated that the final EIS will be produced around the end of the year and a record of decision anticipated in early 2013.

Chair Meyer thanked Mr. Hazlett for his presentation and asked members if they had questions.

Mr. Brady stated that he hoped this example of reexamining cost savings could become a pattern. He noted that with SR-24, they left $100 million from the estimate on the table. Mr. Brady remarked that the longer we wait, the opportunity for lower construction costs and interest rates is being lost. He expressed appreciation for MAG taking the initiative to conduct this analysis and hoped that ADOT would continue the practice. Mr. Brady stated that cities take a budget and work into it and work hard to have contingencies that balance safety with practicality. He requested taking this philosophy and continue to apply it to all projects going forward.

Mr. Hazlett noted that ADOT has been very willing to look at optimizing corridors. He said that design philosophies differ from state to state and some of that goes back to standards and liabilities.

Mr. Roehrich stated that the ADOT process has always been to evaluate and look at the estimates. He said that as they go through the planning and development phases, they are constantly upgrading them. Mr. Roehrich stated that this is not the only independent review of the South Mountain Freeway that has been conducted, the Federal Highway Administration did one. Mr. Roehrich stated that ADOT will continue to take advantage of opportunities, as they do on all corridors. He noted that the estimate is an estimate, and ADOT will pay the cost at the time of the bid. Mr. Roehrich stated that ADOT strives to have the best estimates. He advised that regarding SR-24, a lot depends on the scope, which affects the estimation ability, and that is why it is important to review corridor studies over time.

Mr. Smith stated that what Mr. Brady is referencing is the philosophy to build to the budget. He commented that cities are not without blame. Mr. Smith stated that ADOT gets public input as part of the process to build a facility. ADOT tries to accommodate the cities, and that is how scope creep happens. Mr. Smith stated that what we are trying to say is you have $1.9 billion and we

would like you to accommodate the cities, but you need to build to the budget or lower or we will not have enough money to build everything in the plan.

Mr. Bacon expressed agreement with Mr. Smith, but it is also about discussing what are adequate contingencies in calculating project costs. He said he would be interested to know if there are plans to evaluate project contingency amounts on major construction projects. Mr. Bacon added that the contingency amount sometimes dictates whether you can move forward on a project or not.

Mr. Hazlett stated that ADOT is continually reevaluating its processes. He said that large contingencies are also built in to right-of-way estimates and MAG is working with ADOT's Right-of-Way Group on that. Mr. Hazlett noted that the contingency amount is sometimes based on historical data. He stated that the Burgess and Niple study said that contingency at this level used by most of the departments of transportation is in the 40-50 percent range, not 75 percent.

Mr. Roehrich stated that ADOT continually reevaluates costs during all phases and look at the different components, such as right-of-way, utilities, and utility relocation. Mr. Roehrich stated that many times ADOT uses conservative numbers for the contingency but look to adjust that over time. He stated that bids can be higher or lower, and traditionally, they have been low. Mr. Roehrich stated that ADOT looks for independent review and continues to refine the cost.

Mr. McClendon asked when the decision would be made to begin construction. Mr. Hazlett replied that the decision by the Regional Council to build the freeway has been in place, but in terms of moving forward with the environmental impact statement and the record of decision, is expected in 2013.

7. Regional Freeway and Highway Life Cycle Program Update

Mr. Hazlett next reported on a new effort to balance the Regional Freeway and Highway Program Life Cycle Program, which is facing a deficit of approximately $380 million. He noted that he would be presenting a lot of information today, including information on the Broadway curve and the Southeast Corridor Major Investment Study. Mr. Hazlett advised that in 2009, the Program was reviewed and the Regional Council approved the Tentative Scenario to balance an estimated $6.6 billion shortfall due to cost overruns and revenue shortfalls. He displayed a map of the changes and deferrals in the 2009 Tentative Scenario freeway program balancing.

Mr. Hazlett stated that MAG and ADOT are presently identifying opportunities for cost savings, such as those on SR-24 and Loop 303, and looking at cash flow, costs, and timelines for major program items. He mentioned how MAG staff is evaluating four scenarios to balance the program and incorporate the reduced revenue estimates. Mr. Hazlett displayed a projected timeline for the Program's cash flow and he noted that there a severe negative balances in 2015 and 2016 where ADOT's bonding capacity has been negatively impacted as a result of lower gas tax and sales tax revenue estimates.

Mr. Hazlett noted that 12 rebalancing scenarios were produced by Roger Herzog, MAG staff, and four scenarios are being advanced as the best options for balancing the program. He advised that

the programs on US-60/Grand Avenue and the HOV lanes on SR-202L/Santan Freeway were kept intact. He stated that the regional freeway/highway program is a $9.6 billion program and $3.5 billion was obligated through December 2011.

Mr. Hazlett summarized the four scenarios: Scenario 8: Remove the general purpose lanes widening on Loop 101 and Loop 202; Scenario 10a: Reduce the program for Interstate 17 and Loop 303 from US-60 to I-17; Scenario 10b: Same as Scenario 10a, but swap Loop 303 segments; instead of the full segment from US-60 to I-17, bring back the deferred segment from I-10 to MC-85 due to potential economic development opportunities that the City of Goodyear has mentioned; Scenario 12: Vary start times for Loop 202/South Mountain and Interstate 10/Maricopa Freeway projects. He noted that due to the deficit these projects cannot be done simultaneously and must be done sequentially. Mr. Hazlett stated that the Loop 202/South Mountain Freeway has been in the plan longer and has been emphasized as a regional priority, but they wanted to see if there was any benefit to swapping the start times.

Mr. Hazlett discussed the impacts that each scenario would have on specific corridors. First, he addressed Interstate 17/Black Canyon Freeway from the I–10 split to SR-101L/Agua Fria-Pima Freeway. Mr. Hazlett stated that the EIS is underway and no project has been identified yet for this corridor, which includes adding lanes to the existing facility. He advised that the section at the Durango curve is nearing the end of its service life, and he added that these improvements could help with congestion at the I-10 tunnel and the mini-stack interchange. He stated that some of the scenarios include reducing the budget by $300 million, which could be enabled by leveraging funding through the implementation of such options as managed lanes.

Mr. Hazlett then addressed Loop 303 with two scenarios. The first scenario, 10a, kept the current programming for full freeway construction of SR-303L from US-60 Grand Avenue to I-17. He indicated that a second scenario, 10b, was developed due to the possibility of economic development in the Goodyear area, where the segment from I-10 to MC-85 would be built. This segment has been deferred to the fifth phase of the RTP outside the Proposition 400 funding.

Mr. Smith stated that scenario 10b is due to the proposed Amazon distribution center and the end result of transportation planning should be economic development and if there is an opportunity, we should take a look at it.

Mr. Roehrich stated that the impact to I-10 could be lessened if the segment of Loop 303 south of I-10 was done now, rather than going back and doing a retrofit to the freeway.

Mr. Hazlett then spoke of I-10/Maricopa Freeway and said that approximately $600 million is identified for improvements to this corridor. He noted that due to cash flow, the Loop 202/South Mountain and the I-10/Maricopa Freeway projects cannot be constructed simultaneously and must be done sequentially. Mr. Hazlett noted that they looked at swapping the start times between the two projects to see if there could be any savings.

Mr. Hazlett stated that the I-10 Corridor Study EIS has been underway since 2001 and ADOT is very close to going out for public comment. He said that 25 lanes were planned and so the City of Tempe asked if the freeway could get by with a narrower facility and more multimodal options.

In response, the Southeast Corridor Major Investment Study (MIS) was launched in June 2010. He stated that the study looked at the possibility of implementing managed lanes and a P3 opportunity. Mr. Hazlett stated that there are a lot of ideas for transit on this corridor and he suggested giving a report on the transit side only at a future meeting.

Mr. Hazlett then reported on the preliminary performance findings for I-10 based upon the proposed actions for the Southeast Corridor MIS. He said that the I-10 Corridor Study EIS between the I-10 split and US-60 identified 22 lanes and the Southeast Corridor MIS identified 16 lanes. Mr. Hazlett pointed out the interesting notion of getting the right traffic to the right lanes, and getting the HOV traffic to the HOV lanes. He noted that there are few Direct HOV (DHOV) ramps in the region's freeway system and vehicles traveling across the general purpose traffic to enter the HOV lanes can negatively impact traffic. Mr. Hazlett stated that staff looked at existing DHOV ramps and identified other opportunities for DHOVs, such as on I-90 in Bellevue, Washington. He explained how this helps transit traffic, as well as automobile traffic.

Mr. Hazlett then addressed performance statistics for the configuration of the I-10 Corridor Study EIS (general purpose and HOV lanes) and the Southeast Corridor MIS (general purpose, HOV lanes, and express lanes with a toll and without a toll) at the Salt River Bridge at afternoon peak travel. He noted that the average miles per hour speeds are projected higher with the Southeast Corridor MIS options. Mr. Hazlett stated that the performance statistics for I-10 west of SR-143 at evening travel peak showed the same thing, that even though there were fewer lanes, the traffic would move faster in the MIS options because the right traffic was in the right lanes. Mr. Hazlett also reviewed the performance statistics for I-10 south of Baseline Road and north of Chandler Boulevard.

Mr. Hazlett stated that staff feels they have come up with a good alternative and ADOT will be looking at the alternative, which needs to be fatal flaw testing. He said there are concerns for locating DHOVs at SR-143 due to a Maricopa County operated cemetery there and whether sufficient space exists. Mr. Hazlett stated that the managed lanes concept appears potentially promising and has been passed along to ADOT and it may be incorporated into the EIS.

Mr. Smith stated that right now, the concept with the EIS is to not turn traffic to SR-51 to the mini-stack, which already has congestion issues, but take traffic to the Durango curve.

Mr. Hazlett, in discussing other major items to the 2012 rebalancing, stated that they tested removing the general purpose lanes on Loop 101/Pima Freeway from I-17 to SR-202L/Red Mountain Freeway, but found it was a disbenefit to the region. He noted that they did the same testing with the Price Freeway and the Red Mountain Freeway, and got the same result.

Mr. Hazlett referenced the cost savings on SR-24 previously mentioned by Mr. Brady and he said that these savings will be added to the program. He displayed a summary of major items in each scenario and noted that although some additional testing is needed, staff wanted the Management Committee to know about the options. Mr. Hazlett stated that a report is being draft and presented to the MAG committees for recommendations. He added that actions on the scenarios influence the I-10 and Loop 303 construction.

Chair Meyer thanked Mr. Hazlett for an excellent presentation. He asked members if they had questions.

Mr. McClendon stated that he appreciated that they were looking at alternatives other than adding lanes because it seems ultimately there would be a limit to the number of lanes. He noted how the DHOV ramp from southbound Loop 101 to I-10 in the West Valley was cut and they see the effects on their traffic congestion every day.

Chair Meyer stated that it is technically possible to have 25 lanes at the Broadway curve, but the concept stretches the limits of understanding to travel through areas like that. He expressed appreciation for the cooperation between ADOT and MAG to work on this.

8. Update on the 3-1-1 Business Plan Committee

Chair Meyer stated that approximately one year ago, Tempe requested the assistance of MAG regarding 3-1-1, and even though MAG had no stake in the issue, Dennis Smith pulled together a group of staff from the City of Tempe, the City of Phoenix, and Maricopa County to look at options. Chair Meyer stated that the Management Committee then formed the 3-1-1 Business Plan Committee. He expressed his appreciation to Mr. Smith and the Management Committee for this and to the 3-1-1 Business Plan Committee for developing some recommendations that offer flexibility. Chair Meyer stated that the City of Tempe, in order to improve service to its customers, would like to integrate mobile apps into its customer management system, along with its website and dial up phones, and 3-1-1 is a part of that.

Audrey Skidmore, MAG Information Technology Manager, provided an overview of 3-1-1 and the formation, composition and goals of the 3-1-1 Business Plan Committee. Ms. Skidmore stated that on July 13, 2011, the MAG Management Committee voted to form a 3-1-1 Business Plan Committee to discuss potential system types and funding options for a regional implementation of 3-1-1. She explained that 3-1-1 is a number reserved by the FCC for non-emergency and municipal services.

Ms. Skidmore noted that the interests of the 9-1-1 community were included in the 3-1-1 Business Plan Committee and she added that nine members of the 3-1-1 Business Plan Committee were in attendance at the Management Committee meeting to hear the discussion. She stated that the committee was tasked with evaluating system types, funding options, and whether to recommend proceeding with regional implementation. She added that the committee was directed to provide a report to the Management Committee in a timely manner.

Ms. Skidmore stated that the committee has learned about 3-1-1 and focused on five models, including the interactive voice response model suggested by the City of Tempe. She explained that a caller to an interactive voice response system would select an agency and the system would transfer the call. Ms. Skidmore emphasized that agencies would not be required to participate in any regional 3-1-1 system.

Ms. Skidmore stated that a task force then worked on developing cost estimates, which were included in the agenda packet. She advised that in developing the cost estimates, assumptions

needed to be made regarding call volumes and the call volumes they used were high. Ms. Skidmore noted that these are regional costs. She advised that they were unable to estimate per agency costs or cost savings because these costs would depend on how an agency handled the calls.

Ms. Skidmore then addressed some of the main findings of the committee. She stated that most systems are not created to save money but are created for customer service. She noted that this is the consensus of the experts they have contacted. Ms. Skidmore added that ICMA is very interested in 3-1-1 and has indicated they would like MAG to participate in a discussion of the MAG's process at the annual conference. She stated that Montgomery County, Maryland, tracked its savings and found they saved $10 million per year due to the implementation of 3-1-1.

Ms. Skidmore stated that this region is unique. She explained that were no examples of so many agencies pursuing 3-1-1 cooperatively, especially as a distributed system. Ms. Skidmore stated that due to this region's geography, there could be significant issues if agencies implemented their own individual systems.

Ms. Skidmore stated that the committee found that 3-1-1 increases call volume, perhaps as much as 50 percent, because 3-1-1 is an easily remembered number. She added that most calls are informational and do not require extensive resolution.

Ms. Skidmore stated that successful systems are multiplatform and driven at the executive level from the top down. Ms. Skidmore then turned over the presentation to Jane Morris, City of Phoenix, Chair of the 3-1-1 Business Plan Committee.

Ms. Morris displayed a graphic she put together called, "Whose Job Is it Anyway?" It illustrated a hypothetical street corner and the 12 different city telephone numbers a citizen would need to know to have problems on that street corner resolved by the appropriate department.

Ms. Morris stated that the 3-1-1 Business Plan Committee conducted two straw polls of the membership – one early in the process and one at its last meeting – to determine where the group felt they were going in terms of models. She stated that the majority favored Model One and felt that implementing a 3-1-1 system was something that should be done, but they indicated a difference of opinion on how to implement it.

Ms. Morris stated that a lot of work would need to be done to implement a 3-1-1 system. She stated that the City of Tempe is spot-on with the knowledge base it has developed. Ms. Morris stated that agencies would need to be ready to implement 3-1-1; it is not just about answering the phone. She paraphrased the New York Citty 3-1-1 tagline: Call 9-1-1 for a burning building, but 3-1-1 for a burning question. Ms. Morris stated that telephone books are not to be found any more, and if you did find one, the number of blue government pages can be daunting. She added that the City of Phoenix itself has more than 700 telephone numbers listed in the blue pages.

Ms. Morris stated that to draw an analogy, this project is at the 15 percent design level. She noted that additional work is needed to flesh out a design for a 3-1-1 system. Ms. Morris stated that she thought the committee should proceed with its work. She stated that the committee was requesting

guidance from the Management Committee on whether they continue to move forward, addressing the philosophical issues, and how much weight should be given to cost.

Chair Meyer thanked Ms. Skidmore and Ms. Morris for their reports. He noted that Ms. Morris reported that she recommended moving forward relative to Model One, which was the option most supported in the straw polls. Ms. Morris replied that was correct; Model One provides the most flexibility and allows agencies to opt out. She added that Model One also offers the option for smaller agencies to partner together on a call center. Ms. Morris stated there are a variety of options in Model One that could be at the discretion of the agencies.

Chair Meyer stated that it was his impression that Model One was similar to a starter system and there was an option to grow it or keep it at the same level. Ms. Morris replied that was correct. She added that 3-1-1 is likely require multi-year project. She said that Tempe's experience is a great benefit to the region. Ms. Morris stated that a system could start small and then build with experience. She stated that if the Management Committee supported it, the committee could go back and develop cost information.

Mr. Smith asked Ms. Skidmore to explain what would happen to a resident's call if their city did not participate. Ms. Skidmore stated that she thought this would be developed a part of a recommendation that would be brought back to the Management Committee. She noted that this was a concern raised at the committee meetings.

Chair Meyer noted that callers could be referred to a list of numbers for agencies not participating or nothing could happen is also an option. Ms. Skidmore replied that the process would need to be worked out to everyone's satisfaction. Chair Meyer asked if there was a feasible way to opt out. Ms. Skidmore replied yes.

Mr. Kross expressed appreciation for the efforts on this project. He urged caution with respect to cost. Mr. Kross stated that the Town of Queen Creek has invested a lot of money in internal initiatives and feel they have addressed the customer service issue. He stated that as the process continued, he wanted to ensure that other options are available.

Chair Meyer stated that he thought an evaluation of cost effectiveness needed to be done next. He added that he had seen a cost per call of twelve-hundredths of a cent per call. Ms. Skidmore replied that there is a cost of twelve-hundredths of a cent per call if the call is routed through CenturyLink, due to the tariff. She added that none of the other providers charge a fee per call and mobile phones account for 70 percent of calls.

Chair Meyer stated that there would be some fixed costs for an interactive voice recognition system and a process for apportioning the costs to those participating.

Chair Meyer asked if there was support for moving forward to evaluate the costs, cost effectiveness, and timelines, etc. of Model One. He asked if there were any objections to moving ahead with an analysis of Model One.

Mr. Kross asked for clarification that Model One included the option to decline participation. Ms. Skidmore replied that was correct, and she added that any of the options allowed agencies to decline participation.

Chair Meyer, noting no objections from the Management Committee, said that the 3-1-1 Business Plan Committee was being asked to continue to move forward with an evaluation of the cost and cost effectiveness of Model One and bring the information back to the Management Committee at its earliest convenience.

9. Development of the Draft FY 2013 MAG Unified Planning Work Program and Annual Budget

Becky Kimbrough, MAG Fiscal Services Manager, reported on the development of the fiscal year (FY) 2013 MAG Work Program. She said that the draft Work Program is presented first in January with segments added incrementally each month through May when it is presented for final adoption. Ms. Kimbrough noted that the budget item was on the Management Committee agenda for information, discussion, and input.

Ms. Kimbrough stated that proposed new projects were first presented in February and the proposed project list was in the March draft budget. She noted that since the March meeting revisions have been made to projects. Ms. Kimbrough stated that one project titled "Cave Creek/Carefree Transportation Framework Study" was added. She explained that the towns of Cave Creek and Carefree have requested assistance in developing a transportation framework plan for the two communities that will enhance their connection along Cave Creek Road. Ms. Kimbrough stated that each of the communities is providing $5,000 and Maricopa County is providing $25,000 to the total project cost of $250,000.

Ms. Kimbrough stated that a revision to the Maricopa County Trip Reduction Program has been proposed. She explained that the Trip Reduction program is overseen by the County and has been an ongoing program funded by both the Arizona Department of Environmental Quality and MAG for several years. Ms. Kimbrough stated that MAG has contributed $910,000 to this program since FY 2000. MAG has recently participated in discussions with Maricopa County regarding this funding amount due to county overhead costs that have increased. Ms. Kimbrough stated that the county is projecting a shortfall in funding unless the amount increases to cover overhead, which amounts to $52,347.

Ms. Kimbrough stated that the County also requested one-time funding support for computer equipment replacement for FY 2013 of $20,305. MAG also discussed the possibility of the County collecting data on skill sets from employers in the region when the County does the employer trip reduction survey. She explained that skill set data required by employers would assist the region in evaluating the skill set gaps. Ms. Kimbrough stated that this survey work would cost an estimated $7,358. She advised that these amounts are still under discussion and a final amount will be presented later.

Ms. Kimbrough stated that the Intermodal Planning Group meeting, at which the draft FY 2013 MAG budget was reviewed by the Federal Highway Administration and the Federal Transit Administration, was held March 27, 2012. She said that presentations were given by the Arizona

Department of Transportation MAG, the City of Phoenix, Valley Metro, and METRO. Ms. Kimbrough stated that comments among the group on the elements of the Work Program were positive. She noted that any formal comments from this meeting will be brought to the Management Committee.

Ms. Kimbrough stated that four new staff positions are requested for FY 2013. The first is an Administrative Assistant. She noted that this position was hired in August 2011 using an unfilled vacancy to assist with the Regional Council Executive Committee, the Economic Development Committee meetings, and Special Event Planning for the Economic Development Committee. Ms. Kimbrough stated that the vacancy used by this position now needs to be recruited and it is necessary to create the Administrative Assistant position to free up an existing vacant position.

Ms. Kimbrough stated that the second position is a Transportation Planner I/II, which will augment the existing planning staff within the Transportation Division. Ms. Kimbrough stated that additional assistance is needed for transportation projects including the development of the Freight Plan, the Managed Lane Feasibility Study, the Transportation and Land Use Integration Study, the development of project status report cards, improved and enhanced performance measurement data collection, tracking and reporting, among others.

Ms. Kimbrough stated that the third position is an Application Developer II, to assist in the development of internal applications and databases. She indicated that hiring this position is more cost effective and timely than using consultant resources. Ms. Kimbrough said that there is currently a backlog of projects and the number of projects are anticipated to continue to grow. Some of the projects that need support include Transportation Modeling System Mapping Enhancements, SharePoint improvements, MAG website search improvements, MAG mail list maintenance and improvements, and AZSMART support.

Ms. Kimbrough stated that the fourth position is for a Contract Specialist I/II to assist with proposals and contract agreements which have doubled over the past four years. There is no depth for this position within the MAG organization and with one staff member supporting all of the administration of agreements at MAG, a second position is necessary to ensure proper administration and ongoing support in the area of proposals and contracts.

Ms. Kimbrough stated that the draft Dues and Assessments were first presented in January. She said that the MAG Dues and Assessments were first reduced by 50 percent in FY 2010 as a result of economic conditions and was in place in FY 2011 and FY 2012. Ms. Kimbrough stated that staff is recommending to continue to maintain the 50 percent overall reduction.

Ms. Kimbrough stated that MAG is proposing a budgeted salary increase for FY 2013. She reported that MAG proposed a salary increase for staff in FY 2011 based on the results of an independent compensation study performed in the spring of 2010 by Public Sector Personnel Consultants. Since that time, there have been no adjustments made to staff compensation. Ms. Kimbrough stated that MAG has been reviewing selected salaries using the JIMS system. Of 43 positions at MAG that have been reviewed, about half of the MAG positions, the salary ranges are on average about 14 percent below similar positions found in the JIMS system. MAG is recommending that a proposed five percent increase be included for FY 2013 budgeted salaries

and that any increases to individual MAG salaries be performance based. She said that with no increases provided since FY 2011, this equates to a 2.5 percent average increase per year. MAG staff receive an annual performance evaluation each June and, based on performance, may receive a salary increase. This total proposed increase would not exceed a budgeted amount of $334,361. Ms. Kimbrough indicated that of this amount, a salary savings of approximately $260,000 is estimated for FY 2011. She added that in FY 2011 this salary savings is about 83.5 percent of the proposed salary increase amount.

Chair Meyer thanked Ms. Kimbrough for her presentation and asked members if they had any questions. No questions from the committee were noted.

10. Request for Future Agenda Items

An opportunity was provided for Management Committee members to present a brief summary of current events. The Management Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

No requests for future agenda items were noted.

11. Comments from the Committee

An opportunity will be provided for Management Committee members to present a brief summary of current events. The Management Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

Mr. Hauskins stated that Maricopa County has a Smart Drive Corridor on Daisy Mountain Road. He extended an invitation to everyone to a press conference and demonstration on April 26, 2012.

Adjournment

There being no further business, Mr. Wright moved, Mr. Buss seconded, and the meeting was adjourned at 1:40 p.m.

_____
Chair

_____
Secretary

Agenda Item #5B

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
Enhancement Peer Review Group Round 19 Recommendations

SUMMARY:
The Enhancement Peer Review Group, (EPRG) was formed by the MAG Regional Council in April 1993 to review and recommend a ranked list of Enhancement Fund applications from this region to the Arizona Department of Transportation (ADOT) Transportation Enhancement Review Committee (TERC). In October 2011, after MAG was notified by ADOT that Round 19 Enhancement Fund applications would be due on July 10, 2012, MAG member agencies were informed of the availability of the funding and a schedule was distributed for the ranking and evaluation for transportation enhancement projects.

Transportation enhancement funds can be used for many types of non-traditional transportation projects, including the design and construction of pedestrian walkways and bicycle paths, bicycle education, landscaping, scenic and historic preservation, billboard removal, archaeological research, and other projects that are related to the surface transportation system. This year, eight enhancement fund applications for projects on local roads were received totaling $5,353,880 with approximately $9 million available statewide. Two applications for projects on the ADOT right-of-way were received totaling $1,886,000 with approximately $5 million available statewide.

Projects were evaluated and ranked by the EPRG using criteria established by ADOT. The EPRG reviewed applications and recommended changes to strengthen the applications and improve their ability to compete on a statewide basis. Applicants were then requested to revise their applications based upon EPRG input. After the revised applications were reviewed, the EPRG ranked the applications. The Enhancement Peer Review Group recommended that the list of ranked applications be forwarded to ADOT for consideration by the TERC.

PUBLIC INPUT:
A workshop for potential enhancement fund applicants was held on November 16, 2011, to explain the transportation enhancement process. Notice of the workshop was mailed to persons interested in bicycling, the arts, landscape architecture, planning, hiking, historic preservation, and alternative mode transportation. All meetings of the Enhancement Peer Review Group were held in accordance with the open meeting law. Extensive opportunities for public input were included in the review and ranking process. These input opportunities occurred at EPRG committee meetings.

PROS & CONS:
PROS: Forwarding the ranked applications creates this region's opportunity to obtain federal funds for projects which fall into the eleven enhancement fund categories.

CONS: None.

TECHNICAL & POLICY IMPLICATIONS:

TECHNICAL: None.

POLICY: The Enhancement Funds Working Group was reconstituted into the Enhancement Peer Review Group by the MAG Regional Council on May 28, 2008. The EPRG is chaired and vice-chaired by members of the MAG Transportation Review Committee. Committee members include one member each from the Street Committee, Bicycle and Pedestrian Committee, as well as one historic preservation representative, one landscape architecture representative, and one arts representative. Process changes included prohibiting members on the EPRG from ranking their own projects; providing that members on the EPRG serve up to two years; geographically balancing the membership on the EPRG; and ensuring transparent voting.

ACTION NEEDED:

Recommend that the list of ranked applications from the MAG Enhancement Peer Review Group be forwarded to the Arizona Department of Transportation for consideration by the State Transportation Enhancement Review Committee.

PRIOR COMMITTEE ACTIONS:

On April 23, 2012, the Enhancement Peer Review Group unanimously recommended that the ranked list of project applications be forwarded for approval to the Arizona Department of Transportation (ADOT) Transportation Enhancement Review Committee.

MEMBERS ATTENDING

Katherine Coles, Chair, Phoenix, representing the MAG Bicycle and Pedestrian Committee
John Hauskins, Chair, Maricopa County Department of Transportation, representing Transportation Review Committee
Jim Coffman, Coffman Studio, representing the American Society of Landscape Architects, Arizona Chapter
Donna Isaac, Scottsdale Public Art, representing Arts community
Margaret Baker for Reba Wells Grandrud, Historic Preservation representing Historic Preservation Community
Dan Cook, Chandler, representing MAG Streets Committee

CONTACT PERSON:

Maureen DeCindis, (602) 254-6300

	LOCAL	
RANK	Project	Federal Cost
1	**Mesa: Riverview/Tempe Rio Salado Path: (Segment 3/3)** Design and construct 4,000 lf concrete SUP from end of ADOT right of way into Mesa.	$750,000
2	**Phoenix: First Street Ped Improvement McKinley - Garfield:** Widen sidewalks to 12 feet and add landscaping.	$750,000
3	**Glendale: New River Path - Hillcrest Blvd. North:** Construct 1,355 linear feet of 10' wide concrete path on each bank on New River, north of Hillcrest Drive. Will include two bridges.	$745,201
4	**Scottsdale: Shea Blvd Tunnel Access and Shared Use Path**: 1,314 lean fell of 14' wide path from Cochise Drive to Sahuaro Drive	$750,000
5	**Phoenix: First Street Ped Improvement Garfield to Roosevelt:** Widen sidewalks to 12 feet and add landscaping.	$750,000
6	**Surprise: Pedestrian Improvements Various Locations:** Construct 6' sidewalk, 700 linear ft. on Greenway and one mile on Reems Rd with ADA and landscaping	$592,217
7	**Buckeye: Fourth Street - Monroe to BID Canal:** One third mile of street improvements (median, bike lane, lighting).	$750,000
8	**Litchfield Park:** Shared use path and median refuge on Litchfield Rd north of Bird Lane	$266,462
	TOTAL	**$5,353,880**
	STATE	
1	**ADOT/Mesa: Riverview/Rio Salado Path (Segment 2/3):** Design and Construct 1,500 linear feet of concrete shared use path connecting Tempe to Mesa.	$943,000
2	**ADOT/Avondale: Agua Fria Pedestrian Connector -** Design and construct 10 ' asphalt shared use path on east side of Agua Fria and a pedestrian underpass at I-10.	$943,000
		$1,886,000

Agenda Item #5C

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
Update to the Federal Functional Classification of Tegner Street in Wickenburg

SUMMARY:
At the suggestion of the Arizona Department of Transportation (ADOT), the Town of Wickenburg took formal action on February 6, 2012, to reclassify the section of Tegner Street located within the limits of the Town (from US 60 to US 93) to a federal functional classification of Minor Arterial. Previously this facility had been part of the State Highway System and had been classified as a rural principal arterial. A principal arterial is defined as a roadway facility that carries large traffic volumes over an extended distance with little or no priority given to accessing abutting properties; with the completion of the Wickenburg bypass traffic volumes on Tegnar Street have declined and the facility now primarily serves traffic seeking to access parts of Wickenburg.

MAG concordance in this reclassification is requested. Per ADOT procedures, the concurrence of the regional planning body (e.g., MAG) is needed for the approval of a change to the federal functional classification of a facility. This change will not affect federal funding available to the State or the MAG region or the eligibility of the facility to receive federal transportation funding in the future.

PROS & CONS:
PROS: Approval of this classification of this roadway will allow the reclassification to proceed within the update procedures pursued by ADOT.

CONS: None.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: Roadway projects that wish to utilize transportation federal MAG-STP funds need to be located on a roadway that is federally functionally classified as one of the following: Principal Arterial, Minor Arterial, Major Collector.

POLICY: This request is in accord with federal regulations regarding the coordination of the development and amendment of federal functional classifications between local governmental agencies and state highway agencies.

ACTION NEEDED:
Recommend approval to classify Tegner Street located within the limits of the Town of Wickenburg to a Rural Minor Arterial in the federal functional classification system.

PRIOR COMMITTEE ACTIONS:

Transportation Review Committee: On March 29, 2012, the Transportation Review Committee recommended approval of the proposed update to the federal functional classification system.

MEMBERS ATTENDING

Scottsdale: David Meinhart, Chair
Avondale: David Fitzhugh, Vice-Chair
ADOT: Robert Samour for Floyd Roehrich
Buckeye: Jose Heredia for Scott Lowe
Chandler: Dan Cook for Patrice Kraus
El Mirage: Lance Calvert
Fountain Hills: Randy Harrel
* Gila Bend: Eric Fitzer
* Gila River: Doug Torres
Gilbert: Kurt Sharp for Leah Hubbard
Glendale: Terry Johnson
Goodyear: Cato Esquivel
Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: John Hauskins
Mesa: Jeff Martin for Scott Butler
Paradise Valley: Bill Mead
Peoria: Andrew Granger
Phoenix: Ray Dovalina for Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Surprise: Bob Beckley
Tempe: Chad Heinrich
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

EX-OFFICIO MEMBERS ATTENDING

* Street Committee: Charles Andrews, Avondale
Bicycle/Pedestrian Committee: Katherine Coles, City of Phoenix
* ITS Committee: Debbie Albert, Glendale
* Transportation Safety Committee: Julian Dresang, City of Tempe

* Members neither present nor represented by proxy.
+Attended by Videoconference # Attended by Audioconference

CONTACT PERSON:

Stephen Tate, Transportation Planner III, (602) 254-6300.

Agenda Item #5D

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
Arterial Life Cycle Program Fiscal Year 2012 Regional Area Road Fund Closeout

SUMMARY:
The Arterial Life Cycle Program (ALCP) Regional Area Road Fund (RARF) Closeout process is outlined in the approved ALCP Policies and Procedures (Policies), approved by the MAG Regional Council on December 9, 2009. This is the third year of the ALCP RARF Closeout process. The process was established to address the positive balance of funds for the current year in the ALCP RARF account. Each year there are projects scheduled for work in the current year that are deferred for a number of reasons leaving unexpended RARF funds in the account. The ALCP program allows local agencies to advance construct projects with their own funds to be reimbursed in a later year, which the Regional Transportation Plan (RTP) originally established. The ALCP RARF Closeout process evaluates both these two events to determine the possibility of reimbursing advanced completed projects earlier than scheduled.

The ALCP RARF Closeout process begins with a fiscal analysis of the ALCP and proposed ALCP RARF Closeout options. The ALCP RARF Closeout options are connected to eligible, advanced, completed projects and the priorities established in the ALCP Policies and Procedures. The allocation of ALCP RARF Closeout funds is prioritized by: (1) projects scheduled for reimbursement in the next fiscal year, (2) all other projects according to the chronological order of the programmed reimbursement, (3) the date of the final project invoice, and (4) the date the ALCP Project Reimbursement Request was accepted by MAG staff.

An important part of the Closeout process is the financial analysis done by MAG to determine the impact of proposed ALCP RARF Closeout options. This is explained in the memorandum for this agenda item.

Section 260 of the Policies established RARF Closeout procedures, project eligibility, prioritization, and the allocation process of available closeout funds. A copy of this section of the ALCP Policies and Procedures is in the attachment for this agenda item.

PUBLIC INPUT:
None.

PROS & CONS:
PROS: Once the recommended projects are approved for reimbursements, $18.924 million of ALCP RARF funds can be reimbursed in FY 2012. In addition, the ALCP RARF Closeout assists in the fiscal management of the life cycle program by recognizing available funds for eligible projects

CONS: If not approved, reimbursements will not be made and the balance of ALCP RARF funds in the account would remain the same.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: MAG will modify the ALCP for the advancement of reimbursements.

POLICY: A.R.S. 28-6352 (B) required that MAG performs life cycle management for the arterial street component of the RTP.

ACTION NEEDED:
Recommend approval of the Arterial Life Cycle Program (ALCP) project reimbursements for the Fiscal Year (FY) 2012 ALCP Regional Area Road Fund (RARF) Closeout, and amend the FY 2012 Arterial Life Cycle Program, the 2011-2015 Transportation Improvement Program, and Regional Transportation Plan 2010 Update, as necessary and to allocate any unused RARF Closeout funds to the next project(s) on the list if one or more of the recommended projects fail to meet all ALCP Project Requirements by the established deadlines.

PRIOR COMMITTEE ACTIONS:
On April 26, 2012, the Transportation Review Committee voted to recommend approval of the ALCP project reimbursements for the Fiscal Year 2012 ALCP RARF Closeout, and amend the FY 2012 Arterial Life Cycle Program, the 2011-2015 Transportation Improvement Program, and Regional Transportation Plan 2010 Update, as necessary and to allocate any unused RARF Closeout funds to the next project(s) on the list if one or more of the recommended projects fail to meet all ALCP Project Requirements by the established deadlines.

MEMBERS ATTENDING
Scottsdale: Dave Meinhart
ADOT: Kwi-Sung Kang for Floyd Roehrich
Avondale: David Fitzhugh
* Buckeye: Scott Lowe
Chandler: Patrice Kraus
El Mirage: Lance Calvert
* Fountain Hills: Randy Harrel
* Gila Bend: Eric Fitzer
* Gila River: Doug Torres
* Gilbert: Leah Hubbard
Glendale: Terry Johnson
Goodyear: Cato Esquivel
* Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: Clem Ligocki for John Hauskins
Mesa: Scott Butler
* Paradise Valley: Bill Mead
Peoria: Andrew Granger
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Queen Creek: Tom Condit
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*Transportation Safety Committee: Julian Dresang, City of Tempe

* Members neither present nor represented by proxy. + Attended by Videoconference
# Attended by Audioconference

CONTACT PERSON:
Christina Hopes, (602) 254-6300.

MARICOPA ASSOCIATION of GOVERNMENTS
302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490

May 1, 2012

TO: Members of Management Committee

FROM: Christina Hopes, Transportation Planner II

SUBJECT: ARTERIAL LIFE CYCLE PROGRAM - REGIONAL AREA ROAD FUND FISCAL YEAR 2012 CLOSEOUT PROCESS

The *Arterial Life Cycle Program (ALCP) Policies and Procedures,* approved by the MAG Regional Council, established the Arterial Life Cycle Program (ALCP) Regional Area Road Fund (RARF) Closeout process, which includes a fiscal analysis of the ALCP and proposed RARF Closeout options. The ALCP RARF Closeout options are based on the priorities and project eligibility as established in Section 260 of the *ALCP Policies and Procedures (Policies).* The allocation of ALCP RARF Closeout funds is prioritized by:

1. Projects scheduled for reimbursement in the next fiscal year
2. All other projects according to the chronological order of the programmed reimbursement
3. The fiscal year work was completed on the project
4. The date of the project's final invoice
5. The date the final Project Reimbursement Request was accepted by MAG staff

BACKGROUND

On December 19, 2007, the MAG Regional Council approved the Section 260 of *Policies,* which established the RARF Closeout Process. The *Policies* detail the RARF Closeout procedures, project eligibility, and the allocation process of available closeout funds. Since then, MAG staff, in conjunction with the ALCP Working Group, have made additional refinements to the RARF Closeout procedures, which are documented in the current version of the *Policies* approved by the MAG Regional Council on December 9, 2009.

Before recommending projects to be funded through RARF Closeout, MAG staff performed a detailed financial analysis to determine the impact of proposed ALCP RARF Closeout options. As part of the financial analysis, MAG staff reviewed:

- Eligible projects for the ALCP RARF Closeout
- The Fiscal Year (FY) 2012 programmed vs. actual project expenditures
- Historical trends in RARF revenue collection
- The FY 2012 and Draft FY 2013 ALCP bonding program

- The impact of the various Closeout reimbursement scenarios on the Draft FY 2013 life cycle budget and bonding program
- Programmed project expenditures for FY 2013 in the Draft FY 2013 ALCP

After reviewing the results of the financial analysis, MAG staff recommended to the Transportation Review Committee that four of the six eligible projects be reimbursed in the FY 2012 ALCP Regional Area Road Fund (RARF) Closeout. The recommended projects include:

- Pima Road from Via de Ventura to Krail Street for $3.454 million
- Queen Creek Road from Lindsay Road to Higley Road for $12.029 million
- Ray Road from Sossaman Road to Ellsworth Road for $3.024 million
- Hawes Road from Santan Freeway to Ray Road for $0.417 million

On April 26, 2012, the MAG Transportation Review Committee voted to recommend the approval of the ALCP project reimbursements and allocate any unused RARF Closeout funds to the subsequent project if one or more of the recommended projects failed to meet all ALCP Project Requirements by the established deadlines.

Please refer to the attached table summarizing the list of eligible projects in chronological order of programmed reimbursements and completed fiscal year of work. A copy of Section 260 of the Arterial Life Cycle Program Policies and Procedures addressing RARF Closeout also is attached.

For any questions or comments, please contact Christina Hopes by phone at 602.254.6300 or by email at chopes@azmag.gov.

FY2012 Regional Area Road Fund (RARF) Closeout Eligible Projects

Eligible projects are in consecutive order based on the fiscal year the project is programmed for reimbursement and fiscal year for work.

Fiscal Year for Reimb.	RTP ID	Lead Agency	Project Name	Fiscal Year for Work	Amount 2011$ (millions)	Completed Project Requirements	Recommended for FY2012 Closeout
2013	ACI-PMA-30-03B	Scottsdale	Pima Rd: Via de Ventura to Krail St	2010-2012	3.454	PO, PA, PRR*	Yes
2013-2015	ACI-QNC-10-03-C	Gilbert	Queen Creek Rd: Lindsay Rd to Higley Rd	2010-2012	12.029	PO, PA*	Yes
2016	ACI-RAY-20-03-A	Mesa	Ray Rd: Sossaman Rd to Ellsworth Rd	2009-2011	3.024	PO, PA*	Yes
2016	ACI-HWS-10-03-D	Mesa	Hawes Rd: Santan Fwy to Ray Rd	2009-2011	0.417	PO, PA*	Yes
2017	ACI-ELM-10-03-A	Maricopa County	El Mirage Rd: Bell Rd to Deer Valley Rd	2006-2011	9.725	PO, PA, PRR	No
2022	ACI-HPV-20-03-A	Phoenix	Happy Valley Road: I-17 – 35th Ave	2003-2005	5.343	PO, PA. PRR	No

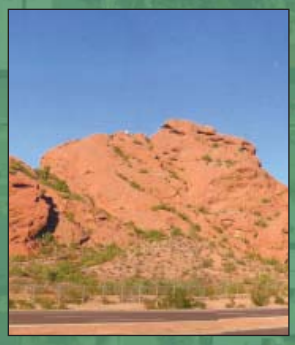
** Indicates Requirement is in Process*

LEGEND	
PA	Project Agreement
PO	Project Overview
PRR	Project Reimbursement Request
Reimb.	Reimbursement

TABLE A. Amendments and Administrative Modifications to the FY2011-2015 TIP and the FY2012 ALCP

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Miles	Lanes Before	Lanes After	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Notes
Scottsdale	2011	2012	SCT11-110CWZ	Pima Rd: Via De Ventura to Krail	Construct roadway widening	1.3	2	4	Sales Tax	$ -	$ -	$ 2,467,878	$ 2,467,878	RARF	$ 1,727,003	Amend. Advance regional funds from FY2013 to FY2012.
Scottsdale	2012	2012	SCT12-110CZ	Pima Rd: Via De Ventura to Krail	Construct roadway widening	1.3	2	4	Sales Tax	$ -	$ -	$ 2,467,878	$ 2,467,878	RARF	$ 1,727,003	Amend. Advance regional funds from FY2013 to FY2012.
Gilbert	2011	2012	GLB13-107ARWZ2	Queen Creek Rd: Val Vista Dr to Higley Rd	Acquisition of right-of-way for roadway widening	2	2	4	Bonds	$ -	$ -	$ 1,520,292	$ 1,520,292	RARF	$ 1,064,205	Amend. Advance regional funds from FY2013 to FY2012.
Gilbert	2011	2012	GLB13-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 18,768	$ 18,768	RARF	$ 13,137	Amend. Advance regional funds from FY2013 to FY2012.
Gilbert	2011	2012	GLB14-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 7,823,044	$ 7,823,044	RARF	$ 5,476,131	Amend. Advance regional funds from FY2014 to FY2012.
Gilbert	2012	2012	GLB12-107CZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 4,536,637	$ 4,536,637	RARF	$ 3,175,646	Amend. Advance regional funds from FY2015 to FY2012.
Mesa	2009	2012	MES485-06ARW	Ray Rd: Sossaman Rd to Ellsworth Rd	Acquisition of right-of-way for roadway widening	2	0	6	Bonds	$ -	$ -	$ 13,843	$ 13,843	RARF	$ 9,690	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2009	2012	MES485-09AD	Ray Rd: Sossaman Rd to Ellsworth Rd	Design roadway widening	2	0	6	Bonds	$ -	$ -	$ 379,427	$ 379,427	RARF	$ 265,599	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2010	2012	MES485-07AC	Ray Rd: Sossaman Rd to Ellsworth Rd	Construct roadway widening	2	0	6	Bonds	$ -	$ -	$ 1,962,820	$ 1,962,820	RARF	$ 1,373,974	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2011	2012	MES11-116CZ	Ray Rd: Sossaman Rd to Ellsworth Rd	Construct roadway widening	2	0	6	Bonds	$ -	$ -	$ 1,962,820	$ 1,962,820	RARF	$ 1,373,974	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2009	2012	MES465-08AD	Hawes Rd: Santan Fwy to Ray Rd	Design roadway widening	0.75	0	6	Bonds	$ -	$ -	$ 43,696	$ 43,696	RARF	$ 30,588	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2010	2012	MES465-08ADZ	Hawes Rd: Santan Fwy to Ray Rd	Design roadway widening	0.75	0	6	Bonds	$ -	$ -	$ 43,696	$ 43,696	RARF	$ 30,588	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2009	2012	MES12-111RZ	Hawes Rd: Santan Fwy to Ray Rd	advance acquistion of right-of-way	0.75	0	6	Bonds	$ -	$ -	$ 1,175	$ 1,175	RARF	$ 823	Amend. Add new line item to the TIP.
Mesa	2010	2012	MES12-111RZ2	Hawes Rd: Santan Fwy to Ray Rd	advance acquistion of right-of-way	0.75	0	6	Bonds	$ -	$ -	$ 1,175	$ 1,175	RARF	$ 823	Amend. Add new line item to the TIP.
Mesa	2010	2012	MES465-10AC	Hawes Rd: Santan Fwy to Ray Rd	Construct roadway widening	0.75	0	6	Bonds	$ -	$ -	$ 252,524	$ 252,524	RARF	$ 176,767	Amend. Advance regional funds from FY2016 to FY2012.
Mesa	2011	2012	MES11-111CZ	Hawes Rd: Santan Fwy to Ray Rd	Construct roadway widening	0.75	0	6	Bonds	$ -	$ -	$ 252,524	$ 252,524	RARF	$ 176,767	Amend. Advance regional funds from FY2016 to FY2012.

Text in RED denotes changes to the TIP and ALCP.



ON THE MOVE

PARTNERS IN PROGRESS

ARTERIAL LIFE CYCLE PROGRAM (ALCP)

POLICIES AND PROCEDURES

December 9, 2009

MARICOPA ASSOCIATION of GOVERNMENTS

B. An administrative adjustment is needed when:

1. Project expenditures for a Project work phase or a Project segment are lower than the estimate, causing the 70% regional reimbursement to be less than the amount programmed in the current ALCP.
2. The remaining regional reimbursement funds may be moved within the original Project, to another work phase or a Project Segment that is programmed in that fiscal year or a later fiscal year.

C. At that time, the ALCP and Project budgets will be adjusted to reflect the remaining Project funds.

D. Administrative Adjustments may occur each fiscal quarter. Changes will be reported in the ALCP Status Report, and the ALCP will be reprinted.

SECTION 260: ALCP RARF CLOSEOUT

A. Annually, MAG Staff will determine the availability of RARF funds to be used for the ALCP RARF Closeout.

1. MAG Staff will demonstrate the fiscal constraint of the ALCP with proposed ALCP RARF Closeout options.
2. A Project or Project segment in the ALCP may not be adversely impacted, delayed, reduced or removed as a result of the reimbursement of RARF funds in the Closeout process to another Project, portion or segment.
3. Lead Agencies and other agency(ies)/jurisdiction(s) listed in a Project Agreement that receive RARF Closeout funds will not be liable to reimburse the RARF funds to the Program if a Program deficit occurs in the future.

B. Lead Agencies should submit a RARF Closeout Notification to MAG per eligible project.

1. MAG Staff will provide a RARF Closeout Notification Form on the MAG ALCP website.

C. The ALCP RARF Closeout Process will begin at the April TRC and continue through the MAG Committee process in May, one month before the annual update of the ALCP.

1. The ALCP Schedule published annually in the MAG Transportation Programming Guidebook will specify all deadlines pertaining to the ALCP RARF Closeout Process, including due dates to submit RARF Closeout Notification forms and ALCP Project Requirements.
2. MAG Staff will notify the ALCP Working Group, in advance, if a change in the ALCP Project Schedule is required.

D. To be considered as an eligible project for reimbursement with RARF Closeout funds:

1. The Project or Project segment must be completed/closed out.
2. The Lead Agency must completed the following Project Requirements:
   a. Project Overview
   b. Project Agreement, and
   c. Project Reimbursement Request.
3. All three requirements must be accepted by MAG Staff as complete.

E. The determination and allocation of ALCP RARF Closeout funds for eligible completed projects will be made according to the following priorities (in sequential order):
    1. Projects scheduled for reimbursement in the next fiscal year;
    2. All other Projects according to the chronological order of the programmed reimbursements.

F. If two or more eligible projects are programmed for reimbursement in the same fiscal year, the reimbursement of the eligible projects will be made according to the following additional priorities (in sequential order):
    1. The date of the Project's final invoice.
    2. The date the Project Reimbursement Request was accepted by MAG Staff.

SECTION 270: USE OF SURPLUS OR DEFICIT PROGRAM FUNDS

A. If a surplus Program funds occurs, existing Projects may be accelerated. Any acceleration will occur according to priority order of the ALCP.
    1. For Projects to be accelerated, matching local funds must be committed.
    2. If there are no current Projects ready for acceleration, the next Project scheduled for reimbursement may be accelerated.
    3. If there are surplus funds available upon the full completion of the ALCP, the MAG Transportation Policy Committee will discuss options regarding additional Projects.

B. ALCP Projects may be delayed if there is a deficit of Program funds. ALCP Projects will be delayed in priority order of the ALCP.

Agenda Item #5E

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY…

DATE:
May 1, 2012

SUBJECT:
Project Changes – Amendment and Administrative Modification to the FY 2011-2015 MAG Transportation Improvement Program, FY 2012 Arterial Life Cycle Program, and to the Regional Transportation Plan 2010 Update

SUMMARY:
The Fiscal Year 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) 2010 Update were approved by the MAG Regional Council on July 28, 2010, and have been modified fourteen times with the last modification approved in April 2012.

Since then, the Arizona Department of Transportation (ADOT), and member agencies have requested project changes to projects categorized as Non Arterial Life Cycle projects that include: defer 16 TIP listings, delete 12, add six, increased funding on two, decrease funding on one, combine five listings into.three, and name corrections on three listings. Project change requests to funding types include Congestion Mitigation Air Quality (CMAQ), Highway Safety Improvement Program (HSIP), National Highway System (NHS), Regional Area Road Funds (RARF), Surface Transportation Program (STP), and Transportation Enhancements (TE). Fiscal balance is maintained for project change requests.

Valley Metro Rail received a Federal Transit Administration (FTA) Section 5309 Small Starts (5309 SS) award of $35,481,000 in Federal Fiscal Year 2012, and is requesting to amend eight budget items, and add sixteen new project budgets for the Central Mesa Light Rail. Attached is the Central Mesa LRT Extension project overview for your reference (2012 update provided). Valley Metro Rail has submitted the Project Construction Grant Agreement (PCGA) to FTA and is pending review and approval. The requests for amendments to the TIP reflect the current Project Construction Grant Agreement (PCGA) budget submittal to FTA.

Additionally, the MAG Transit Committee recommended approval of reprogramming the Transit Center/Park and Ride in Glendale to line up with the project development schedule, and programming the remaining STP-Flex, 5309-FGM, and 5307 funds for preventive maintenance. The Prior Transit Committee Action is related to these line items.

The attached table A, lists all Non Arterial Life Cycle Program (ALCP) project change requests.

Tables B and C list ALCP project change requests. The ALCP requested changes include minor budget modifications, five deleted items, and four new items. Funding reimbursements has been clarified on several items.

All of the projects to be amended may be categorized as exempt from conformity determinations and an administrative modification does not require a conformity determination.

PUBLIC INPUT:

None.

PROS & CONS:

PROS: Approval of this TIP amendment and administrative modification will allow the projects to proceed in a timely manner.

CONS: None.

TECHNICAL & POLICY IMPLICATIONS:

TECHNICAL: Projects that wish to utilize transportation federal funds need to be shown in the TIP in the year that they expect to commence and may need to undergo an air quality conformity analysis or consultation.

POLICY: This amendment and administrative modification request is in accord with MAG guidelines.

ACTION NEEDED:

Recommend approval of amendments and administrative modifications to the FY 2011-2015 MAG Transportation Improvement Program, FY 2012 Arterial Life Cycle Program, and as appropriate, to the Regional Transportation Plan 2010 Update.

PRIOR COMMITTEE ACTIONS:

Transportation Review Committee: On April 26, 2012, the Transportation Review Committee (TRC) recommended approval of amendments and administrative modifications to the FY 2011-2015 MAG TIP, the FY 2012 Arterial Life Cycle Program, and as appropriate, to the RTP 2010 Update. Changes to the tables since TRC recommendation are tinted in yellow.

MEMBERS ATTENDING

Scottsdale: Dave Meinhart
ADOT: Kwi-Sung Kang for Floyd Roehrich
Avondale: David Fitzhugh
* Buckeye: Scott Lowe
Chandler: Patrice Kraus
El Mirage: Lance Calvert
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* Members neither present nor represented by proxy. + Attended by Videoconference
# Attended by Audioconference

MAG Transit Committee: On April 12, 2012, the MAG Transit Committee recommended the reprogramming of the Glendale Park and Ride/Transit Center as shown in the attached tables, and the distribution of FY2010 and FY2011 5309-FGM funds for preventive maintenance.

MEMBERS ATTENDING

* ADOT: Mike Normand
Avondale: Rogene Hill
Buckeye: Andrea Marquez
Chandler: Dan Cook for RJ Zeder
El Mirage: Lance Calvert
Gilbert: Ken Maruyama
Glendale: Cathy Colbath, Chair
Goodyear: Cato Esquivel
* Maricopa County DOT: Mitch Wagner
Mesa: Mike James
* Paradise Valley: William Mead
Peoria: Maher Hazine
Phoenix: Neal Young
Queen Creek: Tom Condit
Scottsdale: Madeline Clemann
Surprise: David Kohlbeck
Tempe: Greg Jordan
* Tolleson: Chris Hagen
Valley Metro Rail/Metro: Wulf Grote
Youngtown: Jim Fox
Regional Public Transportation Authority: Carol Ketcherside

* Members neither present nor represented by proxy.
+ Attended by Videoconference
# Attended by Audioconference

CONTACT PERSON:

Teri Kennedy, Transportation Improvement Program Manager, (602) 254-6300.

Table A. Non-ALCP Project Changes to the Fiscal Year 2011-2015 MAG Transportation Improvement Program

4/30/2012

HIGHWAY

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
~~CHN15-102~~	Chandler	McQueen Rd: Chandler Heights to Riggs Road	Reconstruct roadway to add 2 through lanes in each direction	~~2016~~	NA	1.0	2	6		~~$7,015,000~~	~~$0~~	~~$0~~	~~$7,015,000~~	Delete project from TIP duplicate to listed ALCP project: Work element is outside of TIP.
DOT10-6C29	ADOT	60 (Grand Ave): 71st Ave to McDowell Rd, Phase 1	Roadway improvements and Pavement Preservation	2012	Mar-14	10	6	6	NHS	$0	$17,258,786	$1,043,214	$18,302,000	Amend: Decrease total project budget by $998,000 ($56,886 Regional, $941,114 Federal) from $19,300,000 to $18,302,000. The decreased funding will be used to provide the funding for the railroad utility construction project.
DOT10-6U29	ADOT	60 (Grand Ave): 71st Ave to McDowell Rd, Phase 1	Utility Construction	2012	Mar-14	10	6	6	NHS	$0	$941,114	$56,886	$998,000	Amend: Add a new utility construction project in FY 2012 for $998,000 ($941,114 Fed, $56,886 Region). Funds for this utility project will be decreased in the roadway improvement construction project (DOT10-6C29), which will not affect RTP cash flow. This project includes Burlington Northern Santa Fe (BNSF) railroad utility work.
DOT12-118	ADOT	10: SR101L (Agua Fria) to I-17	Utility Design	2013	Q3 14	9	10	10	RARF	$0	$0	$1,000,000	$1,000,000	Admin Mod: Defer Utility Design work to FY 2013 from FY 2012 while South Mountain Freeway issues are resolved.
DOT98-111	ADOT	101 (Pima Fwy): Pima Rd Extension (JPA)	Design roadway extension	2013	Q4 14	3	0	4	RARF	$0	$0	$297,000	$297,000	Admin Mod: Defer design JPA project to FY 2013 from FY 2012. Current coordination with Salt River Pima Maricopa Indian Community's development plans.
DOT12-122	ADOT	303 (Estrella Fwy): Glendale Ave - Peoria Ave	Landscape design	2013	Q2 14	3	6	6	RARF	$0	$0	$300,000	$300,000	Admin Mod: Defer landscape design project to FY 2013 from FY 2012 to reflect current schedule.
DOT14-154	ADOT	303 (Estrella Fwy): Peoria Ave - Waddell Rd	Landscape construction	2013	Q4 14	2	6	6	RARF	$0	$0	$2,400,000	$2,400,000	Admin Mod: Defer landscape construction project to FY 2013 from FY 2012 to align with landscape design schedule.
DOT12-125	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Landscape design	2013	Q2 14	2	6	6	RARF	$0	$0	$200,000	$200,000	Admin Mod: Defer landscape design project to FY 2013 from FY 2012 to reflect current schedule.
DOT12-126	ADOT	303 (Estrella Fwy): Waddell Rd - Mountain View Rd	Landscape construction	2013	Q4 14	4	6	6	RARF	$0	$0	$4,500,000	$4,500,000	Admin Mod: Defer landscape construction project to FY 2013 from FY 2012 to align with landscape design schedule.
DOT12-838	ADOT	60 (Superstition Fwy): Meridian Rd TI	Design traffic interchange	2013	Q3 14	0.2	TI	TI	RARF	$0	$0	$800,000	$800,000	Admin Mod: Defer design project to FY 2013 from FY 2012. Preparation of the DCR to include a final CE will not be completed in FY 2012.
DOT09-964	ADOT	10: SR101L (Agua Fria) to I-17	Utilities construction	2014	Q4 15	9	10	10	RARF	$0	$0	$13,400,000	$13,400,000	Admin Mod: Defer Utility construction work to FY 2014 from FY 2013 while South Mountain Freeway issues are resolved.
DOT99-124	ADOT	101 (Pima Fwy): Pima Rd Extension (JPA)	Construct roadway extension	2014	Q4 15	3	0	4	RARF	$0	$0	$3,634,000	$3,634,000	Admin Mod: Defer construction JPA project to FY 2014 from FY 2013. Current coordination with Salt River Pima Maricopa Indian Community's development plans.
DOT13-138	ADOT	303 (Estrella Fwy): Glendale Ave - Peoria Ave	Landscape construction	2014	Q4 15	3	6	6	RARF	$0	$0	$3,500,000	$3,500,000	Admin Mod: Defer landscape construction project to FY 2014 from FY 2013 to align with landscape design schedule.
DOT13-140	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Landscape construction	2014	Q4 15	2	6	6	RARF	$0	$0	$2,400,000	$2,400,000	Admin Mod: Defer landscape construction project to FY 2014 from FY 2013 to align with landscape design schedule.

HIGHWAY continued

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
DOT11-105	ADOT	85: Warner Street Bridge	Construction	2014	Q4 15	2	4	4	NHS	$0	$4,997,900	$302,100	$5,300,000	Admin Mod: Defer bridge construction project to FY 2014 from FY 2013. Current coordination with Town of Buckeye development schedule. Lane information included.
DOT14-181	ADOT	202 (Red Mountain Fwy): SR101L to Gilbert Rd	R/W acquisition	2014	Q1 15	6	8	10	RARF	$0	$0	$1,000,000	$1,000,000	Amend: Add a new R/W project in FY 2014 for $1,000,000. The study identified a new right-of-way acquisition that would be required near McKellips Road.
DOT14-182	ADOT	303 (Estrella Fwy): US60 Grand Ave/SR303L TI, Interim	Landscape design	2014	Q3 15	0.2	TI	TI	RARF	$0	$0	$290,000	$290,000	Amend: Add a new landscape design project in FY 2014 for $290,000. The landscape work is not included in the TI construction project.
DOT15-199	ADOT	303 (Estrella Fwy): US60 Grand Ave/SR303L TI, Interim	Landscape construction	2015	Q4 16	0.2	TI	TI	RARF	$0	$0	$2,900,000	$2,900,000	Amend: Add a new landscape construction project in FY 2015 for $2,900,000. The landscape work is not included in the TI construction project.
DOT12-124	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Construction	2012	6/13	2.0	2	6	STP-AZ, STP-MAG	$0	$59,134,800	$3,511,200	$62,646,000	Admend: Increase STP-MAG Funding ($392,222) from GDY09-802 Goodyear Yuma Rd Bridge Design. Increase STP-MAG Funding ($653,778) from GDY11-101 Goodyear Yuma Rd Design. Total STP-MAG funding is $1,046,000. Length and lane info included.
~~ELM11-101~~	El Mirage	Dysart Road from Cactus Road to Thunderbird Road	Design and Construction	2011		1	4	6	Local	~~$1,150,000~~	~~$0~~	~~$0~~	~~$1,150,000~~	Delete project from TIP.
~~ELM11-102~~	El Mirage	Olive Avenue from Dysart Road to El Mirage Road	Design and Construction	2012		1	2	4	Local	~~$1,600,000~~	~~$0~~	~~$0~~	~~$1,600,000~~	Delete project from TIP.
~~GDY09-802~~	Goodyear	Yuma Rd at Bullard Wash	Design bridge and approaches - using FY2009 funds	2011	NA	-----	No	Street	STP-MAG	~~$100,891~~	~~$392,222~~	~~$0~~	~~$493,113~~	Admin: Delete project from TIP. Transfer funding to DOT12-124 Estrella Fwy: Thomas Rd - Camelback Rd.
~~GDY11-101~~	Goodyear	Yuma Road, Estrella Pkwy to Litchfield	Design Yuma Rd: Litchfield Rd to Estrella Pkwy	2011	NA	2.0	2	6	STP-MAG	~~$113,109~~	~~$653,778~~	~~$0~~	~~$766,887~~	Admin: Delete project from TIP. Transfer funding to DOT12-124 Estrella Fwy: Thomas Rd - Camelback Rd.
GLB13-907D	Gilbert	Consolidated Canal at Baseline Rd, Eastern Canal at Baseline Rd, SRP Powerline at Guadalupe Rd, SRP Powerline at Elliot Rd	Design Pedestrian and Bicycle Mid-Block Crossings	2013	NA	0.4	0	0	STP-TEA	$11,970	$198,030	$0	$210,000	Amend: Add new project to the TIP for FY 2013. Funding from ADOT TE award. Correct TIP ID, correct funding award.
GLB13-907C	Gilbert	Consolidated Canal at Baseline Rd, Eastern Canal at Baseline Rd, SRP Powerline at Guadalupe Rd, SRP Powerline at Elliot Rd	Construct Pedestrian and Bicycle Mid-Block Crossings	2015	16-Jun	0.4	0	0	STP-TEA	$33,364	$551,970	$0	$585,334	Amend: Add new project to the TIP for FY 2015. Funding from ADOT TE award. Correct TIP ID, correct funding award.
GLN08-802	Glendale	Grand Canal in west Glendale, from Loop 101 to New River	Construct a 1.5-mile multi-use pathway	2013		1.5	0	0	STP-TEA	$500,000	$0	$837,825	$1,337,825	Amend: Defer the project from FY 2012 to FY 2013
GLN11-704	Glendale	Maryland Avenue: 67th-69th & 79th-83rd Avenues	Spot Improvements on Maryland Avenue for Bike Lanes	2013		0	0	0	STP-TEA	$166,039	$0	$10,037	$176,076	Amend: Defer the project from FY 2012 to FY 2013
~~MES13-100~~	Mesa	Various Locations - Citywide	Pedestrian Countdown Signal Heads- Phase 2	FY13	Jun-14	0	0	0	~~HSIP~~	~~$ -~~	~~26,483~~	~~$ -~~	~~$ 26,483~~	Admend: Delete Project, advance to FY12 MES12-100
~~MES14-101~~	Mesa	Various Locations - Citywide	Pedestrian Countdown Signal Heads- Phase 3	FY14	Jun-15	0	0	0	~~HSIP~~	~~$ -~~	~~26,483~~	~~$ -~~	~~$ 26,483~~	Admend: Delete Project, advance to FY12 MES12-100
MES12-100	Mesa	Various Locations - Citywide	Procure Pedestrian Countdown Signal Heads- Phase 1	FY12	Jun-13	0	0	0	HSIP	$ -	79,448	$ -	$ 79,448	Amend: Combine MES12-100, MES13-100, MES14-101 into one phase (FY12)

HIGHWAY continued

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
~~MES12-101~~	~~Mesa~~	Various Locations - Citywide	Additional Signal Heads- Phase 1	FY12	Jun-13	0	0	0	~~HSIP~~	~~$ -~~	~~117,887~~	~~$ -~~	~~$ 117,887~~	Amend: Delete project and add to phase 1 and 2 in FY 13 and FY 14.
MES13-101	Mesa	Various Locations - Citywide	Procure Additional Signal Heads- Phase 1	FY13	Jun-14	0	0	0	HSIP	$ -	176,831	$ -	$ 176,831	Amend: Combine deleted FY12 MES12-101, into FY 13 MES13-101, and FY 14 MES14-102.
MES14-102	Mesa	Various Locations - Citywide	Procure Additional Signal Heads- Phase 2	FY14	Jun-15	0	0	0	HSIP	$ -	176,831	$ -	$ 176,831	Amend: Combine deleted FY12 MES12-101, into FY 13 MES13-101, and FY 14 MES14-102.
MAG13-810	MAG	Regionwide	Trip Reduction program	2013	Q4 14	0	0	0	CMAQ	$0	$982,652	$0	$982,652	Amend: Increase budget by $72,652 CMAQ; total project cost is $982,652.
~~MAG12-809~~	MAG	Regionwide	Traffic signal optimization program	~~2012~~	NA	0.0	0	0	CMAQ	~~$18,135~~	~~$298,865~~	~~$0~~	~~$317,000~~	Admin: Delete ITS Project from TIP: Work element is in UPWP.
~~MAG12-803~~	MAG	Regionwide	Regionwide bicycle safety education program	~~2012~~	NA	----	----	----	CMAQ	~~$73,000~~	~~$165,000~~	~~$0~~	~~$238,000~~	Admin: Delete project from TIP.
PEO12-111	Peoria	Intersection of Peoria Ave and 75th Avenue	Design intersection improvement.	2012	2014	n/a	n/a	n/a	HSIP	$ 38,331	$ 634,142		$ 672,473	Amend: Correct name to Peoria Avenue
PEO14-103	Peoria	Intersection of Peoria Ave and 75th Avenue	Acquisition of right-of-way for intersection improvement.	2014	2015	n/a	n/a	n/a	HSIP	$ 27,727	$ 458,713		$ 486,440	Amend: Correct name to Peoria Avenue
PEO15-105	Peoria	Intersection of Peoria Ave and 75th Avenue	Relocate utilities, construct / add dual left turn lanes & right turn lanes on all approaches, raised median, & upgrade bike/ pedestrian facilities at intersection.	2015	2016	n/a	n/a	n/a	HSIP	$ 395,642	$ 6,545,445		$ 6,941,087	Amend: Correct name to Peoria Avenue
PHX12-113C	PHX	Dunlap Avenue: 31st Ave to 43rd Ave and 35th Ave	Construction	2014	Nov-14	1.5	5	6	HSIP	31,499	521,104	$ -	552,603	Amed: Move to FY 2014
PHX12-113RW	PHX	Dunlap Avenue: 31st Ave to 43rd Ave and 35th Ave	Acquire Right of Way/Easement	2013	Nov-14	1.5	5	6	HSIP	$ 2,508	$ 41,492	$ -	$ 44,000	Amend: Add New Project work phase to TIP for FY 2013. Statewide HSIP funding awarded from ADOT.
~~SCT12-103~~	Scottsdale	Various Locations - Citywide	Install Changeable Speed Warning Signs - Phase 1	~~2012~~		0	0	0	HSIP	~~$0~~	~~$33,667~~	~~$0~~	~~$33,667~~	Delete Project: Combine all phases in SCT14-115. Move funding to Fiscal Year 2014.
~~SCT13-120~~	Scottsdale	Various Locations - Citywide	Install Changeable Speed Warning Signs - Phase 2	~~2013~~		0	0	0	HSIP	~~$0~~	~~$33,667~~	~~$0~~	~~$33,667~~	Delete Project: Combine all phases in SCT14-115. Move funding to Fiscal Year 2014.
SCT13-121	Scottsdale	Various Locations - Citywide	Pedestrian Countdown Signal Heads - Phase 1	2012		0	0	0	HSIP	$ -	$ 103,876	$ -	$ 103,876	Admin: Move to Fiscal Year 2012
SCT14-115	Scottsdale	Various Locations - Citywide	Install Changeable Speed Warning Signs	2014		0	0	0	HSIP	$ -	$ 101,000	$ -	$ 101,000	Admin: Delete SCT12-103, SCT13-120. Combine Phase 1, Phase 2, and Phase 3 projects. Add fed funding $66,333 from deleted budgets to current HSIP $33,667.

TRANSIT ***Small Starts***

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
VMR12-920T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2012	2016	3.1	14.01.10	2012	5309 SS	$0	$6,296,000	$4,865,998	$11,161,998	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.
VMR12-921T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2012	2016	-	14.02.20	2012	5309 SS	$0	$333,000	$257,366	$590,366	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.
VMR12-922T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2012	-	-	14.04.40	2012	5309 SS	$0	$12,243,000	$9,462,265	$21,705,265	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.
VMR12-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2012			14.05.50	2012	5309 SS	$0	$0	$0	$0	Amend: Add project, grant application: AZ-03-0066. Will be amended when add'l funding is awarded.
VMR11-828TR2	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Improvements	2012	-	3.1	14.06.60	2012	5309 SS	$0	$6,418,000	$4,960,289	$11,378,289	Amend: increase total budget $10,378,289 (increase fed $5,918,000, increase regional $4,460,289). Change name, and ALI. Change year from 2011 to 2012. Included in grant application: AZ-03-0066.

TRANSIT *Small Starts, cont'd*

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
VMR12-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2012	n/a	n/a	14.08.80	2012	5309 SS	$0	$4,748,000	$3,669,593	$8,417,593	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.
VMR12-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2012	n/a	n/a	14.09.90	2012	5309 SS	$0	$3,692,000	$2,853,441	$6,545,441	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.
VMR12-912T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2012	n/a	n/a	14.10.10	2012	5309 SS	$0	$1,751,000	$1,353,298	$3,104,298	Amend: increase total budget $3,104,298 (increase fed $841,777, increase regional $1,353,298). Change name, and ALI. Included in grant application: AZ-03-0066.
VMR12-841T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2013	2016	3.1	14.01.10	2013	5309 SS	$0	$6,554,647	$5,065,899	$11,620,546	Amend: increase total budget $2,820,546 (increase fed $2,154,647, and increase regional $665,899). Change name, and ALI.
VMR13-936T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2013	2016		14.02.20	2013	5309 SS	$0	$1,594,159	$1,232,080	$2,826,239	Amend: decrease total budget $25,348,761 (decrease fed $18,405,841, and decrease regional $6,942,920). Change name, and ALI.
VMR12-918T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2013			14.04.40	2013	5309 SS	$0	$1,644,207	$1,270,761	$2,914,968	Amend: decrease total budget $199,478 (increase fed $86,984, and decrease regional $286,462). Change name, and ALI.
VMR13-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2013			14.05.50	2013	5309 SS	$0	$4,562,841	$3,526,489	$8,089,330	Amend: Add project, Federal PCGA approval est. June 2012
VMR12-842T	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Improvements	2013		3.1	14.06.60	2013	5309 SS	$0	$0	$0	$0	Amend: Reduce budget (fed $2,250,000, Regional $2,250,000) to zero for 2013. Change name, and ALI.
VMR13-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2013			14.08.80	2013	5309 SS	$0	$3,181,095	$2,458,577	$5,639,672	Amend: Add project, Federal PCGA approval est. June 2012
VMR13-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2013			14.09.90	2013	5309 SS	$0	$1,648,257	$1,273,891	$2,922,148	Amend: Add project, Federal PCGA approval est. June 2012
VMR13-927T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2013			14.10.10	2013	5309 SS	$0	$814,794	$629,731	$1,444,525	Amend: Add project, Federal PCGA approval est. June 2012
VMR14-102T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2014	2016	3.1	14.01.10	2014	5309 SS	$0	$1,935,778	$1,496,107	$3,431,885	Amend: decrease total budget $37,568,115 (decrease fed $15,064,222, and decrease regional $22,503,893). Change name, and ALI.
VMR15-102T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2014	2016		14.02.20	2014	5309 SS	$0	$1,595,150	$1,232,846	$2,827,996	Amend: decrease total budget $41,872,004 (decrease fed $17,404,850, decrease regional $24,467,154). Change name, and ALI. Advance year from 2015 to 2014.
VMR14-922T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2014			14.04.40	2014	5309 SS	$0	$0	$0	$0	Amend: Add project, Federal PCGA approval est. June 2012. Will be amended when add'l funding is awarded.
VMR14-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2014			14.05.50	2014	5309 SS	$0	$9,264,529	$7,160,290	$16,424,819	Amend: Add project, Federal PCGA approval est. June 2012
VMR14-924T	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Improvements	2014		3.1	14.06.60	2014	5309 SS	$0	$0	$0	$0	Amend: Add project, Federal PCGA approval est. June 2012
VMR14-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2014			14.08.80	2014	5309 SS	$0	$4,290,708	$3,316,166	$7,606,874	Amend: Add project, Federal PCGA approval est. June 2012
VMR14-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2014			14.09.90	2014	5309 SS	$0	$1,650,923	$1,275,951	$2,926,874	Amend: Add project, Federal PCGA approval est. June 2012
VMR14-927T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2014			14.10.10	2014	5309 SS	$0	$781,910	$604,316	$1,386,226	Amend: Add project, Federal PCGA approval est. June 2012

TRANSIT			*recomened by Transit Committee*											
TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
GLN11-702T	Glendale	Glendale: Citywide Paratransit & GUS	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	62,468	249,870	0	312,338	Admin Mod: Increase funding
GLN11-809T	Glendale	Bell/L101	Acquire right of way regional park-and-ride/transit center (Bell/L101)	2012			11.32.04	2012	5309-FGM	0	3,514,570	804,353	4,318,923	Amend: Add new project from combined GLN11-809TA, TB, and TC. Defer to 2012
~~GLN11-809TA~~	~~Glendale~~	~~Bell/L101~~	~~Acquire right of way regional park-and-ride (Bell/L101) - FY2010 5309-FGM Funds~~	~~2011~~			~~11.32.04~~		~~5309-FGM~~	~~0~~	~~2,287,742~~	~~571,935~~	~~2,859,677~~	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012
~~GLN11-809TB~~	~~Glendale~~	~~Bell/L101~~	~~Acquire right of way regional park-and-ride (Bell/L101)~~	~~2011~~			~~-----~~		~~5309-FGM~~	~~0~~	~~778,505~~	~~194,626~~	~~973,131~~	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012
~~GLN11-809TC~~	~~Glendale~~	~~Bell/L101~~	~~Acquire right of way regional park-and-ride (Bell/L101) - FY 2010 STP Flex Funds~~	~~2011~~			~~11.32.04~~		~~STP-Flex~~	~~0~~	~~448,323~~	~~37,792~~	~~486,115~~	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012
GLN12-812T	Glendale	Bell/L101	Construct regional park-and-ride/transit (Bell/L101)	2013			11.33.04	2013	5307	0	6,782,578	1,695,645	8,478,223	Amend: Move to 2013 and combine GLN12-812TA, TB and TD.
~~GLN12-812TA~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101) - FY2011 5307 Funds~~	~~2012~~			~~11.33.04~~		~~5307~~	~~0~~	~~174,425~~	~~43,606~~	~~218,031~~	Amend: Delete project. Combine with GLN12-8012TB, TD. New Project is: GLN12-812T.
~~GLN12-812TB~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101) - FY2011 Funds~~	~~2012~~			~~11.33.04~~		~~5307, 5309-FGM, STP-AZ-Flex~~	~~0~~	~~2,193,048~~	~~231,901~~	~~2,424,949~~	Amend: Delete project. Combine with GLN12-8012TA, TD. New Project is: GLN12-812T.
~~GLN12-812TC~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101)~~	~~2012~~			~~11.33.01~~		~~STP-Flex~~	~~0~~	~~1,460,900~~	~~88,305~~	~~1,549,205~~	Amend: Delete project, funds are already in GLN12-812TB
~~GLN12-812TD~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101)~~	~~2012~~			~~11.33.01~~		~~5307~~	~~0~~	~~4,415,105~~	~~1,103,776~~	~~5,518,881~~	Amend: Delete project. Change funding from 5309-FGM to 5307, and combine with GLN12-8012TA, TB. New Project is: GLN12-812T.
~~GLN13-199T~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101)~~	~~2013~~			~~11.33.01~~		~~PTF~~	~~9,994,849~~	~~0~~	~~249,501~~	~~10,244,350~~	Amend: Delete Project
~~GLN13-199T~~	~~Glendale~~	~~Bell/L101~~	~~Construct regional park-and-ride (Bell/L101)~~	~~2013~~			~~11.33.01~~		~~PTF~~	~~9,994,849~~	~~0~~	~~249,501~~	~~10,244,350~~	Amend: Delete Project
PEO11-702T	Peoria	Peoria: Citywide Paratransit	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	23,475	93,898	0	117,373	Admin Mod: Increase funding
PHX11-112T	Phoenix	Phoenix -Buses serving Rapid Routes on HOV system	Preventive Maintenance - FY2010 5309-FGM Funds	2012			11.7A.00	2010	5309-FGM	78,366	313,462	0	391,828	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $47,520 to $313,462.
PHX11-706T	Phoenix	Regionwide	Phoenix: Citywide Fixed Route - Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	2,878,008	11,512,033	0	14,390,041	Admin Mod: Increase funding
PHX12-804T	Phoenix	Regionwide	Preventive Maintenance - FY2010 STP-Flex	2012			11.7A.00	2010	STP-Flex	0	448,323	37,792	486,115	Amend: Add new Project
PHX12-805T	Phoenix	Phoenix -Buses serving Rapid Routes on HOV system	Preventive Maintenance - FY2011 5309-FGM Funds	2012			11.7A.00	2011	5309-FGM	31,676	126,702	0	158,378	Amend: Add new project
SCT11-113T	Scottsdale	Scottsdale: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	25,270	101,081	0	126,351	Admin Mod: Increase funding
SUR11-701T	Surprise	Surprise: Citywide Paratransit	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	6,170	24,681	0	30,851	Admin Mod: Increase funding
TMP11-701T	Tempe	Tempe: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	473,095	1,892,381	0	2,365,476	Admin Mod: Increase funding

TRANSIT *continued*

TIP #	Agency	Project Location	Project Description	Fiscal Year	Est. Date Open	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change
VMR11-103T	METRO Rail	Phoenix, Mesa, Tempe - Light Rail	Preventive Maintenance - FY2010 5309-FGM Funds	2012			11.7A.00	2010	5309-FGM	543,309	2,173,236	0	2,716,545	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $351,773 to $2,173,236. Change since TRC, move regional to local cost.
VMR12-109T	Valley Metro/RPTA	Regionwide -Buses serving Express Routes on HOV system	Preventive Maintenance - FY2011 5309-FGM Funds	2012			11.7A.00	2011	5309-FGM	23,549	94,196	0	117,745	Amend: Add new project. Change since TRC, move regional to local cost.
VMT11-106T	Valley Metro/RPTA	Regionwide -Buses serving Express Routes on HOV system	Preventive Maintenance - FY2010 5309-FGM Funds	2012			11.7A.00	2010	5309-FGM	58,261	233,042	0	291,303	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $32,702 to $233,042. Change since TRC, move regional to local cost.
VMT12-104T	METRO Rail	Phoenix, Mesa, Tempe - Light Rail	Preventive Maintenance - FY2011 5309-FGM Funds	2012			11.7A.00	2011	5309-FGM	219,606	878,425	0	1,098,031	Amend: Add new project. Change since TRC, move regional to local cost.
VMR11-104T	Valley Metro Rail	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	141,428	565,712	0	707,140	Admin Mod: Increase funding
VMT11-709T	Valley Metro/RPTA	Regionwide: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012			11.7A.00	2011	5307	695,260	2,781,041	0	3,476,301	Admin Mod: Increase funding
GLN12-100T	Glendale	Glendale: Citywide Paratransit & GUS	Preventive Maintenance 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	3,148	52,088	0	55,236	Admin Mod: Increase funding
PEO12-100T	Peoria	Peoria: Citywide Paratransit	Preventive maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	1,299	21,497	0	22,796	Admin Mod: Increase funding
PHX12-104T	Phoenix	Regionwide	Preventive maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	122,428	2,025,433	0	2,147,861	Admin Mod: Increase funding
SCT12-102T	Scottsdale	Scottsdale: Fixed Route	Preventive maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	2,499	41,340	0	43,839	Admin Mod: Increase funding
SUR12-100T	Surprise	Surprise: Citywide Paratransit	Preventive maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	475	7,854	0	8,329	Admin Mod: Increase funding
TMP12-100T	Tempe	Tempe: Fixed Route	Preventive Maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	42,254	699,051	0	741,305	Admin Mod: Increase funding
VMR12-106T	Valley Metro Rail	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance - 2009 & 2011 STP funds	2012			11.7A.00	2011	STP-Flex	13,979	231,262	0	245,241	Admin Mod: Increase funding
VMT12-102T	Valley Metro/RPTA	Regionwide: Fixed Route	Preventive Maintenance - 2009 & 2011 STP Funds	2012			11.7A.00	2011	STP-Flex	50,675	838,365	0	889,040	Admin Mod: Increase funding

Project Change since TRC

Project Changes to the TIP listed in red

TABLE B. Amendments and Administrative Modifications to the FY2011-2015 TIP and the FY2012 ALCP

Revised 5/1/2012

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Miles	Lanes Before	Lanes After	Funding	Federal	Regional	Local	Total	Reimb Fund	Reimb. Amount	Note
Chandler	2008	2012	CHN08-107CZ	Price Rd: Santan to Germann	Reimbursement for advance construction of roadway widening	1.25	4	6	RARF	$ -	$ -	$ 102,190	$ 5,123,598	RARF	$ 2,880,748	Amend. Decreased regional reimbursement in the TIP due to an administrative error.
Gilbert	2010	2012	GLB12-107ADZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Design roadway widening	2	2	4	Bonds	$ -	$ -	$ 907,658	$ 907,658	RARF	$ 635,361	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to ROW.
Gilbert	2011	2012	GLB12-107ADZ2	Queen Creek Rd: Val Vista Dr to Higley Rd	Design roadway widening	2	2	4	Bonds	$ -	$ -	$ 907,658	$ 907,658	RARF	$ 635,361	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to ROW.
Gilbert	2010	2012	GLB13-107ARWZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Acquisition of right-of-way for roadway widening	2	2	4	Bonds	$ -	$ -	$ 33,567	$ 33,567	RARF	$ 23,497	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to Construction.
Gilbert	2011	2013	GLB13-107ARWZ2	Queen Creek Rd: Val Vista Dr to Higley Rd	Acquisition of right-of-way for roadway widening	2	2	4	Bonds	$ -	$ -	$ 1,520,292	$ 1,520,292	RARF	$ 1,064,205	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to Construction.
Gilbert	2011	2013	GLB13-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 18,768	$ 18,768	RARF	$ 13,137	Amend. New line item in the TIP. FY13 regional funds reallocated from ROW to Construction
Gilbert	2011	2014	GLB14-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 7,823,044	$ 7,823,044	RARF	$ 5,476,131	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to project savings.
Gilbert	2012	2015	GLB12-107CZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	2	2	4	Bonds	$ -	$ -	$ 4,536,637	$ 4,536,637	RARF	$ 3,175,646	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to project savings.
Maricopa County	2013	2013	MMA13-118RWZ	Northern Parkway: Dysart to 111th	Acquisition of right-of-way for bridge construction and roadway widening	2.5	2	4	STP-MAG	$ 1,681,087	$ -	$ 720,466	$ 2,401,553	STP-MAG	$ 1,681,087	Amend. Consolidated two previous TIP line items.
Maricopa County	2012	2016	~~MMA12-928~~	Northern Parkway: Sarival Overpass	Construct roadway widening	0.1	0	4	STP-MAG	$ -	$ -	~~$ 3,576,152~~	~~$ 3,576,152~~	STP-MAG	~~$ 2,503,307~~	Amend. Delete line item from the TIP and ALCP. Work being done as part of another phase of project in the TIP.
Maricopa County	2013	2016	~~MMA15-109CZ~~	Northern Parkway: Sarival Overpass	Construct roadway widening	0.1	0	4	STP-MAG	$ -	$ -	~~$ 966,670~~	~~$ 966,670~~	STP-MAG	~~$ 676,669~~	Amend. Delete line item from the TIP and ALCP. Work being done as part of another phase of project in the TIP.
Maricopa County	2015	2016	~~MMA15-112CZ~~	Northern Parkway: Northern Avenue at Loop 101	Construct roadway widening and overpass	0.5	4	6	STP-MAG	$ 1,123,232	$ -	$ 481,385	$ 1,604,617	STP-MAG	$ 1,123,232	Amend. Decreased regional reimbursement.
Maricopa County	2015	2017	~~MMA15-112CZ2~~	Northern Parkway: Northern Avenue at Loop 101	Construct roadway widening and overpass	0.5	4	6	HURF	$ -	$ -	$ 5,549,846	$ 5,549,846	STP-MAG	$ 3,884,892	Amend. Increased regional reimbursement.
Mesa	~~2007~~	~~2012~~	~~MES12-118RZ~~	Southern Ave at Stapley Dr	Reimbursement for advance pre-design of intersection improvements	0.5	6	6	RARF	$ -	~~$ 121,756~~	$ -	~~$ 121,756~~	RARF	~~$ 121,756~~	Amend. Delete line item from the TIP and ALCP. No additional pre-design to be done. Regional funds reallocated to another work phase.
Mesa	2011	2012	MES11-016DZ3	Southern Ave at Stapley Dr	Design intersection improvement	0.5	6	6	RARF	$ -	$ 256,911	$ 110,105	$ 367,015	RARF	$ 256,911	Amend. Regional funds split across two years. Work to continue in FY2012.
Mesa	2012	2012	MES12-016DZ	Southern Ave at Stapley Dr	Design intersection improvement	0.5	6	6	RARF	$ -	$ 256,911	$ 110,105	$ 367,015	RARF	$ 256,911	Amend. Add new line item to the TIP. Work continued in FY2012

Text in RED indicates changes to the TIP and/or ALCP

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Miles	Lanes Before	Lanes After	Funding	Federal	Regional	Local	Total	Reimb Fund	Reimb. Amount	Note
Mesa	2013	2013	MES13-118CZ	Southern Ave at Stapley Dr	Construct intersection improvement	0.5	6	6	HSIP	$ 6,697,212	$ -	$ 381,741	$ 7,078,953	HSIP	$ 6,697,212	Amend. Changed regional funds to local funds.
Mesa	2013	2013	MES13-118RZ	Southern Ave at Stapley Dr	Reimbursement for construction of intersection improvement	0.5	6	6	RARF	$ -	$ 1,966,712	$ -	$ 1,966,712	RARF	$ 1,966,712	Amend. Add new line item to the TIP. Reimbursement.
Mesa	2013	2014	MES13-118CZ2	Southern Ave at Stapley Dr	Construct intersection improvement	0.5	6	6	RARF	$ -	$ 1,978,186	$ -	$ 1,978,186	RARF	$ 1,978,186	Amend. Deleted local funds. HSIP funds from MES13-118CZ are the local match.
Mesa	2013	2013	MES14-117CZ	Southern Ave at Country Club Dr	Construct intersection improvement	0.5	6	6	CMAQ	$ 910,000	$ -	$ -	$ 910,000	RARF	$ -	Admin: Project has multiple Federal funding sources: Move HSIP $ 3,789,895 and match 229,081, to new project MES14-117CZ2. Move RARF to new project number MES15-117RZ. Keep CMAQ $910,000.
Mesa	2013	2013	MES14-117CZ2	Southern Ave at Country Club Dr	Construct intersection improvement	0.5	6	6	HSIP	$ 3,789,895	$ -	$ 229,081	$ 4,018,976	RARF	$ -	Amend: Add new line item to the TIP. Funding split from MES14-117CZ move HSIP $ 3,789,895 and match 229,081 , delete CMAQ $910,000 and RARF $160,357.
Mesa	2015	2015	MES15-117RZ	Southern Ave at Country Club Dr	Reimbursement for construction of intersection improvement	0.5	6	6	RARF	$ -	$ 160,357	$ -	$ 160,357	RARF	$ 160,357	Amend. Add new line item to the TIP. Funding split from MES14-117CZ.

TABLE C. Amendments and Administrative Modifications to the FY2012 ALCP (Non-TIP Changes)

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Miles	Lanes Before	Lanes After	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note
Chandler	2007	2012	NONE	Price Rd: Santan to Germann	Acquisition of right-of-way for roadway widening	1.25	4	6	RARF	$ -	$ -	~~$ 102,190~~	~~$ 102,190~~	RARF	~~$ 71,533~~	Amend. Delete work phase from the ALCP. Regional funds allocated to construction.
Gilbert	2015	2015	NONE	Queen Creek Rd: Val Vista Dr to Higley Rd	Project savings from roadway widening	2	2	4	RARF	$ -	$ 2,300,485	$ -	$ 2,300,485	RARF	$ 2,300,485	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.
Mesa	2014	2014	NONE	Southern Ave at Stapley Dr	Project savings for arterial capacity improvement	0.5	6	6	RARF	$ -	$ 2,495,664	$ -	$ 2,495,664	RARF	$ 2,495,664	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.
Mesa	2015	2015	NONE	Southern Ave at Stapley Dr	Project savings for arterial capacity improvement	0.5	6	6	RARF	$ -	$ 4,473,850	$ -	$ 4,473,850	RARF	$ 4,473,850	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.
Mesa	2015	2015	NONE	Southern Ave at Country Club Dr	Project savings from roadway widening	0.5	6	6	RARF	$ -	$ 3,605,458	$ -	$ 3,605,458	RARF	$ 3,605,458	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.

Project Change since TRC

Central Mesa LRT Extension
Mesa, Arizona
Project Construction Grant Agreement
Administrative Draft Submitted to FTA in April 2012

Summary Description	
Proposed Project:	Light Rail Transit
	3.1 Miles, 4 Stations
Total Capital Cost ($YOE):	$199.10 Million (Includes $8.2 million in finance charges)
Section 5309 Small Starts Share ($YOE):	$74.99 Million (37.7%)
Annual Forecast Year Operating Cost:	$4.24 Million
Opening Year Ridership Forecast (2016):	9,740 Average Weekday Boardings
	2,180 Daily New Riders
Overall Project Rating:	Medium-High
Project Justification Rating:	Medium
Local Financial Commitment Rating:	Medium-High

Project Description: Valley Metro Rail Inc. (METRO) proposes to build an extension of the existing Central Phoenix/East Valley Light Rail Transit (LRT) line from its eastern terminus at Sycamore and Main Streets in west Mesa to a new terminus at Mesa Drive and Main Street in central Mesa. New at grade stations would be constructed in the median of Main Street at Alma School Road, Country Club Road, Center Street and Mesa Drive. A surface park-and-ride facility with 500 parking spaces would be provided at the Mesa Drive Station. The project will include traffic signal priority for LRT vehicles to allow faster travel times. METRO would operate the extension using its existing fleet of LRT vehicles. Service would be provided at 12-minute headways during weekday peak and mid-day periods, 20-minute headways on weekday evenings and 15-minute headways all day on weekends in 2016, the opening year of the project.

Project Purpose: The Central Mesa LRT Extension is intended to provide a transfer-free connection between the existing Central Phoenix LRT line terminal at Sycamore Street and the downtown Mesa central business district that includes a concentration of retail and office businesses and the Mesa City Plaza. The project would improve connections between the Central Mesa LRT corridor and major activity and employment centers located east and west of the project route such as downtown Phoenix, downtown Tempe, Sky Harbor International Airport and Arizona State University. Local bus service would be expanded to serve each station along the extension and operate more frequently.

Project Development History, Status and Next Steps: In November 2004, Maricopa County, where the cities of Phoenix and Mesa are located, approved Proposition 400 to extend an existing countywide 0.5 percent sales tax for an additional twenty years from 2006 through 2025 to fund transportation improvements including the Central Mesa LRT Extension project. An alternatives analysis for the Central Mesa corridor was initiated in spring 2007. The Central Mesa LRT Extension was adopted as the Locally Preferred Alternative by the Mesa City Council, METRO and the MAG Board of Directors in September 2009. FTA approved the Central Mesa LRT Extension project into Small Starts project development in July 2010. An Environmental Assessment (EA) was issued for public review in November 2010. METRO received a Finding of No Significant Impact from the FTA in July 2011. In March 2012, METRO selected a Design-Build contractor to begin initial construction activities and continue design. METRO anticipates receipt of a Project Construction Grant Agreement in summer 2012, and the start of revenue operations in early 2016.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 Small Starts FHWA Flexible Funds (CMAQ)	 $74.99 $52.84	 37.7% 26.5%
Local: Proposition 400 (1/2-cent Sales Tax)	 $71.17	 35.8%
Total:	**$199.01**	**100.0%**

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Factor	Rating	Comments
Local Financial Commitment Rating	**Medium-High**	
Non-Section 5309 New Starts Share (20% of summary financial rating)	**Medium-High**	The Small Starts share of the project is 37.7 percent.
Project Capital Financial Plan (50% of summary financial rating)	**Medium-High**	
Capital Condition (25% of capital plan rating)	Medium-High	METRO's good bond ratings, issued in 2009 are as follows: AA+ by Standard & Poor's Rating Service and AA+ by Fitch Ratings, Inc.
Commitment of Funds (25% of capital plan rating)	High	All of the non-Small Starts funds are committed or budgeted. Sources of funds include Congestion Mitigation and Air Quality Improvement (CMAQ) funds and local Mesa Public Transportation Fund (PTF) Proposition 400 sales tax proceeds.
Capital Cost Estimates, Assumptions and Financial Capacity (50% of capital plan rating)	Medium	The capital cost is well formed for the level of project development. METRO has the capacity to cover cost increases or funding shortfalls equal to at least 25 percent of estimated project costs.
Project Operating Financial Plan (30% of summary financial rating)	**Medium-High**	
Operating Condition (25% of operating plan rating)	Medium	METRO's current ratio of assets to liabilities is 1.10 in the most recent audited financial statements. There have only been very minor reductions in service.
Commitment of Funds (25% of operating plan rating)	High	All operating funding is budgeted. Funding sources include City of Mesa general funds and farebox revenues.
O&M Cost Estimates, Assumptions, and Financial Capacity (50% of operating plan rating)	Medium	Operating cost estimates are reasonable compared to historical experience. Operating revenues are reasonable compared to historical experience. METRO's projected cash balance is less than three months, but more than 1.5 months, of annual base system-wide operating expenses

Central Mesa LRT Extension
Mesa, Arizona
Project Development
Land Use and Economic Development Rating
(Based upon Information accepted by FTA in July 2010)

LAND USE RATING: Medium-Low

The land use rating reflects the population and employment densities within ½-mile of proposed station areas:

- Average population density across all station areas is 5,602 persons per square mile. Total employment along the extension is 16,000; a further 80,500 jobs are located in downtown Phoenix, which would be served directly by the project.
- The alignment includes a mixture of commercial, retail, residential (single- and multi-family), civic and educational land uses. Three of the four stations serve downtown Mesa, which reflects a traditional downtown development pattern with connected streets, small blocks, pedestrian-scale development and streetscape treatments. Outside of downtown, arterial streets are wider and development is more suburban in nature. Downtown Mesa offers over 5,000 parking spaces, all of which are free.

ECONOMIC DEVELOPMENT RATING: Medium-High

Transit-Supportive Plans and Policies: Medium-High
(50 percent of Economic Development Rating)

- The *Mesa 2025 General Plan*, *West Main Street Neighborhood Plan* and *Town Center Concept Plan* encourage higher-density, pedestrian-friendly development in station areas and provision of infrastructure to support higher densities. The City of Mesa is developing plans to reduce parking requirements and redevelop surface parking lots along Main Street.
- The City of Mesa's zoning code permits moderate- to high-density residential development in areas around each station, with such zoning designations most prevalent in the downtown area. Zoning codes in the downtown area also allow mixed-use development. In other areas, mixed uses and higher densities are permitted through council use permits and overlay zones. The City of Mesa is updating its zoning ordinance to facilitate mixed-use development and reduce parking requirements along the proposed LRT extension; form-based codes are also being considered.
- Regulatory and financial incentives include loans for job creation in the downtown area, reductions in impact fees for redevelopment and low-interest financing and regulatory assistance for economic development projects.

Performance and Impacts of Policies: Medium-High
(50 percent of Economic Development Rating)

- The existing METRO LRT line has spurred considerable development. As of December 2008, a total of $5.4 billion of development had been completed or was under construction in station areas along the line, with a further $2 billion of development proposed. In Tempe and Mesa, nearest the extension, development exceeded $1.1 billion as of December 2008. Proposed projects were likewise valued at $1.1 billion.
- A combination of vacant, underdeveloped and potentially obsolete sites provides ample opportunity for infill and new development along the corridor. A conservative estimate of 232 acres will be available for development by 2030.

ROUTE MAP

CENTRAL MESA LIGHT RAIL EXTENSION

LEGEND

- Light Rail Line
- Central Mesa Extension
- Park-and-Ride
- Railroad
- Existing Station
- Station Locations
- Transit Center

Ref. Mesa LRT 5

Agenda Item #5F

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
Additional FFY2012 CMAQ Funds Available to Transit Projects

SUMMARY:
Each year, through the MAG Committee Process, priorities are established on the use all of the federal obligation authority for the current federal fiscal year (FFY); this is generally known as Closeout.

On February 22, 2012, the MAG Regional Council recommended to approve Scenario #4 to fund projects that will obligate in FFY2012 at a 50 percent increase of the federal share, up to 100 percent of project costs, with an additional $293,000 of federal fund to CHN12-805, and the remaining balance to be flexed to transit, with projects and priorities developed at a later time. At the time of the recommendation, the amount to be flexed to transit was $25,318,375 in federal Congestion Mitigation and Air Quality (CMAQ) funds.

The Transit Committee met in February, March and April to discussed and evaluated five different programming options. On April 12, 2012, the MAG Transit Committee recommended approval of programming $25,242,460 of CMAQ for bus purchases in 2013 and 2014, and then using the freed up 5307 funds for preventive maintenance. The amount of CMAQ funds recommended to be programmed for 2013 bus purchases is $14,267,785 and for 2014 bus purchases is $10,974,675, totalling $25,242,460. The Federal Transit Administration 5307 funds that were originally programmed for bus purchases will now be used for preventive maintenance to operators in the region.

The TIP changes and preventive maintenance distribution amounts over the two years are shown in the attached tables.

PUBLIC INPUT:
None.

PROS & CONS:
PROS: Approval of these recommendations will allow for the FFY2012 CMAQ funds to be fully obligated in the MAG region.

CONS: There is no guarantee that sufficient funds will be available in the following fiscal year to cover any or all of the deferred projects. Uncertainty over the reauthorization of the federal legislation makes this problem more acute.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: Action to close out the FFY 2012 MAG federally funded program is needed to ensure that all MAG federal funds are fully used in a timely and equitable manner. These actions may include any

necessary amendments or administrative adjustments to the FY 2011-2015 MAG TIP to allow the projects to proceed.

POLICY: Adopted MAG policies on the allocation of uncommitted and redistributed federal funds to projects have been followed.

ACTION NEEDED:
Recommend approval of programming the $25,242,460 of CMAQ for bus purchases in 2013 and 2014, programming related 5307 funds from 2013 and 2014 for preventive maintenance; and the related modifications to the FY 2011-2015 MAG Transportation Improvement Program and as appropriate the Regional Transportation Plan 2010 Update.

PRIOR COMMITTEE ACTIONS:
MAG Transportation Review Committee: On April 26, 2012, the MAG Transportation Review Committee recommended the approval of programming the $25,248,413 of CMAQ for bus purchases in 2013 and 2014, programming related 5307 funds from 2013 and 2014 for preventive maintenance; and the related modifications to the FY2011-2015 MAG TIP, and as appropriate the 2010 RTP Update.

MEMBERS ATTENDING

Scottsdale: Dave Meinhart
ADOT: Kwi-Sung Kang for Floyd Roehrich
Avondale: David Fitzhugh
* Buckeye: Scott Lowe
Chandler: Patrice Kraus
El Mirage: Lance Calvert
* Fountain Hills: Randy Harrel
* Gila Bend: Eric Fitzer
* Gila River: Doug Torres
* Gilbert: Leah Hubbard
Glendale: Terry Johnson
Goodyear: Cato Esquivel
* Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: Clem Ligocki for John Hauskins
Mesa: Scott Butler
* Paradise Valley: Bill Mead
Peoria: Andrew Granger
Phoenix: Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Surprise: Bob Beckley
Tempe: Chad Heinrich
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

EX-OFFICIO MEMBERS ATTENDING

*Street Committee: Charles Andrews, Avondale
*Bicycle/Pedestrian Committee: Katherine Coles, City of Phoenix
*ITS Committee: Debbie Albert, Glendale
*Transportation Safety Committee: Julian Dresang, City of Tempe

* Members neither present nor represented by proxy. + Attended by Videoconference
# Attended by Audioconference

MAG Transit Committee: On April 12, 2012, the MAG Transit Committee recommended the approval of programming the $25,248,413 of CMAQ for bus purchases in 2013 and 2014, programming related 5307 funds from 2013 and 2014 for preventive maintenance; and the related modifications to the FY2011-2015 MAG TIP, and as appropriate the 2010 RTP Update.

MEMBERS ATTENDING

* ADOT: Mike Normand
  Avondale: Rogene Hill
Buckeye: Andrea Marquez
  Chandler: Dan Cook for RJ Zeder
El Mirage: Lance Calvert
  Gilbert: Ken Maruyama
  Glendale: Cathy Colbath, Chair
  Goodyear: Cato Esquivel
* Maricopa County DOT: Mitch Wagner
  Mesa: Mike James
* Paradise Valley: William Mead
  Peoria: Maher Hazine
  Phoenix: Neal Young
Queen Creek: Tom Condit
  Scottsdale: Madeline Clemann
  Surprise: David Kohlbeck
  Tempe: Greg Jordan
* Tolleson: Chris Hagen
  Valley Metro Rail/Metro: Ben Limmer for Wulf Grote
  Youngtown: Jim Fox
  Regional Public Transportation Authority Carol Ketcherside

* Members neither present nor represented by proxy.
+ Attended by Videoconference
# Attended by Audioconference

CONTACT PERSON:

Eileen Yazzie, (602) 254-6300

Project Change Sheet - Programming FY2012 CMAQ Closeout funds for Transit Projects

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request
Phoenix	2013	PHX13-107T	Regionwide	Purchase bus: standard 40 foot - 12 replace	11.12.01	CMAQ	7,120,348			7,120,348	Admin Mod: Change from 5307 to 100% CMAQ Funding
Phoenix	2013	PHX13-902T	Regionwide	Purchase bus: < 30 foot - 35 replace (dial-a-ride)	11.12.04	CMAQ	3,260,635			3,260,635	Admin Mod: Change from 5307 to 100% CMAQ Funding
Scottsdale	2013	SCT13-901T	Regionwide	Purchase bus: standard 40 foot - 7 replace	11.12.01	CMAQ	3,886,802			3,886,802	Admin Mod: Change from 5307 to 100% CMAQ Funding
Peoria	2014	PEO11-805T	Regionwide	Purchase bus: < 30 foot - 6 replace (dial-a-ride)	11.12.04	CMAQ	575,733			575,733	Admin Mod: Change from 5307 to 100% CMAQ Funding
Phoenix	2014	PHX14-104T	Regionwide	Purchase bus: < 30 foot - 35 replace (dial-a-ride)	11.12.04	CMAQ	3,358,460			3,358,460	Admin Mod: Change from 5307 to 100% CMAQ Funding
Phoenix	2014	PHX14-105T	Regionwide	Purchase bus: standard 40 foot - 8 replace	11.12.01	CMAQ	4,746,898			4,746,898	Admin Mod: Change from 5307 to 100% CMAQ Funding
Valley Metro/RPT	2014	VMT14-103T	Regionwide	Purchase bus: < 30 foot - 14 replace (dial-a-ride)	11.12.04	CMAQ	1,343,384			1,343,384	Admin Mod: Change from 5307 to 100% CMAQ Funding
Valley Metro/RPTA	2014	VMT14-106T	Regionwide	Purchase vanpools: 25 expand		CMAQ	950,200			950,200	Admin Mod: Change from 5307 to 100% CMAQ Funding
Glendale	2013	GLN13-901T	Glendale: Citywide Paratransit & GUS	Preventive Maintenance	11.12.40	5307	87,182	0	21,796	108,978	2013 Amount
							122,187		30,547	152,734	Amount of increase related to CMAQ Closeout
							209,369		**52,342**	**261,711**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Peoria	2013	PEO13-901T	Peoria: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	28,474	0	7,119	35,593	2013 Amount
							36,312		9,078	45,390	Amount of increase related to CMAQ Closeout
							64,786		**16,197**	**80,983**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**

Project Change Sheet - Programming FY2012 CMAQ Closeout funds for Transit Projects

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request
Phoenix	2013	PHX13-901T	Regionwide	Preventive Maintenance	11.7A.00	5307	4,323,038	0	1,080,760	5,403,798	2013 Amount
							7,716,157		1,929,039	9,645,196	Amount of increase related to CMAQ Closeout
							12,039,195		**3,009,799**	**15,048,994**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Scottsdale	2013	SCT13-101T	Scottsdale: Fixed Route	Preventive Maintenance	11.7A.00	5307	20,860	0	5,215	26,075	2013 Amount
							108,682		27,171	135,853	Amount of increase related to CMAQ Closeout
							129,542		**32,386**	**161,928**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Surprise	2013	SUR13-901T	Surprise: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	6,543	0	1,636	8,179	2013 Amount
							19,239		4,810	24,049	Amount of increase related to CMAQ Closeout
							25,782		**6,446**	**32,228**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Tempe	2013	TMP13-901T	Tempe: Fixed Route	Preventive Maintenance	11.7A.00	5307	487,968	0	121,992	609,960	2013 Amount
							2,046,098		511,525	2,557,623	Amount of increase related to CMAQ Closeout
							2,534,066		**633,517**	**3,167,583**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Valley Metro Rail	2013	VMR13-105T	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance	11.7A.00	5307	293,019	0	73,255	366,274	2013 Amount
							1,526,653		381,663	1,908,316	Amount of increase related to CMAQ Closeout
							1,819,672		**454,918**	**2,274,590**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**

Project Change Sheet - Programming FY2012 CMAQ Closeout funds for Transit Projects

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request
Valley Metro/RPTA	2013	VMT13-902T	Regionwide: Fixed Route	Preventive Maintenance	11.7A.00	5307	897,106	0	224,277	1,121,383	2013 Amount
							2,692,456		673,114	3,365,570	Amount of increase related to CMAQ Closeout
							3,589,562		**897,391**	**4,486,953**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Glendale	2014	GLN14-101T	Glendale: Citywide Paratransit & GUS	Preventive Maintenance	11.7A.00	5307	110,317	0	27,579	137,896	2014 Amount
							93,986		23,497	117,483	Amount of increase related to CMAQ Closeout
							204,303		**51,076**	**255,379**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Peoria	2014	PEO14-101T	Peoria: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	34,092	0	8,523	42,615	2014 Amount
							27,931		6,983	34,914	Amount of increase related to CMAQ Closeout
							62,023		**15,506**	**77,529**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Phoenix	2014	PHX14-103T	Regionwide	Preventive Maintenance	11.7A.00	5307	6,363,438	0	1,590,860	7,954,298	2014 Amount
							5,935,211		1,483,803	7,419,014	Amount of increase related to CMAQ Closeout
							12,298,649		**3,074,662**	**15,373,311**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Scottsdale	2014	SCT14-101T	Scottsdale: Fixed Route	Preventive Maintenance	11.7A.00	5307	69,214	0	17,304	86,518	2014 Amount
							83,597		20,899	104,496	Amount of increase related to CMAQ Closeout
							152,811		**38,203**	**191,014**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**

Project Change Sheet - Programming FY2012 CMAQ Closeout funds for Transit Projects

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request
Surprise	2014	SUR14-101T	Surprise: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	13,705	0	3,426	17,131	2014 Amount
							14,799		3,700	18,499	Amount of increase related to CMAQ Closeout
							28,504		**7,126**	**35,630**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Tempe	2014	TMP14-101T	Tempe: Fixed Route	Preventive Maintenance	11.7A.00	5307	1,351,626	0	337,907	1,689,533	2014 Amount
							1,573,844		393,461	1,967,305	Amount of increase related to CMAQ Closeout
							2,925,470		**731,368**	**3,656,838**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Valley Metro Rail	2014	VMR14-110T	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance	11.7A.00	5307	972,243	0	243,061	1,215,304	2014 Amount
							1,174,290		293,573	1,467,863	Amount of increase related to CMAQ Closeout
							2,146,533		**536,633**	**2,683,166**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**
Valley Metro/RPTA	2014	VMT14-101T	Regionwide: Fixed Route	Preventive Maintenance	11.7A.00	5307	1,908,646	0	477,162	2,385,808	2014 Amount
							2,071,017		517,754	2,588,771	Amount of increase related to CMAQ Closeout
							3,979,663		**994,916**	**4,974,579**	**Admin Mod: Increase federal funding. Total amount for preventive maintenance shown in this line item.**

Agenda Item #5G

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
Conformity Consultation

SUMMARY:
The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan 2010 Update. The amendment and administrative modification involve several projects, including Arizona Department of Transportation projects, various transit projects including the METRO Central Mesa light rail project, and the programming of FY 2012 CMAQ Closeout funds for transit projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. A description of the projects is provided in the attached interagency consultation memorandum. Comments on the conformity assessment are requested by May 18, 2012.

PUBLIC INPUT:
Copies of the conformity assessment have been distributed for consultation to the Federal Transit Administration, Federal Highway Administration, Arizona Department of Transportation, Arizona Department of Environmental Quality, City of Phoenix Public Transit Department, METRO/RPTA, Maricopa County Air Quality Department, Central Arizona Association of Governments, Pinal County Air Quality Control District, U.S. Environmental Protection Agency and other interested parties including members of the public.

PROS & CONS:
PROS: Interagency consultation for the amendment and administrative modification notifies the planning agencies of project modifications to the TIP and Regional Transportation Plan 2010 Update.

CONS: The review of the conformity assessment requires additional time in the project approval process.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: The amendment and administrative modification may not be considered until the consultation process for the conformity assessment is completed.

POLICY: Federal transportation conformity regulations require interagency consultation on development of the transportation plan, TIP, and associated conformity determinations to include a process involving the Metropolitan Planning Organization, State and local air quality planning agencies, State and local transportation agencies, Environmental Protection Agency, Federal Highway Administration, and the Federal Transit Administration. Consultation on the conformity assessment has been conducted in accordance with federal regulations, MAG Conformity

Consultation Processes adopted by the Regional Council in February 1996 and MAG Transportation Conformity Guidance and Procedures adopted by the Regional Council in March 1996. In addition, federal guidance is followed in response to court rulings regarding transportation conformity.

ACTION NEEDED:
Consultation.

PRIOR COMMITTEE ACTIONS:
None.

CONTACT PERSON:
Dean Giles, Air Quality Planning Program Specialist, (602) 254-6300.

MARICOPA ASSOCIATION of GOVERNMENTS
302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490

May 1, 2012

TO: Leslie Rogers, Federal Transit Administration
Karla Petty, Federal Highway Administration
John Halikowski, Arizona Department of Transportation
Henry Darwin, Arizona Department of Environmental Quality
Neal Young, City of Phoenix Public Transit Department
Stephen Banta, METRO/RPTA
William Wiley, Maricopa County Air Quality Department
Brian Tapp, Central Arizona Association of Governments
Donald Gabrielson, Pinal County Air Quality Control District
Gregory Nudd, U.S. Environmental Protection Agency, Region IX
Other Interested Parties

FROM: Dean Giles, Air Quality Planning Program Specialist

SUBJECT: CONSULTATION ON A CONFORMITY ASSESSMENT FOR A PROPOSED AMENDMENT AND ADMINISTRATIVE MODIFICATION TO THE FY 2011-2015 MAG TRANSPORTATION IMPROVEMENT PROGRAM AND REGIONAL TRANSPORTATION PLAN 2010 UPDATE

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan 2010 Update. The amendment and administrative modification involve several projects, including Arizona Department of Transportation projects, various transit projects including the METRO Central Mesa light rail project, and the programming of FY 2012 CMAQ Closeout funds for transit projects. Comments on the conformity assessment are requested by May 18, 2012.

MAG has reviewed the projects for compliance with the federal conformity rule and has found that consultation is required on the conformity assessment. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. The conformity finding of the TIP and the associated Regional Transportation Plan 2010 Update, as amended, that was made by the Federal Highway Administration and Federal Transit Administration on March 15, 2012 remains unchanged by this action. The conformity assessment is being transmitted for consultation to the agencies listed above and other interested parties. If you have any questions or comments, please contact me at (602) 254-6300.

Attachment

cc: Eric Massey, Arizona Department of Environmental Quality
Scott Omer, Arizona Department of Transportation

ATTACHMENT

CONFORMITY ASSESSMENT FOR A PROPOSED AMENDMENT AND ADMINISTRATIVE MODIFICATION TO THE FY 2011-2015 MAG TRANSPORTATION IMPROVEMENT PROGRAM AND REGIONAL TRANSPORTATION PLAN 2010 UPDATE

The federal transportation conformity rule (40 CFR 93.105) requires interagency consultation when making changes to a Transportation Improvement Program (TIP) and Transportation Plan. The consultation processes are also provided in the Arizona Conformity Rule (R18-2-1405). This information is provided for consultation as outlined in the MAG Conformity Consultation Processes document adopted by the MAG Regional Council on February 28, 1996. In addition, federal guidance is followed in response to court rulings regarding transportation conformity.

The amendment includes projects that may be categorized as exempt from conformity determinations. Types of projects considered exempt are defined in the federal transportation conformity rule at 40 CFR 93.126. The administrative modification includes minor project revisions that do not require a conformity determination. Examples of minor project revisions include schedule, funding source, and funding amount changes. The proposed amendment and administrative modification to the FY 2011-2015 MAG Transportation Improvement Program and Regional Transportation Plan 2010 Update include the projects on the attached table. The project number, agency, and description is provided, followed by the conformity assessment.

MAG has reviewed the projects for compliance with the federal conformity rule and consultation is required on the conformity assessment. The projects are not expected to create adverse emission impacts or interfere with Transportation Control Measure implementation. The conformity finding of the TIP and the associated Regional Transportation Plan 2010 Update, as amended, that was made by the Federal Highway Administration and Federal Transit Administration on March 15, 2012 remains unchanged by this action.

Amendment and Administrative Modification to the FY 2011-2015 MAG Transportation Improvement Program and Regional Transportation Plan 2010 Update

HIGHWAY

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
CHN15-102	Chandler	McQueen Rd: Chandler Heights to Riggs Road	Reconstruct roadway to add 2 through lanes in each direction	2016	1.0	2	6		$ 7,015,000	$ -	$ -	$ 7,015,000	Delete project from TIP duplicate to listed ALCP project: Work element is outside of TIP.	A minor project revision is needed to delete the duplicate project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT10-6C29	ADOT	60 (Grand Ave): 71st Ave to McDowell Rd, Phase 1	Roadway improvements and Pavement Preservation	2012	10	6	6	NHS	$0	$17,258,786	$1,043,214	$18,302,000	Amend: Decrease total project budget by $998,000 ($56,886 Regional, $941,114 Federal) from $19,300,000 to $18,302,000. The decreased funding will be used to provide the funding for the railroad utility construction project.	A minor project revision is needed to decrease project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT10-6U29	ADOT	60 (Grand Ave): 71st Ave to McDowell Rd, Phase 1	Utility Construction	2012	10	6	6	NHS	$0	$941,114	$56,886	$998,000	Amend: Add a new utility construction project in FY 2012 for $998,000 ($941,114 Fed, $56,886 Region). Funds for this utility project will be decreased in the roadway improvement construction project (DOT10-6C29), which will not affect RTP cash flow. This project includes Burlington Northern Santa Fe (BNSF) railroad utility work.	The new project is considered exempt under the category "Railroad/highway crossing." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-118	ADOT	10: SR101L (Agua Fria) to I-17	Utility Design	2013	9	10	10	RARF	$ -	$ -	$ 1,000,000	$ 1,000,000	Admin Mod: Defer Utility Design work to FY 2013 from FY 2012 while South Mountain Freeway issues are resolved.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT98-111	ADOT	101 (Pima Fwy): Pima Rd Extension (JPA)	Design roadway extension	2013	3	0	4	RARF	$ -	$ -	$ 297,000	$ 297,000	Admin Mod: Defer design JPA project to FY 2013 from FY 2012. Current coordination with Salt River Pima Maricopa Indian Community's development plans.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-122	ADOT	303 (Estrella Fwy): Glendale Ave - Peoria Ave	Landscape design	2013	3	6	6	RARF	$ -	$ -	$ 300,000	$ 300,000	Admin Mod: Defer landscape design project to FY 2013 from FY 2012 to reflect current schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
DOT14-154	ADOT	303 (Estrella Fwy): Peoria Ave - Waddell Rd	Landscape construction	2013	2	6	6	RARF	$ -	$ -	$ 2,400,000	$ 2,400,000	Admin Mod: Defer landscape construction project to FY 2013 from FY 2012 to align with landscape design schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-125	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Landscape design	2013	2	6	6	RARF	$ -	$ -	$ 200,000	$ 200,000	Admin Mod: Defer landscape design project to FY 2013 from FY 2012 to reflect current schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-126	ADOT	303 (Estrella Fwy): Waddell Rd - Mountain View Rd	Landscape construction	2013	4	6	6	RARF	$ -	$ -	$ 4,500,000	$ 4,500,000	Admin Mod: Defer landscape construction project to FY 2013 from FY 2012 to align with landscape design schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-838	ADOT	60 (Superstition Fwy): Meridian Rd TI	Design traffic interchange	2013	0.2	TI	TI	RARF	$ -	$ -	$ 800,000	$ 800,000	Admin Mod: Defer design project to FY 2013 from FY 2012. Preparation of the DCR to include a final CE will not be completed in FY 2012.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT09-964	ADOT	10: SR101L (Agua Fria) to I-17	Utilities construction	2014	9	10	10	RARF	$ -	$ -	$ 13,400,000	$ 13,400,000	Admin Mod: Defer Utility construction work to FY 2014 from FY 2013 while South Mountain Freeway issues are resolved.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT99-124	ADOT	101 (Pima Fwy): Pima Rd Extension (JPA)	Construct roadway extension	2014	3	0	4	RARF	$ -	$ -	$ 3,634,000	$ 3,634,000	Admin Mod: Defer construction JPA project to FY 2014 from FY 2013. Current coordination with Salt River Pima Maricopa Indian Community's development plans.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT13-138	ADOT	303 (Estrella Fwy): Glendale Ave - Peoria Ave	Landscape construction	2014	3	6	6	RARF	$ -	$ -	$ 3,500,000	$ 3,500,000	Admin Mod: Defer landscape construction project to FY 2014 from FY 2013 to align with landscape design schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT13-140	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Landscape construction	2014	2	6	6	RARF	$ -	$ -	$ 2,400,000	$ 2,400,000	Admin Mod: Defer landscape construction project to FY 2014 from FY 2013 to align with landscape design schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT11-105	ADOT	85: Warner Street Bridge	Construction	2014	0.2	4	4	NHS	$ -	$ 4,997,900	$ 302,100	$ 5,300,000	Admin Mod: Defer bridge construction project to FY 2014 from FY 2013. Current coordination with Town of Buckeye development schedule.	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT14-181	ADOT	202 (Red Mountain Fwy): SR101L to Gilbert Rd	R/W acquisition	2014	6	8	10	RARF	$ -	$ -	$ 1,000,000	$ 1,000,000	Amend: Add a new R/W project in FY 2014 for $1,000,000. The study identified a new right-of-way acquisition that would be required near McKellips Road.	The right-of-way project would not impact the assumptions used in the transportation model. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
DOT14-182	ADOT	303 (Estrella Fwy): US60 Grand Ave/SR303L TI, Interim	Landscape design	2014	0.2	TI	TI	RARF	$ -	$ -	$ 290,000	$ 290,000	Amend: Add a new landscape design project in FY 2014 for $290,000. The landscape work is not included in the TI construction project.	The new project is considered exempt under the category "Plantings, landscaping, etc." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT15-199	ADOT	303 (Estrella Fwy): US60 Grand Ave/SR303L TI, Interim	Landscape construction	2015	0.2	TI	TI	RARF	$ -	$ -	$ 2,900,000	$ 2,900,000	Amend: Add a new landscape construction project in FY 2015 for $2,900,000. The landscape work is not included in the TI construction project.	The new project is considered exempt under the category "Plantings, landscaping, etc." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
DOT12-124	ADOT	303 (Estrella Fwy): Thomas Rd - Camelback Rd	Construction	2012	2.0	2	6	STP-AZ, STP-MAG	$ -	$ 59,134,800	$ 3,511,200	$ 62,646,000	Admend: Increase STP-MAG Funding ($392,222) from GDY09-802 Goodyear Yuma Rd Bridge Design. Increase STP-MAG Funding ($653,778) from GDY11-101 Goodyear Yuma Rd Design. Total STP-MAG funding is $1,046,000.	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GDY09-802	Goodyear	Yuma Rd at Bullard Wash	Design bridge and approaches - using FY2009 funds	2011	-----	No	Street	STP-MAG	$ 100,891	$ 392,222	$ -	$ 493,113	Admin: Delete project from TIP. Transfer funding to DOT12-124 Estrella Fwy: Thomas Rd - Camelback Rd.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GDY11-101	Goodyear	Yuma Road, Estrella Pkwy to Litchfield	Design Yuma Rd: Litchfield Rd to Estrella Pkwy	2011	2.0	2	6	STP-MAG	$ 113,109	$ 653,778	$ -	$ 766,887	Admin: Delete project from TIP. Transfer funding to DOT12-124 Estrella Fwy: Thomas Rd - Camelback Rd.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN13-907	Gilbert	Consolidated Canal at Baseline Rd, Eastern Canal at Baseline Rd, SRP Powerline at Guadalupe Rd, SRP Powerline at Elliot Rd	Design Pedestrian and Bicycle Mid-Block Crossings	2013	0.4	0	0	STP-TEA	$ 13,000	$ 202,000	$ -	$ 215,000	Amend: Add new project to the TIP for FY 2013. Funding from ADOT TEA	The new project is considered exempt under the category "Bicycle and pedestrian facilities." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN15-907	Gilbert	Consolidated Canal at Baseline Rd, Eastern Canal at Baseline Rd, SRP Powerline at Guadalupe Rd, SRP Powerline at Elliot Rd	Construct Pedestrian and Bicycle Mid-Block Crossings	2015	0.4	0	0	STP-TEA	$ 37,334	$ 548,000	$ -	$ 585,334	Amend: Add new project to the TIP for FY 2015. Funding from ADOT TEA	The new project is considered exempt under the category "Bicycle and pedestrian facilities." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN08-802	Glendale	Grand Canal in west Glendale, from Loop 101 to New River	Construct a 1.5-mile multi-use pathway	2013	1.5	0	0	STP-TEA	$ 500,000	$ -	$ 837,825	$ 1,337,825	Amend: Defer the project from FY 2012 to FY 2013	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN11-704	Glendale	Maryland Avenue: 67th-69th & 79th-83rd Avenues	Spot Improvements on Maryland Avenue for Bike Lanes	2013	0	0	0	STP-TEA	$ 166,039	$ -	$ 10,037	$ 176,076	Amend: Defer the project from FY 2012 to FY 2013	A minor project revision is needed to defer the project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length miles	Lanes Before	Lanes After	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
MAG13-810	MAG	Regionwide	Trip Reduction program	2013	0	0	0	CMAQ	$ -	$ 982,652	$ -	$ 982,652	Amend: Increase budget by $72,652 CMAQ; total project cost is $982,652.	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
MAG12-809	MAG	Regionwide	Traffic signal optimization program	2012	0.0	0	0	CMAQ	$ 18,135	$ 298,865	$ -	$ 317,000	Admin: Delete ITS Project from TIP: Work element is in UPWP.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
MAG12-803	MAG	Regionwide	Regionwide bicycle safety education program	2012	----	----	----	CMAQ	$ 73,000	$ 165,000	$ -	$ 238,000	Admin: Delete project from TIP.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PEO12-111	Peoria	Intersection of Peoria Ave and 75th Avenue	Design intersection improvement.	2012	n/a	n/a	n/a	HSIP	$ 38,331	$ 634,142		$ 672,473	Amend: Correct name to Peoria Avenue	A minor project revision is needed to correct project location in TIP. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PEO14-103	Peoria	Intersection of Peoria Ave and 75th Avenue	Acquisition of right-of-way for intersection improvement.	2014	n/a	n/a	n/a	HSIP	$ 27,727	$ 458,713		$ 486,440	Amend: Correct name to Peoria Avenue	A minor project revision is needed to correct project location in TIP. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PEO15-105	Peoria	Intersection of Peoria Ave and 75th Avenue	Relocate utilties, construct / add dual left turn lanes and right turn lanes on all approaches, raised median, and upgrade bike/ pedestrian facilities at intersection.	2015	n/a	n/a	n/a	HSIP	$ 395,642	$ 6,545,445		$ 6,941,087	Amend: Correct name to Peoria Avenue	A minor project revision is needed to correct project location in TIP. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TRANSIT														
TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
GLN11-702T	Glendale	Glendale: Citywide Paratransit & GUS	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 62,468	$ 249,870	$ -	$ 312,338	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN11-809T	Glendale	Bell/L101	Acquire right of way regional park-and-ride/transit center (Bell/L101)	2012		11.32.04	2012	5309-FGM	$ -	$ 3,514,570	$ 804,353	$ 4,318,923	Amend: Add new project from combined GLN11-809TA, TB, and TC. Defer to 2012	A minor project revision is needed to combine projects to form new project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN11-809TA	Glendale	Bell/L101	Acquire right of way regional park-and-ride (Bell/L101) - FY2010 5309-FGM Funds	2011		11.32.04		5309-FGM	$ -	$ 2,287,742	$ 571,935	$ 2,859,677	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012	A minor project revision is needed to delete project and combine to form new project, GLN11-809T. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN11-809TB	Glendale	Bell/L101	Aquire right of way regional park-and-ride (Bell/L101)	2011		-----		5309-FGM	$ -	$ 778,505	$ 194,626	$ 973,131	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012	A minor project revision is needed to delete project and combine to form new project, GLN11-809T. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN11-809TC	Glendale	Bell/L101	Acquire right of way regional park-and-ride (Bell/L101) - FY 2010 STP Flex Funds	2011		11.32.04		STP-Flex	$ -	$ 448,323	$ 37,792	$ 486,115	Amend: Delete Project; Combine GLN11-809TA, TB, and TC. Defer to 2012	A minor project revision is needed to delete project and combine to form new project, GLN11-809T. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-812T	Glendale	Bell/L101	Construct regional park-and-ride/transit (Bell/L101)	2013		11.33.04	2013	5307	$ -	$ 6,782,578	$ 1,695,645	$ 8,478,223	Amend: Move to 2013 and combine GLN12-812TA, TB and TD.	A minor project revision is needed to combine projects to form new project and to defer project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-812TA	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101) - FY2011 5307 Funds	2012		11.33.04		5307	0	174,425	43,606	218,031	Amend: Delete project. Combine with GLN12-8012TB, TD. New Project is: GLN12-812T.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-812TB	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101) - FY2011 Funds	2012		11.33.04		5307, 5309-FGM, STP-AZ-Flex	0	2,193,048	231,901	2,424,949	Amend: Delete project. Combine with GLN12-8012TA, TD. New Project is: GLN12-812T.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-812TC	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101)	2012		11.33.01		STP-Flex	$ -	$ 1,460,900	$ 88,305	$ 1,549,205	Amend: Delete project, funds are already in GLN12-812TB	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-812TD	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101)	2012		11.33.01		5307	$ -	$ 4,415,105	$ 1,103,776	$ 5,518,881	Amend: Delete project. Change funding from 5309-FGM to 5307, and combine with GLN12-8012TA, TB. New Project is: GLN12-812T.	A minor project revision is needed to delete project and combine to form new project, GLN12-812T. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
GLN13-199T	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101)	2013		11.33.01		PTF	$ 9,994,849	$ -	$ 249,501	$ 10,244,350	Amend: Delete Project	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN13-199T	Glendale	Bell/L101	Construct regional park-and-ride (Bell/L101)	2013		11.33.01		PTF	$ 9,994,849	$ -	$ 249,501	$ 10,244,350	Amend: Delete Project	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PEO11-702T	Peoria	Peoria: Citywide Paratransit	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 23,475	$ 93,898	$ -	$ 117,373	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PHX11-112T	Phoenix	Phoenix -Buses serving Rapid Routes on HOV system	Preventive Maintenance - FY2010 5309-FGM Funds	2012		11.7A.00	2010	5309-FGM	$ 78,366	$ 313,462	$ -	$ 391,828	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $47,520 to $313,462.	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PHX11-706T	Phoenix	Regionwide	Phoenix: Citywide Fixed Route - Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 2,878,008	$ 11,512,033	$ -	$ 14,390,041	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PHX12-804T	Phoenix	Regionwide	Preventive Maintenance - FY2010 STP-Flex	2012		11.7A.00	2010	STP-Flex	$ -	$ 448,323	$ 37,792	$ 486,115	Amend: Add new Project	The new project is considered exempt under the category "Operating assistance to transit agencies." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PHX12-805T	Phoenix	Phoenix -Buses serving Rapid Routes on HOV system	Preventive Maintenance - FY2011 5309-FGM Funds	2012		11.7A.00	2011	5309-FGM	$ 31,676	$ 126,702	$ -	$ 158,378	Amend: Add new project	The new project is considered exempt under the category "Operating assistance to transit agencies." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
SCT11-113T	Scottsdale	Scottsdale: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 25,270	$ 101,081	$ -	$ 126,351	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
SUR11-701T	Surprise	Surprise: Citywide Paratransit	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 6,170	$ 24,681	$ -	$ 30,851	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
TMP11-701T	Tempe	Tempe: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 473,095	$ 1,892,381	$ -	$ 2,365,476	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR11-103T	METRO Rail	Phoenix, Mesa, Tempe - Light Rail	Preventive Maintenance - FY2010 5309-FGM Funds	2012		11.7A.00	2010	5309-FGM	$ -	$ 2,173,236	$ 543,309	$ 2,716,545	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $351,773 to $2,173,236.	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
VMR12-109T	Valley Metro/RPTA	Regionwide -Buses serving Express Routes on HOV system	Preventive Maintenance - FY2011 5309-FGM Funds	2012		11.7A.00	2011	5309-FGM	$ -	$ 94,196	$ 23,549	$ 117,745	Amend: Add new project	The new project is considered exempt under the category "Operating assistance to transit agencies." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMT11-106T	Valley Metro/RPTA	Regionwide -Buses serving Express Routes on HOV system	Preventive Maintenance - FY2010 5309-FGM Funds	2012		11.7A.00	2010	5309-FGM	$ -	$ 233,042	$ 58,261	$ 291,303	Admin Mod: Modify funds for 2010 preventive maintenance by increasing the federal amount from $32,702 to $233,042.	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMT12-104T	METRO Rail	Phoenix, Mesa, Tempe - Light Rail	Preventive Maintenance - FY2011 5309-FGM Funds	2012		11.7A.00	2011	5309-FGM	$ -	$ 878,425	$ 219,606	$ 1,098,031	Amend: Add new project	The new project is considered exempt under the category "Operating assistance to transit agencies." The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR11-104T	Valley Metro Rail	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 141,428	$ 565,712	$ -	$ 707,140	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMT11-709T	Valley Metro/RPTA	Regionwide: Fixed Route	Preventive Maintenance - 2011 5307 Funds	2012		11.7A.00	2011	5307	$ 695,260	$ 2,781,041	$ -	$ 3,476,301	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
GLN12-100T	Glendale	Glendale: Citywide Paratransit & GUS	Preventive Maintenance 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 3,148	$ 52,088	$ -	$ 55,236	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PEO12-100T	Peoria	Peoria: Citywide Paratransit	Preventive maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 1,299	$ 21,497	$ -	$ 22,796	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
PHX12-104T	Phoenix	Regionwide	Preventive maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 122,428	$ 2,025,433	$ -	$ 2,147,861	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
SCT12-102T	Scottsdale	Scottsdale: Fixed Route	Preventivt maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 2,499	$ 41,340	$ -	$ 43,839	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
SUR12-100T	Surprise	Surprise: Citywide Paratransit	Preventive maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 475	$ 7,854	$ -	$ 8,329	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
TMP12-100T	Tempe	Tempe: Fixed Route	Preventive Maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 42,254	$ 699,051	$ -	$ 741,305	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
VMR12-106T	Valley Metro Rail	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance - 2009 & 2011 STP funds	2012		11.7A.00	2011	STP-Flex	$ 13,979	$ 231,262	$ -	$ 245,241	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMT12-102T	Valley Metro/RPTA	Regionwide: Fixed Route	Preventive Maintenance - 2009 & 2011 STP Funds	2012		11.7A.00	2011	STP-Flex	$ 50,675	$ 838,365	$ -	$ 889,040	Admin Mod: Increase funding	A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-920T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2012	**3.1**	14.01.10	2012	5309 SS	$ -	$ 6,296,000	$ 4,865,998	$ 11,161,998	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-921T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2012	-	14.02.20	2012	5309 SS	$ -	$ 333,000	$ 257,366	$ 590,366	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-922T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2012	-	14.04.40	2012	5309 SS	$ -	$ 12,243,000	$ 9,462,265	$ 21,705,265	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2012		14.05.50	2012	5309 SS	$ -	$ -	$ -	$ -	Amend: Add project, grant application: AZ-03-0066. Will be amended when add'l funding is awarded.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR11-828TR2	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Imrpovements	2012	**3.1**	14.06.60	2012	5309 SS	$ -	$ 6,418,000	$ 4,960,289	$ 11,378,289	Amend: increase total budget $10,378,289 (increase fed $5,918,000, increase regional $4,460,289). Change name, and ALI. Change year from 2011 to 2012. Included in grant application: AZ-03-0066.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2012	n/a	14.08.80	2012	5309 SS	$ -	$ 4,748,000	$ 3,669,593	$ 8,417,593	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2012	n/a	14.09.90	2012	5309 SS	$ -	$ 3,692,000	$ 2,853,441	$ 6,545,441	Amend: Add project, grant application: AZ-03-0066. Total Small Starts prjt budget $132,965,354.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-912T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2012	n/a	14.10.10	2012	5309 SS	$ -	$ 1,751,000	$ 1,353,298	$ 3,104,298	Amend: increase total budget $3,104,298 (increase fed $841,777, increase regional $1,353,298). Change name, and ALI. Included in grant application: AZ-03-0066.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
VMR12-841T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2013	3.1	14.01.10	2013	5309 SS	$ -	$ 6,554,647	$ 5,065,899	$ 11,620,546	Amend: increase total budget $2,820,546 (increase fed $2,154,647, and increase regional $665,899). Change name, and ALI.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR13-936T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2013		14.02.20	2013	5309 SS	$ -	$ 1,594,159	$ 1,232,080	$ 2,826,239	Amend: decrease total budget $25,348,761 (decrease fed $18,405,841, and decrease regional $6,942,920). Change name, and ALI.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-918T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2013		14.04.40	2013	5309 SS	$ -	$ 1,644,207	$ 1,270,761	$ 2,914,968	Amend: decrease total budget $199,478 (increase fed $86,984, and decrease regional $286,462). Change name, and ALI.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR13-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2013		14.05.50	2013	5309 SS	$ -	$ 4,562,841	$ 3,526,489	$ 8,089,330	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR12-842T	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Imrpovements	2013	3.1	14.06.60	2013	5309 SS	$ -	$ -	$ -	$ -	Amend: Reduce budget (fed $2,250,000, Regional $2,250,000) to zero for 2013. Change name, and ALI.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR13-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2013		14.08.80	2013	5309 SS	$ -	$ 3,181,095	$ 2,458,577	$ 5,639,672	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR13-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2013		14.09.90	2013	5309 SS	$ -	$ 1,648,257	$ 1,273,891	$ 2,922,148	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR13-927T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2013		14.10.10	2013	5309 SS	$ -	$ 814,794	$ 629,731	$ 1,444,525	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-102T	VMR	Central Mesa LightRail	Sm Starts: Guideway & Track Elements	2014	3.1	14.01.10	2014	5309 SS	$ -	$ 1,935,778	$ 1,496,107	$ 3,431,885	Amend: decrease total budget $37,568,115 (decrease fed $15,064,222, and decrease regional $22,503,893). Change name, and ALI.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

TIP #	Agency	Project Location	Project Description	Fiscal Year	Length	A.L.I.	Year of Fund	Fund Type	Local Cost	Federal Cost	Regional Cost	Total Cost	Requested Change	Conformity Assessment
VMR15-102T	VMR	Central Mesa LightRail	Sm Starts: Stations, Stops, Terminals, Intermodal	2014		14.02.20	2014	5309 SS	$ -	$ 1,595,150	$ 1,232,846	$ 2,827,996	Amend: decrease total budget $41,872,004 (decrease fed $17,404,850, decrease regional $24,467,154). Change name, and ALI. Advance year from 2015 to 2014.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-922T	VMR	Central Mesa LightRail	Sm Starts: Sitework & Special Conditions	2014		14.04.40	2014	5309 SS	$ -	$ -	$ -	$ -	Amend: Add project, Federal PCGA approval est. June 2012. Will be amended when add'l funding is awarded.	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-923T	VMR	Central Mesa LightRail	Sm Starts: Systems	2014		14.05.50	2014	5309 SS	$ -	$ 9,264,529	$ 7,160,290	$ 16,424,819	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-924T	VMR	Central Mesa LightRail	Sm Starts: ROW, Land, Existing Imrpovements	2014	3.1	14.06.60	2014	5309 SS	$ -	$ -	$ -	$ -	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-928T	VMR	Central Mesa LightRail	Sm Starts: Professional Services	2014		14.08.80	2014	5309 SS	$ -	$ 4,290,708	$ 3,316,166	$ 7,606,874	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-926T	VMR	Central Mesa LightRail	Sm Starts: Unallocated Contingency	2014		14.09.90	2014	5309 SS	$ -	$ 1,650,923	$ 1,275,951	$ 2,926,874	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
VMR14-927T	VMR	Central Mesa LightRail	Sm Starts: Finance Charges	2014		14.10.10	2014	5309 SS	$ -	$ 781,910	$ 604,316	$ 1,386,226	Amend: Add project, Federal PCGA approval est. June 2012	Central Mesa light rail project is in the conforming TIP and Regional Transportation Plan 2010 Update. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Chandler	2008	2012	CHN08-107CZ	Price Rd: Santan to Germann	Reimbursement for advance construction of roadway widening	RARF	$ -	$ -	$ 102,190	$ 5,123,598	RARF	$ 2,880,748	Amend. Decreased regional reimbursement in the TIP due to an administrative error.	A minor project revision is needed to decrease reimbursement amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2010	2012	GLB12-107ADZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Design roadway widening	Bonds	$ -	$ -	$ 907,658	$ 907,658	RARF	$ 635,361	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to ROW.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2011	2012	GLB12-107ADZ2	Queen Creek Rd: Val Vista Dr to Higley Rd	Design roadway widening	Bonds	$ -	$ -	$ 907,658	$ 907,658	RARF	$ 635,361	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to ROW.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2010	2012	GLB13-107ARWZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Acquisition of right-of-way for roadway widening	Bonds	$ -	$ -	$ 33,567	$ 33,567	RARF	$ 23,497	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to Construction.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2011	2013	GLB13-107ARWZ2	Queen Creek Rd: Val Vista Dr to Higley Rd	Acquisition of right-of-way for roadway widening	Bonds	$ -	$ -	$ 1,520,292	$ 1,520,292	RARF	$ 1,064,205	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to Construction.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Gilbert	2011	2013	GLB13-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	Bonds	$ -	$ -	$ 18,768	$ 18,768	RARF	$ 13,137	Amend. New line item in the TIP. FY 2013 regional funds reallocated from ROW to Construction.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2011	2014	GLB14-107ACZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	Bonds	$ -	$ -	$ 7,823,044	$ 7,823,044	RARF	$ 5,476,131	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to project savings.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2012	2015	GLB12-107CZ	Queen Creek Rd: Val Vista Dr to Higley Rd	Construct roadway widening	Bonds	$ -	$ -	$ 4,536,637	$ 4,536,637	RARF	$ 3,175,646	Amend. Decreased total cost and regional reimbursement. Difference in regional funds moved to project savings.	A minor project revision is needed to decrease project amount. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Maricopa County	2013	2013	MMA13-118RWZ	Northern Parkway: Dysart to 111th	Acquisition of right-of-way for bridge construction and roadway widening	STP-MAG	$ 1,681,087	$ -	$ 720,466	$ 2,401,553	STP-MAG	$ 1,681,087	Amend. Consolidated two previous TIP line items.	A minor project revision is needed to consolidate project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Maricopa County	2012	2016	MMA12-928	Northern Parkway: Sarival Overpass	Construct roadway widening	STP-MAG	$ -	$ -	$ 3,576,152	$ 3,576,152	STP-MAG	$ 2,503,307	Amend. Delete line item from the TIP and ALCP. Work being done as part of another phase of project in the TIP.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Maricopa County	2013	2016	MMA15-109CZ	Northern Parkway: Sarival Overpass	Construct roadway widening	STP-MAG	$ -	$ -	$ 966,670	$ 966,670	STP-MAG	$ 676,669	Amend. Delete line item from the TIP and ALCP. Work being done as part of another phase of project in the TIP.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Maricopa County	2015	2016	MMA15-112CZ	Northern Parkway: Northern Avenue at Loop 101	Construct roadway widening and overpass	STP-MAG	$ 1,123,232	$ -	$ 481,385	$ 1,604,617	STP-MAG	$ 1,123,232	Amend. Decreased regional reimbursement.	A minor project revision is needed to decrease regional reimbursement. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Maricopa County	2015	2017	MMA15-112CZ2	Northern Parkway: Northern Avenue at Loop 101	Construct roadway widening and overpass	HURF	$ -	$ -	$ 5,549,846	$ 5,549,846	STP-MAG	$ 3,884,892	Amend. Increased regional reimbursement.	A minor project revision is needed to increase regional reimbursement. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2007	2012	MES12-118RZ	Southern Ave at Stapley Dr	Reimbursement for advance pre-design of intersection improvements	RARF	$ -	$ 121,756	$ -	$ 121,756	RARF	$ 121,756	Amend. Delete line item from the TIP and ALCP. No additional pre-design to be done. Regional funds reallocated to another work phase.	A minor project revision is needed to delete project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2011	2012	MES11-016DZ3	Southern Ave at Stapley Dr	Design intersection improvement	RARF	$ -	$ 256,911	$ 110,105	$ 367,015	RARF	$ 256,911	Amend. Regional funds split across two years. Work to continue in FY2012.	A minor project revision is needed to add new FY 2012 line item for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Mesa	2012	2012	MES12-016DZ	Southern Ave at Stapley Dr	Design intersection improvement	RARF	$ -	$ 256,911	$ 110,105	$ 367,015	RARF	$ 256,911	Amend. Add new line item to the TIP. Work continued in FY2012	A minor project revision is needed to add new reimbursement line item for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2013	2013	MES13-118CZ	Southern Ave at Stapley Dr	Construct intersection improvement	HSIP	$ 6,697,212	$ -	$ 381,741	$ 7,078,953	HSIP	$ 6,697,212	Amend. Changed regional funds to local funds.	A minor project revision is needed to adjust funding sources for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2013	2013	MES13-118RZ	Southern Ave at Stapley Dr	Reimbursement for construction of intersection improvement	RARF	$ -	$ 1,966,712	$ -	$ 1,966,712	RARF	$ 1,966,712	Amend. Add new line item to the TIP. Reimbursement.	A minor project revision is needed to add new reimbursement line item for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2013	2014	MES13-118CZ2	Southern Ave at Stapley Dr	Construct intersection improvement	RARF	$ -	$ 1,978,186	$ -	$ 1,978,186	RARF	$ 1,978,186	Amend. Deleted local funds. HSIP funds from MES13-118CZ are the local match.	A minor project revision is needed to adjust funding sources for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Mesa	2013	2013	MES14-117CZ	Southern Ave at Country Club Dr	Construct intersection improvement	CMAQ	$ 910,000	$ -	$ -	$ 910,000	RARF	$ -	Admin: Project has multiple Federal funding sources: Move HSIP $ 3,789,895 and match 229,081, to new project MES14-117CZ2. Move RARF to new project number MES15-117RZ. Keep CMAQ $910,000.	A minor project revision is needed to adjust funding sources for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2013	2013	MES14-117CZ2	Southern Ave at Country Club Dr	Construct intersection improvement	HSIP	$ 3,789,895	$ -	$ 229,081	$ 4,018,976	RARF	$ -	Amend: Add new line item to the TIP. Funding split from MES14-117CZ move HSIP $ 3,789,895 and match 229,081 , delete CMAQ $910,000 and RARF $160,357.	A minor project revision is needed to adjust funding sources for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2015	2015	MES15-117RZ	Southern Ave at Country Club Dr	Reimbursement for construction of intersection improvement	RARF	$ -	$ 160,357	$ -	$ 160,357	RARF	$ 160,357	Amend. Add new line item to the TIP. Funding split from MES14-117CZ.	A minor project revision is needed to adjust funding sources for project. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Work Year	Reimb. Year	TIPIDN	Location	Work	Funding	Federal	Regional	Local	Total	Reimb Fund Type	Reimb. Amount	Note	Conformity Assessment
Chandler	2007	2012	NONE	Price Rd: Santan to Germann	Acquisition of right-of-way for roadway widening	RARF	$ -	$ -	$ 102,190	$ 102,190	RARF	$ 71,533	Amend. Delete work phase from the ALCP. Regional funds allocated to construction.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Gilbert	2015	2015	NONE	Queen Creek Rd: Val Vista Dr to Higley Rd	Project savings from roadway widening	RARF	$ -	$ 2,300,485	$ -	$ 2,300,485	RARF	$ 2,300,485	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2014	2014	NONE	Southern Ave at Stapley Dr	Project savings for arterial capacity improvement	RARF	$ -	$ 2,495,664	$ -	$ 2,495,664	RARF	$ 2,495,664	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2015	2015	NONE	Southern Ave at Stapley Dr	Project savings for arterial capacity improvement	RARF	$ -	$ 4,473,850	$ -	$ 4,473,850	RARF	$ 4,473,850	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Mesa	2015	2015	NONE	Southern Ave at Country Club Dr	Project savings from roadway widening	RARF	$ -	$ 3,605,458	$ -	$ 3,605,458	RARF	$ 3,605,458	Amend. Add project savings line to the ALCP. Regional funds reallocated from reduced project costs.	A minor project revision is needed to reallocate project funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request	Conformity Assessment
Phoenix	2013	PHX13-107T	Regionwide	Purchase bus: standard 40 foot - 12 replace	11.12.01	CMAQ	$ 7,120,348			$ 7,120,348	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Phoenix	2013	PHX13-902T	Regionwide	Purchase bus: < 30 foot - 35 replace (dial-a-ride)	11.12.04	CMAQ	$ 3,260,635			$ 3,260,635	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Scottsdale	2013	SCT13-901T	Regionwide	Purchase bus: standard 40 foot - 7 replace	11.12.01	CMAQ	$ 3,886,802			$ 3,886,802	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Peoria	2014	PEO11-805T	Regionwide	Purchase bus: < 30 foot - 6 replace (dial-a-ride)	11.12.04	CMAQ	$ 575,733			$ 575,733	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Phoenix	2014	PHX14-104T	Regionwide	Purchase bus: < 30 foot - 35 replace (dial-a-ride)	11.12.04	CMAQ	$ 3,358,460			$ 3,358,460	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Phoenix	2014	PHX14-105T	Regionwide	Purchase bus: standard 40 foot - 8 replace	11.12.01	CMAQ	$ 4,746,898			$ 4,746,898	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro/ RPTA	2014	VMT14-103T	Regionwide	Purchase bus: < 30 foot - 14 replace (dial-a-ride)	11.12.04	CMAQ	$ 1,343,384			$ 1,343,384	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro/ RPTA	2014	VMT14-106T	Regionwide	Purchase vanpools: 25 expand	11.13.15	CMAQ	$ 950,200			$ 950,200	Admin Mod: Change from 5307 to 100% CMAQ Funding	A minor project revision is needed to change the funding source. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request	Conformity Assessment
Glendale	2013	GLN13-901T	Glendale: Citywide Paratransit & GUS	Preventive Maintenance	11.12.40	5307	$ 209,369	$ -	$ 52,342	$ 261,711	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Peoria	2013	PEO13-901T	Peoria: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	$ 64,786	$ -	$ 16,197	$ 80,983	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Phoenix	2013	PHX13-901T	Regionwide	Preventive Maintenance	11.7A.00	5307	$ 12,039,195	$ -	$ 3,009,799	$ 15,048,994	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Scottsdale	2013	SCT13-101T	Scottsdale: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 129,542	$ -	$ 32,386	$ 161,928	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Surprise	2013	SUR13-901T	Surprise: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	$ 25,782	$ -	$ 6,446	$ 32,228	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Tempe	2013	TMP13-901T	Tempe: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 2,534,066	$ -	$ 633,517	$ 3,167,583	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro Rail	2013	VMR13-105T	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance	11.7A.00	5307	$ 1,819,672	$ -	$ 454,918	$ 2,274,590	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro/RPTA	2013	VMT13-902T	Regionwide: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 3,589,562	$ -	$ 897,391	$ 4,486,953	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agency	Year	TIPIDN	Location	Work	ALI	Funding	Federal	Regional	Local	Total	Request	Conformity Assessment
Glendale	2014	GLN14-101T	Glendale: Citywide Paratransit & GUS	Preventive Maintenance	11.7A.00	5307	$ 204,303	$ -	$ 51,076	$ 255,379	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Peoria	2014	PEO14-101T	Peoria: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	$ 62,023	$ -	$ 15,506	$ 77,529	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Phoenix	2014	PHX14-103T	Regionwide	Preventive Maintenance	11.7A.00	5307	$ 12,298,649	$ -	$ 3,074,662	$ 15,373,311	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Scottsdale	2014	SCT14-101T	Scottsdale: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 152,811	$ -	$ 38,203	$ 191,014	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Surprise	2014	SUR14-101T	Surprise: Citywide Paratransit	Preventive Maintenance	11.7A.00	5307	$ 28,504	$ -	$ 7,126	$ 35,630	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Tempe	2014	TMP14-101T	Tempe: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 2,925,470	$ -	$ 731,368	$ 3,656,838	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro Rail	2014	VMR14-110T	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Preventive Maintenance	11.7A.00	5307	$ 2,146,533	$ -	$ 536,633	$ 2,683,166	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.
Valley Metro/RPTA	2014	VMT14-101T	Regionwide: Fixed Route	Preventive Maintenance	11.7A.00	5307	$ 3,979,663	$ -	$ 994,916	$ 4,974,579	Admin Mod: Increase federal funding	A minor project revision is needed to increase funding. The conformity status of the TIP and Regional Transportation Plan 2010 Update would remain unchanged.

Agenda Item #5H

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

DATE:
May 1, 2012

SUBJECT:
2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

SUMMARY:
In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency (EPA) in December 2007. In January 2011, the plan was voluntarily withdrawn to address technical approvability issues identified by EPA and include new information. While the plan was withdrawn, the measures in the plan continue to be implemented to reduce PM-10. The plan included a broad range of commitments to implement measures from the State, Maricopa County, and the twenty-three local governments in the PM-10 nonattainment area. Collectively, the plan included fifty-three committed measures that began implementation in 2008.

On May 23, 2007, the MAG Regional Council approved additional items for the Suggested List of Measures to Reduce PM-10 Particulate Matter. One of these items was that each year, MAG would issue a report on the status of the implementation of the committed measures for this region by the cities, towns, Maricopa County, and the State. The report would be made available to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality, and the Environmental Protection Agency.

A report has been prepared that provides the implementation status of the committed measures for calendar year 2010. The report also incorporates the results from 2008 and 2009 in order to more accurately reflect the level of implementation of the committed measures in the region. In general, the combined implementation results for 2008, 2009, and 2010 meet or exceed the commitments made to implement a majority of the measures in the MAG 2007 Five Percent Plan for PM-10. For example, Maricopa County and the local governments paved or stabilized 181 miles of public dirt roads in 2008, 2009, and 2010 which is 77 miles more than the commitments in the Five Percent Plan.

PUBLIC INPUT:
No public comments were received at the April 26, 2012 meeting of the MAG Air Quality Technical Advisory Committee.

PROS & CONS:
PROS: This report documents the progress that has been made in implementing the fifty-three measures in the MAG 2007 Five Percent Plan for PM-10 in 2008, 2009, and 2010.

CONS: Some measures in the Five Percent Plan were not fully implemented until 2009 or 2010.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: None

POLICY: It is important that the measures in the Five Percent Plan be implemented as quickly as possible so that the PM-10 standard can be attained at the monitors. Three consecutive years of clean data at all PM-10 monitors in the nonattainment area are required in order to attain the federal standard.

ACTION NEEDED:

Recommend forwarding the 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 in the Maricopa County Nonattainment Area to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality, and the Environmental Protection Agency.

PRIOR COMMITTEE ACTIONS:

Air Quality Technical Advisory Committee: On April 26, 2012, the MAG Air Quality Technical Advisory Committee unanimously recommended forwarding the 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 in the Maricopa County Nonattainment Area to the Governor's Office, Arizona Legislature, Arizona Department of Environmental Quality and the Environmental Protection Agency.

MEMBERS ATTENDING

Oddvar Tveit, Tempe, Chairman
Elizabeth Biggins-Ramer, Buckeye, Vice Chair
Sue McDermott for Kristen Sexton, Avondale
Jon Sherrill for Jim Weiss, Chandler
Jamie McCullough, El Mirage
Jessica Koberna for Kurt Sharp, Gilbert
Doug Kukino, Glendale
Cato Esquivel, Goodyear
* Scott Bouchie, Mesa
William Mattingly, Peoria
Philip McNeely, Phoenix
Tim Conner, Scottsdale
Antonio DeLaCruz, Surprise
Mark Hannah, Youngtown
Ramona Simpson, Queen Creek
* American Lung Association of Arizona
Wendy Crites for Kristin Watt, Salt River Project
* Brian O'Donnell, Southwest Gas
Mark Hajduk, Arizona Public Service
Gina Grey, Western States Petroleum Assn.
Dawn M. Coomer, Valley Metro/RPTA
* Dave Berry, Arizona Motor Transport Assn.
Jeannette Fish, Maricopa County Farm Bureau
Steve Trussell, Arizona Rock Products Association
Amy Bratt, Greater Phoenix Chamber of Commerce
Amanda McGennis, Associated General Contractors
Spencer Kamps, Homebuilders Association of Central Arizona
Mannie Carpenter, Valley Forward
Kai Umeda, University of Arizona Cooperative Extension
Beverly Chenausky, Arizona Department of Transportation
Eric Massey for Diane Arnst, Arizona Department of Environmental Quality
* Environmental Protection Agency
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2010 IMPLEMENTATION STATUS OF COMMITTED MEASURES IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

APRIL 2012

MARICOPA ASSOCIATION of GOVERNMENTS

2010 IMPLEMENTATION STATUS OF COMMITTED MEASURES IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

The MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area was submitted to the Environmental Protection Agency (EPA) in December 2007. In order to reduce PM-10, a broad range of commitments to implement measures were received from the State, Maricopa County, and the twenty-three local governments in the PM-10 nonattainment area. The plan included fifty-three committed control measures which began implementation in 2008. The Maricopa Association of Governments (MAG) is tracking the implementation status of the measures in the plan.

In May 2011, MAG issued a report summarizing the implementation status of the committed measures for calendar year 2009. The following 2010 implementation status report also incorporates the results from 2008 and 2009 in order to more accurately reflect the level of implementation of the committed measures in the region. Implementation of the committed measures in the Five Percent Plan were being phased in over a three-year period (2008, 2009, 2010).

Tracking forms were prepared to assist the implementing entities in reporting the progress made to implement the measures for calendar year 2010. The 2010 tracking forms were sent to MAG member agencies on August 10, 2011. All completed 2010 tracking forms were received by December 12, 2011. MAG has summarized the combined 2008, 2009 and 2010 status of the implementation of the committed measures. In general, the combined implementation results for 2008, 2009, and 2010 meet or exceed the commitments made to implement a majority of the measures in the MAG Five Percent Plan for PM-10. Table 1 summarizes the measures that exceeded their commitments. Table 2 lists the implementation status of all of the committed measures in the Five Percent Plan for PM-10.

Figure 1 illustrates the PM-10 emission reductions in 2010 for the committed control measures that were quantified for numeric credit to meet the five percent per year target and demonstrate attainment. Figure 2 provides the PM-10 emission reductions in 2010 for the committed contingency measures that were quantified for numeric credit. In some cases, the emission reductions represent the impact of multiple, reinforcing measures.

BACKGROUND INFORMATION

In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency by December 31, 2007. The plan was required to reduce PM-10 emissions by five percent per year until the standard is met. In order to attain the standard by December 31, 2010, the region needed three years of clean data at the monitors (2008, 2009, 2010). It is important to attain the PM-10 standard as quickly as possible or additional years of five percent reductions may need to be added to the plan. The Executive Summary for the MAG 2007 Five Percent Plan for PM-10 is attached.

On May 23, 2007, the MAG Regional Council approved additional items for the Suggested List of Measures to Reduce PM-10. One of the items was that each year, MAG would issue a report on the status of the implementation of the committed measures for this region by the cities, towns, Maricopa County and the State. The report would be made available to the Governor's Office, Legislature, Arizona Department of Environmental Quality and the Environmental Protection Agency. This report provides the combined implementation status of committed measures for calendar years 2008, 2009, and 2010.

The forms for tracking the implementation of committed measures were developed with input from the implementing entities. On September 15, 2011, MAG conducted a workshop to discuss the tracking of the measures for calendar year 2010.

Monitored exceedances of the 24-hour PM-10 standard have declined since 2006, as shown in Figure 3. There can be no more than three daily exceedances at any PM-10 monitor over a three year period in order for the standard to be met. The measures described in this tracking report will be important in reducing PM-10 emissions to enable the region to meet the standard.

TABLE 1
MEASURES THAT EXCEEDED 2008, 2009, and 2010 COMMITMENTS
IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10

COMMITTED MEASURE	COMMITMENT	ACTUAL	EXCEEDED COMMITMENT
26. Pave or stabilize existing public dirt roads and alleys.			
• Pave public dirt roads.	28.63 miles	67.12 miles	38.49 miles
• Stabilize public dirt roads.	75.49 miles	114.22 miles	38.73 miles
• Pave dirt alleys.	63.89 miles	70.39 miles	6.50 miles
• Stabilize dirt alleys.	308.85 miles	394.52 miles	85.67 miles
27. Limit speeds to 15 miles per hour on high traffic dirt roads.			
• Post 15 mph speed limit signs.	24.36 miles	36.86 miles	12.50 miles
28. Pave or stabilize unpaved shoulders.			
• Pave unpaved shoulders.	95.87 curb miles	253.20 curb miles	157.33 curb miles
• Stabilize unpaved shoulders.	296.64 curb miles	706.10 curb miles	409.46 curb miles
53. Repave or overlay paved roads with rubberized asphalt.			
• Repave highway with rubberized asphalt.	5.21 miles	13.03 miles	7.82 miles
45. Prohibit use of leaf blowers on unstabilized surfaces.	Maricopa County	Maricopa County 1 local government	1 local government

TABLE 2
2008, 2009, AND 2010 IMPLEMENTATION STATUS OF COMMITTED MEASURES IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Fugitive Dust Control Rules		
1. Public education and outreach with assistance from local governments. Quantified for numeric credit as a contingency measure.	826 Articles (internal and public media, newsletters, etc.) were published. 460 Media / Events (specific air events, booths on air quality at other events, media, etc.) were held. Over 178,336 visits to the Maricopa County Air Quality Department (MCAQD) website; over 24,000 visits to the Air Quality news page; 180,221 total page views on www.CleanAirMakeMore.com. In addition to publishing articles and conducting events, Maricopa County and 14 local governments performed other types of public education and outreach activities.	County, State, local governments
2. Extensive Dust Control Training Program. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Dust Control training program required by Senate Bill (SB) 1552. (A.R.S. § 49-474.05 A. & B.) In March 2008, Maricopa County adopted Rule 310, Rule 280, and Rule 316 revisions in regard to dust control training. In 2008, Maricopa County hired 2 dust control compliance and 2 administrative support personnel to coordinate and conduct the training program. In 2009, two inspectors and two administrative staff worked part time to coordinate and conduct the Rule 310 and Rule 316 Dust Control Training programs. In 2010, two inspectors worked part time managing the Rule 310 Third Party Training program, and a third inspector worked part time managing the Rule 316 Dust Control Training program. During November & December, one full time employee was dedicated to transitioning the Rule 310 training program from third party to in-house. Additionally, 2 administrative staff worked part time on the Rule 310 and Rule 316 Dust Control Training programs. 15,443 individuals completed County-certified dust control training classes. This includes training conducted by certified trainers in local government. One local government has provided all applicable workers with dust control training. In one jurisdiction, 63 staff received training and certificates for the Maricopa County Basic Dust Control Rule 310 and 1 staff member received the Comprehensive Dust Control Rule 310 training and certificate. In one federal agency, 2 staff members completed training to become certified dust control coordinators.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
3. Dust Managers required at construction sites of 50 acres and greater. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Dust managers required by SB 1552. (A.R.S. § 49-474.05 A. & E.) In March 2008, Maricopa County adopted Rule 310 and Rule 316 revisions in regard to dust managers.	County
4. Dedicated enforcement coordinator for unpaved roads, unpaved parking, and vacant lots.	Maricopa County assigned a supervisor to oversee the vacant lot program.	County
5. Establish a certification program for Dust Free Developments to serve as an industry standard. Quantified for numeric credit as a contingency measure.	SB 1552 required ADEQ to establish a certification program. (A.R.S. § 49-457.02 A.) This measure was not implemented because ADEQ delayed the certification program indefinitely due to budgetary constraints. In 2010, ADEQ refocused resources on control measures that result in emissions reductions. Maricopa County will support ADEQ's efforts (when ADEQ's budgetary constraints are lifted) to develop a program to certify and publicize companies that routinely demonstrate exceptional efforts to reduce airborne dust. As the regulatory authority, Maricopa County will provide verifications of eligible companies as necessary to implement this program and as requested by ADEQ.	State, County
6. Better defined tarping requirements in Rule 310 to include enclosure of the bed.	In March 2008, Maricopa County adopted Rule 310 and Rule 310.01 revisions in regard to tarping. Maricopa County changed the requirements regarding loading haul trucks (i.e., load all haul trucks such that at no time shall the highest point of the bulk material be higher than the sides, front, and back of the cargo container area).	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
7. Conduct mobile monitoring to measure PM-10 and issue NOVs.	In December 2008, Maricopa County filled 1 chemical engineering position for the mobile monitoring program. In February 2009, the mobile monitoring van was delivered to Maricopa County. Two deployments in 2009: (1) Fisher Sand and Gravel on 28th Street, and (2) Gas separating plant near Olive Avenue and El Mirage Road. Two deployments in 2010: (1) 5% Monitoring Project, and (2) Characterization Study.	County
8. Conduct nighttime and weekend consistent inspections. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Although Maricopa County conducted nighttime and weekend inspections during 2008, the program was not fully implemented, as the department was focused on hiring and training additional staff. Nighttime and weekend inspections conducted in 2008 included complaint inspections and targeted inspections of specific industries that operate at night and on weekends. In 2009, Maricopa County initiated a pilot program to enhance the existing nighttime and weekend inspection program. The pilot program extended weekday inspection hours to include 4:00 to 6:00 a.m. and 5:00 to 8:00 p.m. and weekends from 6:00 a.m. to 2:30 p.m.. Following the pilot program, the County initiated a cross-training program for all inspectors to better utilize their abilities to deal with all circumstances and source types they may encounter. The After Hours program for 2010 consisted of as needed nighttime and weekend responses to complaints or identified problems for a portion of the year. The remainder of 2010 included staffing patrol and inspection activities outside of the standard schedule of weekday inspections to test the effectiveness of such a program.	County
9. Increase consistent inspection frequency for permitted sources. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	In March 2008, Maricopa County adopted Rule 280 revisions in regard to inspection frequency. In 2008, Maricopa County hired 55 staff: 32 inspectors, 13 administrative and permit technicians, 6 inspector supervisors, and 4 administrative supervisors for the Dust Control Compliance Program. Some staff reductions/reassignments occurred in 2009 due to the economic downturn and reduced workload. As of December 31, 2009, the MCAQD had 55 staff in the Dust Control Section (44 inspectors, 4 administrative, 6 supervisors, 1 manager).	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
9. Increase consistent inspection frequency for permitted sources - CONTINUED.	For 2010, the MCAQD had 47 staff that could generally be considered the Dust Control Section (36.5 inspectors, 4.5 administrative, 5 supervisors, 1 manager). The MCAQD began implementation of a universal inspector program in October of 2009 wherein all inspectors are cross trained to conduct inspections on all source types. By the end of 2010, all inspectors have been cross trained, therefore, MCAQD no longer has staff dedicated to inspect only one specific source type such as dust or non-title V sources. Maricopa County issued 9,305 permits for dust control sources (Rule 310). Maricopa County conducted 39,433 inspections of dust control permitted sources (Rule 310). In 2008, Maricopa County hired 5 inspectors for nonmetallic mineral processing facilities (Rule 316). These 5 inspector positions are included in the 32 inspector positions mentioned above. The MCAQD's universal inspector program as explained above in the "Staffing for Dust Control Compliance Program (Rule 310)" now encompasses Rule 316 sources as well. Maricopa County issued 412 permits for nonmetallic processing facilities (Rule 316). Maricopa County conducted 4,325 inspections of nonmetallic mineral processing facilities (Rule 316).	
10. Increase number of proactive consistent inspections in areas of highest PM-10 emissions densities. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Maricopa County conducted monitor surveillance on 16 days.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
11. Notify violators more rapidly to promote immediate compliance.	Maricopa County Air Quality Department (MCAQD) continued the standard practice of dust compliance inspectors who observe potential violations making reasonable efforts to inform a person on-site or call the permit holder so that measures can be taken to prevent, reduce, or mitigate dust generation before a violation occurs.	County
12. Provide timely notification regarding high pollution days.	Maricopa County sent 2,227,476 text alerts and email messages to subscribers for high pollution advisories (HPAs) and health watches. Maricopa County posted news articles, related to particulate matter HPAs and health watches, on its website. Maricopa County website visits in 2008: 20,727 unique visitors; average pages visited = 3.24; average time spent = 2.22 minutes. Maricopa County website visits in 2009: 22,597 unique visitors; average pages visited = 2.22; average time spent = 1.18 minutes. Maricopa County distributed 16 news releases in 2009 and 40 news releases in 2010 regarding HPAs and health watches.	County
13. Develop a program for subcontractors.	Subcontractor program required by SB 1552. (A.R.S. § 49-474.06 A.) In March 2008, Maricopa County adopted Rule 200 and Rule 280 revisions in regard to the subcontractor registration program. In 2008, Maricopa County hired 4 permit technicians to administer the subcontractor registration program. These positions are included in the 55 positions noted in Committed Measure #9. In 2009 and 2010, the subcontractor registration program was administered part time by two Permit Technician staff working in the Permitting Division of the Air Quality Department. Maricopa County registered 9,417 subcontractors.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
14. Reduce dragout and trackout emissions from nonpermitted sources. Quantified for numeric credit as a contingency measure.	In March 2008, Maricopa County adopted Rule 310.01 revisions in regard to dragout and trackout. Maricopa County added the requirement to install a trackout control device to sections covering unpaved parking lots and off-site hauling of bulk materials by livestock operations. Also, in Rule 310.01, Maricopa County added the definitions of "trackout/carryout" and "trackout control device". In 2010, one jurisdiction issued a written notice of violation (NOV) for dirt, mud, and debris that was tracked onto a city right-of-way and issued one stop work order until a track-out device was rebuilt and a vehicle parking area was stabilized.	County
15. Cover loads/haul trucks in Apache Junction. Quantified for numeric credit as a contingency measure.	In early 2008, the City of Apache Junction adopted an ordinance to cover loads/haul trucks.	City of Apache Junction
16. Require dust coordinators at earthmoving sites of 5-50 acres. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Dust coordinator required by SB 1552. (A.R.S. § 49-474.05 A. & E.) In March 2008, Maricopa County adopted Rule 310 and Rule 316 revisions in regard to dust coordinators.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
36. **Require barriers in addition to Rule 310 stabilization requirements for construction where all activity has ceased, except for sites in compliance with storm water permits.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	In March 2008, Maricopa County adopted Rule 310 revisions in regard to barriers. Maricopa County revised long-term stabilization control measures to reduce the period of inactivity to 30 days and linked the stabilization by water control measure with the requirement for barriers.	County
37. **Reduce the tolerance of trackout to 25 feet before immediate cleanup is required for construction sites be placed in Maricopa County Rule 310.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	In March 2008, Maricopa County adopted Rule 310 revisions in regard to the trackout requirements by reducing the toleration of trackout to 25 feet before cleanup is required.	County
38. **No visible emissions across the property line be placed in Maricopa County Rule 310 and 310.01, and in local ordinances for nonpermitted sources appropriate.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	In March 2008, Maricopa County adopted Rule 310 and Rule 310.01 revisions in regard to visible emissions. One local government adopted an ordinance that restricts visible emissions from crossing property lines.	County, local governments
49. **Allow Peace Officer enforcement of load covering.**	SB 1552 amended existing state law to require that for the purpose of highway safety or air pollution prevention, a person shall not drive or move a vehicle on a highway unless the vehicle is constructed or loaded in a manner to prevent any of its load from dropping, sifting, leaking or otherwise escaping from the vehicle. (A.R.S. § 28-1098 A. - C.)	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Industry		
17. Fully implement Rule 316. Quantified for numeric credit as a contingency measure.	The Rule 316 litigation was settled on June 20, 2007. As a result, the June 8, 2005, version of Rule 316 was in place as of the settlement date. Maricopa County is enforcing the provision of Rule 316 for nonmetallic mineral processing sources of PM-10. In 2009, 37 of the 44 Dust Control Section inspectors had been fully trained to inspect Rule 316 sites. The MCAQD's universal inspector program, as explained in Committed Measure #9 "Staffing for Dust Control Compliance Program (Rule 310)", now encompasses Rule 316 sources as well.	County
39. Modeling cumulative impacts - The measure would need further definition by Maricopa County and the Arizona Department of Environmental Quality and be subject to input to ensure that unintended consequences for temporary uses are not created.	A draft Cumulative Modeling Policy was developed by the Maricopa County Air Quality Department and the Arizona Department of Environmental Quality in calendar year 2009. The draft policy was distributed for public review in February 2010. Next steps are being considered by the Maricopa County Air Quality Department. It is important to note that no emission reduction credit was quantified for this measure in the Five Percent Plan.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Nonroad Activities		
18. Ban or discourage use of leaf blowers on high pollution advisory days.	Program to ban or discourage leaf blowers required by SB 1552. (A.R.S. § 9-500.04 A.5.(a). and A.R.S. § 11-877 A.1.) Maricopa County and 23 local governments have implemented programs that restrict or prohibit the use of leaf blowers on high pollution advisory days.	County, local governments
19. Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations. Quantified for numeric credit as a contingency measure.	Ordinance to prohibit off-road vehicle use required by SB 1552. (A.R.S. § 9-500.27 A.- E. and A.R.S. § 49-457.03) In February 2008, Maricopa County adopted the P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County Ordinance. This ordinance was developed to address dust concerns raised by vehicle use and trespass on private and public property. It is intended to complement Maricopa County Rule 310.01, which focuses on property owners' responsibility to maintain soil stabilization. OHV issues within incorporated areas reflect similar complexities. Ordinance P-28 underwent revisions in 2010 to its penalty structure, which is intended to provide more flexibility in adjudicating cases. MCAQD is working toward developing a common knowledge base regarding frequent complaint areas and their access points, enforcement history, ongoing outreach efforts by police departments, Justice Court procedures, and database needs. In addition to responding to complainants' concerns, MCAQD has organized a group of inspectors to gather this type of information and begin making direct contacts in the field. MCAQD plans to identify heavy use areas and research parcel ownership, and then contact property owners for installation of control measures, "no trespass" signs, and obtain authority to cite trespassers without land owner's presence. This is currently being done in conjunction with MCAQD's existing vacant lot inspection program. The process for storing and retrieving such "authority documents" is being reviewed. Additional cooperative efforts are underway to incorporate private land use agreements, Designated Trail plans, and other historically-used access roads into ongoing efforts.	State, County, local governments

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
19. Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations - CONTINUED.	In 2009, MCAQD initiated efforts to develop a partnership with law enforcement agencies, not only to address the inspectors' limited authority on these contacts, but also to provide a consistent enforcement message to the public. Law enforcement agencies (Phoenix Police Department, Peoria Police Department, Maricopa County Flood Control District, and Maricopa County Sheriff's Office) have begun using this ordinance to initiate field contacts. MCAQD is laying groundwork for both internal and external processes, including coordinating inspector field contacts with law enforcement response. MCAQD is also familiarizing inspectors with fieldwork, contact skills, and safety, and working with the Justice Court system on administrative procedures. Maricopa County Sheriff's Office (MCSO) success within the court system is as yet undetermined. Arizona Game and Fish Department initiated actively enforcing OHV laws and an ongoing OHV educational program. MCAQD inspectors distribute off-road vehicle fact sheets in the field informally when contacts are made. Information is included in the Clean Air Make More Campaign. Inspectors are prepared to attend OHV-enthusiast events as the opportunity is available. County inspectors attended at least one off-road vehicle enthusiast event, partnering with Arizona State Trust Land staff to field questions from the public. County inspectors attended the AZGFD Expo in March 2009 and distributed off-road vehicle fact sheets. MCAQD indicated that high-use areas are generally located outside of city limits or on State Trust property; local police departments and MCSO have begun responding to some of these areas, supported by available funds from the Off-Highway Vehicle (OHV) Decal program (registration fees). MCAQD also indicated that funds from the OHV Decal program were being used by: (1) Maricopa Flood Control District to hire a deputy to enforce Maricopa County's P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County Ordinance, and (2) Arizona Game and Fish Department to hire two staff and train two more staff for enforcement of the P-28 ordinance.	

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
19. Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations - CONTINUED.	23 local governments have new or existing ordinances to prevent or discourage off-road vehicle use and restrict access to areas with high off-road vehicle use. ADEQ distributed 3,900 hard copies of "Nature Rules" map to OHV dealers and posted materials on the Arizona State Parks website (received 11,660 downloads/visits), Arizona State Land Department's website (received 6,251 visits), ADEQ's website (received 5,430 downloads/visits), and the Arizona Game and Fish Department website. Maricopa County, 17 local governments, and ADEQ, have conducted public education and outreach to discourage off-road vehicle use in the PM-10 nonattainment area. The Tonto National Forest included a segment on dust control education in its OHV training program. 9 jurisdictions with high off-road activity have restricted vehicle use by installing signs and/or physical barriers. One local government: (1) Stabilized 57 acres with hydroseed (2) Posted "No Trespassing" signs, installed berms, and/or stabilized 137 acres of vacant area, including two washes, with hydroseed, and (3) Stabilized 2.25 acres of open area next to a wash with decomposed granite and rip rap. Two local governments fenced 16.25 acres to prevent vehicle access. In 2008, Arizona State Parks installed one kiosk and two access gates; replaced 1 mile of fencing; provided outreach at 77 official events; and provided 3,100 public information contacts. In 2008, Arizona Game and Fish Department issued 27 citations for violations of the OHV law. The Arizona State Land Department (ASLD) spent $159,203 to implement the following control measures: installation of 1,037 linear feet of concrete barriers; installation of 7,352 linear feet of chain link fence; purchase of 300 "No Trespassing" signs; purchase and installation of two 10-foot gates; posting of 38 "Area Closed by Commissioners Orders" signs; posting of 2 "Closed for Soil Stabilization" signs; posting of 14 "No Trespassing" signs; and increased the presence of law enforcement.	

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
19. Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations - CONTINUED.	In 2009, ASLD posted 53 “No Trespassing” signs and 30 area closure signs. ASLD also installed 3,770 linear feet of chain link fence around closed areas. In 2009, the U.S. Forest Service installed three gates to limit unauthorized OHV access in the Tonto National Forest. In 2010, MCAQD's Clean Air Make More widget was added to ADEQ's and ASLD’s websites. Arizona Game and Fish (AZGF) and Arizona State Parks are working to add the widget to their websites. Arizona State Parks [http://azstateparks.com/ohv/] included links on its website to the OHV Ambassadors program, Where to Ride, and the new OHV decal program. ADEQ updated and clarified its map showing the Area A boundary and the "OHV use allowed" areas. In 2010, the U.S. Bureau of Land Management distributed OHV materials to 754 individuals at a total of 22 training programs and conducted 4 OHV outreach events. Maricopa County Air Quality Department conducted 11 OHV dust control presentations and trained 240 people. "Arizona State Land Department, Off-Highway Vehicle Recreation Fund and Travel Management Program Annual Reports, Fiscal Years 2009 - 2011" listed the following information: (1) Law Enforcement: An agreement with City of Peoria was extended in 2010 through 2013 and ASLD provided training and field books. ASLD began a 5 year agreement with the Maricopa County Sheriff’s Department and committed financial assistance and training for enforcement of off-highway vehicle laws, (2) Information and Education: ASLD provided a map on its website identifying routes within "Area A" that have been approved for motorized travel and (3) Outreach: ASLD participated in OHV Ambassador Training, AGFD's Outdoor EXPO, and National Forest Travel Management Plan public meetings.	

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
20. Provide incentives to retrofit nonroad diesel engines and encourage early replacements with advanced technologies.	In 2007, the Arizona Legislature adopted Senate Bill 1552 which included a voluntary diesel equipment retrofit program. (A.R.S. § 49-474.07 A. - D.) According to A.R.S. § 49-474.07 A., a County with a population of more than four hundred thousand persons shall operate and administer a voluntary diesel emissions retrofit program in the county for the purpose of reducing particulate emissions from diesel equipment. The program shall provide for real and quantifiable emissions reductions based on actual emissions reductions by an amount greater than that already required by applicable law, rule, permit or order and computed based on the percentage emissions reductions from the testing of the diesel retrofit equipment prescribed in Subsection C as applied to the rated emissions of the engine and using the standard operating hours of the equipment. Maricopa County Air Quality Department (MCAQD) has indicated that A.R.S. § 49-474.07 did not establish a fund to provide incentives to retrofit nonroad engines, but rather established provisions applicable to permitted stationary source diesel powered equipment. Under the provisions of ARS 49-474.07, the permittee may retain one-half of the particulate emissions reductions from retrofit of diesel equipment operated at the permitted site for purposes of receiving a permit modification or a new permit provision that allows for extended hours of operation for the permitted equipment. The provisions of ARS § 49-747.07 are undergoing legal review and analysis during the current statewide new source review rulemaking, and if implemented, will require revision of MCAQD's stationary source permitting program and applicable rules. However, this review and analysis has no bearing on the Five Percent Plan or on Committed Measure #20. It is important to note that no emission reduction credit was quantified for this measure in the Five Percent Plan.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
21. Ban leaf blowers from blowing debris into streets. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.5.(b)., A.R.S. § 11-877 A.2., and A.R.S. § 49-457.01 B.) In February 2008, Maricopa County adopted the P-25 Leaf Blower Restriction Ordinance to ban leaf blowers from blowing debris into streets in Maricopa County. In 2009, 17 of the 44 MCAQD's Dust Control Section Inspectors were trained to enforce the leaf blower ordinance. In addition, 23 local governments have new or existing ordinances to ban leaf blowers from blowing debris into streets. MCAQD's universal inspector program, as explained in Committed Measure #9 in the "Staffing for Dust Control Compliance Program (Rule 310)", now encompasses all sources.	County, local governments
22. Implement a leaf blower outreach program. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Leaf blower outreach program required by SB 1552. (A.R.S. § 49-457.01 D., E. and F.) ADEQ produced and distributed 8,000 hard copies of leaf blower fact sheets to six retail leaf blower outlets. In addition, retailers and equipment rental businesses throughout Area A were provided with electronic copies of ADEQ's 'Pointers on Operating a Leaf Blower' with the expectation they would print and distribute the handout at points of sale and rental. ADEQ distributed warning signs for posting on HPA days to leaf blower rental outlets. ADEQ authored an article about the unsafe use of leaf blowers that was published in the Arizona Landscape Contractors Association's (ALCA) Influence magazine. A public-awareness advertisement was published in the ALCA Influence and Southwest Horticulture magazines. ADEQ's leaf blower outreach materials, which were posted on the agency's website (www.azdeq.gov/environ/air/prevent/index.html), received a total of 14,980 visits. ADEQ adapted and posted a leaf blower training manual, provided by the Outdoor Power Equipment Institute, on ADEQ's website. Those materials received 2,884 downloads/visits. A number of cities and towns also conduct leaf blower outreach as part of the efforts reported in Committed Measure #1.	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
23. Ban ATV use on high pollution days. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	All terrain vehicle (ATV) ban on high pollution days required by SB 1552. (A.R.S. § 49-457.03) ADEQ distributed High Pollution Advisory (HPA) forecasts to subscribers and to the U.S. Forest Service, U.S. Bureau of Land Management, Arizona State Land Department, Arizona Game and Fish Department, Arizona State Parks Department, and the Maricopa County Air Quality Department. ADEQ also posted HPA forecasts and warnings on the agency's website and works with television broadcast stations to communicate HPA notices to the public. On February 27, 2009, Fox Motorsports filmed a half-hour program focused on off-highway vehicle (OHV) use and the 5% Plan requirements on High Pollution Advisory Days. Representatives of ADEQ, MCAQD, Arizona Game and Fish, Arizona State Lands, U.S. Bureau of Land Management and the Arizona Rock Products Association were filmed near the Hassayampa River for this program. Broadcast date has not yet been scheduled. ADEQ: “Law enforcement officers who are authorized under Title 28 will enforce this requirement. On Federal Lands, the Federal agency with jurisdiction enforces it”. In 2009, the police departments of Peoria and Phoenix issued a total of 132 warnings and 35 citations for violations of the OHV ban on PM-10 HPA days. In 2010, 31 students completed an online safety course provided by Arizona Game and Fish (AZGF). AZGF issued 40 OHV citations in Phoenix during Fiscal Year (FY) 2011. In a report to the Arizona Legislature dated August 29, 2011, AZGF reported spending $1,304,865 in FY 2011 for OHV law enforcement from the off-highway vehicle recreation fund and has hired two full time employees for law enforcement in Area A. Arizona State Land Department (ASLD) employs one full-time Trespass Inspector and spent $23,941 on contracted law enforcement in 2010. ASLD also spent $11,378 on signs (including closure signs). ASLD enforcement issued 113 OHV citations and 248 OHV warnings in 2010.	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
45. Prohibit use of leaf blowers on unstabilized surfaces. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Ordinance required by SB 1552. (A.R.S. § 11-877 A.3. and A.R.S. § 49-457.01 C.) In February 2008, Maricopa County adopted Ordinance P-25 to prohibit use of leaf blowers on unstabilized surfaces. All inspectors have been trained to enforce the leaf blower ordinance as part of the universal inspector program described in Committed Measure #9. In addition, a local government, although not required, adopted this ordinance.	County
46. Outreach to off-road vehicle purchasers.	The Arizona State Parks Department has convened a Dealer Pilot Program Committee to develop printed dust abatement educational materials for off-road vehicle renters/purchasers. ADEQ participates in these committee meetings.	State
Paved Roads		
24. Sweep street with PM-10 certified street sweepers. Quantified for numeric credit as a contingency measure.	SB 1552 requires that new or renewed contracts for street sweeping on city streets must be conducted with PM-10 certified street sweepers. (A.R.S. § 9-500.04 A.9. and A.R.S. § 49-474.01 A.8.) The three local governments, that issue street sweeping contracts, require that their contractors use PM-10 certified street sweepers. Effective February 20, 2010, ADOT's contract for sweeping State Highways requires use of PM-10 certified street sweepers. Maricopa County uses its PM-10 certified street sweeping contract to routinely sweep 700 miles (1,400 curb miles) of streets. Maricopa County and local governments purchased 38 PM-10 certified street sweepers with CMAQ funds and 5 PM-10 certified street sweepers with other funds.	State, County, local governments

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
52. **Coordinate public transit services with Pinal County**.	ADOT has coordinated public transit services with Pinal County. See the following websites for information regarding this coordination: (1) Arizona Rural Transit Needs Study Final Report - May 2008 (http://www.azdot.gov/mpd/Community_Grant_Services/PDF/Rural_Transit_Needs_Study_Final_Report_May_2008.pdf) (2) Maricopa 5311 information (http://www.azdot.gov/MPD/Community_Grant_Services/Maricopa.asp) Total coordinated public transit funding from all sources for the following entities in Pinal County: • Year 2009: Coolidge - $506,578, Maricopa - $788,405 • Year 2010: Coolidge - $662,200, Maricopa - $802,585 Total coordinated public transit funding from all sources for the following areas outside of the PM-10 nonattainment area within Maricopa County: • Year 2009: Salt River Pima-Maricopa Indian Community - $380,361, RPTA Wickenburg Rte - $315,645 • Year 2010: Salt River Pima-Maricopa Indian Community - $388,570 RPTA Wickenburg Rte - $246,020	State
53. **Repave or overlay paved roads with rubberized asphalt**. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	ADOT repaved 13.03 miles of State Highways with rubberized asphalt pavement (7.82 miles more than the commitment).	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Unpaved Parking Lots		
25. Pave or stabilize existing unpaved parking lots. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.6. & A.7. and A.R.S. § 49-474.01 A.5. & A.6.) Maricopa County revised parking lot provisions in Rule 310.01 (Fugitive Dust from Non-traditional Sources of Fugitive Dust) to synchronize with SB 1552 requirements. These rule revisions were adopted in March 2008. 23 local governments have new or existing ordinances to require paving or stabilizing existing unpaved parking lots. 266 Maricopa County and local government staff are enforcing ordinances to require paving or stabilizing existing unpaved parking lots. All inspectors in Maricopa County's Dust Control Section have been trained on inspecting unpaved parking lots as part of the universal inspector program described in Committed Measure #9. Currently, inspectors conduct monthly "Sweeps". A sweep is a one-day focused effort where all Dust Control Section inspectors conduct inspections of vacant lots and unpaved parking lots in Maricopa County. In 2008, 186 unpaved parking lot inspections and 5,005 vacant lot inspections were conducted. In 2009, 16 sweeps were conducted yielding 536 unpaved parking lot inspections and 12,013 inspections of vacant lots. In 2010, MCAQD conducted 256 unpaved parking lot inspections and 4,735 inspections of vacant lots. A total of 978 unpaved parking lot inspections and 21,753 vacant lot inspections were conducted during 2008, 2009, and 2010. Three local governments paved 13.96 acres of unpaved parking lots and unpaved driveways. Two local governments stabilized 13.32 acres of unpaved parking lots and unpaved driveways. One local government stabilized 9.40 acres of unpaved parking lots with turf. One local government paved/stabilized eight existing town-owned unpaved parking lots with a total surface area of 7.81 acres.	County, local governments

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Unpaved Roads, Alleys, and Shoulders		
26. Pave or stabilize existing public dirt roads and alleys. Quantified for numeric credit as a contingency measure.	Plan requirements for paving or stabilizing public dirt roads and alleys were amended by SB 1552. (A.R.S. § 9-500.04 A.3. and A.R.S. § 49-474.01 A.4.) In March 2008, Maricopa County adopted Rule 310.01 revisions in regard to unpaved roads and alleys. Maricopa County and 20 local governments have developed or updated plans to pave or stabilize targeted public dirt roads and alleys. Maricopa County, Pinal County, Gila River Indian Community (GRIC) and local governments have implemented this measure for: <u>Public Dirt Roads</u> By paving 67.12 miles of public dirt roads (38.49 miles more than the commitments) and stabilizing 114.22 miles of public dirt roads (38.73 miles more than the commitments), with a total of 181.34 miles of public dirt roads paved or stabilized (77.22 miles more than the commitments). <u>Dirt Alleys</u> By paving 70.39 miles of dirt alleys (6.50 miles more than the commitments) and stabilizing 394.52 miles of dirt alleys (85.67 miles more than the commitments) with a total of 464.91 miles of dirt alleys paved or stabilized (92.17 miles more than the commitments). One local government improved 9 intersections by paving turn lanes and/or shoulders.	County, local governments
27. Limit speeds to 15 miles per hour on high traffic dirt roads. Quantified for numeric credit as a contingency measure.	Maricopa County and 4 local governments have posted 36.86 miles of dirt roads and alleys with 15 mph (or less) speed limit signs (12.50 miles more than the commitments). In 2010, Maricopa County paved 1.19 miles of dirt roads that had been posted with 15 mph speed limit in 2009. Several jurisdictions report that all high traffic dirt roads have been paved.	County, local governments

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
28. Pave or stabilize unpaved shoulders. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Plan requirements to pave or stabilize unpaved shoulders were amended by SB 1552. (A.R.S. § 9-500.04 A.3. and A.R.S. § 49-474.01 A.4.) Maricopa County and 20 local governments have developed or updated plans to pave or stabilize unpaved shoulders on targeted arterials. ADOT, Maricopa County, and local governments implemented this measure by paving 253.20 curb miles of dirt shoulders (157.33 curb miles more than the commitments) and stabilizing 706.10 curb miles of dirt shoulders (409.46 curb miles more than the commitments). ADOT added 19.26 curb miles of curb and gutter (Note: These 19.26 curb miles are included in the paving of 253.20 curb miles of dirt shoulders.) One local government improved 9 intersections by paving turn lanes and/or shoulders.	County, State, local governments
43. MAG allocate $5 million in FY 2007 MAG federal funds matched on a 50/50 basis by MAG member agencies for paving dirt roads and shoulder projects and that these projects be immediately submitted to MAG for consideration at the July meetings of the MAG Management Committee and Regional Council for an amendment to the Transportation Improvement Program. These funds would be on a nonsupplanting basis for new projects. Quantified for numeric credit as a contingency measure.	$5 million is programmed in the FY 2007-2011 MAG Transportation Improvement Program to fund 9 projects that pave dirt roads and shoulders in the PM-10 nonattainment area.	MAG, local governments
51. Conduct an inventory of dirt roads, alleys and estimated traffic counts.	The City of El Mirage developed a preliminary inventory of unpaved roads in its jurisdiction. In addition, other local governments, although not required, developed preliminary inventories of their unpaved roads.	local government

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Unpaved Surfaces		
29. Create a fund for paving and stabilizing in high pollution areas.	Eleven of Maricopa County's settlement agreements for air quality violations included supplemental environmental projects.	County
40. MAG member agencies reexamine existing ordinances to ensure that nonpermitted sources, such as unpaved parking, unpaved staging areas, unpaved roads, unpaved shoulders, vacant lots and open areas, receive priority attention.	One local government re-examined existing ordinances to ensure non-permitted sources received priority attention.	MAG member agencies
Vacant Lots		
30. Strengthen and increase enforcement of 310.01 for vacant lots. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Maricopa County hired a supervisor to oversee the vacant lot program. This staff position was also included in the data provided for Committed Measures #4 and #9. All MCAQD Dust Control Section inspectors have been trained on inspecting vacant lots as part of the universal inspector program described in Committed Measure #9 above. Currently, inspectors conduct monthly “Sweeps”. A sweep is a one-day focused effort where all Dust Control Section inspectors conduct inspections of vacant lots and unpaved parking lots throughout Maricopa County. Maricopa County conducted a total of 21,753 vacant lot inspections. Maricopa County now has a contract in place for stabilization of vacant lots and also for on-call street sweeping.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
31. Restrict vehicular use and parking on vacant lots. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.8. and A.R.S. § 49-474.01 A.7.) In February 2008, Maricopa County adopted the P-27 Vehicle Parking and Use on Unstabilized Vacant Lots Ordinance and in 2010 revised the ordinance to provide more flexibility in adjudicating cases. In addition, 23 local governments have new or existing ordinances to prohibit vehicle trespass on vacant land.	County, local governments
32. Enhanced enforcement of trespass ordinances and codes. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	In February 2008, Maricopa County adopted the P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County and the P-27 Vehicle Parking and Use on Unstabilized Vacant Lots ordinances and in 2010 revised the ordinances to provide more flexibility in adjudicating cases. Maricopa County will combine the enforcement of the P-27 Vehicle Parking and Use Ordinance with the Vacant Lot Sweep Program. Currently, field staff continue outreach (distribution of fact sheets on parked vehicles) while the penalty structure of the ordinance is being updated. The details of the enforcement component are also being integrated into Maricopa County's "Accela" software, which will allow for a smoother transition of the program. In addition, 18 local governments report increased enforcement of vehicle trespass ordinances and codes for vacant lots. In 2010, Maricopa County issued 9 notices to correct (NTC's) and 8 notices of violations (NOV's) in relation to P-27 type situations. One local government issued 29 NOVs: Vacant Lot Parking - 15, Dust Generating Activities - 8, Unpaved Parking Lots - 5, and PM-10 Trackout - 1.	County, local governments

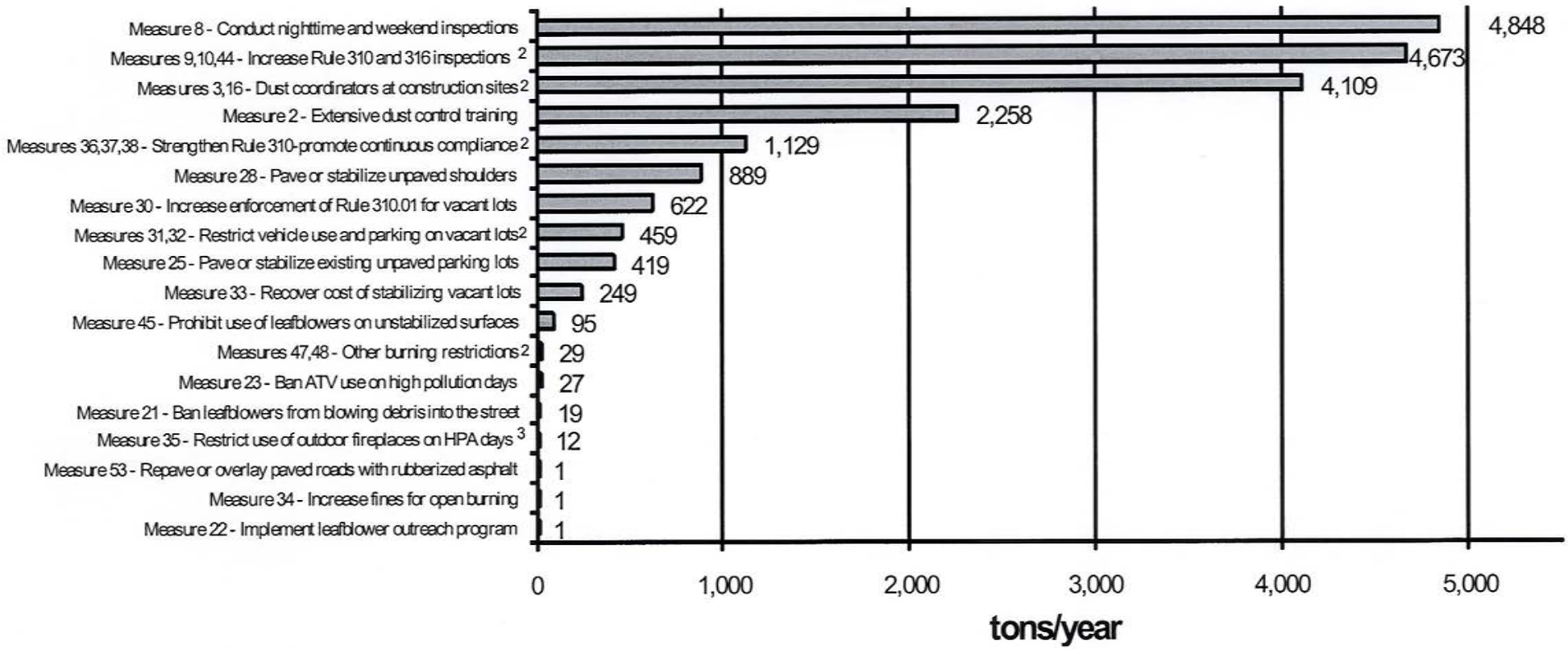
COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
33. Ability to assess liens on parcels to cover the costs of stabilizing them (Recover costs of stabilizing vacant lots). Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	SB 1552 requires rule revisions for stabilization of disturbed surfaces of vacant lots. (A.R.S. § 49-474.01 A.11.) Maricopa County adopted Rule 310.01 revisions in March 2008 to incorporate A.R.S. § 49-474.01 A.11. to allow the County to recover stabilization costs through the penalty process.	County
Open Burning / Woodburning		
34. Increase fines for open burning. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	SB 1552 requires increasing the fines for unlawful open burning. (A.R.S. § 11-871 D.4. and A.R.S. § 49-501 G.) In March 2008, Maricopa County revised the P-26 Residential Woodburning Restriction Ordinance to increase the civil penalty to $250 for the fourth or any subsequent violation of the ordinance in accordance with Senate Bill 1552. Maricopa County responded to 824 illegal open burning complaints and 216 wrongful fireplace use complaints which resulted in 27 documented violations of Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) and 30 warnings for violations of Ordinance P-26 (Residential Woodburning Restriction Ordinance).	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
35. **Restrict use of outdoor fireplaces and pits and ambience fireplaces in the hospitality industry.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	SB 1552 requires Maricopa County to prohibit use of wood-burning chimineas, outdoor fire pits, and similar outdoor fires on County No-Burn Days. (A.R.S. § 49-501 F.) In March 2008, Maricopa County adopted revisions to P-26 (Residential Woodburning Restriction Ordinance) and Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) to restrict use of outdoor fireplaces and pits and ambience fireplaces in the hospitality industry.	County
47. **Ban open burning during the ozone season.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Open burning ban from May 1 through September 30 each year required by SB 1552. (A.R.S. § 49-501 A.2.) In March 2008, Maricopa County implemented an open burning ban during the ozone season by adding these requirements to Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) and to P-26 (Residential Woodburning Restriction Ordinance).	County
48. **Require residential woodburning ordinances to include no burn restrictions on high pollution advisory days.** Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Revision of County ordinance required by SB 1552. (A.R.S. § 11-871 B.) The "no burn restrictions on HPA days" was already a requirement in Maricopa County's Residential Woodburning Restriction ordinance (P-26 ordinance). Note: Maricopa County revisions to the Residential Woodburning Ordinance, adopted in March 2008, pertained to Committed Measure #35. See Committed Measure #34 for data on complaints received by the County in regard to open burning and wrongful fireplace use.	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Agriculture		
41. Forward to the Governor's Agricultural Best Management Practices Committee that cessation of tilling be required on high wind days and that agricultural best management practices be required in existing Area A.	Agricultural Best Management Practices required in Area A by SB 1552. (A.R.S. § 49-457 H. & N.6. and A.R.S. § 49-542 Sec. 20.) On September 25, 2007, the Governor's Agricultural Best Management Practices (BMP) Committee revised its rule to double the number of BMPs that farmers must implement, added 5 BMP choices (including cessation of tilling on High Pollution Advisory Days), and expanded the area for BMPs. Arizona State Rules 18-2-610 and 611 were revised, effective November 14, 2007, to comply with Senate Bill (SB) 1552. The Legislature adopted a requirement in SB 1552 that expanded the regulated area for Agricultural BMPs to include the portion of Area A in Maricopa County and increased the number of required Agricultural BMPs from one to two from each category by December 31, 2007.	State
42. The Arizona State Legislature provide funding to the Arizona Department of Environmental Quality for four agriculture dust compliance officers for a total of five inspectors.	ADEQ indicated that expenditure authority for these four positions is no longer available to ADEQ. In 2010, Arizona Department of Agriculture's Agricultural Best Management Compliance Assistance made 107 on-site visits, drafted 4,148 consultation letters and participated in 12 events for educational outreach and training.	State
50. Require two agricultural best management practices. Quantified for numeric credit as a contingency measure.	Required by SB 1552. (A.R.S. § 49-457 H. & N.6. and A.R.S. § 49-542 Sec. 20.) Arizona State Rules 18-2-610 and 611 were revised, effective November 14, 2007, to comply with Senate Bill (SB) 1552. The Legislature adopted a requirement in SB 1552 that expanded the regulated area for Agricultural BMPs to include the portion of Area A in Maricopa County and increased the number of required Agricultural BMPs from one to two from each category by December 31, 2007.	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008, 2009, and 2010 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
All Sources		
44. Maricopa County should increase consistent enforcement in areas where PM-10 violations continue to occur, along with efforts throughout the region. When an area continually experiences higher PM-10 concentrations than other areas, increased enforcement in areas experiencing high monitor readings is needed to protect public health. Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.	Maricopa County has increased consistent enforcement in areas where PM-10 violations continue to occur. In March 2008, Maricopa County revised Rule 280 (Fees) to cover increased staffing levels for the MCAQD as a result of Maricopa County's Five Percent Plan commitments. In 2009, the MCAQD Dust Control Section implemented the "Monitor Project". The focus of the Monitor Project was to concentrate inspectors' efforts within a 2-mile radius of several MCAQD monitoring stations (W. 43rd Ave., Durango, South Phoenix, Higley, Buckeye and Zuni Hills). Inspectors conducted inspections of all permitted sites within the 2-mile radius as well as monitored other dust generating activity. The frequency of inspections differed per monitoring station and varied from 3 inspections per week to one inspection per week.	County

Figure 1
Reductions in 2010 for Committed Control Measures in the Five Percent Plan for PM-10[1]

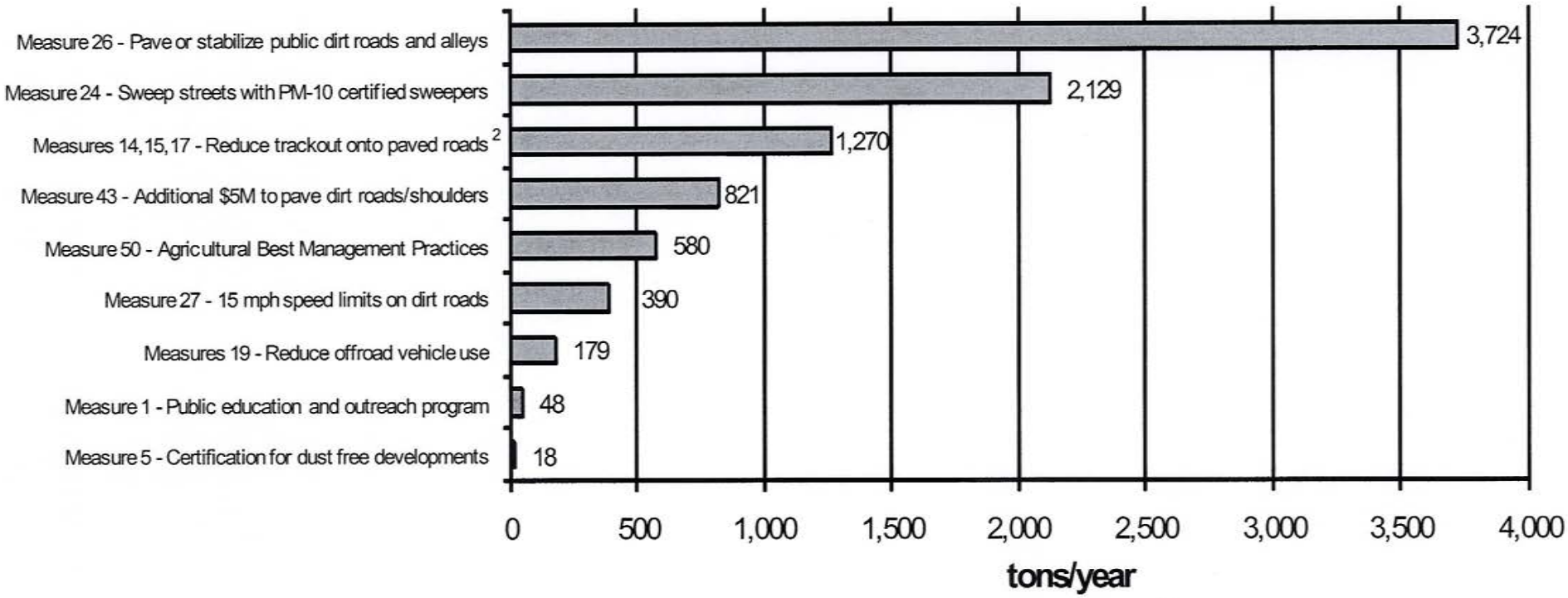


[1]Committed measures quantified for numeric credit to meet the five percent per year target and demonstrate attainment.

[2]In these cases, the emission reductions represent the combined impact of multiple, reinforcing measures.

[3]HPA days = high pollution advisory days

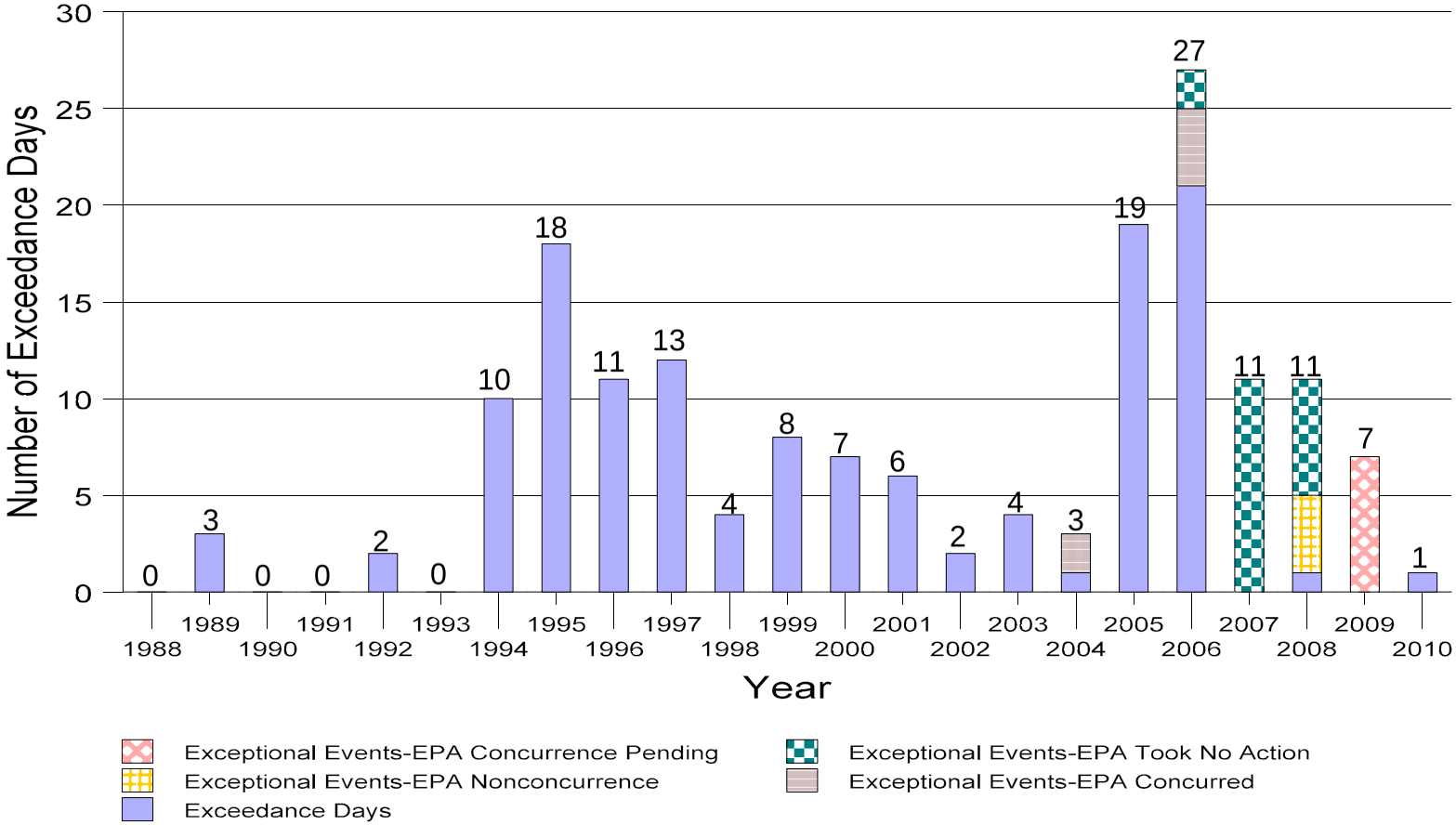
Figure 2
Reductions in 2010 for Contingency Measures in the Five Percent Plan for PM-10[1]



[1]Committed measures quantified for numeric credit as contingency measures.

[2]For "Reduce trackout onto paved roads," the emission reduction represents the combined impact of Measures 14,15 and 17.

Figure 3
Number of 24-Hour PM-10 Exceedance Days



Notes: -The Arizona Department of Environmental Quality began flagging exceptional events in 2004.
-The chart includes exceedance days at the Buckeye monitor, which is located outside the PM-10 nonattainment area.
-On July 19, 2007, the exceedance at the Buckeye monitor was not associated with the exceptional event that also occurred on that day.

Sources: 1988 - 1997 - Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, February 2000.
1998 - 2010 - EPA Air Quality System.

ATTACHMENT

MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

EXECUTIVE SUMMARY

MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

EXECUTIVE SUMMARY

MARICOPA ASSOCIATION of GOVERNMENTS

MAG 2007 FIVE PERCENT PLAN FOR PM-10
EXECUTIVE SUMMARY

Within the Maricopa County nonattainment area, the National Ambient Air Quality Standard has not yet been attained for PM-10 particulate pollution. The Maricopa Association of Governments was designated by the Governor of Arizona in 1978 and recertified by the Arizona Legislature in 1992 to serve as the Regional Air Quality Planning Agency to develop plans to address air pollution problems.

Based upon the 1990 Clean Air Act Amendments, the Maricopa County nonattainment area was initially classified as Moderate for PM-10 particulate pollution. However, on May 10, 1996, the nonattainment area was reclassified to Serious due to failure to attain the particulate standard by December 31, 1994. The Serious Area reclassification was effective on June 10, 1996.

The Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area was submitted to the Environmental Protection Agency (EPA) in February 2000. On July 25, 2002, EPA published a notice of final approval for the plan. Collectively, the plan contained approximately seventy-seven committed control measures from the State and local governments. The plan demonstrated attainment of the PM-10 standard by December 31, 2006.

In order to be in attainment, the region needed three years of clean data at the monitors for 2004, 2005, and 2006. However, there were numerous exceedances of the 24-hour standard in 2005 and 2006. On June 6, 2007, EPA published a final notice with its findings that the Maricopa County nonattainment area had failed to attain the PM-10 standard by the federal deadline of December 31, 2006.

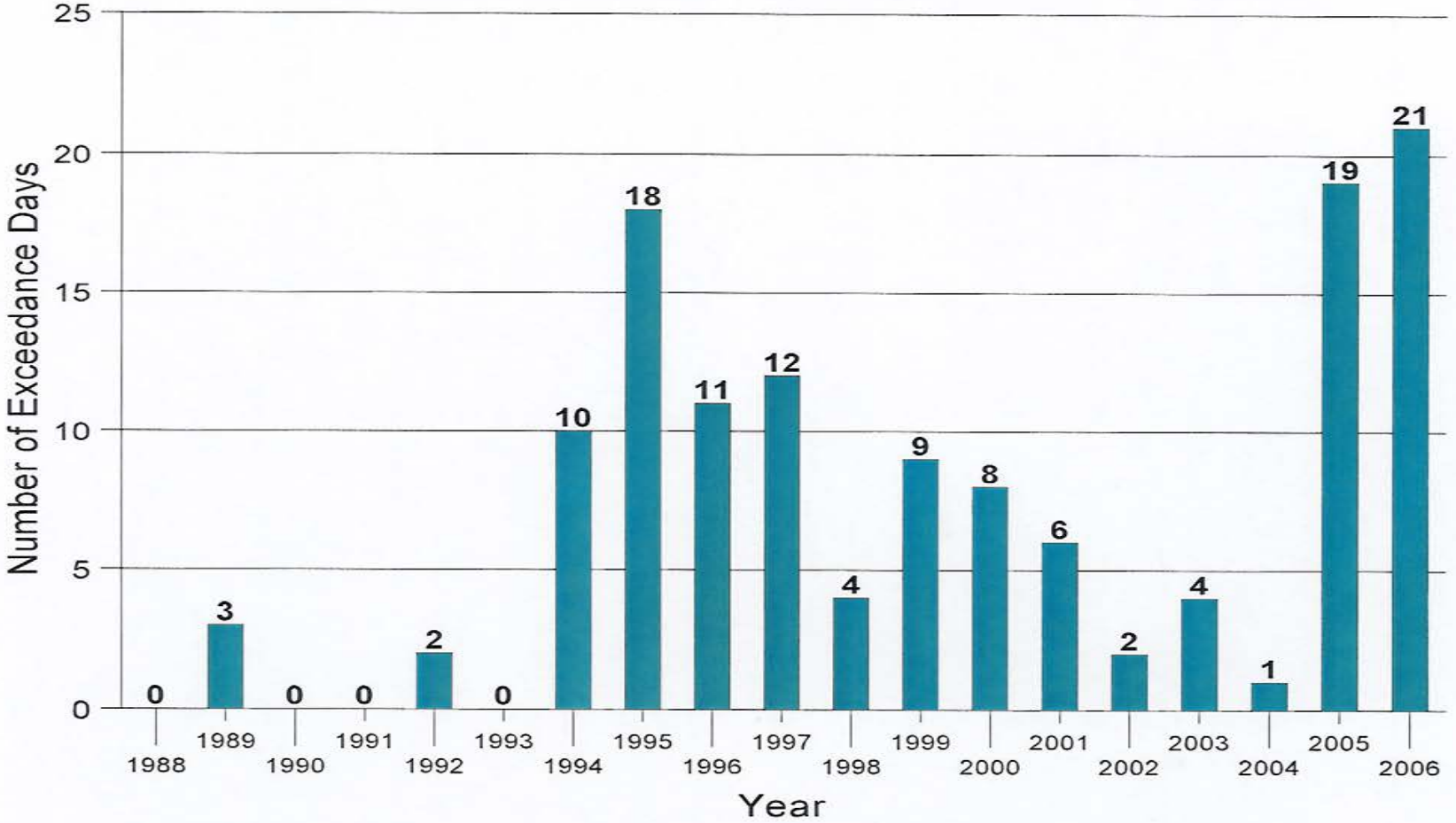
In accordance with Section 189 (d) of the Clean Air Act, the Five Percent Plan for PM-10 is due to the Environmental Protection Agency by December 31, 2007. The plan is required to reduce PM-10 emissions by at least five percent per year until the standard is attained as measured by the monitors. The Clean Air Act specifies that the plan must be based upon the most recent emissions inventory for the area and also include a modeling demonstration of attainment.

Particulate air pollution can occur throughout the year. The formation of PM-10 particulate pollution is dependent upon several factors. Among these factors are stagnant masses, severe temperature inversions in the winter, high winds in the summer, and fine, silty soils characteristic of desert locations. In the Maricopa County nonattainment area, particulate matter (PM-10) concentrations are elevated during various seasons of the year and under different weather conditions. The variability is due to the diverse composition of PM-10 and the sources contributing to this diversity.

The trend in PM-10 levels for the Maricopa County nonattainment area is presented in Figure ES-1. The 24-hour PM-10 standard is 150 micrograms per cubic meter. In 2004,

FIGURE ES-1

NUMBER OF 24-HOUR PM-10 EXCEEDANCE DAYS



Note: The Arizona Department of Environmental Quality began flagging natural and exceptional events in 2004. Exceedances that have been approved or are pending approval by EPA as natural or exceptional events have been removed from this chart.

Sources: 1988 - 1997 - Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, February 2000.
1998 - 2006 - EPA Air Quality System; Maricopa County Network Reviews; ADEQ Air Quality Reports.

there was one exceedance day of the 24-hour standard. However, in 2005 there were 19 exceedance days and in 2006 there were 21 exceedance days of the 24-hour standard. Figure ES-2 indicates the monitors where exceedances occurred. The violations of the standard at the Bethune Elementary School, Durango Complex, and West 43rd Avenue monitors caused the region to fail to attain the PM-10 standard by the December 31, 2006 attainment date.

A rigorous planning effort was conducted to prepare the MAG 2007 Five Percent Plan for PM-10. An extensive Preliminary Draft Comprehensive List of Measures was compiled for evaluation. The MAG Analysis of Particulate Control Measure Cost Effectiveness report provided an evaluation of forty-six control measures. For each measure, the following information was prepared: narrative description; suggested implementing entity; estimate of the cost of implementation; estimate of the PM-10 emission reduction potential; estimate of the cost effectiveness ($/ton of PM-10 reduced); and discussion of implementation issues and comments. In preparing the information for the analysis, measures from other PM-10 Serious Areas were reviewed and contacts were established. Relevant dust control literature reviews were performed to obtain data on measured emission reductions. Contacts were established with local agencies and businesses in Maricopa County to determine the cost of labor, equipment, materials, etc.

The MAG PM-10 Source Attribution and Deposition Study was another major study which provided information for the evaluation of control measures. The study was designed to identify the sources of emissions contributing to violations of the PM-10 standard at monitors in the nonattainment area during stagnant conditions and characterize the deposition of PM-10 particles emitted by these sources. The MAG consultants for the study were T&B Systems and Sierra Research. The key questions addressed in the study were:

1. Where are the specific source areas and/or sources in the Salt River region that contribute to the particulate matter (PM) loading at the Durango Complex and West 43rd monitoring sites?

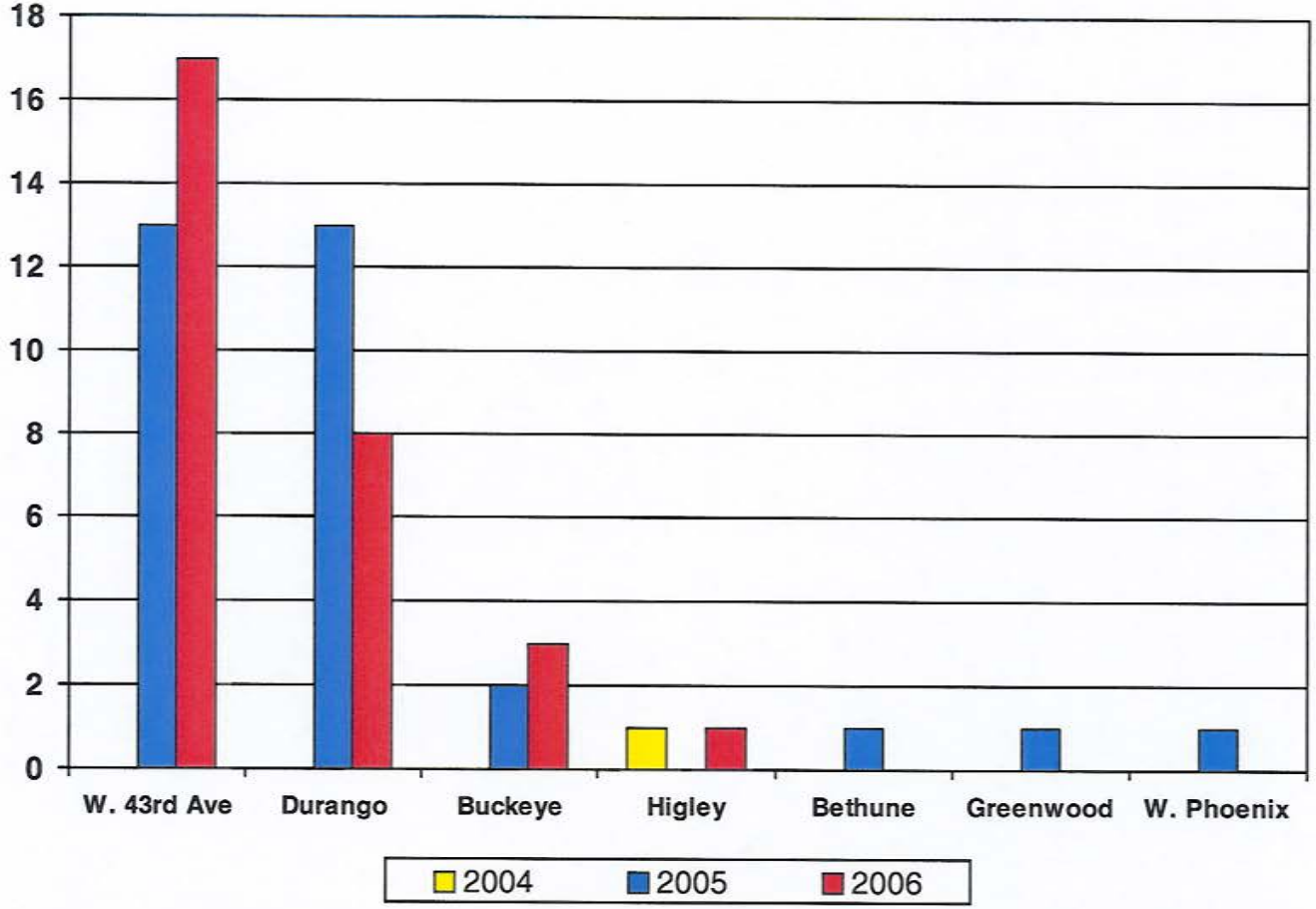
2. To obtain useful results from models such as AERMOD, can the regional particle size distribution be characterized on an area basis (i.e., is there an area of uniformity that can be generalized?)

3. What are the causes of heavy PM loading during the morning hours at the Durango and West 43rd monitors? Are the diurnal variations of PM-10 and peaks due to reentrainment of paved road dust, or due to other activities in the surrounding areas that are coincident with traffic peaks?

The approach used for the study involved assessing existing meteorological and PM data; selecting monitoring tools; establishing a sampling plan; defining routes for mobile sampling; determining locations of meteorological data collection; selecting locations to investigate dispersion of roadway sources; conducting sampling in two phases;

FIGURE ES-2

EXCEEDANCES OF THE 24-HOUR PM-10 STANDARD AT MONITORS IN MARICOPA COUNTY



Notes: 1. Exceedances are based on data from the EPA Air Quality System (AQS). Exceedances due to natural events have been removed from the AQS by EPA.

2. The exceedance at the Bethune, Greenwood, and W. Phoenix monitors occurred on 12/12/05.

coordinating with local agencies for related data; and performing daily review of collected data to identify insights, opportunities and problems. The monitoring tools for the study included: a particle lidar; mobile monitoring; DustTrak optical PM-10 monitors; DustTrak optical PM-2.5 monitors; an aerodynamic particle size analyzer; MiniVol filter based samplers; a sodar; and a SCAMPER vehicle. The SCAMPER (System for Continuous Aerosol Monitoring of Particulate Emissions from Roadways) vehicle was used to measure PM-10 from paved roads. From November 15, 2006 through December 14, 2006, extensive measurements were taken in the Salt River area using state-of-the-art technologies.

In general, the study identified a number of sources of PM-10 in the Salt River area. They included: trackout; dragout from unpaved or poorly maintained paved roads or parking lots; unpaved shoulders; unpaved roads; open burning; agriculture; and vehicle activity on unpaved parking areas and vacant lots. Preliminary results from the study were used in the evaluation of control measures and the final results were used in the modeling attainment demonstration.

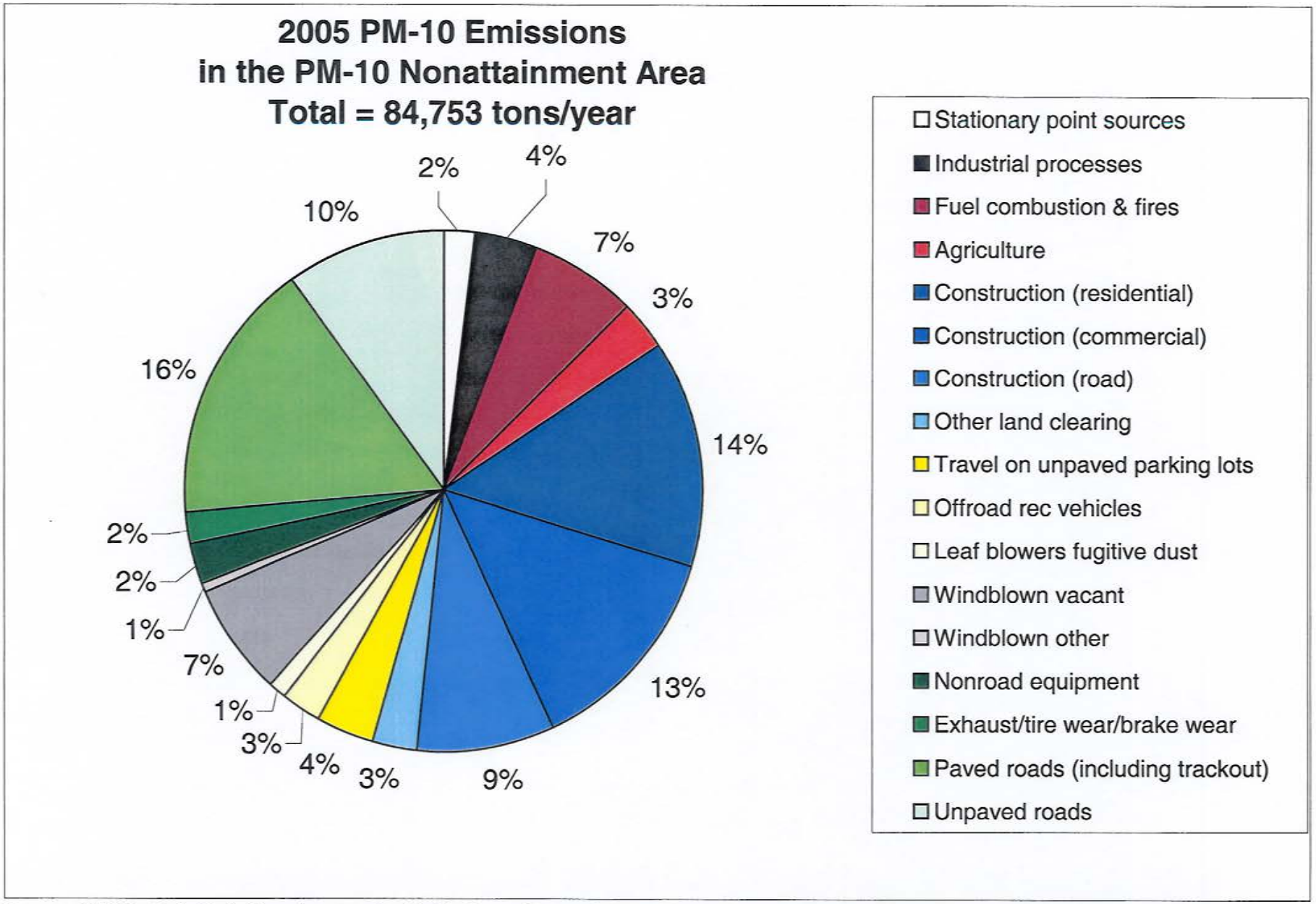
Based upon the Maricopa County Air Quality Department 2005 Periodic Emissions Inventory for PM-10 for the Maricopa County Nonattainment Area, the primary sources of PM-10 are: Paved Roads (including trackout) 16 percent; Construction (residential) 14 percent; Construction (commercial) 13 percent; Unpaved Roads 10 percent; Construction (road) 9 percent; Fuel Combustion and Fires (industrial natural gas and fuel oil, commericial/institutional natural gas and fuel oil, and residential natural gas, wood and fuel oil) 7 percent; and Windblown Vacant (vacant lots) 7 percent. The sources are depicted in Figure ES-3.

The emissions in the 2005 Periodic Emissions Inventory for PM-10 were projected to 2007, 2008, 2009, and 2010. The total controlled emissions of 97,436 tons in the 2007 projected inventory were used to calculate the five percent reduction target in emissions (see Figure ES-4). This number was multiplied by five percent to determine the PM-10 emissions reduction target of 4,872 tons per year. To meet this annual target, the 2008 emissions with committed control measures must be at least 4,872 tons less than the base case 2008 emissions; the controlled 2009 emissions must be at least 9,744 tons less than the 2009 base case emissions; and the controlled 2010 emissions must be at least 14,616 tons less than the 2010 base case emissions.

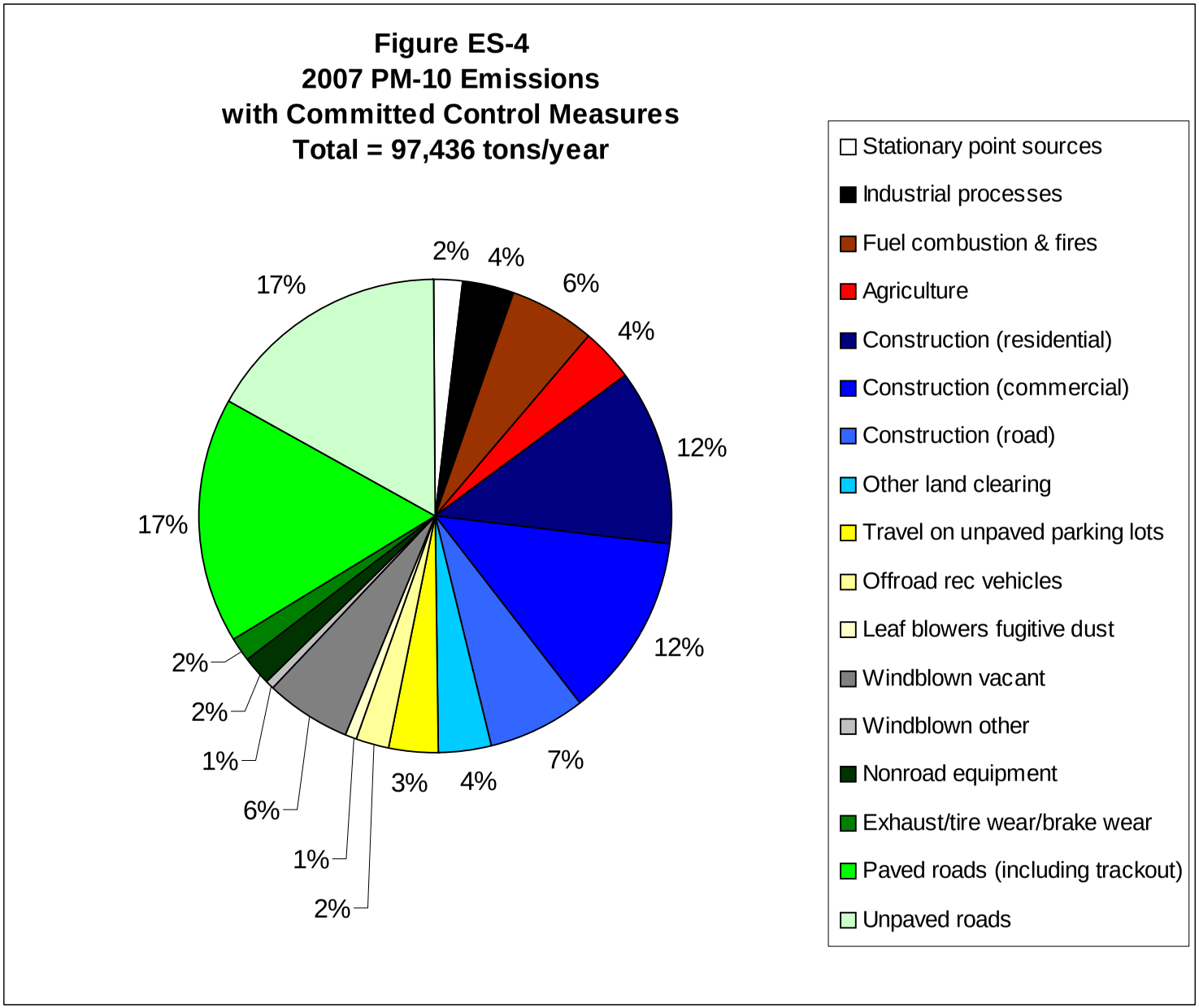
In order to reduce PM-10, a broad range of commitments to implement measures were received from the State, Maricopa County, and the twenty-three local governments in the PM-10 nonattainment area. Collectively, the MAG 2007 Five Percent Plan for PM-10 includes fifty-three committed measures.

The key committed measures that were quantified as control measures include: Dust Managers/Coordinators at Earthmoving Sites; Increase Rule 310 and 316 Inspections; Extensive Dust Control Training; Conduct Nighttime and Weekend Inspections; Strengthen Rule 310 to Promote Continuous Compliance; Pave or Stabilize Dirt Shoulders; Pave or

FIGURE ES-3



Source: 2005 Periodic Emissions Inventory for the Maricopa County, Arizona Nonattainment Area. Maricopa County Air Quality Department. May 2007.



Source: Maricopa Association of Governments, 2007

Stabilize Unpaved Parking Lots; Restrict Vehicle Use on Vacant Lots; Strengthen Rule 310.01 for Vacant Lots; and Recover the Cost of Stabilizing Vacant Lots.

The committed control measures were quantified in order to model attainment and meet the five percent reduction targets. The PM-10 emissions reductions for the committed control measures are shown in Figure ES-5.

With the implementation of the committed control measures, the total PM-10 emissions in 2010 are 82,829 tons (See Figure ES-6), which represents a 19.3 percent reduction in the 2010 base case emissions. These reductions are necessary to model attainment of the PM-10 standard at all monitors as expeditiously as practicable, which is 2010. The total reductions due to the committed control measures also exceed the annual five percent reduction targets in 2008, 2009 and 2010, as indicated in Table ES-1.

In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 also contains contingency measures. The contingency measures are committed measures in the adopted plan which achieve emissions reductions beyond those measures relied upon to model attainment of the standard and demonstrate progress toward attainment (i.e., five percent reductions, reasonable further progress, and milestones).

The key committed measures in the Five Percent Plan that were quantified as contingency measures are: Pave or Stabilize Dirt Roads and Alleys; Sweep with PM-10 Certified Street Sweepers; Reduce Trackout Onto Paved Roads; Additional Five Million Dollars in FY 2007 MAG Federal Funds for Paving Dirt Roads and Shoulders; Agricultural Best Management Practices; 15 Mile Per Hour Speed Limits on Dirt Roads; Reduce Offroad Vehicle Use; Certification for Dust Free Developments; and Public Education and Outreach Program.

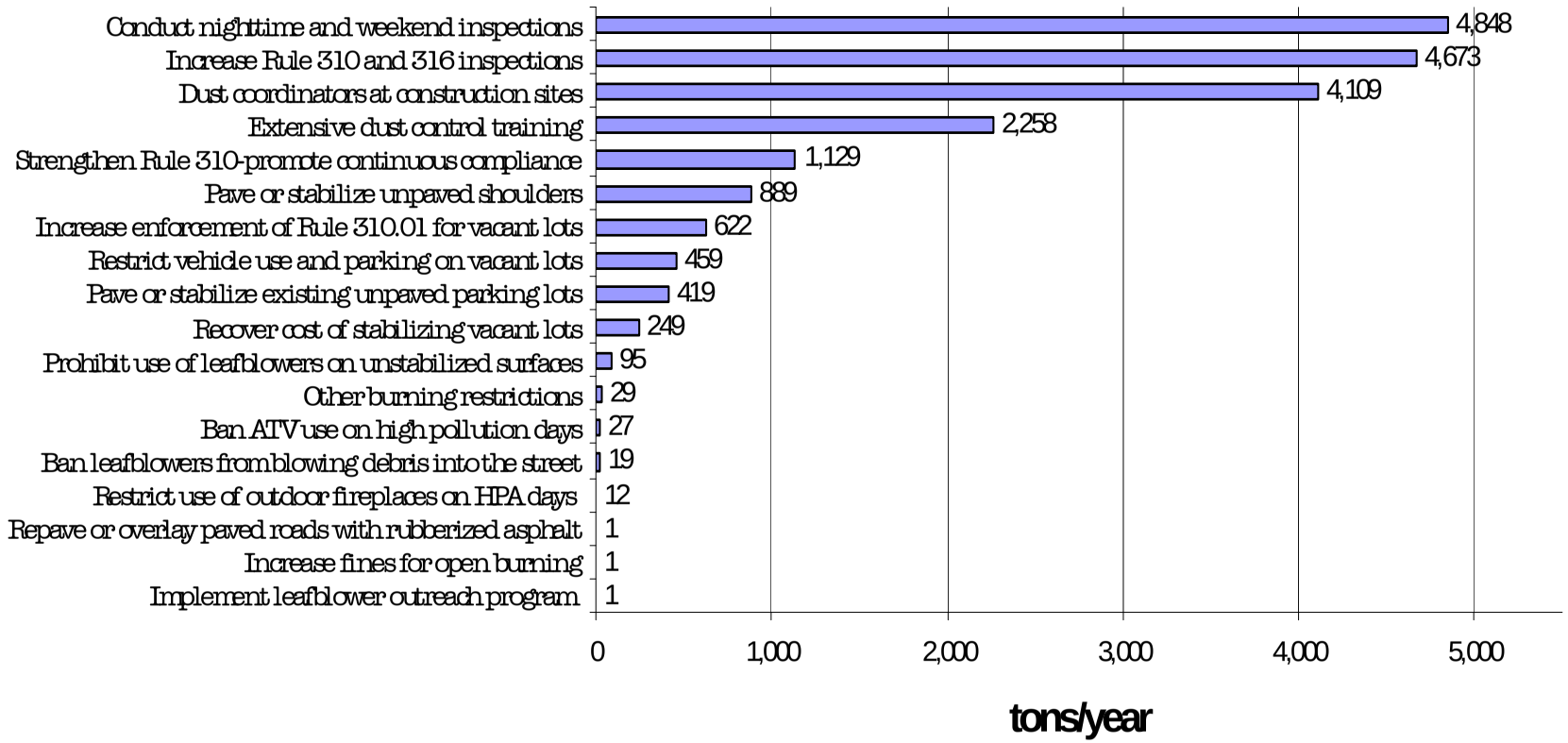
EPA guidance indicates that contingency measures should provide emissions reductions equivalent to one year of reasonable further progress. The reasonable further progress requirements for Serious PM-10 nonattainment areas are included in Section 189(c) of the Clean Air Act. For the Five Percent Plan, one year of reasonable further progress is equivalent to a reduction in PM-10 emissions of 4,869 tons.

Figure ES-7 shows the impacts of the individual contingency measures in 2010. Collectively, the contingency measures reduce PM-10 emissions by 5,223 tons in 2008, 7,213 tons in 2009, and 9,159 tons in 2010 versus the contingency target of 4,869 tons per year, as shown in Table ES-1.

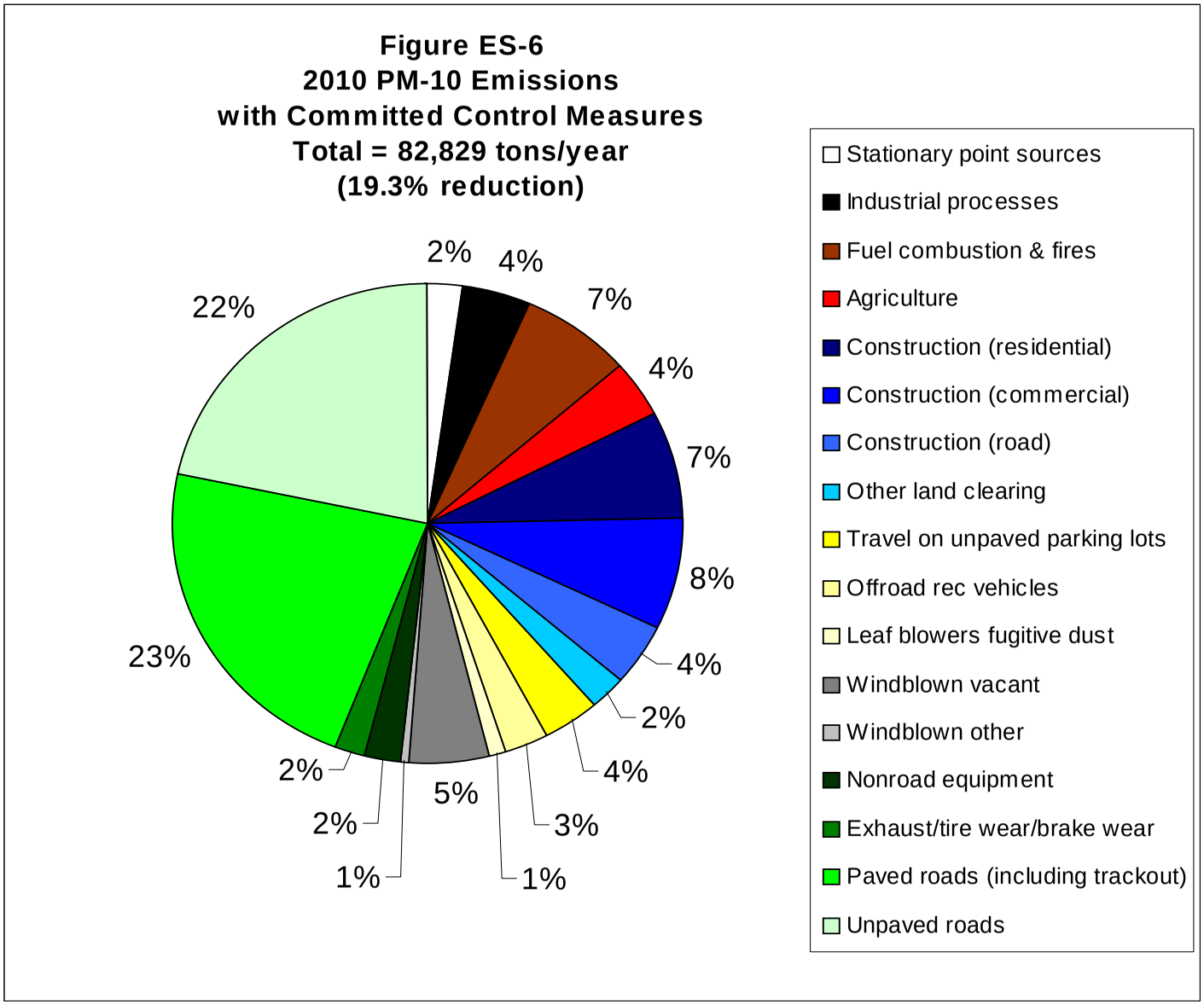
The total 2010 PM-10 emissions with committed control measures and committed contingency measures are 73,670 tons (see Figure ES-8). Together, these measures reduce base case PM-10 emissions by 28.2 percent in 2010.

For conformity analyses, the onroad mobile source emissions budget includes reentrained dust from travel on paved roads; vehicular exhaust, tire wear, and brake wear; travel on unpaved roads; and road construction. In 2010, the PM-10 emissions from these four source categories total 103.3 metric tons per day. This represents the onroad mobile source emissions budget for conformity.

Figure ES-5
Reductions in 2010 for Committed Control Measures in the Five Percent Plan for PM-10



Source: Maricopa Association of Governments, 2007



Source: Maricopa Association of Governments, 2007

TABLE ES-1

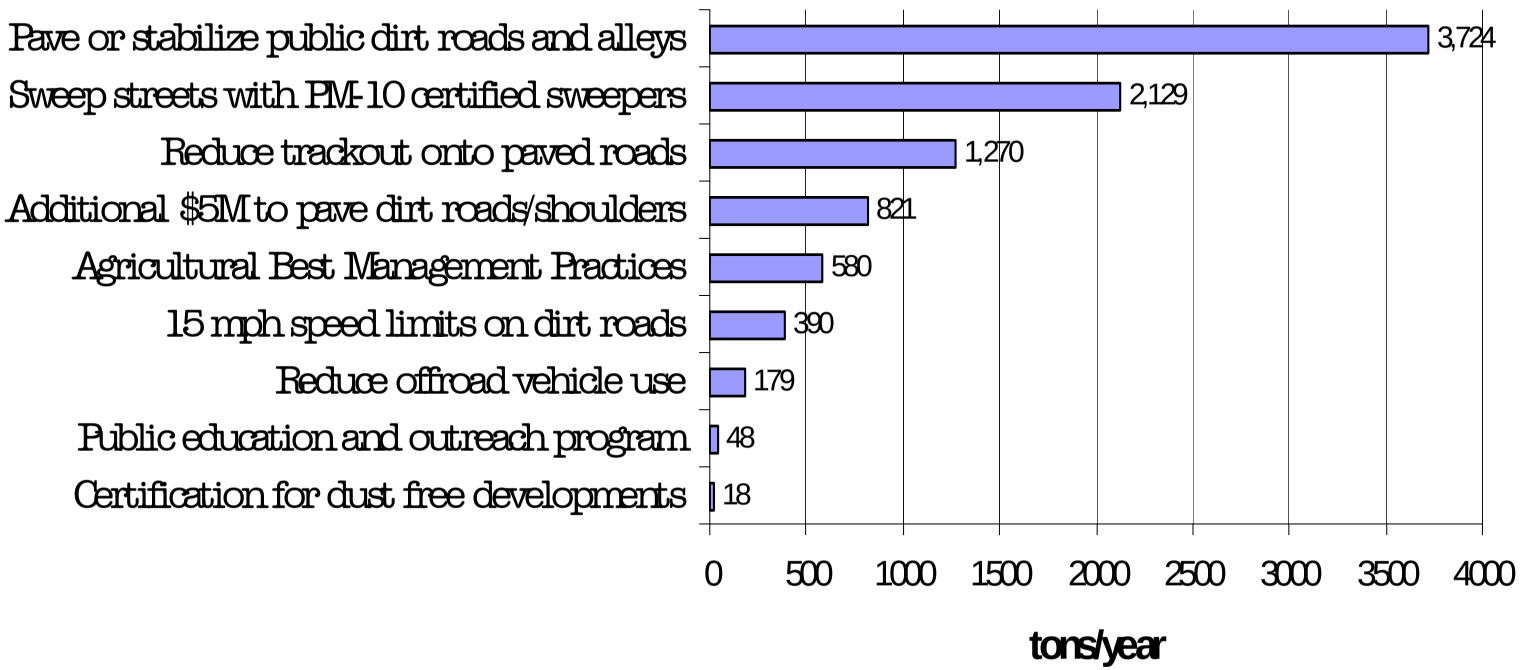
EMISSIONS REDUCTIONS FOR COMMITTED CONTROL MEASURES QUANTIFIED TO MODEL ATTAINMENT AND MEET THE FIVE PERCENT REDUCTION REQUIREMENT

- 6,605 tons vs. five percent reduction target of 4,872 tons in 2008
- 15,423 tons vs. five percent reduction target of 9,744 tons in 2009
- 19,840 tons vs. five percent reduction target of 14,616 tons in 2010

EMISSIONS REDUCTIONS FOR COMMITTED CONTINGENCY MEASURES QUANTIFIED TO MEET THE CONTINGENCY MEASURE REQUIREMENT

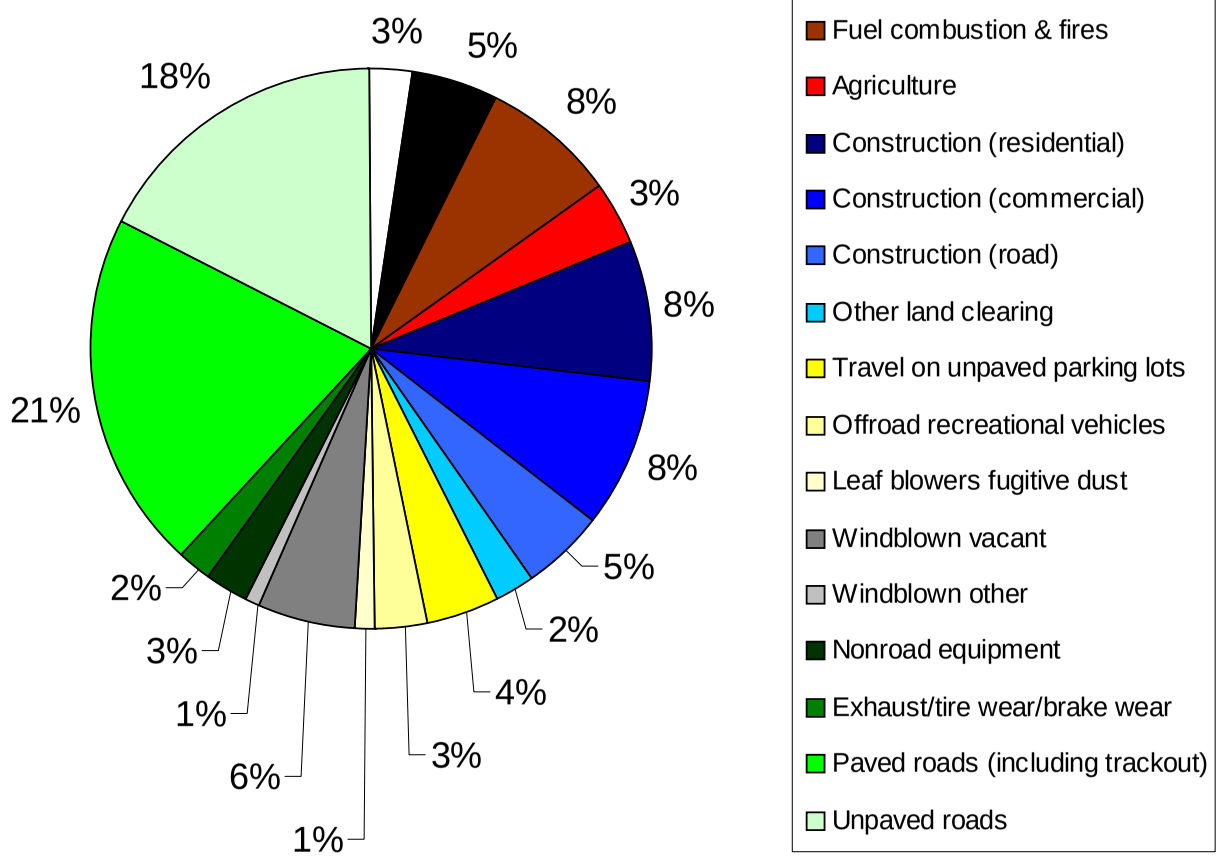
- 5,223 tons vs. contingency reduction target of 4,869 tons in 2008
- 7,213 tons vs. contingency reduction target of 4,869 tons in 2009
- 9,159 tons vs. contingency reduction target of 4,869 tons in 2010

Figure ES-7
Reductions in 2010 for Contingency Measures in the Five Percent Plan for PM-10



Source: Maricopa Association of Governments, 2007

Figure ES-8
2010 PM-10 Emissions
with Committed Control and Contingency Measures
Total = 73,670 tons/year
(28.2% reduction)



Source: Maricopa Association of Governments, 2007

Agenda Item #6

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY… for your review

DATE:
May 3, 2012

SUBJECT:
Regional Freeway and Highway Life Cycle Program – 2012 Rebalancing

SUMMARY:
Arizona Revised Statues (ARS) 28-6352 (A) requires a budget process that ensures the estimated cost of the freeways and other controlled access highways in the Regional Transportation Plan (RTP) does not exceed the total amount of revenues estimated to be available. The MAG Regional Freeway and Highway Program is subject to this requirement. In an oversight capacity, MAG staff collects and reviews project and financial data related to the Program from the Arizona Department of Transportation (ADOT). The program is reviewed from both a year-by-year, and in a composite perspective to ensure the funds are available for eventual construction. The year-by-year process, referred to as "cash flow" is completed through a modeling effort for the program between Fiscal Years (FY) 2006 and 2026. These horizon years coincide with the life of the half-cent Maricopa County Transportation Excise Tax, which was passed by the voters of Maricopa County in November 2004.

In 2009, the Regional Freeway and Highway Program was reviewed and the Regional Council approved the Tentative Scenario to balance an estimated $6.6 billion shortfall due to cost overruns and revenue shortfalls. Based upon MAG and ADOT estimates, the Program is projected to have an additional $390 million shortfall due to even lower revenue projections in the Proposition 400 Regional Area Roadway Fund (RARF). At the April 11, 2012 Management Committee meeting, MAG staff presented four scenarios for balancing the additional $390 million from the Program. Following presentations of these scenarios in April to the Management Committee, Transportation Policy Committee, and MAG Regional Council, the preference has been to consider the scenario that balances the program by repositioning projects to improve the Program's cash flow; transfer funding in the SR-303L corridor, remove $300 million from the budget in the Interstate 17/Black Canyon Freeway corridor, and to encourage ADOT to focus upon cost-effective solutions that will provide opportunities to return projects to the Program in the future.

Accompanying this summary transmittal is a technical report summarizing the planning methods used by MAG staff to develop the 2012 scenario. This document includes data on the cash flow analyses used to establish the scenario and project timelines for major items in the Regional Freeway and Highway Program. The basis for the staff recommendation of Scenario 10b can be found on Page 25 of the document. The revised Regional Freeway and Highway Program will be incorporated into the update of the MAG Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP), both of which will be subject to an air quality conformity analysis.

PUBLIC INPUT:
No public input has been received at this time.

PROS & CONS:

PROS: Development of the 2012 scenario, based upon principles consistent with the original planning goals and objectives used to initially establish the Regional Transportation Plan in 2003, provides a basis and direction for governing the remaining funds available for regional freeway and highway construction. The cost-saving measures and partial and full project deferrals will continue to ensure construction funding for two significant corridors from the program: Loop 202/South Mountain Freeway and the Loop 303 Freeway in the West Valley.

This scenario also adds mileage to Loop 303 with an extension south from Interstate 10 into the City of Goodyear's growing warehousing and distribution economy. The 2012 scenario also defers projects to Phase V of the Regional Transportation Plan, which allows the priority for their eventual construction to happen when funding returns or is potentially continued in the future.

CONS: The tentative scenario identifies approximately $390 million in cuts to the Program's amounts for an unspecified project in the Interstate 17/Black Canyon Freeway corridor between the Interstate 10 "Split" and Loop 101/Agua Fria-Pima Freeways traffic interchanges.

TECHNICAL & POLICY IMPLICATIONS:

TECHNICAL: The 2012 scenario for bridging the $390 million gap in the Regional Freeway and Highway Program has technical implications for meeting performance targets. The project deferrals could create congestion not anticipated during the initial development of the Regional Transportation Plan in 2003.

It should be noted that preliminary technical analyses by MAG staff of the Loop 303 segments indicate the interim four-lane freeway presently open between US-60/Grand Avenue and Interstate 17/Black Canyon Freeway accommodates the 2030 travel demand for this portion of the corridor. In addition, preliminary benefit-cost analysis results demonstrate a considerable benefit for extending Loop 303 south of Interstate 10 to MC-85. Information about these findings are documented in the attached technical report.

POLICY: The process used to develop the 2012 Scenario for the Regional Freeway and Highway Program follows the same principles used in the last rebalance effort in 2009. In developing this scenario, it should be noted that the return of the Loop 303 segment south of Interstate 10 is consistent with the principle of last out first in, where this was the only Phase III project deferred to Phase V in 2009.

ACTION NEEDED:

Recommend approval of 2012 Rebalancing Scenario 10B, where the MAG Regional Freeway and Highway Program meets the projected $390 million shortfall by repositioning the SR-202L/South Mountain Freeway and Interstate 10/Maricopa Freeway projects to improve the Program's cash flow; transfer funding from the SR-303L segment between US-60 and Interstate 17 to the SR-303L segment between Interstate 10 and MC-85, but retain funding for a grade separated interchange at the existing El Mirage Rd intersection; remove $300 million from the Program's budget for the Interstate 17/Black Canyon Freeway corridor; and to encourage ADOT to focus upon cost-effective solutions that will provide opportunities to return projects to the Program in the future; and incorporate the revised program in the next update of the MAG Transportation Improvement Program and the Regional Transportation Plan.

PRIOR COMMITTEE ACTIONS:

The Transportation Review Committee at its April 26, 2012 meeting recommended approval of 2012 Rebalancing Scenario 10B, where the MAG Regional Freeway and Highway Program meets the projected $390 million shortfall by repositioning the SR-202L/South Mountain Freeway and Interstate

10/Maricopa Freeway projects to improve the Program's cash flow; transfer funding from the SR-303L segment between US-60 and Interstate 17 to the SR-303L segment between Interstate 10 and MC-85, but retain funding for a grade separated interchange at the existing El Mirage Rd intersection; remove $300 million from the Program's budget for the Interstate 17/Black Canyon Freeway corridor; and to encourage ADOT to focus upon cost-effective solutions that will provide opportunities to return projects to the Program in the future.

MEMBERS ATTENDING

Scottsdale: Dave Meinhart
ADOT: Kwi-Sung Kang for Floyd Roehrich
Avondale: David Fitzhugh
* Buckeye: Scott Lowe
Chandler: Patrice Kraus
El Mirage: Lance Calvert
* Fountain Hills: Randy Harrel
* Gila Bend: Eric Fitzer
* Gila River: Doug Torres
* Gilbert: Leah Hubbard
Glendale: Terry Johnson
Goodyear: Cato Esquivel
* Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: Clem Ligocki for John Hauskins
Mesa: Scott Butler
* Paradise Valley: Bill Mead
Peoria: Andrew Granger
Phoenix: Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Surprise: Bob Beckley
Tempe: Chad Heinrich
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

EX-OFFICIO MEMBERS ATTENDING

*Street Committee: Charles Andrews, Avondale
*Bicycle/Pedestrian Committee: Katherine Coles, City of Phoenix
*ITS Committee: Debbie Albert, Glendale
*Transportation Safety Committee: Julian Dresang, City of Tempe

* Members neither present nor represented by proxy. + Attended by Videoconference
# Attended by Audioconference

CONTACT PERSON:

Bob Hazlett, MAG Senior Engineering Manager, 602 254-6300.

2012 Scenario for the MAG Regional Feeway and Highway Program

May 2012

MARICOPA ASSOCIATION of GOVERNMENTS

2012 SCENARIO TECHNICAL REPORT

Arizona Revised Statues (ARS) 28-6352 (A) requires a budget process that ensures the estimated cost of the freeways and other controlled access highways in the Regional Transportation Plan (RTP) does not exceed the total amount of revenues estimated to be available. The MAG Regional Freeway and Highway Program is subject to this requirement. In an oversight capacity, MAG staff collects and review project and financial data related to the Program from the Arizona Department of Transportation (ADOT). The program is reviewed from both a year-by-year, and in a composite perspective to ensure the funds are available for eventual construction. The year-by-year process, referred to as "cash flow" is completed through a modeling effort for the program between Fiscal Years (FY) 2006 and 2026. These horizon years coincide with the life of the half-cent Maricopa County Transportation Excise Tax, which was passed by the voters of Maricopa County in November 2004.

1. BACKGROUND

The 2003 Regional Transportation Plan identified the budget for the Regional Freeway and Highway Program as $9,421.2 million, or roughly $9.5 billion. In 2009, the Arizona Department of Transportation (ADOT) cost opinion for completing the program was $15,952.4 million, or nearly $16 billion. In June 2008, ADOT prepared a cost assessment of the Program, and identified the following as key reasons for the dramatic increases:

- Right-of-way price escalation from the middle part of the previous decade, estimated at $1.1 billion;
- Inflation of construction materials and labor due to international demand for commodities and the domestic construction boom, estimated at $2.0 billion; and
- Scope growth due to a variety of construction items and over-design, estimated at $3.5 billion.

This $6.6 billion deficit was mitigated through a *Tentative Scenario for the Regional Freeway and Highway Program*[1] that was approved by the MAG Regional Council in October 2009. In this scenario, various techniques were applied for reducing costs to the program. These techniques included:

- Management Strategy savings from lower construction and system-wide costs, estimated at $758 million;
- Value Engineering savings in the Loop 202/South Mountain and Loop 303 Freeway corridors, estimated at $1.7 billion; and,

[1] Maricopa Association of Governments, *Tentative Scenario for the Regional Freeway and Highway Program*, October 2009. Tentative Scenario approved by MAG Regional Council on October 28, 2009.

- Project deferrals to Phase V of the Regional Transportation Plan (FY2026-FY2031), estimated at $4.1 billion.

1.1 Recent Program Accomplishments

Since approval of the 2009 Tentative Scenario for the Regional Freeway and Highway Program, ADOT has continued improving the system. Key improvements since 2010 include (illustrated in Figure 1):

- Opening the Loop 303 interim 4-lane roadway from Happy Valley Rd to Interstate 17.
- Adding one HOV lane in both directions on Loop 202/Red Mountain Freeway from Loop 101/Pima-Price to Gilbert Road.
- Adding one general-purpose lane in each direction on Interstate 10/Papago Freeway from Verrado Way to Sarival Avenue.
- Adding one general purpose lane in each direction on Interstate 17/Black Canyon Freeway from SR-74/Carefree Highway to Anthem Way.
- Constructing 31-miles of new HOV lanes in each direction on Loop 101/Agua Fria-Pima Freeways from Interstate 10/Papago to SR-51/Piestewa
- Constructing 11-miles of new HOV lanes in each direction on Loop 202/Santan Freeway from Gilbert Road to Interstate 10/Maricopa.
- Adding one general-purpose lane in each direction on US-60/Grand Ave from 83rd Avenue to Loop 303.
- Constructing a new direct HOV (DHOV) ramp from Interstate 10/Maricopa Freeway on the north to Loop 202/Santan Freeway on the east in the Pecos Stack system interchange.
- Constructing a new DHOV ramp from Loop 101/Price Freeway on the north to Loop 202/Santan Freeway on the east in the south Loop 101/Loop 202 system interchange.

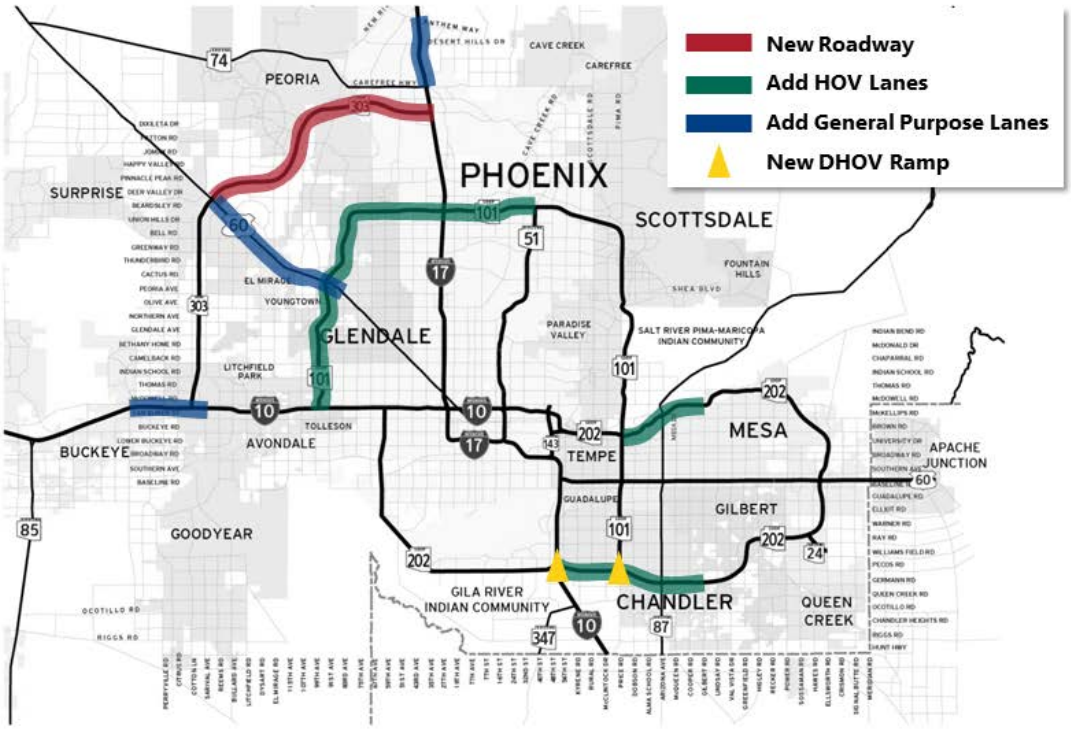


Figure 1. Significant Projects completed since 2009 Rebalancing.

1.2 Projects Under Construction

At the time of this document's preparation, ADOT has three key projects under construction. These include the following (illustrated in Figure 2):

- Conversion of Loop 303 from a two-lane interim roadway to a six-lane freeway, from Interstate 10 to US-60/Grand Avenue. Construction includes a new system interchange with Interstate 10/Papago Freeway, new interim interchanges with Northern Parkway and US-60/Grand Avenue, and the entire roadway is anticipated for completion by 2015.
- Construction of the first mile of the SR-24/Gateway Freeway corridor from Loop 202/Santan to Ellsworth Road, including new system interchange. This construction is scheduled for completion by 2014 and was accelerated through financing provided by the City of Mesa.
- Reconstruction of US-60/Grand Avenue from 83rd Avenue to 19th Avenue with new pavement and access management enhancements. Road work is anticipated complete by 2014.

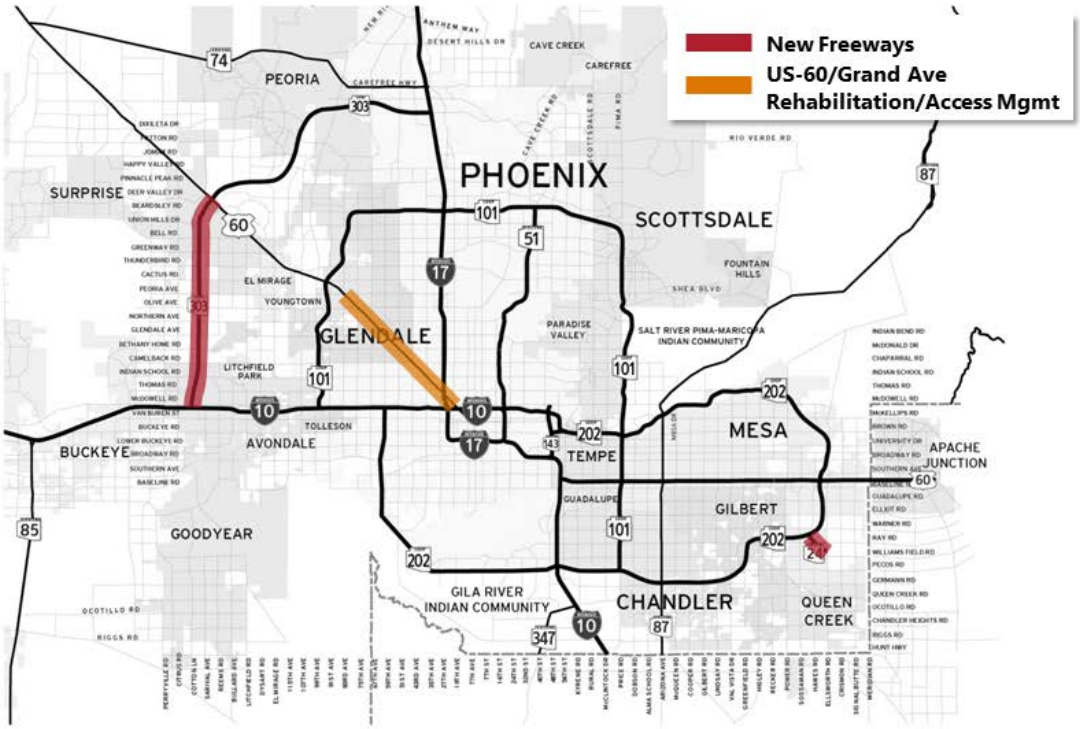


Figure 2. Key Construction Projects by ADOT 2012-2015.

1.3 Project Studies Underway

In developing the 2012 Scenario for the Regional Freeway Program, it is important to understand the status of the remaining projects. ADOT has studies underway to environmentally clear and identify the design for the future projects. The locations of these studies are illustrated in Figure 3. Additional information about the projects follows the figure by topic:

- New Freeway Corridor
- Add HOV Lanes
- Add General-purpose Lanes
- New US-60/Grand Avenue Traffic Interchanges

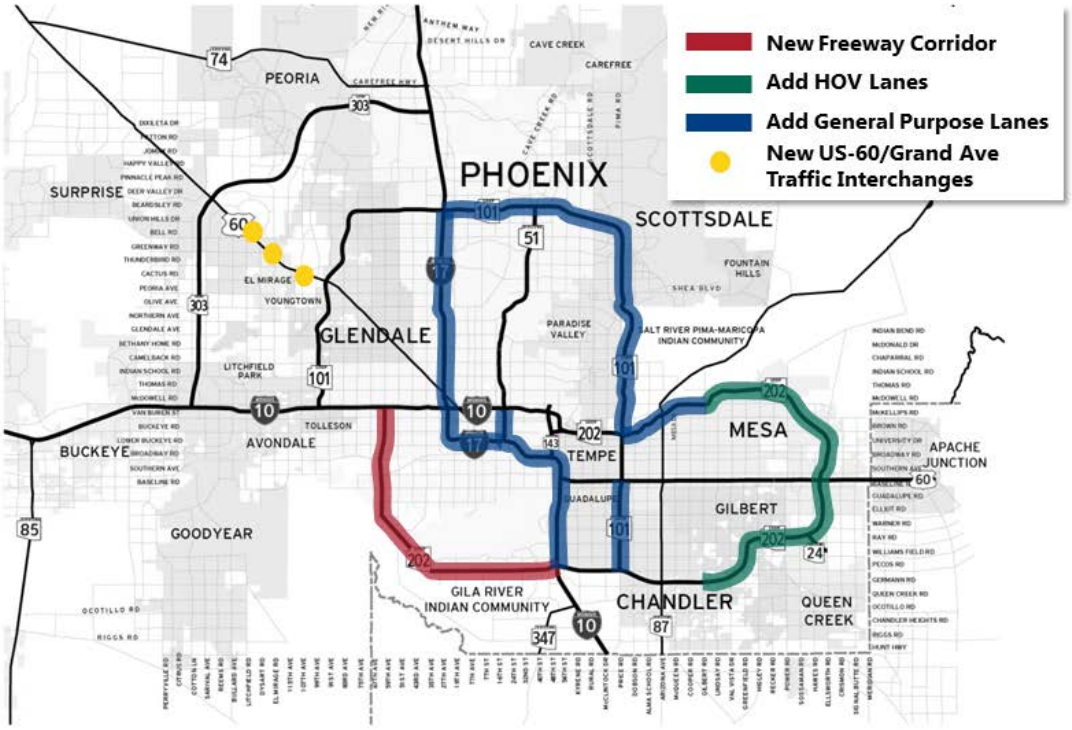


Figure 3. Locations of projects under study by ADOT.

1.3.1 New Freeway Corridor

Loop 202/South Mountain Freeway

The South Mountain Freeway is a vital component of the MAG Regional Transportation Plan (RTP), linking the East Valley with Phoenix and West Valley communities. It also plays a critical role in relieving traffic that is currently concentrated on Interstate 10 through Central Phoenix, providing an alternative to Interstate 10 and reducing congestion on surface streets such as Baseline Road and Southern Avenue. Some of the specific factors include:

- The purpose of the proposed freeway is to provide improved mobility for the current and future residents of the region.
- It is estimated that up to 170,000 vehicles per day will use the South Mountain Freeway each day by 2035, which is comparable to current use on the Loop 101 in Scottsdale and Loop 202 in Mesa today. More than 90 percent of this traffic will be local in origin, similar to the existing Loop system.
- Without the proposed freeway, this traffic would have to depend upon other over-burdened roadways, such as I-10 and Baseline road, to make connections between the East Valley and the West Valley.
- The freeway would serve as an alternative in the event of emergency closures of other regional freeways.

- The proposed freeway will serve other purposes as well, including providing regional links to the remainder of the regional transportation system, as outlined in the Regional Transportation Plan; serving regional mobility needs; and meeting objectives adopted in regional and local long-range plans.

The voters of Maricopa County originally approved the Loop 202/South Mountain Freeway in 1985, for funding as part of Proposition 300. This action was reaffirmed in 2004, when voters approved the extension of funding for the RTP, which included the Loop 202/South Mountain Freeway. With construction of Loop 303 now underway, moving forward with the South Mountain Freeway is the highest priority project in the Life Cycle Program.

Presently, ADOT and the Federal Highway Administration (FHWA) are in the process of completing an Environmental Impact Statement (EIS) and Location/Design Concept Report (L/DCR) for the South Mountain Freeway corridor. Both agencies anticipate providing a draft EIS document for public review in summer 2012 and plan to complete the environmental process with a Record of Decision in 2013. After this process is complete, ADOT can then proceed with design of the facility.

It should be noted that since adopting the 2009 Tentative Scenario by MAG Regional Council, several events have occurred in development of the Loop 202/South Mountain Freeway corridor. The most significant event was a February 2012 vote by the Gila River Indian Community members to consider placing a portion of the freeway corridor on Community land to avoid South Mountain and provide an alternative route to planned construction in the Ahwatukee neighborhood of Phoenix. Community members voted "No Build," thereby expressing their desire to not have the South Mountain Freeway constructed on their land. With this vote, the only option is now available for ADOT and FHWA to consider is locating the corridor between Interstate 10/Maricopa and 51st Avenue, permitting the EIS to be completed in 2013.

1.3.2 Add HOV Lane Projects

ADOT has completed the Design Concept Report (DCR) for adding HOV lanes into the median of Loop 202/Red Mountain Freeway from Gilbert Rd to US-60/Superstition Freeway, and also along Loop 202/Santan Freeway from US-60/Superstition Freeway to Gilbert Rd. Projects associated with this 28-mile segment of Loop 202 represent the final locations for HOV lanes in the East Valley.

1.3.3 Add General-Purpose Lanes

Interstate 10/Maricopa Freeway

Since 2001, ADOT and FHWA have been conducting this Environmental Impact Statement (EIS) study for the widening of Interstate 10 between the SR-51/Loop 202 "Mini-Stack" and Loop 202/Santan-South Mountain Freeways "Pecos Stack" traffic interchanges. The purpose of this EIS is to identify the ultimate improvements needed to accommodate travel demand in the Interstate 10 corridor. The alternative under study identifies constructing a local-express lane configuration for the freeway between the Intestate 17 "Split" and US-60/Superstition Freeway interchanges, a new system interchange with SR-143/Hohokam Expressway, and adding general-purpose lanes in both directions between US-60 and Loop 202/Santan-South Mountain Freeways in

the Southeast Valley. The alternative under consideration identifies widening of Interstate to as many as 25-lanes in the Broadway curve segment of the freeway between SR-143 and US-60. The estimated cost for the full construction of the alternative under study in the EIS is $1.6 billion.

In 2003, the Regional Transportation Plan identified only funding a portion of the project at $700 million. For planning purposes, it has been anticipated that key elements of the alternative would be initially constructed; specifically the reconstruct of the SR-143 system interchange and the necessary local-express lane configuration in the Broadway curve segment of Interstate 10 to support the new system interchange. These proposed construction limits are from east of 32nd St to south of Baseline Rd. With the available funding, the action would also include adding a single general-purpose in each direction of Interstate 10 from Baseline Rd to the Loop 202 "Pecos Stack" traffic interchange.

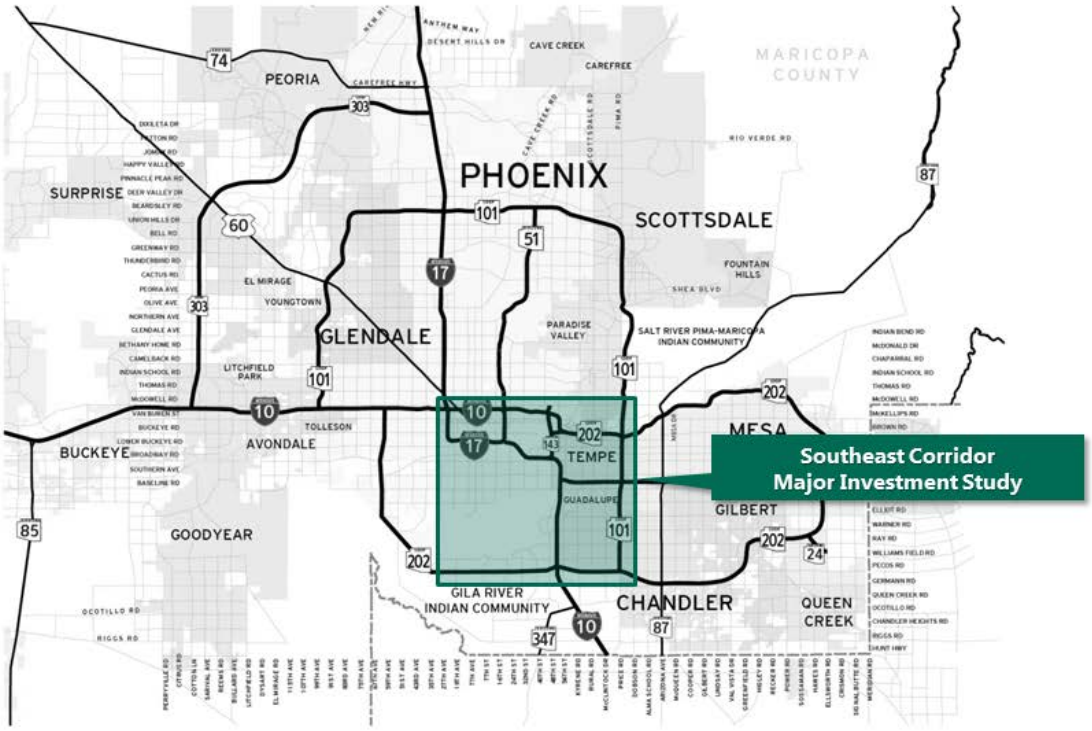


Figure 4. Study area for the Southeast Corridor Major Investment Study.

MAG member agencies have concerns about the widening proposal in the Interstate 10 Corridor Study EIS at the Broadway curve. Specifically, there is speculation about whether other geometries and alternative modes have been fully considered in the overall corridor plan for the freeway. At the member agencies request, MAG launched the Southeast Corridor Major Investment Study (MIS) to address these concerns. While the MIS is still under development, preliminary results have shown that an Interstate 10 managed lanes alternative, in an express-toll configuration with additional DHOV ramps, has better performance than the EIS alternative. A comparison between the two alternatives is presented in the following table.

Segment	Interstate 10 Corridor Improvement Study EIS	Southeast Corridor Major Investment Study
SR-51/Loop 202 to Interstate 17 Split	**4-5** general-purpose lanes **1** HOV lane	**3-4** general-purpose lanes **1** HOV lane
Interstate 17 Split to US-60	**4** 'Local' general-purpose lanes **5** 'Express' general-purpose lanes **2** 'Express' HOV lanes	**5** general-purpose lanes **3** 'Express' HOV/HOT lanes
US-60 to Loop 202 Pecos Stack	**4** general-purpose lanes **1** HOV lane	**4** general-purpose lanes **2** 'Express' HOV/HOT lanes
		▪ Add "premium" DHOV ramps ▪ Connect to an I-17 HOV/HOT lanes option

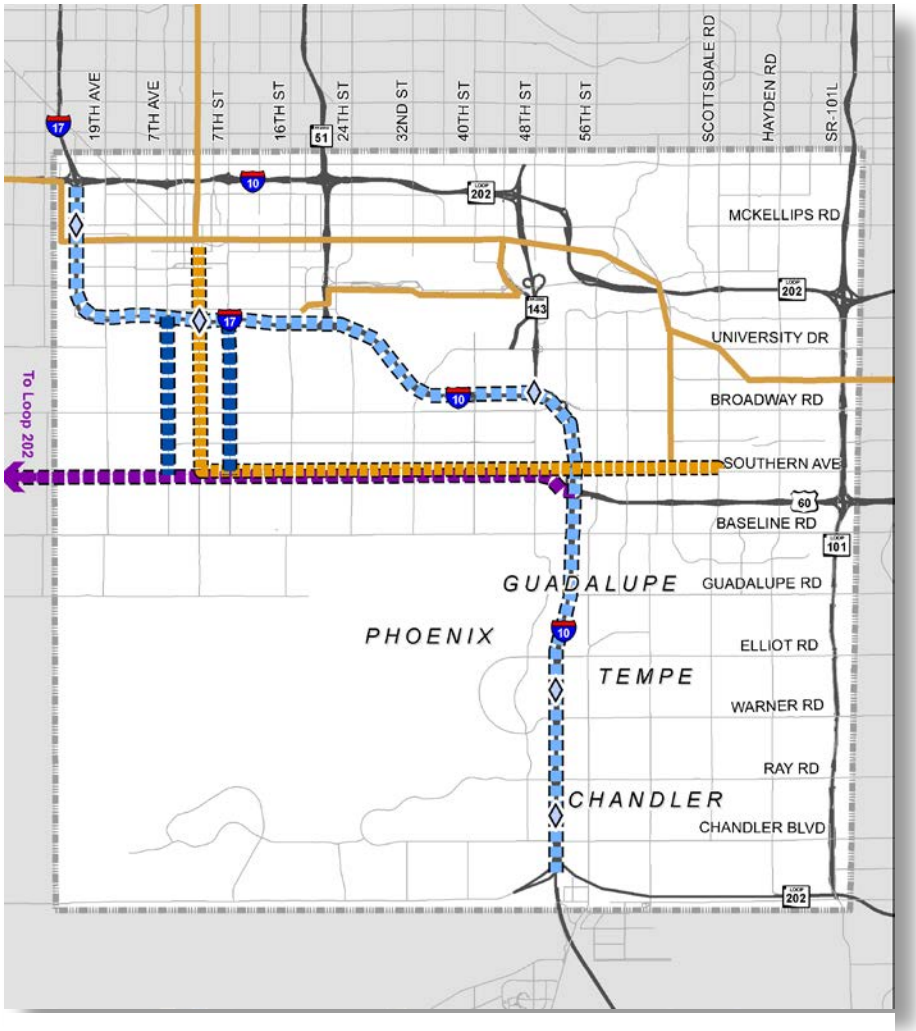


Figure 5. Southeast Corridor Major Investment Study alternative illustrating proposed DHOV locations along Interstates 10 and 17.

ADOT and FHWA have been in the process of completing the draft EIS for the Interstate 10 Corridor Improvement Study. Presently, the goal is to have a document ready for public review in the summer 2012, and the Record of Decision in 2013. However, the alternative under study in the EIS has impacts to Phoenix Sky Harbor International Airport property near the Interstate 10/Interstate 17 "Split" traffic interchange. The extent of these impacts is still under investigation by the ADOT/FHWA study team, the Federal Aviation Administration, and the City of Phoenix Aviation Department.

In addition, the material generated by the Southeast Corridor Major Investment Study suggests an additional

alternative for consideration in the EIS process. MAG staff is coordinating this possibility with ADOT and FHWA. Additional study time would be needed if the MIS Managed Lanes alternative were incorporated into the EIS. This could extend the draft EIS review and subsequent Record of Decision to a later date than the respective summer 2012 and 2013 previously identified.

Interstate 17 Corridor Study EIS

Started in 2010, this Environmental Impact Statement study is examining various add lanes alternatives for widening the 20-miles of Interstate 17 between the Interstate 10 "Split" and Loop 101/Agua Fria-Pima Freeways interchanges. Portions of Interstate 17 represent the oldest segments of freeway in the Valley and they are approaching the end of their service life. The Regional Transportation Plan identifies unspecified improvements for this corridor and has programmed approximately $1.1 billion for their construction.

Like the Interstate 10 Corridor Study EIS, this study is determining the ultimate cross-section for Interstate 17 to meet travel demands by the 2035 horizon. At the time of this document, the alternatives are under development. The options under study for the alternatives range from adding one to two general-purpose lanes in both directions, improving frontage road connections and geometry, to developing better HOV operations with DHOV ramps at Central Ave, Washington St-Jefferson St, Grand Avenue, Missouri St, Mountain View Rd (at Metrocenter Mall), and Paradise Ln. Although the alternatives are very preliminary, and the cost estimates under close study, estimates for improving Interstate 17 range from $2.5 billion to $3.0 billion for implementation. The ADOT and FHWA study team are working on a schedule for draft delivery of the EIS document in late 2013 with accompanying Record of Decision in 2014.

As depicted in the Southeast Corridor Major Investment Study, consideration was given to extending the Interstate 10 Managed Lanes alternative from the Loop 202 "Pecos Stack" traffic interchange through the "Split" interchange and onto Interstate 17 itself. The study included DHOV connections at Central Ave and Washington St and Jefferson St. In review of the performance results, the MIS study team has recommended that consideration be given a "natural" corridor that begins on Interstate 17 at the Interstate 10 "Stack" interchange, proceed south through the Durango curve and east through the "Split" interchange, and then onto Interstate 10 around Broadway curve to the Loop 202 "Pecos Stack" interchange. It was observed that the Interstate 10 Corridor Study EIS focuses improvements and channels traffic to the SR-51/Loop 202 "Mini-Stack" interchanges, resulting in unintended consequences for increased congestion at the Deck Park Tunnel with little chance for improvement.

Loop 101/Pima Freeway, Loop 101/Price Freeway, and Loop 202/Red Mountain Freeway

ADOT is in various stages of study for adding general-purpose lanes along Loop 101 and Loop 202 in the East Valley. The project that is furthest along is the Loop 101/Pima Freeway segment between Shea Blvd and Loop 202/Red Mountain Freeway. This project is in design.

The Design Concept Reports (DCR) have been completed for the Loop 101/Pima Freeway segments between SR-51/Piestewa Freeway and Pima Rd-Princess Dr, and Pima Rd-Princess Dr to Shea Blvd. A DCR is also in the final stages for Loop 202/Red Mountain Freeway for an additional general-purpose lane in each direction

between Loop 101/Pima-Price Freeways and Gilbert Rd, and in the early stages for Loop 101/Pima Freeway between Intestate 17 and SR-51. ADOT is about to begin the DCR study of the Loop 101/Price Freeway from US-60/Superstition Freeway to Loop 202/Santan Freeway.

1.3.4 New US-60/Grand Avenue Traffic Interchanges

ADOT has had under study since 2007 the potential for improving the as many intersections as possible along US-60/Grand Avenue intersections between the Loop 303 and Loop 101/Agua Fria Freeways. The Regional Transportation Plan has identified a program budget of $65 million for these improvements. The present recommendation from ADOT is to construct a grade-separated interchange at US-60/Grand Ave at Bell Rd, improve the approach alignments at the Thunderbird Rd-Thompson Ranch Rd intersection, and construct a grade-separation at 103rd Avenue (with no access to US-60). ADOT's recommendation has a current cost opinion of $83 million, which exceeds the current program amount.

The majority of the costs identified in ADOT's recommendation are at the US-60/Grand Ave at Bell Rd intersection. This intersection has the highest volume between Loop 303 and Loop 101. Recently, ADOT's study team has been identifying different geometric alternatives for constructing a grade-separated interchange at this location that elevates Bell Rd over Grand Avenue and the adjacent Burlington Northern-Santa Fe Railroad, and minimizes property acquisitions in a heavily commercialized area of Surprise. Additional studies are underway by both ADOT and MAG with additional consultant assistance to formulate a solution that identifies an equitable solution at Bell Rd and allows for developing the additional improvements at Thunderbird Rd-Thompson Ranch Rd and 103rd Ave.

2. Projected Program Cash Flow

Cash flow modeling of the Regional Freeway and Highway Program (FY 2006-2026) was performed to compare available funding with program expenditures. The latest cash flow analysis indicates that there is a funding deficit of approximately $390 million through FY 2026, with year-end negative cash balances occurring as early as FY 2014.

2.1 Background

As previously noted, in October 2009, the MAG Regional Council approved a tentative scenario to balance the Proposition 400 Freeway/Highway Life Cycle Program, and to incorporate it into the Regional Transportation Plan 2010 Update and the FY 2011-2015 MAG Transportation Improvement Program.

In April 2011, MAG Committees were briefed on the work efforts and accomplishments that were made in delivering the Regional Freeway and Highway Program, as well as the cost and revenue projections for the Program and the potential need for additional rebalancing. At that time, it was estimated that the Life Cycle Program was out of balance by approximately 2.3 percent through FY 2026, due to lower revenue forecasts. Because of federal program and revenue forecasting uncertainties, it was determined that rebalancing of the Program should be addressed after new revenue forecasts became available at the end of calendar year 2011.

New transportation revenue forecasts are somewhat lower.

New revenue forecasts for the Regional Freeway and Highway Program were produced in the fall of 2011, including federal, state and regional revenue sources. From the Maricopa County Excise Sales Tax, the Program receives 56.2 percent of all revenues collected under this tax. Currently, ADOT and MAG estimate half-cent revenues (FY 2006-2026) for freeways of approximately $5.12 billion, which is somewhat lower than the previous estimate of $5.24 billion in 2011.

The Regional Freeway and Highway Program also receives annual funding through the Arizona Department of Transportation (ADOT) from the Highway Users Revenue Fund (HURF). The latest estimate for ADOT funds (FY 2006-2026) dedicated to the MAG area totals approximately $6.32 billion, which is slightly lower than the previous estimate of $6.39 billion in 2011.

In addition to the half-cent sales tax revenues and ADOT monies, federal transportation funding directed to the MAG region in the form of Surface Transportation (STP) funds and Congestion Mitigation and Air Quality (CMAQ) funds are available for use in implementing projects in the Program. The latest estimate for MAG region federal aid (FY 2006-2026) is approximately $564 million, which is essentially unchanged from the previous estimate in 2011.

Bonding capacity has been reduced significantly.

Recently, bond rating agencies have advised ADOT to increase the revenue coverage ratio on their bonding projections. This combined with lower sale tax projections resulted in a lower level of bond issuance than pre-

viously, with bond proceeds (FY 2006-2026) totaling approximately $2.64 billion, compared to the previous level of $3.61 billion. The lower bonding levels result in a net positive effect on total funds available, because of the lower interest expense. However, the lower bonding capacity results in less flexibility to accommodate peaks in construction spending, which can result in longer project implementation periods.

2.2 Analysis

Cash flow modeling revealed an overall Life Cycle program deficit and year-end negative cash balances that will require significant program adjustments. Cash flow analysis was applied to the current Freeway/Highway Life Cycle Program schedule, taking into account the latest project cost estimates and revenue projections. Also, bond issues were projected consistent with revenue streams and coverage requirements. This analysis indicated that there is an overall funding deficit of approximately $390 million for the Regional Freeway and Highway Program through FY 2026. Life cycle projects expenditures will needed to be reduced by at least this amount to achieve a balanced program.

In addition to the overall deficit, the cash flow analysis revealed negative year-end cash balances beginning in FY 2014 and continuing through FY 2026. The maximum negative year-end cash balance occurred in FY 2016 and exceeds $881 million. The negative year-end cash balances, largely as a result of reduced bonding capacity, will necessitate significant project schedule adjustments to achieve positive year-end balances. The following figure charts the projected cash flow for the Regional Freeway and Highway Program.

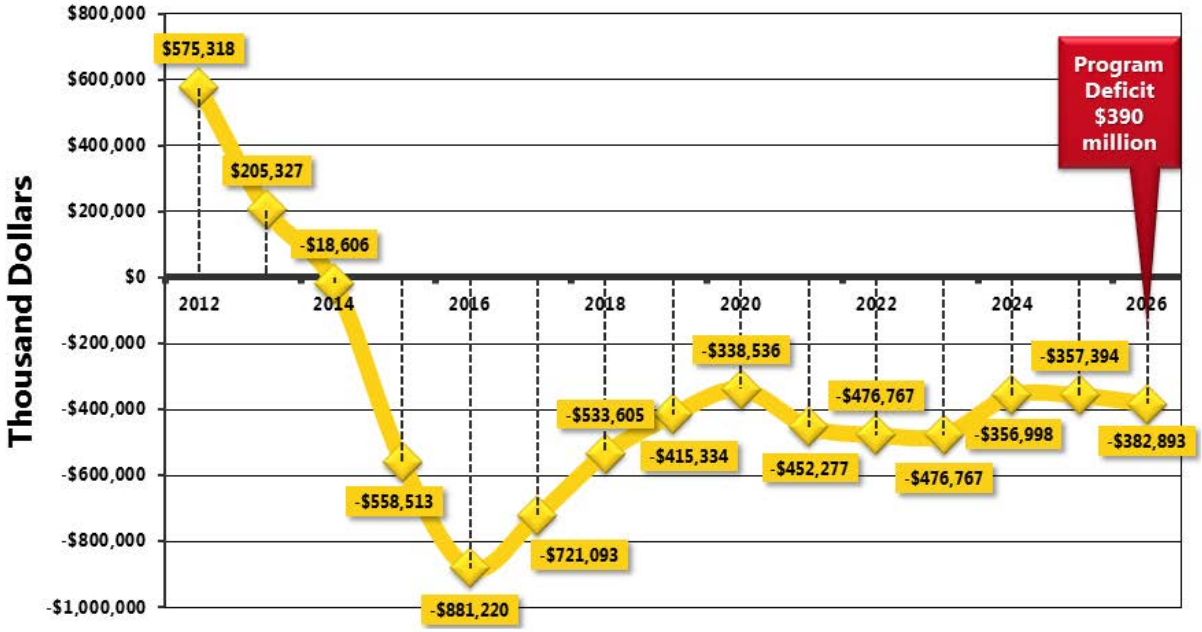


Figure 6. ADOT Base 2012 Cash flow projection for Regional Freeway and Highway Program.

To rebalance the program, a number of factors need to be taken into account.

In order to rebalance the program, both the amount and timing of expenditures need to be taken into account. As part of this process, it will be important to:

- Identify the major projects in the programming process;
- Establish key project priorities;
- Note opportunities for project scope and/or funding adjustments; and
- Recognize implementation risks.

Considering these parameters, the following principles were considered for the balancing the program from the $390 million deficit identified in this analysis:

- Do not change the present timing for immediate construction projects in the near-term. This includes projects under construction along Loop 303 between Interstate 10/Maricopa Freeway and US-60/Grand Avenue, the initial one-mile segment of SR-24/Gateway Freeway between Loop 202/Santa Freeway and Ellsworth Ave, and the reconstruction of US-60/Grand Avenue with pavement rehabilitation and access management improvements between 83rd Ave and 19th Ave.
- Following the principles from the 2009 rebalancing effort, continue with programs for completing the Regional HOV Network on existing freeways. This includes new HOV lanes along Loop 202/Red Mountain Freeway from Gilbert Rd to US-60/Superstition Freeway and along Loop 202/Santan Freeway between US-60/Superstition Freeway and Gilbert Rd.
- Continue with the program for improving intersections along US-60/Grand Avenue between Loop 303 and Loop 101/Agua Fria Freeway.
- Closely examine cash flow, costs, and proposed time lines for major Program items. This includes understanding where projects are in the study and design phases, and how these projects can be incorporated into the overall Program cash flow.

Based on these principles, MAG staff identified different cash flow scenarios for balancing the $390 million deficit in the Regional Freeway and Highway Program. Of these all of the scenarios that were studied, MAG staff advanced four scenarios for further examination by the Regional Council, Transportation Policy Committee, Management Committee, and Transportation Review Committee. The following text discusses the four advanced scenarios. Additional information on the studied scenarios that were dismissed from further evaluation is contained in this report's appendix.

2.3 Background for the Four Scenarios

The first item for consideration in rebalancing the Program was to incorporate recent bid savings from projects that are presently under construction. For purposes of this analysis, MAG staff incorporated the $66.5 million in savings from the SR-24/Gateway Freeway bids. This segment of SR-24 represents the initial first mile of the

freeway from Loop 202/Santan Freeway to Ellsworth Ave and includes construction of the system traffic interchange. Ultimately, SR-24 is planned to be extended to the Maricopa-Pinal county line and potentially further east to meet US-60 near SR-79 in Florence Junction.

In establishing the rebalancing scenarios, MAG staff examined the major project items that remain for implementation in the Regional Freeway and Highway Program. Again, the HOV lanes along Loop 202 and intersection improvements along US-60/Grand Avenue were considered established projects for the purpose of rebalancing. These major items considered for rebalancing include the following projects:

- Interstate 17/Black Canyon Freeway – from the Interstate 10 "Split" interchange to Loop 101/Agua Fria-Pima Freeways interchange – add lanes;
- Loop 303 – from US-60/Grand Avenue to Interstate 17 – add lanes;
- Interstate 10/Maricopa Freeway – from Interstate 17 "Split" interchange to Loop 202/Santan-South Mountain Freeways – add lanes;
- Loop 101/Pima Freeway – From Intestate 17/Black Canyon Freeway to Loop 202/Red Mountain Freeway – add one general-purpose lane in each direction;
- Loop 101/Price Freeway – From US-60/Superstition Freeway to Loop 202/Santan Freeway – add one general-purpose lane in each direction;
- Loop 202/Red Mountain Freeway – From Loop 101/Pima-Price Freeways to Gilbert Rd – add one general-purpose lane in each direction; and
- Loop 202/South Mountain Freeway – From Interstate 10/Maricopa Freeway to Interstate 10/Papago Freeway – construct new freeway with one HOV lane and three general-purpose lanes in each direction.

Each of the four scenarios incorporates the projected Program cash flow as a critical assumption. The most critical assumption relates to the projected $559 million and $881 million negative balances identified for FY2015 and FY2016 (see Figure 6). The severe negative balances are due to the shortage in available bonding capacity caused by lower sales tax revenues. During these fiscal years, ADOT had projected to have two large scale projects underway: the new Loop 202/South Mountain Freeway construction and the initial add lanes project on the Interstate 10/Maricopa Freeway. Given the severity of these negative figures, MAG staff has determined in the following scenarios that the Program cannot support construction of both large scale projects simultaneously.

In the following text, discussion is provided about the projects associated with these major items to demonstrate how the scenario balances the program. The discussion also identifies how the major items construction – Loop 202/South Mountain or Interstate 10/Maricopa – is sequenced in the scenario.

2.3.1 Scenario 8

Of the scenarios considered by MAG staff, this option was considered with the concept of deferring the addition of general-purpose lanes along Loop 101/Pima Freeway, Loop 202/Red Mountain Freeway, and Loop 101/Price Freeway. All other major items remain in the program; however, some projects occur at different times to improve upon the Program cash flow. For this scenario, the new Loop 202/South Mountain Freeway corridor construction is ahead of the Interstate 10/Maricopa Freeway add lanes project. The following figure illustrates the scenario.

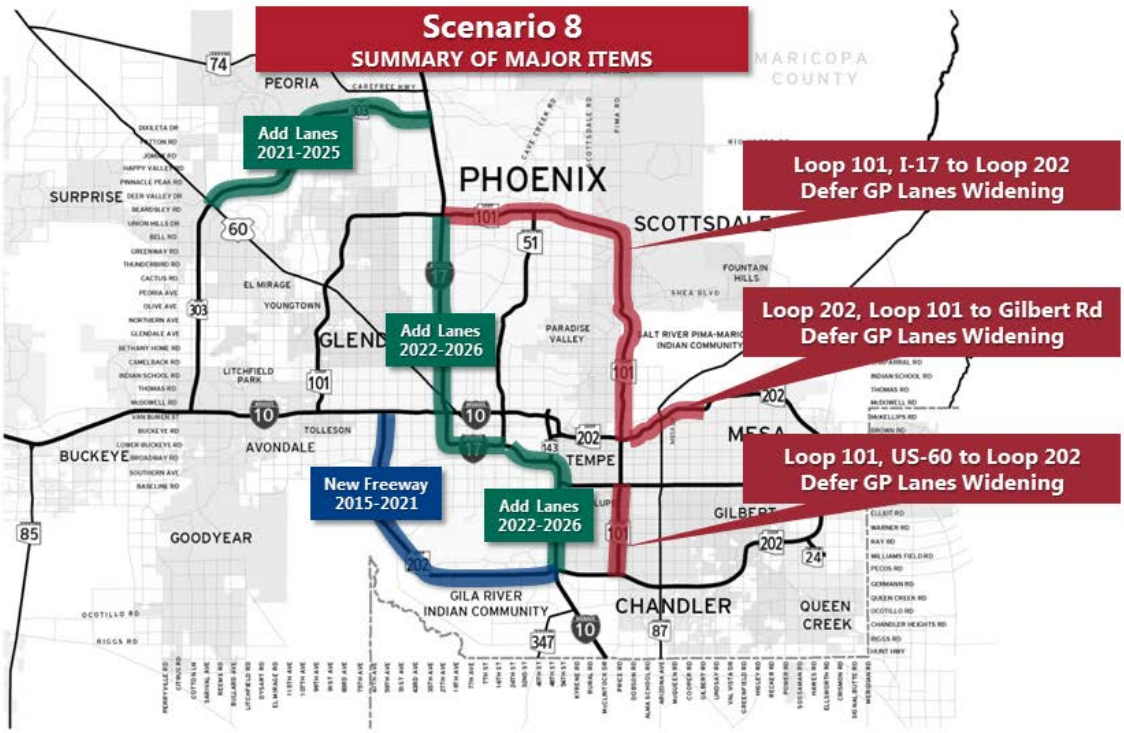


Figure 7. Scenario 8 for the Regional Freeway and Highway Program.

As this scenario focuses upon deferral of adding general-purpose lanes along Loop 101 and Loop 202, the following table has been prepared to summarize their projected costs and estimated construction horizons. If these add general-purpose lane projects were deferred to Phase V of the Regional Transportation Plan (beyond FY2026), then the current Program would have an approximately an additional $420 million. This figure exceeds the gap of the $390 million deficit identified for the Program.

Freeway Corridor	Project Segment	Status	Program Budget	Current Cost Opinion	Construction Year
Loop 101/Pima	Shea Blvd to Loop 202/ Red Mountain	Design in FY2013	$96.9 million	$96.0 million	FY2014
Loop 202/Red Mountain	Loop 101 to Gilbert Rd	DCR under study	$68.2 million	$74.6 million	FY2015
Loop 101/Pima	Pima Rd-Princess Dr to Shea Blvd	Completed DCR	$49.0 million	$56.4 million	FY2021
Loop 101/Pima	SR-51/Piestewa to Pima Rd-Princess Dr	Completed DCR	$76.9 million	$73.5 million	FY2022
Loop 101/Price	US-60/Superstition to Loop 202/Santan	DCR to be developed	$52.3 million	$53.4 million	FY2023
Loop 101/Pima	Interstate 17 to SR-51	DCR under study	$78.7 million	$77.9 million	FY2024
DCR – Design Concept Report			$422.0 million	$431.8 million	

MAG completed travel demand modeling to determine what type of impact this scenario would have on the Regional Freeway and Highway Program network. It was determined that not building these additional general purpose lanes would significantly increase travel times on the entire network, adding more than 82,000 hours in travel time among the system's users in 2035. By adding travel time, not building these general-purpose lanes is actually a dis-benefit to the system, yielding a benefit-cost ratio of -0.71 based on travel time savings alone. Additional costs to the program, such as continuing operations and maintenance costs have not been figured into this benefit-cost ratio. However, the modeling has proven this scenario to be a dis-benefit by adding travel time across the system and yielding a negative ratio.

In terms of the Program, this scenario does provide positive cash flow through the FY2026 horizon. The following illustrates the cash flow. The scheduling changes associated with the projects in this Scenario are summarized in the appendix.

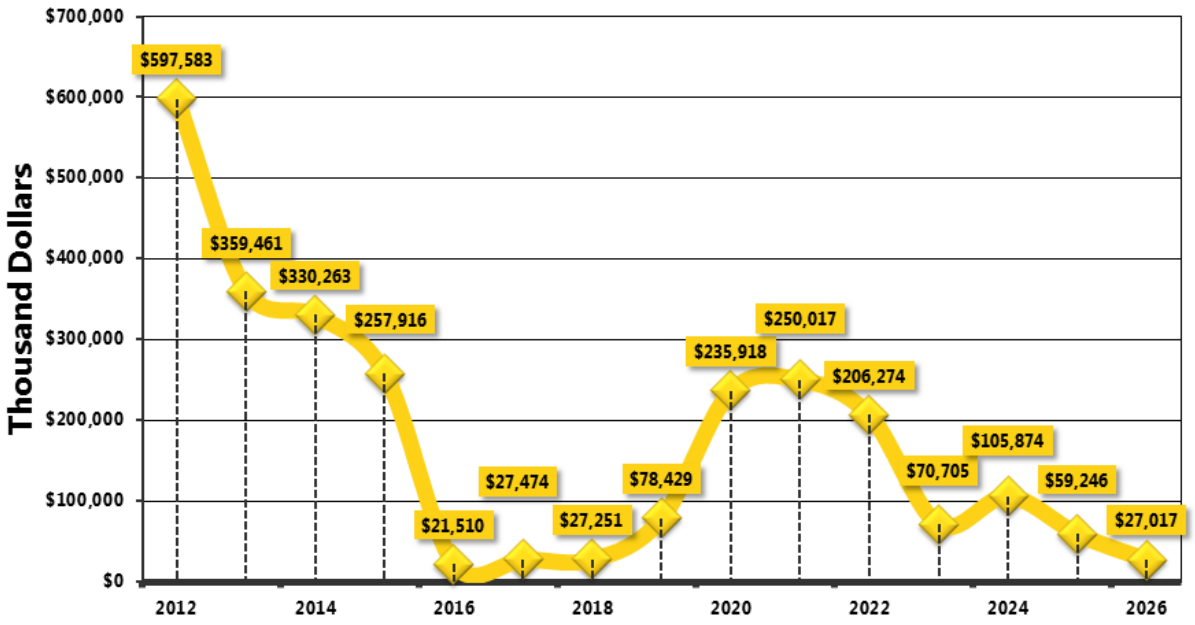


Figure 8. Cash flow model illustration for Scenario 8.

2.3.2 Scenario 10a

MAG staff developed this cash flow scenario that reduces the program budget for two major item corridors. In the Loop 303 corridor, the current cost opinion for the conversion of the interim four-lane facility into a six-lane freeway is $284.0 million. The current Program amount for this construction is $301.9 million. ADOT's cost opinion presently divides the construction action into three projects representing different phases of improvement. The final project, valued at $79.4 million, provides for construction of the service traffic interchanges to arterial streets that have not been constructed. Given the slower pace of development MAG anticipates for this portion of the Valley, this scenario considers deferring this construction until a later phase of the Regional Transportation Plan. For purposes of cash flow modeling, the Program amount for the Loop 303 was reduced from $284.0 million to $204.6 million.

In the Interstate 17/Black Canyon Freeway corridor, this scenario reduces the Program amount for construction by $300 million. Presently, the Program amount for Interstate 17 is $1.1 billion for adding lanes between the Interstate 10 "Split" and Loop 101/Agua Fria-Price Freeways traffic interchanges. As noted previously, ADOT and FHWA have this segment under study through an Environmental Impact Statement (EIS) process. Given this segment is still under study, no project has been identified for the corridor. As current alternatives from the EIS anticipate an overall corridor need in excess of $2.5 billion, MAG staff is working with ADOT and FHWA to identify other options for meeting the demands in the Interstate 17 corridor. These options include

alternate concepts for other cross-sections, project delivery, and the possibility of leveraging the RTP Program amount as part of a Public-Private-Partnership (P3) opportunity in exchange for a priced managed lanes toll concession. For purposes of this scenario and cash flow modeling, the Program amount for Interstate 17 was reduced from $1.1 billion to $800 million.

The following figure illustrates Scenario 10a. For purposes of this scenario, it was assumed that the Loop 202/South Mountain Freeway corridor construction would precede the initial add lanes project on the Interstate 10/Maricopa Freeway. The add general-purpose lanes along Loop 101/Pima Freeway, Loop 202/Red Mountain Freeway, and Loop 101/Price Freeway are included in this scenario.

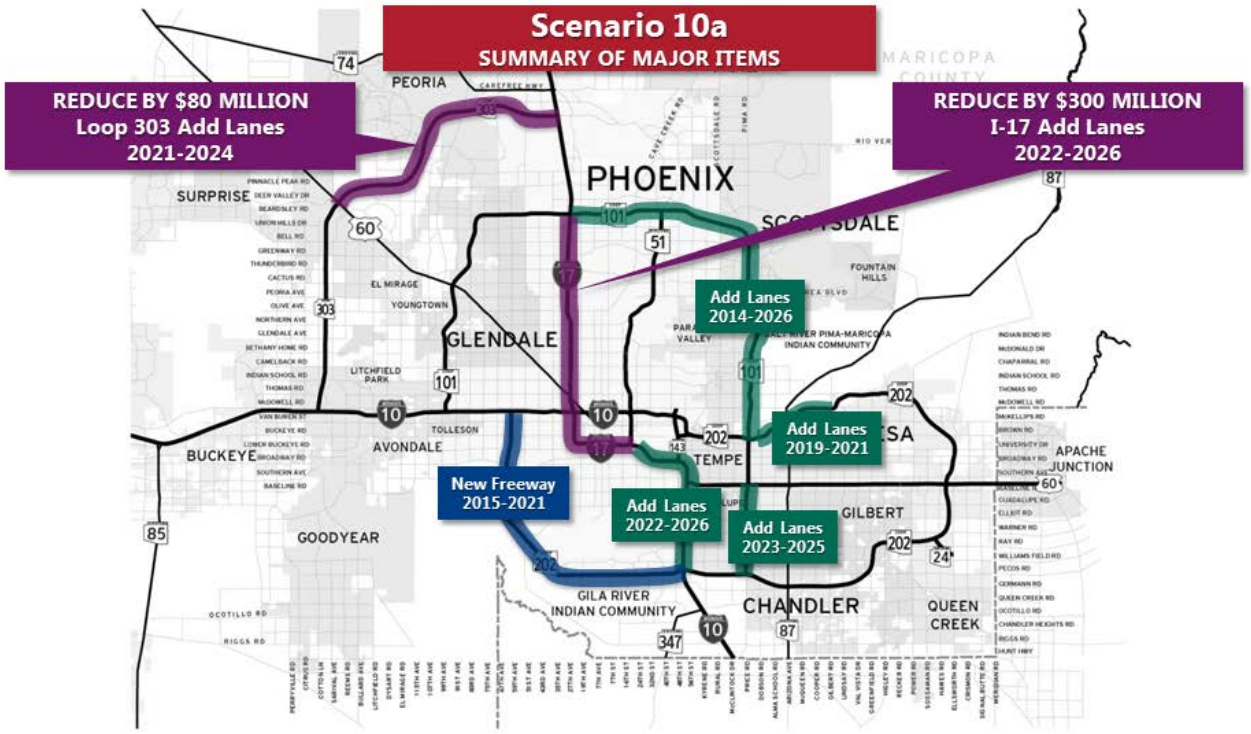


Figure 9. Scenario 10a for the Regional Freeway and Highway Program.

Operationally, the outcome of this scenario has little difference on the traffic operations in the MAG travel demand model. It was assumed that the Program reductions on Loop 303 and Interstate 17 would not make a difference in the number of through lanes on either corridor. This does not affect freeway performance in any model results.

The consideration of this scenario, therefore, was to identify whether reducing Program amounts yields a positive cash flow for the period leading up to FY2026. According to MAG analysis, it does, as illustrated below. The scheduling changes for the projects associated with Scenario 10a are listed in the appendix.

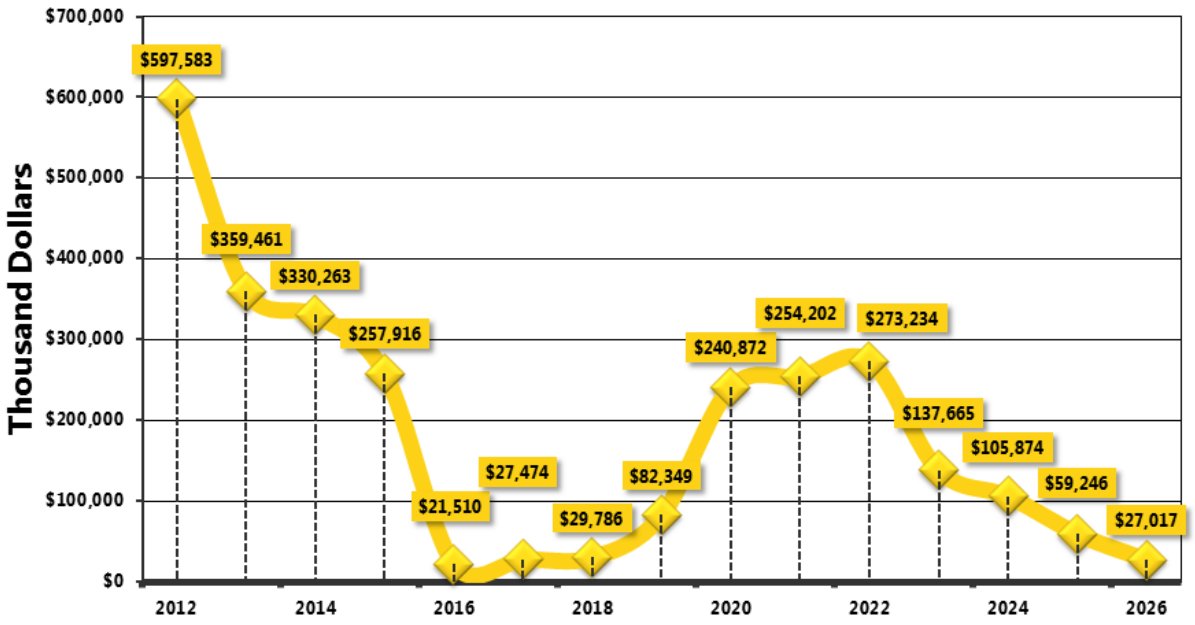


Figure 10. Cash flow illustration for Scenario 10a.

2.3.3 Scenario 10b

This scenario is nearly identical to Scenario 10a with the exception of project considerations in the Loop 303 corridor. As part of the 2009 rebalancing process, the Regional Council approved the add lanes project for the Loop 303 segment between US-60/Grand Avenue and Interstate 17 and to defer to Phase V of the Regional Transportation Plan construction of a new segment, south of Interstate 10 to MC-85 in the Goodyear area. From the October 2009 report, it was noted how the intent for this segment, in conjunction with the SR-30/Interstate 10 Reliever Freeway (previously noted as SR-801) is to provide a continuous freeway connection alternative between the SR-202L/South Mountain and Interstate 10/Papago Freeways. The entire SR-30 corridor was deferred to Phase V in October 2009.

As conditions continue to change throughout the metropolitan Phoenix area, it is apparent that economic growth in the distribution and warehousing sectors in the economy continue to improve, especially in the Goodyear area. These improving conditions suggest the need to enhance transportation connections with Interstate 10 to provide better access for freight movements. According to the City of Goodyear staff, bringing this segment of Loop 303 back into the Program could add permanent jobs to the metropolitan economy. The section of Loop 303 from US-60/Grand Avenue to Interstate 17 will handle the projected volumes in this portion of the corridor through 2030 in its current configuration.

As noted in the October 2009 report, the cost opinion for constructing this segment of Loop 303 between Interstate 10 and MC-85 is $240.0 million. This figure is close to the $284.0 million estimated for add lanes project along Loop 303 from US-60/Grand Ave to Interstate 17. In Scenario 10b, the option is to switch projects and consider returning the Goodyear segment of Loop 303 to the Program.

For purposes of this scenario, it was assumed that the Loop 202/South Mountain Freeway corridor construction would precede the initial add lanes project on the Interstate 10/Maricopa Freeway. The add general-purpose lanes along Loop 101/Pima Freeway, Loop 202/Red Mountain Freeway, and Loop 101/Price Freeway are included in this scenario. The following illustrates the projects in Scenario 10b.

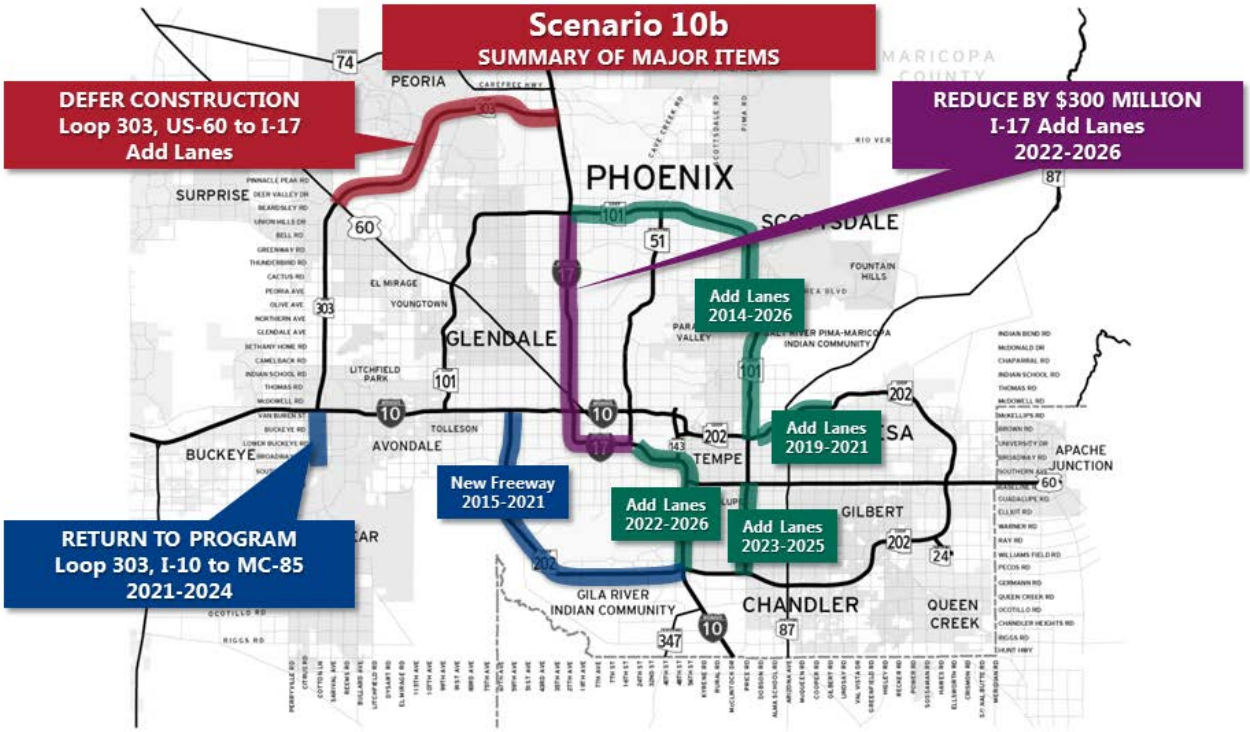


Figure 11. Scenario 10b for the Regional Freeway and Highway Program.

MAG completed travel demand modeling to determine what type of impact this scenario would have on the Regional Freeway and Highway Program network. It was determined that it would significantly decrease travel times on the entire network, effectively decreasing more than 1.1 million hours in driving time among the system's users in 2035. By decreasing travel time, the construction of Loop 303 south of Interstate 10 to MC-85 is a considerable benefit to the system yielding a benefit-cost ratio of 5.76. This benefit-cost ratio is based on travel time savings alone and does not factor into account added costs such as continuing operations and maintenance of the facility. In MAG staff opinion, if these costs were added, the benefit-cost ratio will still be fairly high as the travel time savings identify significant improvement across the entire Regional Freeway and Highway Program system.

Additional modeling was completed to determine whether the future travel demand for the Loop 303 segment north of US-60 to Interstate 17 could be accommodated with the projected increase in travel demand. The following table summarizes the 2030 forecasted traffic for three locations and anticipated level of service.

Location on Loop 303	2030 Daily Travel Demand	Level of Service
Between Lone Mountain Parkway and Westland Dr	62,600	C
Between Lake Pleasant Parkway and 67th Avenue	71,200	C
Between 51st Avenue and 43rd Avenue	74,500	D

Data source: Volumes obtained from MAG Travel Demand Model. LOS assessment based on methods for urban planning from the *Highway Capacity Manual*, Transportation Research Board, 2010 and *Quality/Level of Service Handbook*, Florida Department of Transportation, 2009.

While the majority of intersections with this segment of Loop 303 are grade separated, there are two locations where the roadway meets cross-streets at-grade. These locations are the ramp terminals at the interim interchange with Interstate 17-Sonoran Desert Drive and the El Mirage Road intersection. As part of Scenario 10b, MAG staff recommends incorporating a grade-separated interchange into the program for El Mirage Rd to improve safety and reduce the conflict potential of a remote at-grade intersection between Interstates 10 and 17.

Further MAG staff recommends monitoring traffic conditions at the Interstate 17 interchange to determine the timing and need for the direct flyover ramps that are planned at this location. As part of recent improvements, ADOT developed the grading and Intestate 17 mainline structures that will ease the remaining construction in the interchange. However, the direct flyover ramps are the most expensive construction items as these are all built on structure. Based upon the recent trends in favorable construction bids and right-of-way acquisitions, it is possible that a future rebalancing of the Regional Freeway and Highway Program could provide room to return this construction to the program. It will be important to monitor traffic conditions at this system location to help the decision making process about the flyover ramps.

In terms of the Program, this scenario does provide positive cash flow through the FY2026 horizon. The following illustrates the cash flow. The scheduling changes associated with the projects in this scenario are summarized in the appendix.

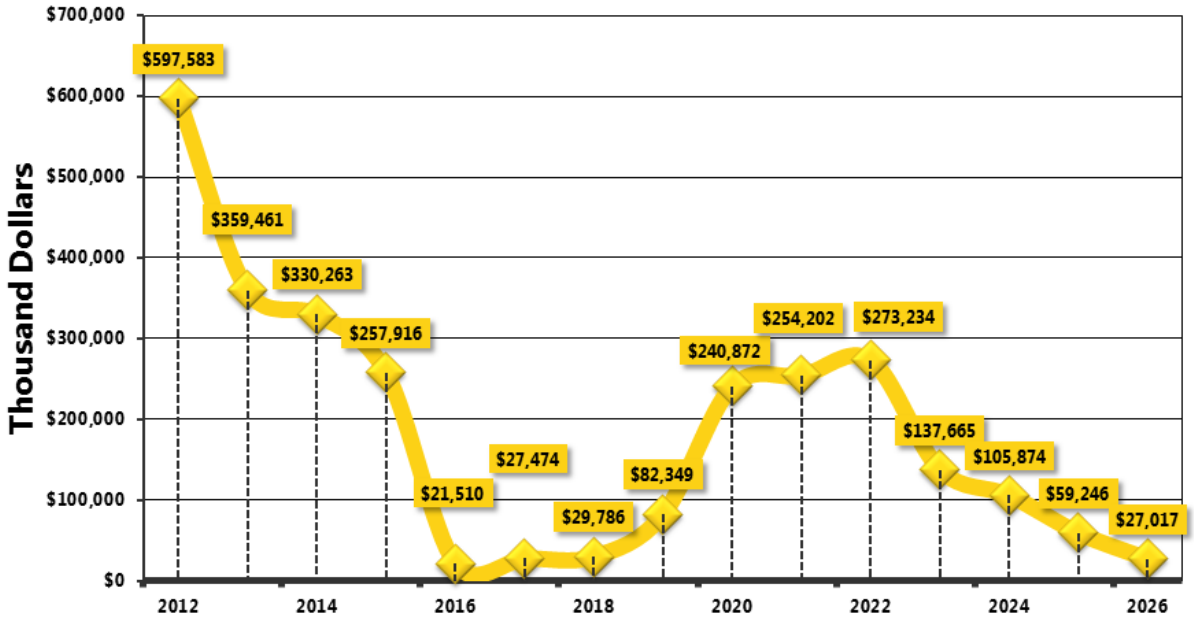


Figure 12. Cash flow illustration for Scenario 10b.

2.3.4 Scenario 12

As depicted in the three previous scenarios, the project sequencing of major items has identified construction of the Loop 202/South Mountain Freeway construction before the initial add lanes project in the Interstate 10/Maricopa Freeway corridor. This sequencing has been following the direction from the Regional Council where after the Loop 303 construction was underway, the next priority is building Loop 202/South Mountain Freeway. Analysis of the cash flow has suggested that construction both Loop 202 and Interstate 10 simultaneously is very difficult due to ADOT's bonding capacity.

In this scenario, the priorities are reversed where the initial add-lanes project for Interstate 10 are constructed ahead of the Loop 202/South Mountain Freeway. Current progress with the EIS process for each corridor suggests that both will be receiving their Record of Decision in about the same time frame in 2013. Further, the controversy behind the Loop 202/South Mountain Freeway is pointing towards potential legal challenges after the EIS is complete on that corridor that could delay ADOT's ability to begin the design and construction process. This scenario was developed to account for delays in the Loop 202 corridor.

The following figure illustrates Scenario 12. Like Scenario 10a, it includes reducing the Program amounts for the Loop 303 and Interstate 17/Black Canyon Freeway corridors by $80 million and $300 million, respectively. The reasoning for reducing these Program amounts has been discussed under that scenario. In addition, the

add general purpose lanes along Loop 101/Pima Freeway, Loop 202/Red Mountain Freeway, and Loop 101/Price Freeway are included in this scenario.

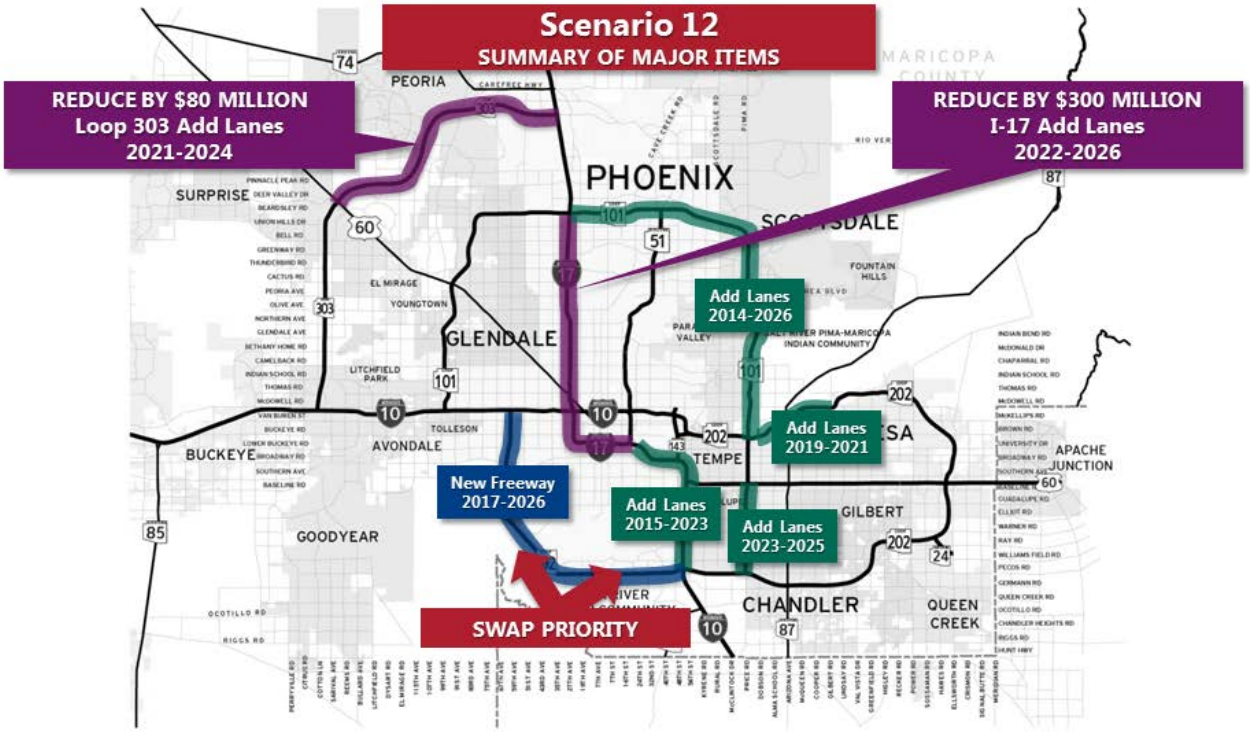


Figure 13. Scenario 12 for the Regional Freeway and Highway Program.

Operationally, the outcome of this scenario has little difference on the traffic operations in the MAG travel demand model. It was assumed that the Program reductions on Loop 303 and Interstate 17 would not make a difference in the number of through lanes on either corridor. This does not affect freeway performance in any model results.

The consideration of this scenario, therefore, was to identify whether reducing Program amounts yields a positive cash flow for the period leading up to FY2026. According to MAG analysis, it does, as illustrated below. Of all four scenarios, the cash flow from this scenario yields the best outcome where expenditures happen gradually over time versus the upfront construction of an entire corridor as would be the case with Loop 202/South Mountain Freeway. The scheduling changes for the projects associated with Scenario 12 are listed in the appendix.

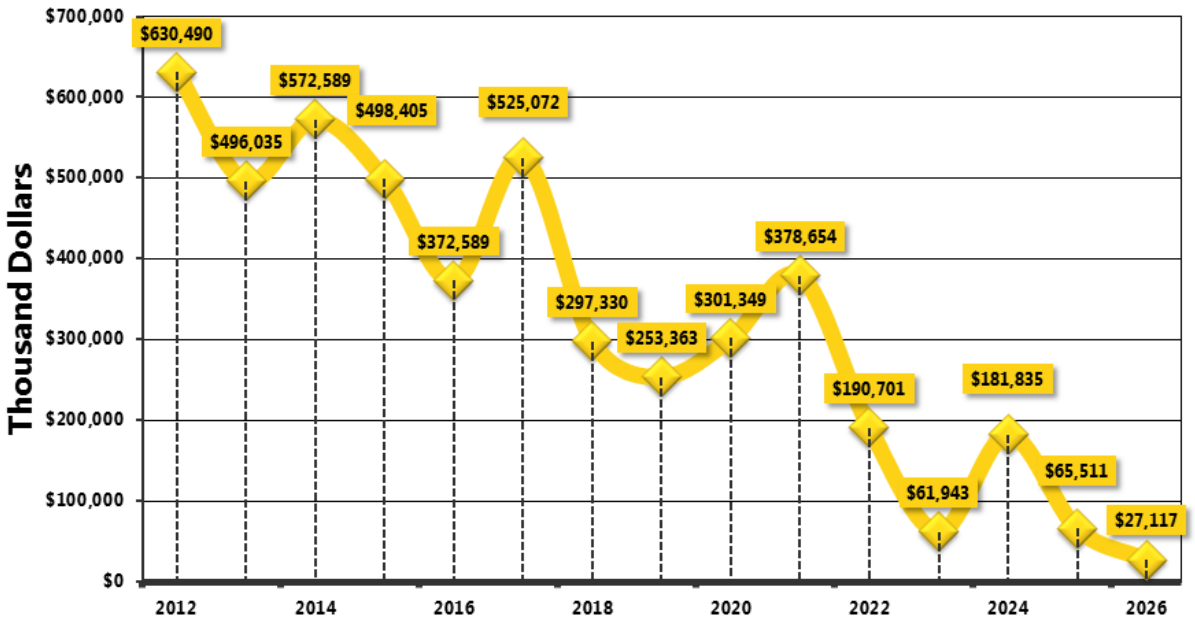


Figure 14. Cash flow illustration of Scenario 12.

3. Recommendation

It should be noted that the cash flow analyses were preliminary and are subject to final ADOT modeling. Some minor project schedule adjustments may be necessary as a result.

Each of the four scenarios presented in the previous section of this report rebalance the Regional Freeway and Highway Program of the Regional Transportation Plan and provides a positive cash flow from 2012 through 2026. There are significant differences in each scenario that have merits and dis-benefits to the Program in general. Based upon the information presented, MAG staff recommends moving forward with Scenario 10b at this time to balance the program:

- In the Loop 303 corridor, the promise of additional economic activity from the warehousing and distribution sectors suggest that improving access to Interstate 10, a transcontinental east-west freeway corridor, could result in new job creation. This position is strengthened if the Loop 303 freeway is extended south from Interstate 10 to MC-85 in the Goodyear area.
- Construction of the south Loop 303 corridor is completed rather than adding lanes to the freeway between US-60/Grand Avenue and Interstate 17. However, this should not be viewed as negative as the recently opened Loop 303 from Happy Valley Rd through Peoria and North Phoenix provides a four-lane freeway facility at posted speed of 65 miles per hour. This segment of Loop 303 passes through land that has been primarily planned for residential construction and it could be some time before development pressures accentuate the need for additional capacity. Projections indicate that this section can accommodate the future traffic through at least 2030. This recommendation includes moving forward with construction of the El Mirage Rd traffic interchange to replace the last at-grade intersection on Loop 303 between US-60 and Interstate 17 as part of the proposed Program.
- Scenario 10b prioritizes Loop 202/South Mountain Freeway construction ahead of the initial add-lanes project for the Interstate 10/Maricopa Freeway. While there are unknowns about the outcomes in the EIS process for both corridors, the Regional Council has made it clear that Loop 202 has the higher priority and that EIS efforts should be completed in the earliest so ADOT can begin design and construction.
- As noted in Section 1.3.3 of this document, MAG staff recognizes that planning for improvements in the Interstate 10/Maricopa Freeway corridor is an evolving process. Since 2001, ADOT and FHWA have been working on a recommendation to widen the corridor to as many as 25-lanes to meet future demand. MAG member agencies have expressed concern about this recommendation, and through the Southeast Corridor Major Investment Study, have identified a corridor alternative with fewer lanes, less impact on Phoenix Sky Harbor International Airport, and with better performance over the EIS alternative. The MIS study introduces tolled managed lanes as a method for providing travel time reliability along Interstate 10 as well as a potential means for funding the improvements. With this new information, it is advised to reexamine the Interstate 10 Corridor Study EIS with these different concepts.

- The scenario also identifies reducing the Program amount for the Interstate 17/Black Canyon Freeway corridor by $300 million. As noted, no clear project has been identified for the corridor and the EIS process that is presently underway has indicated a need for over $2.5 billion to accommodate future demand. Like the Interstate 10/Maricopa Freeway corridor, MAG staff sees this corridor as a candidate for tolled managed lanes. This is an opportunity to leverage available funding against private capital to fully improve the entire corridor.

As noted in the October 2009 rebalancing effort, project deferrals represented more than 60 percent of the effort to bridge the gap in the Regional Freeway and Highway Program. This 2012 rebalancing effort has identified an opportunity to return one of those projects back to the program as recommended in Scenario 10b. From October 2009, it was noted that measures need to be taken to monitor the Program to identify opportunities for restoring other deferred projects to an early phase for construction. These include:

- Continual monitoring of available revenues for funding the Program. In previous favorable economic times, Regional Area Road Funds (the half-cent sales tax) exceeded projections, creating extra funding. When favorable times return, these potential revenues should be used to construct the deferred projects.
- Incorporate future federal funding into the Regional Freeway and Highway Program. Congress is currently deliberating a future transportation authorization that could result in the federal funds available to MAG. Activities in Washington DC will be monitored closely.
- Identify opportunities for projects in deferred corridors to be funded through alternate methods. This document has suggested opportunities to incorporate PPP in the form of tolled managed lanes to enhancing funding for improvements to Interstate 10/Maricopa Freeway and Interstate 17/Black Canyon Freeway corridors. However, most PPP opportunities are only considered by private sector investment when a project or corridor has been cleared environmentally. The environmental assessment process for both the SR-30 and SR-24/Gateway Freeway (east of Ellsworth Ave) corridors should be completed to clear them from an environmental perspective and to identify the centerline for each corridor.
- Determine the possibility of using other federal funding sources and strategies for completing deferred projects. For example rail safety funds may be available to the MAG region for constructing the deferred grade separated interchanges along US-60/Grand Ave, between Loop 101 and Interstate 17, due to its close proximity to the BNSF Railroad.
- Working with ADOT to continually identify methods for delivering the project in a more effective manner. As a critical part of this tentative scenario, MAG and ADOT staff have generated value engineering decisions for the Loop 202/South Mountain and Loop 303 Freeway corridors resulting in approximately $1.7 billion in savings to the Program. This process should continue periodically as the Regional Freeway and Highway Program is updated in the future.
- Continue to work with MAG member agencies to preserve future rights-of-way for new corridors. As ADOT completes its environmental studies for future freeway corridors, efforts should be made to ac-

tively coordinate acquisitions with affected stakeholders and to identify the most economical manner for obtaining right-of-way. And, as these costs may again escalate in the future, ADOT should incorporate a tighter urban design profile for future corridors allowing the facility to be constructed in the least amount of right-of-way possible.

In addition to potentially returning projects to an earlier phase, value engineering and other improved project delivery approaches will be an essential part of scaling deferred projects to fit within the funding forecasted to be available in Phase V of the Regional Transportation Plan.

APPENDIX A

Transportation Policy Committee Presentation on 2012 Scenario

(See Slides 12-16 for Performance Data on Southeast Corridor MIS Interstate 10 Alternative)

REGIONAL FREEWAY AND HIGHWAY LIFE CYCLE PROGRAM UPDATE

Transportation Policy Committee

April 18, 2012

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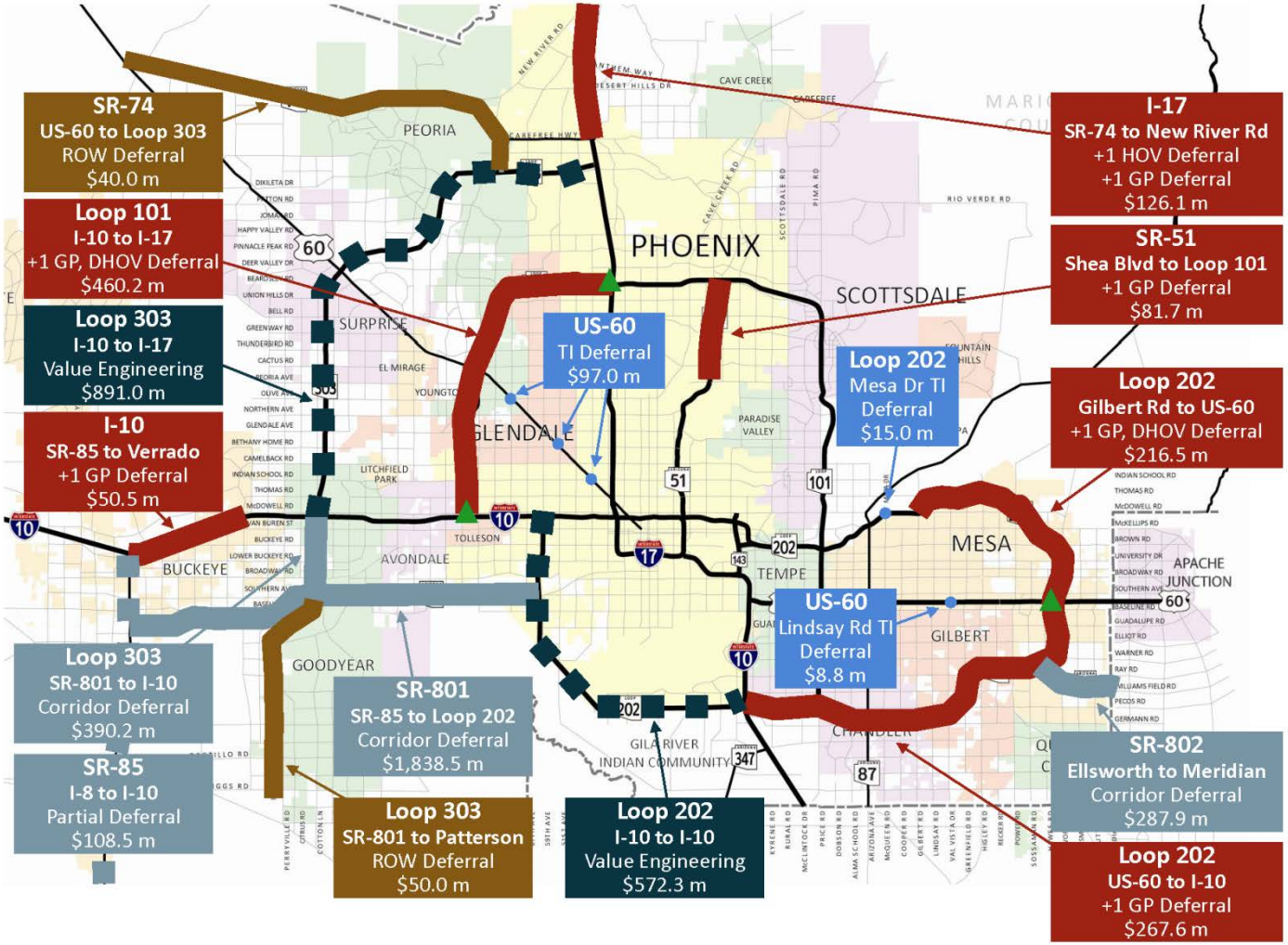
2009 Freeway Program Balancing



$6.6 billion reduction

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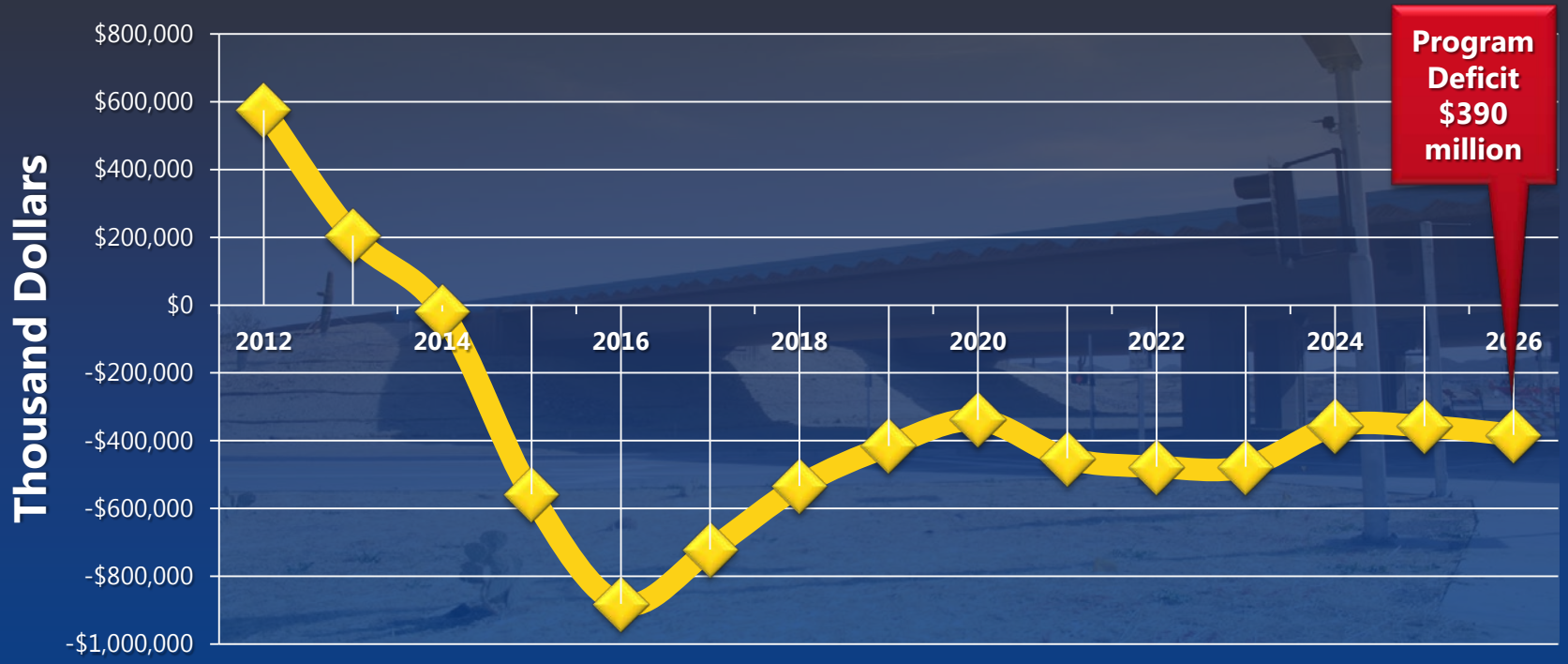
Projected Program Cash Flow



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2012 Balancing Background

- **Look at cash-flow, costs, and time-lines for major program items.**
- Twelve scenarios considered – four advanced as best case for balancing and meeting cash-flow projections.
- Programs on US-60/Grand Ave and HOV lanes on SR-202L/Santan Fwy unaffected.
- **$9.6 billion program in total, $3.5 billion obligated through December 2011.**

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Major Items Summary

Corridor	Scenario 8	Scenario 10a	Scenario 10b	Scenario 12
Interstate 17/Black Canyon *Add Lanes, Interstate 10 Split to SR-101L*	2022-2026	Reduce by $300m 2022-2026	Reduce by $300m 2022-2026	Reduce by $300m 2022-2026
Loop 303 *Add Lanes, US-60/Grand to Interstate 17*	2021-2025	Reduce by $80m 2021-2024	X	Reduce by $80m 2021-2024
Loop 303 *New Freeway, MC-85 to Interstate 10*	X	X	2021-2024	X
Interstate 10/Maricopa *Local/Express, 32nd St to SR-202L*	2021-2026	2021-2026	2021-2026	2015-2023
Loop 101/Pima *Add Lanes, Interstate 17 to SR-202L/Red Mtn*	X	2014-2026	2014-2026	2014-2026
Loop 101/Price *Add Lanes, US-60 to SR-202L/Santan*	X	2023-2025	2023-2025	2023-2025
Loop 202/Red Mountain *Add Lanes, SR-101L to Gilbert Rd*	X	2019-2021	2019-2021	2019-2021
Loop 202/South Mountain *New Freeway, I-10/Maricopa to I-10/Papago*	2015-2021	2015-2021	2015-2021	2017-2026
SR-24/Gateway *New Freeway, SR-202L to Ellsworth Rd*	$66.5 million savings	$66.5 million savings	$66.5 million savings	$66.5 million savings

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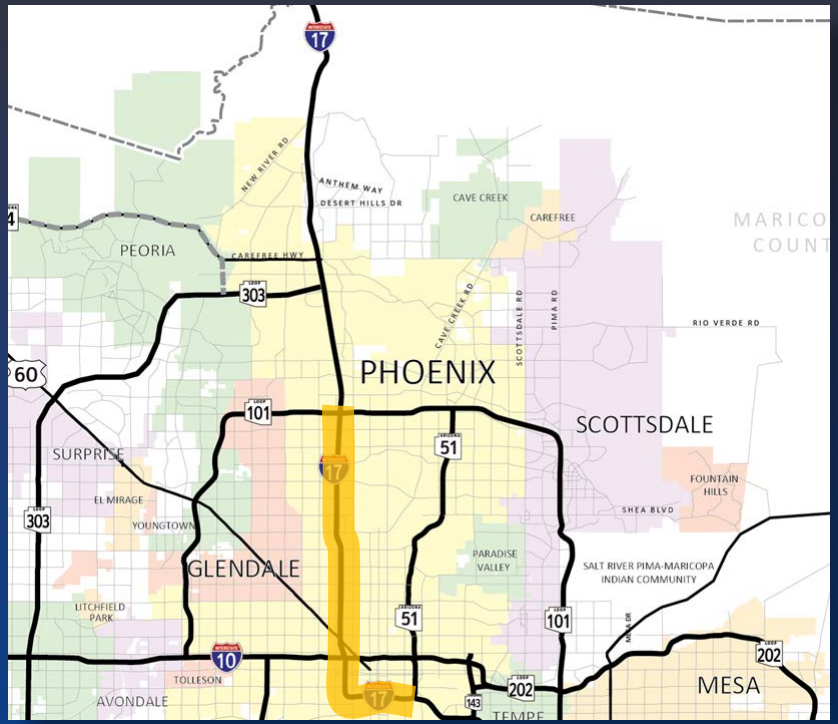
Interstate 17/Black Canyon



- Interstate 10 Split to SR-101L/Agua Fria-Pima
- Add Lanes
- **$1,112.6 million Program Balance**

Scenario	Timing
8	Construct 2022-2026
10a	Reduce Budget by $300 million Construct 2022-2026
10b	Reduce Budget by $300 million Construct 2022-2026
12	Reduce Budget by $300 million Construct 2022-2026

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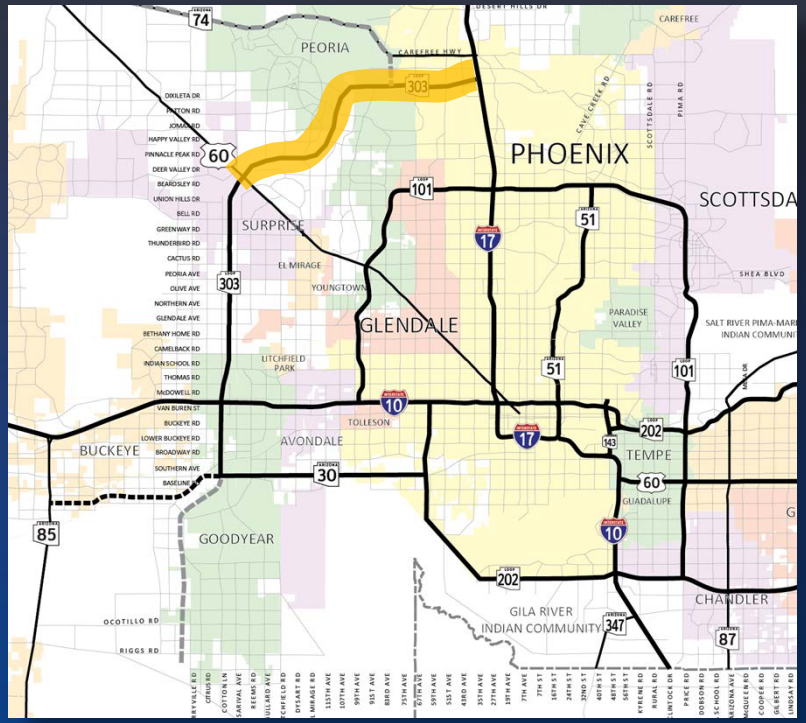
Loop 303



- US-60/Grand Ave to Interstate 17
- Add Lanes, finish system interchange with Interstate 17
- **$414.6 million Program Balance**

Scenario	Timing
8	Construct 2021-2025
10a	Reduce Budget by $80 million Construct 2021-2024
10b	No action
12	Reduce Budget by $80 million Construct 2021-2025

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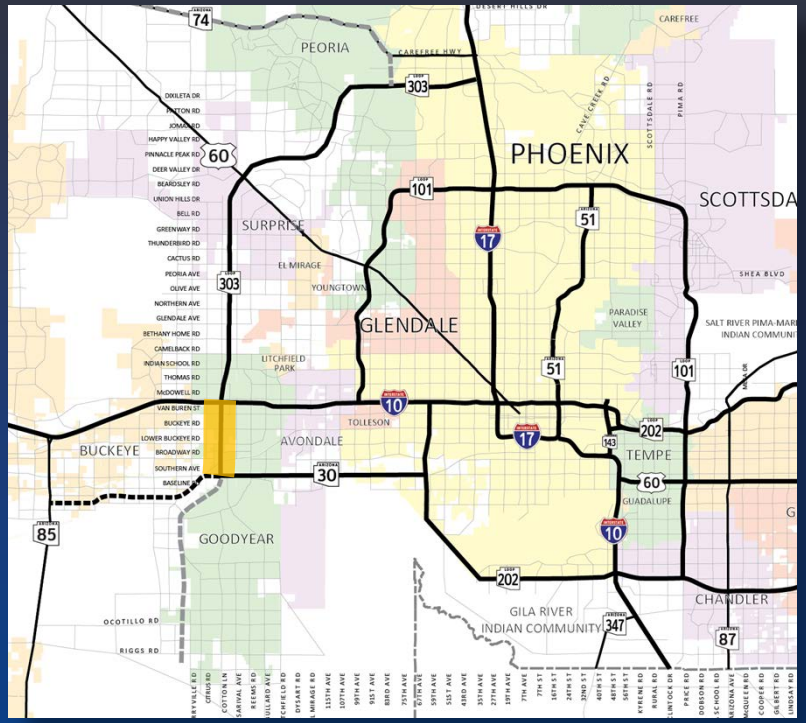
Loop 303



- MC-85 to Interstate 10
- New Freeway; finish system interchange with Interstate 10/Papago
- **Deferred to Phase V in 2009**

Scenario	Timing
8	No action
10a	No action
10b	Construct 2021-2024
12	No action

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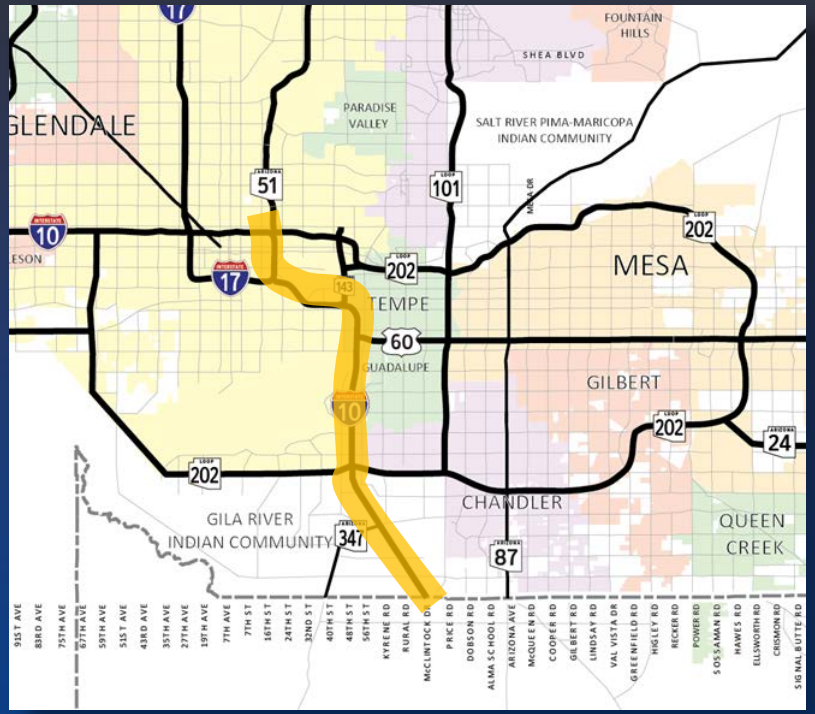
Interstate 10/Maricopa Freeway



- 32nd St to Baseline Rd
- Construct Local-Express Lanes
- **$596.9 million Program Balance**
- $73.7 million for SR-202L to Riggs Rd

Scenario	Timing
8	Construct 2021-2026
10a	Construct 2021-2026
10b	Construct 2021-2026
12	Construct 2015-2023

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Interstate 10/Maricopa Freeway

I-10 Corridor Study EIS	
SR-51/Loop 202 to Interstate 17 Split	**4-5** general purpose lanes **1** HOV Lane
Interstate 17 Split to US-60	**4** 'Local' gen purpose lanes **5** 'Express' gen purpose lanes **2** 'Express' HOV lanes
US-60 to Loop 202 Pecos Stack	**4** general purpose lanes **1** HOV lane

Southeast Corridor MIS	
SR-51/Loop 202 to Interstate 17 Split	**3-4** general purpose lanes **1** HOV lane
Interstate 17 Split to US-60	**5** general purpose lanes **3** 'Express' HOV/HOT lanes
US-60 to Loop 202 Pecos Stack	**4** general purpose lanes **2** 'Express' HOV/HOT lanes

- Added "premium" DHOV ramps
- Alternate service interchange geometries
- Connect to an I-17 HOV/HOT lanes option

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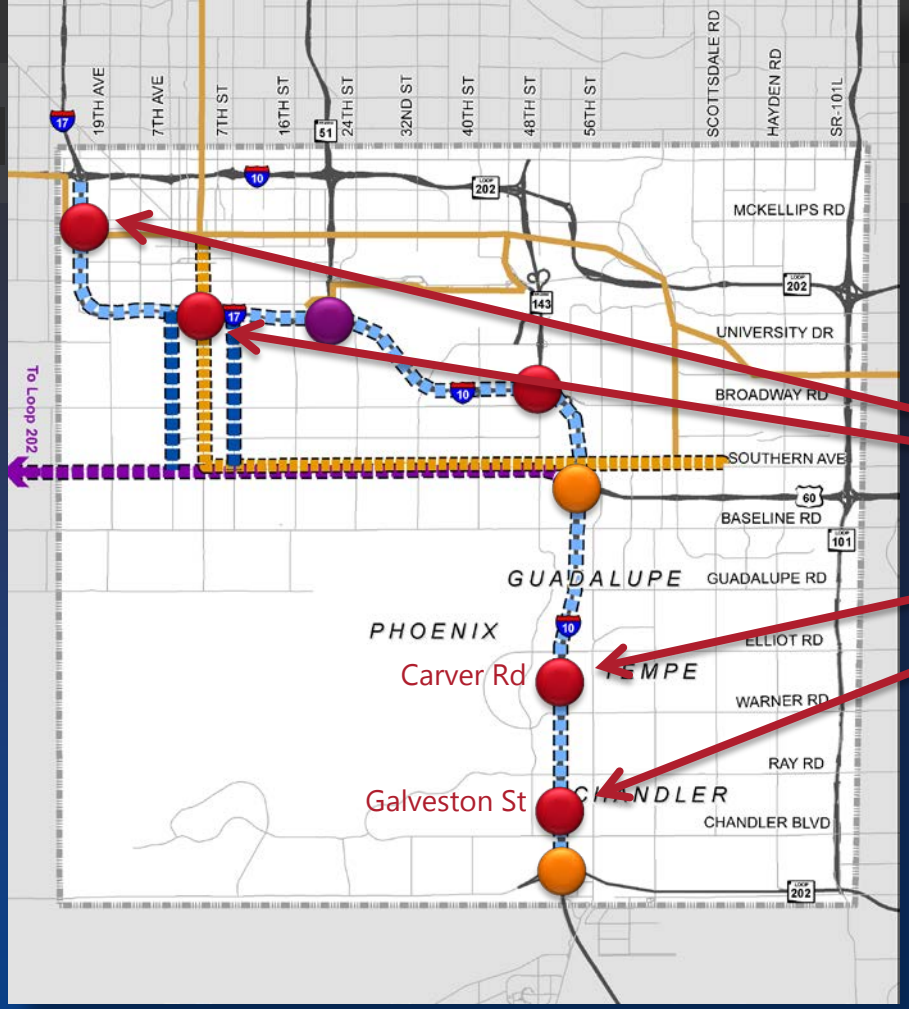
DHOV (Direct HOV) Ramps



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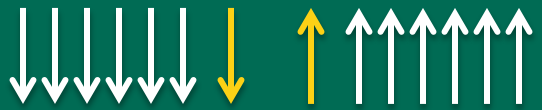
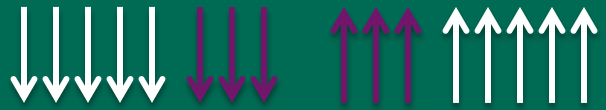
Performance Statistics

Interstate 10 – Salt River Bridge
Outbound Traffic, Evening Peak



I-10 Corridor Study EIS

58.3 mph	30.4 mph
3,200 vehicles	36,800 vehicles



SE Corridor MIS – Express Lanes

63.8 mph	39.0 mph
9,500 vehicles	32,600 vehicles

SE Corridor MIS – Express Lanes, No Toll

64.3 mph	35.6 mph
8,600 vehicles	34,000 vehicles

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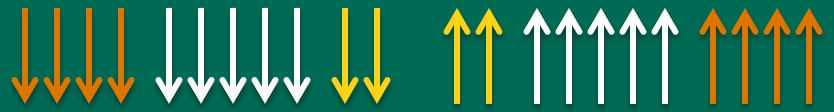
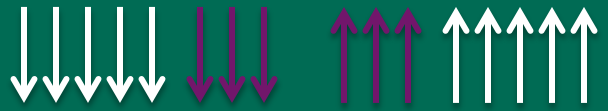
Performance Statistics

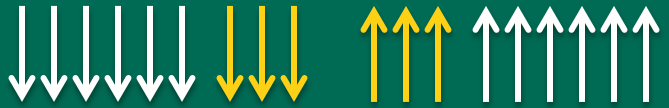
Interstate 10 – West of SR-143
Outbound Traffic, Evening Peak



I-10 Corridor Improvement Study EIS	58.1 mph	23.5 mph	26.8 mph
	3,200 vehicles	27,400 vehicles	10,300 vehicles



SE Corridor MIS – Express Lanes	64.1 mph	37.0 mph
	9,000 vehicles	33,800 vehicles



SE Corridor MIS – Express Lanes, No Toll	64.4 mph	35.2 mph
	8,300 vehicles	34,200 vehicles

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Performance Statistics

Interstate 10 – Before US-60/Superstition Freeway
Outbound Traffic, Evening Peak

I-10 Corridor Study EIS	58.1 mph	46.9 mph	18.7 mph
	3,200 vehicles	27,400 vehicles	16,100 vehicles
SE Corridor MIS – Express Lanes	62.3 mph	43.9 mph	30.8 mph
	11,100 vehicles	28,500 vehicles	13,300 vehicles
SE Corridor MIS – Express Lanes, No Toll	64.2 mph	33.7 mph	33.1 mph
	8,700 vehicles	32,200 vehicles	13,000 vehicles

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Performance Statistics

Interstate 10 - South of Baseline Rd
Outbound Traffic, Evening Peak

I-10 Corridor Study EIS	67.1 mph	25.2 mph
	1,500 vehicles	30,400 vehicles
SE Corridor MIS – Express Lanes	47.3 mph	40.8 mph
	7,100 vehicles	29,400 vehicles
SE Corridor MIS – Express Lanes, No Toll	32.3 mph	37.6 mph
	6,700 vehicles	30,900 vehicles

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Performance Statistics

Interstate 10 – North of Chandler Blvd
Outbound Traffic, Evening Peak

I-10 Corridor Improvement Study EIS	42.9 mph	31.3 mph
	2,400 vehicles	24,200 vehicles
SE Corridor MIS – Express Lanes	51.2 mph	44.9 mph
	5,600 vehicles	24,200 vehicles
SE Corridor MIS – Express Lanes, No Toll	44.4 mph	38.3 mph
	4,600 vehicles	27,200 vehicles

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Loop 101/Pima Freeway

- Interstate 17 to SR-202L/Red Mountain
- Add general purpose lanes
- **$305.2 million Program Balance**
  - I-17 to SR-51 ($73.5 m)
  - SR-51 to Pima-Princess ($77.9 m)
  - Pima-Princess to Shea ($56.4 m)
  - Shea to SR-202L ($97.4 m)

Scenario	Timing
8	No Action
10a	Construct 2014-2026
10b	Construct 2014-2026
12	Construct 2014-2026

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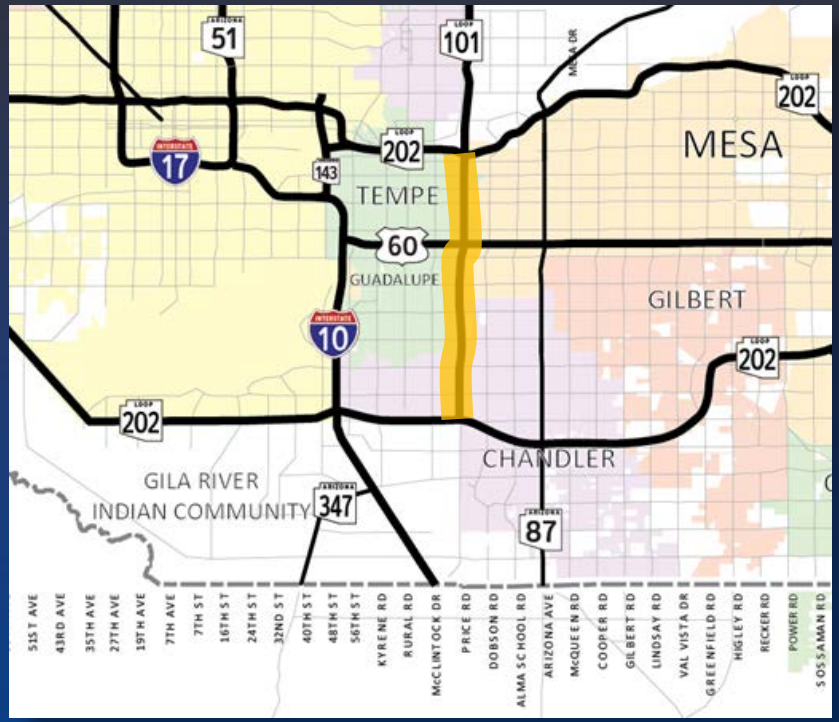
Loop 101/Price Freeway



- US-60/Superstition Fwy to SR-202L/Santan Fwy
- Add general purpose lanes
- **$53.4 million Program Balance**

Scenario	Timing
8	No Action
10a	Construct 2023-2025
10b	Construct 2023-2025
12	Construct 2023-2025

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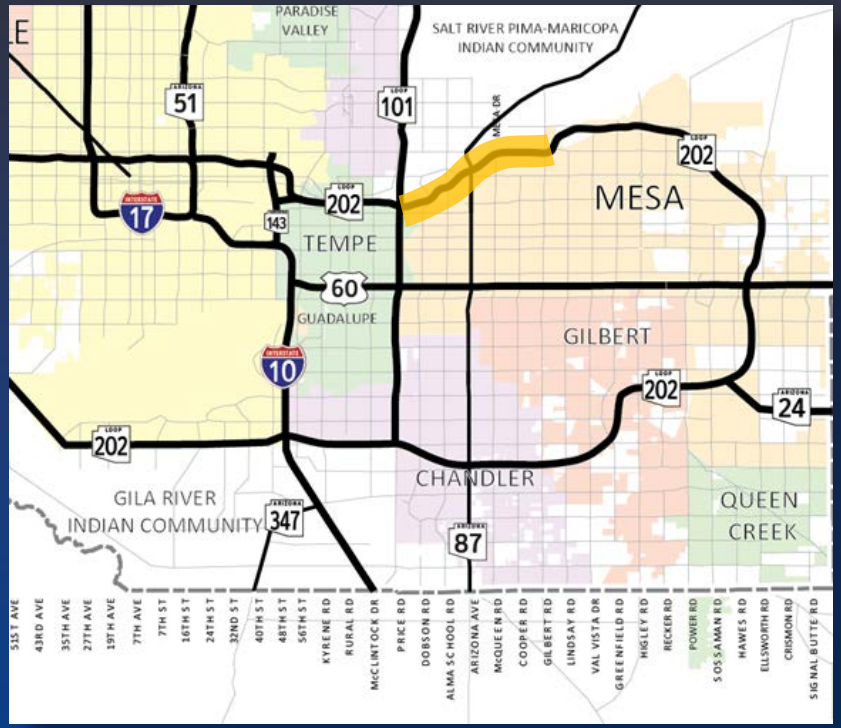
Loop 202/Red Mountain Freeway



- SR-101L/Pima-Price Fwys to Gilbert Rd
- Add general purpose lanes
- **$60.3 million Program Balance**

Scenario	Timing
8	No Action
10a	Construct 2019-2021
10b	Construct 2019-2021
12	Construct 2015-2017

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Loop 202/South Mountain Freeway

- Interstate 10/Maricopa Fwy to Interstate 10/Papago Fwy
- New Freeway, 8-lanes (3+1 cross-section), and new system interchange at 59th Ave
- **$1,881.5 million Program Balance**
- EIS/ROD completed in 2013

Scenario	Timing
8	Construct 2015-2021
10a	Construct 2015-2021
10b	Construct 2015-2021
12	Construct 2017-2026

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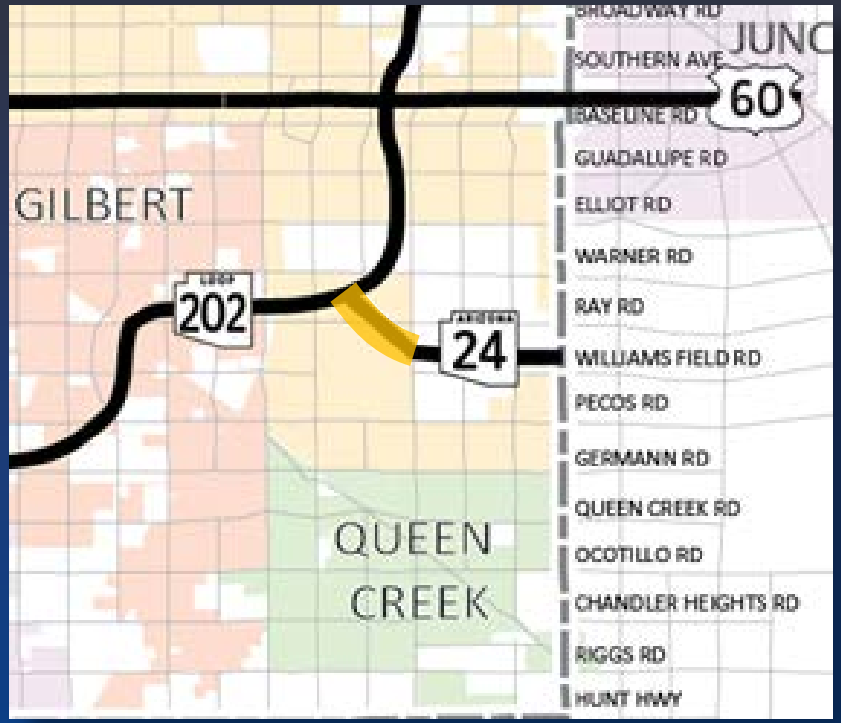
SR-24/Gateway Freeway



- SR-202L/Santan Fwy to Ellsworth Rd
- Phase I, new system interchange with SR-202L
- New Freeway
- **$81.7 million Program** (reduced due to bid savings)

Scenario	Timing
8	$66.5 million savings
10a	$66.5 million savings
10b	$66.5 million savings
12	$66.5 million savings

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Major Items Summary

Corridor	Scenario 8	Scenario 10a	Scenario 10b	Scenario 12
Interstate 17/Black Canyon *Add Lanes, Interstate 10 Split to SR-101L*	2022-2026	Reduce by $300m 2022-2026	Reduce by $300m 2022-2026	Reduce by $300m 2022-2026
Loop 303 *Add Lanes, US-60/Grand to Interstate 17*	2021-2025	Reduce by $80m 2021-2024	X	Reduce by $80m 2021-2024
Loop 303 *New Freeway, MC-85 to Interstate 10*	X	X	2021-2024	X
Interstate 10/Maricopa *Local/Express, 32nd St to SR-202L*	2021-2026	2021-2026	2021-2026	2015-2023
Loop 101/Pima *Add Lanes, Interstate 17 to SR-202L/Red Mtn*	X	2014-2026	2014-2026	2014-2026
Loop 101/Price *Add Lanes, US-60 to SR-202L/Santan*	X	2023-2025	2023-2025	2023-2025
Loop 202/Red Mountain *Add Lanes, SR-101L to Gilbert Rd*	X	2019-2021	2019-2021	2019-2021
Loop 202/South Mountain *New Freeway, I-10/Maricopa to I-10/Papago*	2015-2021	2015-2021	2015-2021	2017-2026
SR-24/Gateway *New Freeway, SR-202L to Ellsworth Rd*	$66.5 million savings	$66.5 million savings	$66.5 million savings	$66.5 million savings

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REGIONAL FREEWAY AND HIGHWAY LIFE CYCLE PROGRAM UPDATE

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APPENDIX B

Regional Freeway and Highway Program – By Corridor

RTP Planning Segments and Proposed Action

RTP Phases:
Phase I - FY2006-FY2010
Phase II - FY2011-FY2015
Phase III - FY2016-FY2020
Phase IV- FY2021-FY2026

Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Shading: Yellow = Deferral in program to Phase V, Blue = Segment construction complete and open to traffic.

Maricopa Association of Governments
Regional Transportation Plan

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
INTERSTATE 10/PAPAGO										
SR-85 to SR-303L	GP	Add one lane in each direction; Sarival Ave to Verrado Way	5.0	IV	$ 44.2	$ 29.9	Construction finished Open to traffic	**$ 29.9**	$ 29.9	$ -
SR-85 to SR-303L	GP	Add one lane in each direction; Verrado Way to SR-85	7.0	IV	$ 61.8	$ 50.5	**Defer general purpose lane widening from Verrado Way to SR-85 to future phase**	**$ -**	$ -	$ -
SR-303L to Dysart Rd	TI	Construct Bullard Ave interchange	-	I	$ 9.2	$ 9.7	Construction finished Open to traffic	**$ 9.7**	$ 9.7	$ -
SR-303L to Dysart Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	5.0	II	$ 54.0	$ 109.4	Construction finished Open to traffic	**$ 109.4**	$ 109.4	$ -
SR-303L to Dysart Rd	TI	Construct Perryville Rd interchange	-	II	$ 9.2	$ 21.1	Move forward with present plans	**$ 19.0**	$ -	$ 19.0
Dysart Rd to SR-101L	GP, HOV	Add one general purpose and one HOV lane in each direction	6.0	II	$ 57.0	$ 61.7	Construction finished Open to traffic	**$ 61.7**	$ 61.7	$ -
Dysart Rd to SR-101L	TI	Construct El Mirage Rd interchange	-	IV	$ 17.3	$ 19.8	Move foreward with present plans	**$ 19.8**	$ -	$ 19.8
SR-101L/Agua Fria to I-17/Black Canyon	GP	Add one lane in each direction	7.0	I	$ 79.0	$ 79.0	Reprogram construction to match timing of SR-202L/South Mountain connection at 59th Avenue	**$ 79.0**	$ 17.2	$ 61.8
		Totals for Interstate 10/Papago Corridor:			$ 331.7	$ 381.1		**$ 328.4**	$ 227.9	$ 100.6
INTERSTATE 10/MARICOPA										
SR-51 to 40th St (CD Roads)	GP	Add General Purpose Lanes	3.0	IV	$ 120.0	$ 30.0	**Defer general purpose lane construction to future phase** Retain budget for reconstruction of West PHX Sky Harbor traffic interchange for security purposes - defer to Phase IV	**$ 30.0**	$ -	$ 30.0
40th St to Baseline Rd (CD Roads)	GP, HOV	Construct Local-Express Lane system, consisting of: - Reconstruct SR-143 interchange - Add two general purpose lanes in each direction - Add one HOV lane in each direction	6.0	I	$ 380.0	$ 446.1	Move forward with present plans	**$ 446.1**	$ 18.1	$ 428.0
Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction Reconstruct I-10 approach to US-60/Superstition system interchange	6.0	II	$ 53.0	$ 202.4	Move forward with present plans	**$ 202.4**	$ 8.1	$ 194.3
SR-202L/Santan to Riggs Rd	HOV	Add one HOV lane in each direction	6.0	II	$ 23.0	$ 31.1	Move forward with present plans	**$ 31.1**	$ -	$ 31.1
SR-202L/Santan to Riggs Rd	GP	Add one lane in each direction	6.0	II	$ 23.0	$ 31.1	Move forward with present plans	**$ 31.1**	$ 0.2	$ 29.9
SR-202L/Santan to Riggs Rd	TI	Construct Chandler Heights Rd interchange	-	IV	$ 13.8	$ 22.9	Move forward with present plans	**$ 22.9**	$ -	$ 22.9
		Totals for Interstate 10/Maricopa Corridor:			$ 612.8	$ 763.6		**$ 763.6**	$ 26.4	$ 736.2

Project Type Key:
GP - General Purpose Lane Widening
HOV - High Occupancy Vehicle Lane Widening
TI - New Traffic Interchange
DHOV - Direct HOV Ramp connection
S/W - System-wide Project

RTP Phases:
Phase I - FY2006-FY2010
Phase II - FY2011-FY2015
Phase III - FY2016-FY2020
Phase IV- FY2021-FY2026

Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Shading: Yellow = Deferral in program to Phase V, Blue = Segment construction complete and open to traffic.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
INTERSTATE 17/BLACK CANYON										
I-10/Maricopa (Split) to I-10/Papago (Stack)	HOV	Add one HOV lane in each direction	7.0	III	$ 77.0	$ 81.5	Segment in need of rehabilitation, improvements to include: - Add one HOV lane in each direction - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	**$ 293.0**	$ 4.5	$ 288.5
I-10/Papago (Stack) to Arizona Canal	GP	Add General Purpose Lanes (number unspecified and to be determined from study)	7.0	III	$ 1,000.0	$ 962.3	Revise design plan to include: - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	**$ 439.5**	$ 2.3	$ 437.2
Arizona Canal to SR-101L/Agua Fria and Pima Fwys	GP	Add one lane in each direction	6.0	II	$ 53.0	$ 135.1	Move forward with present plans	**$ 89.1**	$ 6.8	$ 82.3
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	GP, HOV	Add one general purpose and one HOV lane in each direction	9.0	I	$ 169.0	$ 330.6	Construction finished Open to traffic	**$ 330.6**	$ 330.6	$ -
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Jomax Rd and Dixileta Rd interchanges	-	I	$ 27.6	$ 41.2	Construction finished Opened to traffic	**$ 41.2**	$ 41.2	$ -
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Dove Valley Rd interchange Advanced by the City of Phoenix	-	IV	$ 18.4	$ 22.7	Construction finished Open to traffic	**$ 22.7**	$ 22.7	$ -
SR-74/Carefree Hwy to Anthem Way	GP, HOV	Add one general purpose and one HOV lane in each direction	5.0	IV	$ 72.0	$ 117.9	Construction finished Open to traffic **HOV Lane deferred to Phase V**	**$ 16.8**	$ 16.8	$ -
Anthem Way to New River Rd	GP	Add one lane in each direction	3.0	IV	$ 26.0	$ 25.0	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for Interstate 17/Black Canyon Corridor:			$ 1,443.0	$ 1,716.2		**$ 1,232.8**	$ 424.8	$ 808.0
US-60/GRAND AVE										
SR-303L to SR-101L/Agua Fria	GP	Add one lane in each direction	10.0	I	$ 39.0	$ 51.2	Construction finished Open to traffic	**$ 51.2**	$ 51.2	$ -
SR-303L to SR-101L/Agua Fria	GP	Construct up to three additional grade separated traffic interchanges at locations to be determined	10.0	II	$ 64.0	$ 63.2	Move forward with present plans	**$ 63.2**	$ -	$ 63.2
SR-101L/Agua Fria to Van Buren St	GP	Add one lane in each direction 83rd Ave to 99th Ave	11.0	I	$ 30.0	$ 48.7	Construction finished Open to traffic	**$ 48.7**	$ 48.7	$ -
SR-101L/Agua Fria to Van Buren St	GP	Rehabiliate pavement and provide access management improvements	11.0	II	$ 20.0	$ 23.3	Improvements Underway Scheduled completion in 2013	**$ 24.0**	$ 24.0	$ -
SR-101L/Agua Fria to Van Buren St	TI	Construct up to three additional arterial grade separated traffic interchanges at locations to be determined	11.0	IV	$ 97.0	$ 97.0	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for US-60/Grand Ave Corridor:			$ 250.0	$ 283.5		**$ 187.2**	$ 123.9	$ 63.2

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RTP Phases:
Phase I - FY2006-FY2010
Phase II - FY2011-FY2015
Phase III - FY2016-FY2020
Phase IV- FY2021-FY2026

Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
US-60/SUPERSTITION										
I-10 to SR-101L/Price Fwy	GP	Add one lane in each direction	4.5	I	$ 9.0	$ 25.0	Construction finished Open to traffic	**$ 25.0**	$ 25.0	$ -
SR-101L/Price to Val Vista Dr	TI	Construct Lindsay Rd interchange with ramps to/from West	-	II	$ 4.6	$ 8.8	**Defer to future phase**	**$ -**	$ -	$ -
Val Vista Dr to Power Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	4.0	I	$ 85.0	$ 96.0	Construction finished Open to traffic	**$ 96.0**	$ 96.0	$ -
Crismon Rd to Meridian Rd	HOV	Add one HOV lane in each direction	2.0	III	$ 31.0	$ 28.4	Design Concept Report Study begins in FY2013	**$ 27.2**	$ -	$ 27.2
Crismon Rd to Meridian Rd	TI	Construct Meridian Rd interchange with ramps to/from West	-	II	$ 4.6	$ 8.8	Design Concept Report Study underway	**$ 7.9**	$ -	$ 7.9
		Totals for US-60/Superstition Corridor:			$ 134.2	$ 167.0		**$ 156.1**	$ 121.0	$ 35.1
US-93										
Yavapai County to Wickenburg	GP	Construct interim Wickenburg Bypass	3.4	I	$ 24.0	$ 31.6	Construction finished Open to traffic	**$ 31.6**	$ 31.6	$ -
		Total for US-93 Corridor:			$ 24.0	$ 31.6		**$ 31.6**	$ 31.6	$ -
SR-51/PIESTEWA										
SR-101L/Pima to Shea Blvd	HOV, DHOV	- Add one HOV lane in each direction - Construct direct HOV ramp to SR-101L/Pima on the east	6.0	I	$ 52.0	$ 51.3	Construction finished Open to traffic	**$ 51.3**	$ 51.3	$ -
SR-101L/Pima to Shea Blvd	GP	Add one lane in each direction	6.0	IV	$ 51.0	$ 81.7	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for SR-51/Piestewa Corridor:			$ 103.0	$ 133.0		**$ 51.3**	$ 51.3	$ -

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Regional Freeway and Highway Program - By Corridor

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
LOOP 101/AGUA FRIA										
MC-85 to Interstate 10	GP	Construct improvements along 99th Ave	-	I	$ -	$ 4.0	Construction finished Open to traffic	**$ 4.0**	$ 4.0	$ -
I-10 to US-60/Grand Ave	TI	Complete Bethany Home Rd interchange with ramps to/from North	-	I	$ 10.0	$ 9.4	Construction finished Open to traffic	**$ 9.4**	$ 9.4	$ -
I-10 to US-60/Grand Ave	HOV	Add one HOV lane in each direction	10.0	III	$ 53.0	$ 53.5	Construction finished Open to traffic Still needs full reconciliation	**$ 48.2**	$ 38.7	$ 9.5
I-10 to US-60/Grand Ave	GP	Add one lane in each direction	10.0	IV	$ 85.0	$ 150.4	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Olive, Northern **Defer GP Lanes to Future Phase**	**$ 14.4**	$ 14.4	$ -
I-10 to US-60/Grand Ave	DHOV	Construct Direct HOV Ramp to/from I-10/Papago on East	-	IV	$ 60.0	$ 68.1	**Defer to future phase**	**$ -**	$ -	$ -
I-10 to US-60/Grand Ave	DHOV	Construct Direct HOV Ramp at Maryland Avenue near Westgate	-	II	$ -	$ 14.5	Move forward with construction Proposed design-build in 2013	**$ 14.5**	$ 14.5	$ -
US-60/Grand Ave to I-17	TI	Construct Beardsley Rd-Union Hills Rd interchange	-	II	$ 24.8	$ 28.8	Construction finished Open to traffic	**$ 28.8**	$ 28.8	$ -
US-60/Grand Ave to I-17	HOV	Add one HOV lane in each direction	12.0	IV	$ 64.0	$ 64.2	Construction finished Open to traffic Still needs full reconciliation	**$ 57.8**	$ 46.4	$ 11.4
US-60/Grand Ave to I-17	GP	Add one lane in each direction	12.0	IV	$ 102.0	$ 177.8	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Thunderbird **Defer GP Lanes to Future Phase**	**$ 2.8**	$ 2.8	$ -
US-60/Grand Ave to I-17	DHOV	Construct Direct HOV Ramp to/from I-17/Black Canyon on the South	-	IV	$ 72.0	$ 81.1	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for Loop 101/Agua Fria Corridor:			$ 470.8	$ 651.8		**$ 179.8**	$ 159.0	$ 20.8

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Regional Freeway and Highway Program - By Corridor

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
LOOP 101/PIMA										
I-17 to SR-51	HOV	Add one HOV lane in each direction	7.0	II	$ 37.0	$ 37.5	Construction finished Open to traffic Still needs full reconciliation	**$ 33.8**	$ 27.1	$ 6.7
I-17 to SR-51	GP	Add one lane in each direction	7.0	IV	$ 59.0	$ 93.5	Move forward with present plans to address highest volumes on the regional loop freeways	**$ 84.1**	$ 5.5	$ 78.7
SR-51 to Princess Dr	TI	Construct 64th St interchange	-	I	$ 16.6	$ 31.4	Construction finished Will open after 64th St is complete	**$ 31.4**	$ 31.4	$ -
SR-51 to Princess Dr	HOV	Add one HOV lane in each direction	6.0	II	$ 29.0	$ 18.8	Construction finished Open to traffic	**$ 18.8**	$ 18.8	$ -
SR-51 to Princess Dr	GP	Add one lane in each direction	6.0	IV	$ 51.0	$ 86.0	Move forward with present plans to address highest volumes on the regional loop freeways	**$ 77.4**	$ 0.5	$ 76.9
Princess Dr to Shea Blvd	HOV	Add one HOV lane in each direction	4.0	I	$ 22.0	$ 16.4	Construction finished Open to traffic	**$ 16.4**	$ 16.4	$ -
Princess Dr to Shea Blvd	GP	Add one lane in each direction	4.0	IV	$ 34.0	$ 54.4	Move forward with present plans to address highest volumes on the regional loop freeways	**$ 49.0**	$ -	$ 49.0
Shea Blvd to SR-202L/Red Mtn	HOV	Add one HOV lane in each direction	11.0	I	$ 61.0	$ 46.0	Construction finished Open to traffic Includes Chaparral improvements	**$ 46.0**	$ 46.0	$ -
Shea Blvd to SR-202L/Red Mtn	GP	Add one lane in each direction	11.0	II	$ 94.0	$ 107.7	Move forward with present plans to address highest volumes on the regional loop freeways	**$ 96.9**	$ -	$ 96.9
		Totals for Loop 101/Pima Corridor:			$ 403.6	$ 491.6		**$ 453.6**	$ 145.6	$ 308.1
LOOP 101/PRICE										
SR-202L/Red Mtn to Baseline Rd	HOV	Add one HOV lane in each direction	4.0	I	$ 22.0	$ 18.2	Construction finished Open to traffic	$ 18.2	$ 18.2	$ -
Baseline Rd to SR-202L/Santan	HOV	Add one HOV lane in each direction	6.0	I	$ 31.0	$ 25.9	Construction finished Open to traffic	$ 25.9	$ 25.9	$ -
Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction	6.0	IV	$ 51.0	$ 58.1	Move forward with present plans to address highest volumes on the regional loop freeways	**$ 52.3**	$ -	$ 52.3
		Totals for Loop 101/Price Corridor:			$ 104.0	$ 102.2		**$ 96.4**	$ 44.1	$ 52.3

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Regional Freeway and Highway Program - By Corridor

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SR-143/HOHOKAM										
McDowell Rd to I-10/Maricopa	TI	Not identified in 2003 RTP Funding transferred to SR-143 from deleted SR-153 Sky Harbor Expwy	3.8	I	$ -	$ 36.6	Reconstruction of Sky Harbor Blvd/SR-202S interchange and widening of SR-143 overcrossing of Salt River, as needed Construction underway, complete in 2013	**$ 36.6**	$ 36.6	$ -
		Totals for SR-143/Hohokam Corridor:			$ -	$ 36.6		**$ 36.6**	$ 36.6	$ -
LOOP 202/RED MOUNTAIN										
I-10/SR-51 to Rural Rd	GP	Add general purpose lanes	7.0	I	$ 67.0	$ 178.1	Construction finished Open to traffic	$ 178.1	$ 178.1	$ -
Rural Rd to SR-101L	GP	Add general purpose lanes	2.0	I	$ 39.0	$ 48.8	Constructon finished Open to traffic	$ 48.8	$ 48.8	$ -
SR-101L to Gilbert Rd	HOV	Add one HOV lane in each direction	6.0	I	$ 32.0	$ 27.4	Construction finished Open to traffic	$ 27.4	$ 27.4	$ -
SR-101L to Gilbert Rd	GP	Add one lane in each direction	6.0	II	$ 51.0	$ 68.2	Move forward with present plans	**$ 68.2**	$ -	$ 68.2
SR-101L to Gilbert Rd	TI	Construct Mesa Dr interchange with ramps to/from West	-	IV	$ 4.6	$ 15.0	**Defer to future phase**	**$ -**	$ -	$ -
Gilbert Rd to Higley Rd	HOV	Add one HOV lane in each direction	5.0	III	$ 27.0	$ 24.3	Move forward with present plans	**$ 24.3**	$ -	$ 24.3
Gilbert Rd to Higley Rd	GP	Add one lane in each direction	5.0	IV	$ 42.0	$ 57.8	**Defer to future phase**	**$ -**	$ -	$ -
Higley Rd to US-60/Superstition	HOV	Add one HOV lane in each direction	10.0	IV	$ 52.0	$ 48.2	Move forward with present plans Lower cost opinion due to recent bids	**$ 48.2**	$ -	$ 48.2
Higley Rd to US-60/Superstition	GP	Add one lane in each direction	10.0	IV	$ 85.0	$ 136.0	**Defer to future phase**	**$ -**	$ -	$ -
Higley Rd to US-60/Superstition	DHOV	Construct Direct HOV Ramp to/from US-60/Supersition on the West	-	IV	$ 20.0	$ 22.7	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for Loop 202/Red Mountain Corridor:			$ 419.6	$ 626.6		**$ 395.1**	$ 254.4	$ 140.7

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Regional Freeway and Highway Program - By Corridor

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
LOOP 202/SANTAN										
US-60/Superstition to Val Vista Rd	HOV	Add one HOV lane in each direction	11.0	IV	$ 55.0	$ 58.9	Move forward with present plans	**$ 53.0**	$ -	$ 53.0
US-60/Superstition to Val Vista Rd	GP	Add one lane in each direction	11.0	IV	$ 93.0	$ 128.9	**Defer to future phase**	**$ -**	$ -	$ -
Val Vista Rd to Gilbert Rd	HOV	Add one HOV lane in each direction	2.0	II	$ 11.4	$ 10.7	Move forward with present plans	**$ 9.6**	$ -	$ 9.6
Val Vista Rd to Gilbert Rd	GP	Add one lane in each direction	2.0	IV	$ 16.9	$ 23.4	Obligated funds are for Lindsay Rd to Gilbert Rd multi-modal path improvement **Defer GP Lanes to Future Phase**	**$ 1.1**	$ 1.1	$ -
Gilbert Rd to I-10/Maricopa Fwy	HOV, DHOV	Add one HOV lane in each direction Construct Direct HOV Ramp to/from Interstate 10 on the north	12.0	II	$ 75.6	$ 76.3	Construction finished Open to traffic	**$ 83.3**	$ 83.3	$ -
Gilbert Rd to I-10/Maricopa Fwy	DHOV	Construct Direct HOV Ramp to/from SR-101L/Price on the North	-	III	$ 20.4	$ 22.7	Construction finished Open to traffic	**$ 24.8**	$ 24.8	$ -
Gilbert Rd to I-10/Maricopa Fwy	GP	Add one lane in each direction	12.0	IV	$ 81.6	$ 84.6	**Defer to future phase**	**$ -**	$ -	$ -
		Totals for Loop 202/Santan Corridor:			$ 353.9	$ 405.5		**$ 171.8**	$ 109.2	$ 62.6
LOOP 202/SOUTH MOUNTAIN										
I-10/Papago Fwy to I-10/SR-202L Santan	GP	Construct new freeway, 3 general purpose lanes in each direction	22.0	II	$ 1,067.0	$ 2,472.3	Move forward with freeway plans for corridor, to include: - HOV Lane in each direction - Narrow cross-section matching Proposition 300 program construction - Alignment along 59th Avenue between Buckeye Rd and I-10	**$ 1,900.0**	$ 61.3	$ 1,838.7
		Totals for Loop 202/South Mountain Corridor:			$ 1,067.0	$ 2,472.3		**$ 1,900.0**	$ 61.3	$ 1,838.7

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Regional Freeway and Highway Program - By Corridor

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
LOOP 303										
Riggs Rd to SR-801/MC-85	GP	Provide for ROW protection for extension of Loop 303 corridor	-	IV	$ -	$ 50.0	**Defer to future phase**	**$ -**	$ -	$ -
SR-801/MC-85 to Interstate 10	GP	Construct new freeway, 3 general purpose lanes in each direction	5.0	III	$ 230.0	$ 390.2	Move forward with freeway plans for corridor	**$ 240.0**	$ -	$ 240.0
Interstate 10/Papago to US-60/Grand Ave	GP	Construct new freeway, 3 general purpose lanes in each direction	15.0	II	$ 545.0	$ 1,872.0	Corridor Under Construction Completion in 2015	**$ 1,196.4**	$ 739.4	$ 457.0
US-60/Grand Ave to Interstate 17	GP	Construct interim facility, 2 general purpose lanes in each direction	18.0	I	$ 354.8	$ 347.6	Construction finished Open to traffic	**$ 347.6**	$ 347.6	$ -
US-60/Grand Ave to Interstate 17	GP	Expand interim facility with one general purpose lane in each direction; finish freeway traffic interchanges	18.0	II	$ 290.3	$ 335.4	Construct El Mirage Rd service interchange Monitor need for I-17 Direct Ramps **Defer remainder to future phase**	**$ 12.0**	$ -	$ 12.0
		Totals for Loop 303 Corridor:			$ 1,420.0	$ 2,995.2		**$ 1,796.0**	$ 1,087.0	$ 709.0
ARIZONA STATE ROUTE 30 (Interstate 10 Reliever)										
SR-85 to SR-303L	GP	Construct interim facility, 1 general purpose lane in each direction	11.0	IV	$ 83.0	$ 211.0	**Defer to future phase** Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Buckeye and Goodyear	**$ -**	$ -	$ -
SR-303L to Avondale Blvd	GP	Construct new freeway, 3 general purpose lanes in each direction	7.0	IV	$ 352.2	$ 790.5	**Defer to future phase** Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Goodyear and Avondale	**$ 13.5**	$ 13.5	$ -
Avondale Blvd to SR-202L/South Mountain	GP	Construct new freeway, 3 general purpose lanes in each direction	6.0	IV	$ 369.8	$ 862.0	**Defer to future phase** Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Avondale and Phoenix	**$ 11.5**	$ 11.5	$ -
		Totals for SR-30 Corridor:			$ 805.0	$ 1,863.5		**$ 25.0**	$ 25.0	$ -

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Regional Freeway and Highway Program - By Corridor

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SR-24/GATEWAY										
SR-202L to Ellsworth Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	2.0	III	$ 155.0	$ 81.7	Construction of initial interim segment and system TI at Loop 202 underway Completed in 2014 **Defer ultimate construction to future phase**	**$ 81.7**	$ 81.7	$ -
Ellsworth Rd to Meridian Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	3.0	III	$ 170.0	$ 236.0	**Defer to future phase** Finish Environmental Assessment and Design Concept Report efforts for entire corridor (including extension in Pinal County to US-60/SR-79) for ROW preservation by City of Mesa	**$ -**	$ -	$ -
		Totals for SR-24/Gateway Corridor:			$ 325.0	$ 317.7		**$ 81.7**	$ 81.7	$ -
SR-74/CAREFREE HIGHWAY										
US-60/Grand Ave to SR-303L	GP	Construct passing lanes west of Lake Pleasant	25.1	I	$ -	$ 15.1	Construction finished Open to traffic	$ 10.1	$ 10.1	$ -
SR-303L to I-17	GP	Provide for ROW protection for future Lake Pleasant Fwy corridor	5.4	IV	$ -	$ 40.0	**Defer to future phase** Conduct future Environmental Assessment and Design Concept Report for freeway corridor ROW preservation by Peoria and Surprise	**$ -**	$ -	$ -
		Totals for SR-74/Carefree Highway Corridor:			$ -	$ 55.1		**$ 10.1**	$ 10.1	$ -

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RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
SR-85										
Interstate 8 to Hazen Rd	GP	Convert existing facility into four-lane divided highway	29.2	I	$ 43.6	$ 98.5	Four-lane divided highway complete Open to traffic **Defer future improvements, including Interstate 8 interchange, to future phase**	**$ 78.5**	$ 78.5	$ -
Hazen Rd to Interstate 10	GP	Convert existing facility into four-lane divided highway	5.6	I	$ 74.9	$ 152.5	Four-lane divided highway complete Open to traffic **Defer full freeway section buildout between Hazen Rd and Interstate 10 to future phase**	**$ 64.0**	$ 64.0	$ -
		Totals for SR-85 Corridor:			$ 118.6	$ 251.0		**$ 142.5**	$ 142.5	$ -
SR-87										
Gila County to Shea Blvd	GP	Construct spot improvements to corridor as needed	33.7	I	$ 38.2	$ 49.2	Improvements from Tonto Nat'l Forest Boundary to Dos S Ranch Rd identified Includes new Four Peaks Rd interchange Construction Complete Open to Traffic	$ 49.2	$ 49.2	$ -
		Totals for SR-87 Corridor:			$ 38.2	$ 49.2		**$ 49.2**	$ 49.2	$ -
SR-88/APACHE TRAIL										
Pinal County to Gila County	GP	Construct spot improvements to corridor as needed	33.4	I	$ 1.8	$ 1.7	Construction complete Open to Traffic	**$ 1.5**	$ 1.5	$ -
		Totals for SR-88/Apache Trail Corridor:			$ 1.8	$ 1.7		**$ 1.5**	$ 1.5	$ -

Project Type Key:
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TI - New Traffic Interchange
DHOV - Direct HOV Ramp connection
S/W - System-wide Project

RTP Phases:
Phase I - FY2006-FY2010
Phase II - FY2011-FY2015
Phase III - FY2016-FY2020
Phase IV- FY2021-FY2026

Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Shading: Yellow = Deferral in program to Phase V, Blue = Segment construction complete and open to traffic.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
SYSTEM-WIDE/FREEWAY MANAGEMENT SYSTEM				The Regional Transportation Plan includes funding for the Freeway Management System (FMS) program which helps keep traffic flowing as smoothly as possible. Efforts in this system-wide category include providing for additional variable message signs, traffic monitoring equipment, and personnel time for operations.						
Freeway Management System	S/W	Phase I Expenditures	-	I	$ 7.5	$ 9.8	Efforts underway Phase I Complete	**$ 9.8**	$ 9.8	$ -
Freeway Management System	S/W	Phase II Expenditures	-	II	$ 18.1	$ 23.6	Reprogram cost opinion to match the original RTP estimate for Phase II	**$ 17.7**	$ 16.9	$ 0.8
Freeway Management System	S/W	Phase III Expenditures	-	III	$ 41.9	$ 54.8	Reprogram cost opinion to match the original RTP estimate for Phase III	**$ 41.0**	$ -	$ 41.0
Freeway Management System	S/W	Phase IV Expenditures	-	IV	$ 49.3	$ 64.5	Reprogram cost opinion to match the original RTP estimate for Phase IV	**$ 48.3**	$ -	$ 48.3
		Totals for S/W Freeway Management System Program:			$ 116.8	$ 152.7		**$ 116.8**	$ 26.7	$ 90.1
SYSTEM-WIDE/MAINTENANCE				Maintenance funding provided from the Regional Transportation Plan includes continuing efforts for litter collection and education, landscaping, and other work items to maintain the condition of the Regional Freeway System.						
Landscaping, Liter, Maintenance	S/W	Phase I Expenditures	-	I	$ 47.9	$ 52.2	Efforts underway Phase I Complete	**$ 52.2**	$ 52.2	$ -
Landscaping, Liter, Maintenance	S/W	Phase II Expenditures	-	II	$ 67.8	$ 73.9	Reprogram cost opinion to match the original RTP estimate for Phase II	**$ 66.5**	$ 25.9	$ 40.6
Landscaping, Liter, Maintenance	S/W	Phase III Expenditures	-	III	$ 76.8	$ 83.8	Reprogram cost opinion to match the original RTP estimate for Phase III	**$ 75.4**	$ -	$ 75.4
Landscaping, Liter, Maintenance	S/W	Phase IV Expenditures	-	IV	$ 84.5	$ 92.1	Reprogram cost opinion to match the original RTP estimate for Phase IV	**$ 82.9**	$ -	$ 82.9
		Totals for S/W Maintenance Program:			$ 277.0	$ 302.1		**$ 277.0**	$ 78.1	$ 198.9
SYSTEM-WIDE/NOISE MITIGATION				System-wide/Noise Mitigation programming is provided by the Regional Transportation Plan to cover expenditures outside of those noise mitigation efforts identified in corridor-specific actions. These expenditures include additional noise walls and continuing preservation of the Quiet-Pavement program.						
Noise Mitigation	S/W	Phase I Expenditures	-	I	$ 55.0	$ 67.2	Efforts underway Phase I Complete	**$ 67.2**	$ 67.2	$ -
Noise Mitigation	S/W	Phase II Expenditures	-	II	$ 20.0	$ 30.0	Reprogram cost opinion to match the original RTP estimate for Phase II	**$ 7.8**	$ 16.1	$ (8.3)
Noise Mitigation	S/W	Phase III Expenditures	-	III	$ -	$ 150.0	**Defer pavement preservation efforts to next phase**	**$ -**	$ -	
Noise Mitigation	S/W	Phase IV Expenditures	-	IV	$ -	$ 150.0	**Defer pavement preservation efforts to next phase**	**$ -**	$ -	
		Totals for S/W Noise Mitigation Program:			$ 75.0	$ 397.2		**$ 75.0**	$ 83.3	$ (8.3)

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Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Shading: Yellow = Deferral in program to Phase V, Blue = Segment construction complete and open to traffic.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
SYSTEM-WIDE/RIGHT-OF-WAY				The Regional Transportation Plan includes costs for administrating right-of-way (ROW) acquisition throughout the construction period for the Regional Freeway system under Proposition 400.						
ROW	S/W	Phase I Expenditures	-	I	$ 40.0	$ 40.0	Efforts underway Phase I Complete	**$ 40.0**	$ 40.0	$ -
ROW	S/W	Phase II Expenditures	-	II	$ 40.0	$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	**$ 40.0**	$ 14.0	$ 26.0
ROW	S/W	Phase III Expenditures	-	III	$ 40.0	$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	**$ 40.0**	$ -	$ 40.0
ROW	S/W	Phase IV Expenditures	-	IV	$ 17.0	$ 17.0	Move forward with present plans Lower cost opinion due to recent bids	**$ 17.0**	$ -	$ 17.0
		Totals for S/W Right-of-Way Program:			$ 137.0	$ 137.0		**$ 137.0**	$ 54.0	$ 83.0
SYSTEM-WIDE/DESIGN				The Regional Transportation Plan includes costs for administrating environmental, engineering, and preliminary design throughout the period for the Regional Freeway system under Proposition 400. Expenditures include the administration of the Management Consultant contract.						
Design	S/W	Phase I Expenditures	-	I	$ 112.1	$ 142.4	Efforts underway Phase I Complete	**$ 142.4**	$ 142.4	$ -
Design	S/W	Phase II Expenditures	-	II	$ 103.8	$ 131.9	Reprogram cost opinion to match the original RTP estimate for Phase II	**$ 91.7**	$ 45.1	$ 46.7
Design	S/W	Phase III Expenditures	-	III	$ 98.8	$ 125.5	Reprogram cost opinion to match the original RTP estimate for Phase III	**$ 87.3**	$ -	$ 87.3
Design	S/W	Phase IV Expenditures	-	IV	$ 57.5	$ 73.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	**$ 50.8**	$ -	$ 50.8
		Totals for S/W Design Program:			$ 372.2	$ 472.8		**$ 372.2**	$ 187.5	$ 184.8
SYSTEM-WIDE/MINOR PROJECTS				System-wide/Minor Projects programming is provided by the Regional Transportation Plan to cover expenditures for spot improvements on the Regional Freeway System under Proposition 400. Examples include, but may not be limited to, arterial improvements at existing traffic interchanges, the Freeway Service Patrol, and park and ride lots.						
Minor Projects	S/W	Phase I Expenditures	-	I	$ 1.3	$ 7.9	Efforts underway Scheduled completion in FY2010	**$ 7.9**	$ 7.9	$ -
Minor Projects	S/W	Phase II Expenditures	-	II	$ 2.6	$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase II	**$ 2.6**	$ 4.7	$ (2.1)
Minor Projects	S/W	Phase III Expenditures	-	III	$ 2.6	$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase III	**$ 0.4**	$ -	$ 2.6
Minor Projects	S/W	Phase IV Expenditures	-	IV	$ 2.6	$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	**$ 0.4**	$ -	$ 2.6
		Totals for S/W Minor Projects Program:			$ 9.0	$ 52.9		**$ 11.3**	$ 12.6	$ 3.1

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Regional Freeway and Highway Program - By Corridor

MAY 2012 DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Shading: Yellow = Deferral in program to Phase V, Blue = Segment construction complete and open to traffic.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)	Proposed Action	**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
					2003 RTP Estimate	2012 ADOT Cost Opinion (includes deferrals)		**2012 Program Amount**	Funding obligated thru FY2012	Remainder for Proposed Action
		Totals for Regional Freeway and Highway Program:			**$ 9,413.2**	**$ 15,310.6**		**$ 9,079.7**	**$ 3,656.2**	**$ 5,426.8**

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APPENDIX C

Background Scenarios for 2012 Program Balancing

Scenario #1 (S. Mtn. First / I-17 & 303L Reduc. / Const. Seq.-Exten. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	338,749	495,294	138,091	214,556	161,570	82,180	437,776	324,483	170,415	175,412	326,213	433,713	371,496	282,973	222,472	6,500,345
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	62,510	56,840	49,320	72,747	107,284	48,449	73,500	65,000	9,086	1,964,727
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	29,278	37,505	34,922	37,988	24,799	22,611	34,716	32,662	28,713	793,691
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	750,370	846,443	400,512	456,589	201,361	125,128	542,464	431,828	267,857	299,347	471,696	518,373	493,512	394,635	304,271	9,630,316
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	954,017	1,050,337	626,516	694,691	545,432	347,686	750,767	648,158	503,851	545,553	727,422	778,103	758,457	659,130	538,985	14,335,542
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(33,422)	(311,809)	(66,409)	(132,353)	72,059	219,690	(200,261)	(84,933)	232,811	44,150	(9,487)	(163,705)	(26,139)	(56,376)	(33,524)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	587,294	275,485	209,075	76,722	148,782	368,472	168,210	83,277	316,088	360,238	350,752	187,046	160,907	104,531	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	587,294	275,485	209,075	76,722	148,782	368,472	168,210	83,277	316,088	360,238	350,752	187,046	160,907	104,531	71,007	
46	Guideline	147,793	104,340	96,445	108,163	89,388	133,694	151,048	77,617	87,783	45,908	34,043	104,218	86,473	59,939	66,110	94,835	104,102	100,542	84,062	67,962	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	453,600	124,436	131,459	(11,060)	102,874	334,428	63,992	(3,196)	256,149	294,128	255,916	82,944	60,366	20,468	3,045	

Scenario #1 (S. Mtn. First / I-17 & 303L Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location	Const. Start (FY)	Comments	Total Proj Cost (millions)
I-10					
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	2021	Const. start shifted from FY 19 to FY 21	$68,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	2017	Const. start shifted from FY 13 to FY 17	$167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	2018	Const. start shifted from FY 14 to FY 18	$114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	2020	Const. start shifted from FY 15 to FY 20	$134,600,000
I-17					
Construction	BL CA	Arizona Canal - SR 101L	N/A	Project dropped; cost was $86.4 M starting in FY 2016	$0
Construction	BL CA	Arizona Canal - McDowell Rd	2022	Cost reduced by $71.2 M	$78,800,000
Construction	BL CA	Arizona Canal - McDowell Rd	2023	Cost reduced by $71.2 M	$78,800,000
Construction	BL CA	Arizona Canal - McDowell Rd	2024	Cost reduced by $71.2 M	$58,800,000
Construction	BL CA	I/10 West - I/10 East	2025	No change	$266,000,000
SR-24					
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	2012	Cost reduced by $66.5 M	$81,700,000
202L (S. Mtn.)					
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	2023	Const. start shifted from FY 20 to FY 23	$99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	2022	Const. start shifted from FY 19 to FY 22	$49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	2018	Const. start shifted from FY 15 to FY 18 and extended one year	$177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	2018	Const. start shifted from FY 15 to FY 18 and extended one year	$99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	2022	Const. start shifted from FY 19 to FY 22	$114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	2023	Const. start shifted from FY 20 to FY 23	$133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	2018	Const. start shifted from FY 15 to FY 18	$46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	2024	Const. start shifted from FY 21 to FY 24	$95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	2024	Const. start shifted from FY 21 to FY 24	$64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	2017	Const. start shifted from FY 14 to FY 17	$227,700,000
303L					

Scenario #1 (S. Mtn. First / I-17 & 303L Reduc. / Const. Seq.-Exten. Adj.): Project Changes					
			Const.	**Comments**	**Total Proj**
Phase	**Corr**	**Description/Location**	**Start (FY)**		**Cost (millions)**
Construction	EST	I/17 - US60, Grand Ave	2021	Const. start shifted from FY 19 to FY 21	$93,000,000
Construction	EST	I/17 - US60, Grand Ave	2022	Const. start shifted from FY 20 to FY 22	$93,000,000
Construction	EST	I/17 - US60, Grand Ave	N/A	Project dropped; cost was $79.4 M starting in FY 2021	$0
Systemwide					
Design	SYS	Preliminary Engineering (Mgt. Con. 30% Plans) 22	N/A	P.E. dropped in FY 22; cost was $8.0 million	$0

Scenario #2 (S. Mtn. First / I-17 & 303L Reduc. / Const. Seq.-Exten. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	338,749	495,294	138,091	235,049	252,650	227,011	261,242	199,636	241,163	317,716	378,324	335,195	370,358	170,468	214,447	6,500,345
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	62,510	56,840	49,320	72,747	107,284	48,449	73,500	65,000	9,086	1,964,727
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	29,278	37,505	34,922	37,988	24,799	22,611	34,716	32,662	28,713	793,691
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	750,370	846,443	400,512	477,082	292,441	269,959	365,930	306,981	338,605	441,651	523,807	419,855	492,374	282,130	296,246	9,630,316
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	954,017	1,050,337	626,516	715,184	636,512	492,517	574,233	523,311	574,599	687,857	779,533	679,585	757,319	546,625	530,960	14,335,542
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(33,422)	(311,809)	(66,409)	(152,846)	(19,021)	74,859	(23,727)	39,914	162,063	(98,154)	(61,598)	(65,187)	(25,001)	56,129	(25,499)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	587,294	275,485	209,075	56,229	37,209	112,068	88,340	128,254	290,317	192,163	130,566	65,378	40,377	96,506	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	587,294	275,485	209,075	56,229	37,209	112,068	88,340	128,254	290,317	192,163	130,566	65,378	40,377	96,506	71,007	
46	Guideline	147,793	104,340	96,445	108,163	89,388	133,694	151,048	77,617	91,198	61,088	58,182	74,796	65,665	71,731	89,828	103,520	87,682	100,352	65,312	66,624	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	453,600	124,436	131,459	(34,969)	(23,879)	53,886	13,545	62,589	218,586	102,336	27,045	(22,304)	(59,975)	31,194	4,383	

Scenario #2 (S. Mtn. First / I-17 & 303L Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location		Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
Construction	BL CA	Arizona Canal - SR 101L	WIDEN	16-18	**Deleted**	86,400,000	**Deleted**
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	22-24	22-24	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	23-25	23-25	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	24-26	24-26	130,000,000	**58,800,000**
Construction	BL CA	I/10 West - I/10 East	WIDEN	25-26	25-26	266,000,000	266,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	21-23	**Deleted**	79,400,000	**Deleted**
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	15,000,000	15,000,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	6,300,000	6,300,000
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2	WIDEN	16-18	16-18	50,320,000	50,320,000
Construction	GRAND	SR101L - Aqua Fria - Van Buren St, Phase 2	WIDEN	14-16	14-16	20,500,000	20,500,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	WIDEN	19-21	**21-23**	68,400,000	68,400,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility	WIDEN	13-15	13-15	13,400,000	13,400,000
Construction	PAP-MAR	202L, Santan - Riggs Rd	WIDEN	15-17	15-17	68,900,000	68,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	LOC/EX	13-15	**17-20**	167,400,000	167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	LOC/EX	14-16	**19-21**	114,000,000	114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	LOC/EX	15-17	**20-22**	134,600,000	134,600,000
Construction	PAP-MAR	Sky Harbor West Airport Access	INT	15-17	15-17	37,400,000	37,400,000
Construction	PIMA	I/17 - SR51	GP	24-26	24-26	68,700,000	68,700,000
Construction	PIMA	SR51 - Princess	GP	22-23	22-23	72,800,000	72,800,000
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	21-22	52,700,000	52,700,000
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	14-16	91,000,000	91,000,000
Construction	RED MT	101L - Gilbert Rd	GP	15-17	15-17	56,400,000	56,400,000
Construction	RED MT	Gilbert Rd - Higley Rd	HOV	19-20	19-20	16,800,000	16,800,000
Construction	RED MT	Higley Rd - US60	HOV	22-24	22-24	32,300,000	32,300,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	19-21	**20-22**	49,800,000	49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	NEW	15-17	**17-20**	177,100,000	177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	NEW	15-17	**17-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	NEW	19-21	**21-23**	114,500,000	114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	NEW	20-22	**23-25**	133,000,000	133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	NEW	15-17	**17-19**	46,300,000	46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	NEW	21-23	**23-25**	95,700,000	95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	NEW	21-23	**23-25**	64,800,000	64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	NEW	14-16	**15-18**	227,700,000	227,700,000
Construction	SR85	SR 85 at Gila Bend, Phase I	INTRSCT	12-13	12-13	14,248,470	14,248,470
Utility	SR85	SR 85 at Gila Bend, Phase I, Utility	INTRSCT	12-13	12-13	1,400,000	1,400,000
Construction	SR85	SR 85 at Gila Bend, Phase II	WIDEN	18-20	**19-21**	37,000,000	37,000,000
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	17-19	26,500,000	26,500,000
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	NEW	12-14	12-14	148,200,000	**81,700,000**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	23-25	49,900,000	49,900,000
Construction	SANTAN	US 60, Superstition - Gilbert Rd	HOV	22-24	22-24	46,800,000	46,800,000
Design	SYSTEMWIDE	Preliminary Engineering (MGT. Con. 30% Plans FY 22)	DESIGN	22	**Deleted**	8,000,000	**Deleted**

Scenario #3 (S. Mtn. First / Drop GP Lanes / Const. Seq.-Exten. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	338,749	495,294	135,361	150,187	215,534	286,399	265,562	199,636	241,163	297,163	295,217	391,340	446,997	193,679	211,012	6,488,245
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	62,510	56,840	49,320	72,747	107,284	48,449	73,500	65,000	9,086	1,964,727
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	29,278	37,505	34,922	37,988	32,799	22,611	34,716	32,662	28,713	801,691
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	750,370	846,443	397,782	392,220	255,325	329,347	370,250	306,981	338,605	421,098	448,700	476,000	569,013	305,341	292,811	9,626,216
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	954,017	1,050,337	623,786	630,322	599,396	551,905	578,553	523,311	574,599	667,304	704,426	735,730	833,958	569,836	527,525	14,331,442
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(33,422)	(311,809)	(63,679)	(67,984)	18,095	15,471	(28,047)	39,914	162,063	(77,601)	13,509	(121,332)	(101,640)	32,918	(22,064)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	587,294	275,485	211,805	143,821	161,917	177,388	149,340	189,254	351,317	273,716	287,226	165,893	64,253	97,171	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	587,294	275,485	211,805	143,821	161,917	177,388	149,340	189,254	351,317	273,716	287,226	165,893	64,253	97,171	75,107	
46	Guideline	147,793	104,340	96,445	108,163	89,388	133,694	151,048	77,162	77,054	54,902	68,080	75,516	65,665	71,731	86,402	91,003	97,040	113,125	69,180	66,052	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	453,600	124,436	134,644	66,767	107,015	109,308	73,825	123,589	279,586	187,314	196,223	68,853	(48,872)	27,991	9,055	

Scenario #3 (S. Mtn. First / Drop GP Lanes / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location		Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
Construction	BL CA	Arizona Canal - SR 101L	WIDEN	16-18	16-18	86,400,000	86,400,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East	WIDEN	25-26	25-26	266,000,000	266,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	21-23	**23-25**	79,400,000	79,400,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	15,000,000	15,000,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	6,300,000	6,300,000
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2	WIDEN	16-18	16-18	50,320,000	50,320,000
Construction	GRAND	SR101L - Aqua Fria - Van Buren St, Phase 2	WIDEN	14-16	14-16	20,500,000	20,500,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	WIDEN	19-21	**21-23**	68,400,000	68,400,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility	WIDEN	13-15	13-15	13,400,000	13,400,000
Construction	PAP-MAR	202L, Santan - Riggs Rd	WIDEN	15-17	15-17	68,900,000	68,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	LOC/EX	13-15	**17-20**	167,400,000	167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	LOC/EX	14-16	**19-21**	114,000,000	114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	LOC/EX	15-17	**20-22**	134,600,000	134,600,000
Construction	PAP-MAR	Sky Harbor West Airport Access	INT	15-17	15-17	37,400,000	37,400,000
Construction	PIMA	I/17 - SR51	GP	24-26	**Deleted**	68,700,000	**Deleted**
Construction	PIMA	SR51 - Princess	GP	22-23	**Deleted**	72,800,000	**Deleted**
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	**Deleted**	52,700,000	**Deleted**
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	**Deleted**	91,000,000	**Deleted**
Construction	RED MT	101L - Gilbert Rd	GP	15-17	**Deleted**	56,400,000	**Deleted**
Construction	RED MT	Gilbert Rd - Higley Rd	HOV	19-20	19-20	16,800,000	16,800,000
Construction	RED MT	Higley Rd - US60	HOV	22-24	22-24	32,300,000	32,300,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	19-21	**20-22**	49,800,000	49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	NEW	15-17	**17-20**	177,100,000	177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	NEW	15-17	**17-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	NEW	19-21	**21-23**	114,500,000	114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	NEW	20-22	**23-25**	133,000,000	133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	NEW	15-17	**17-19**	46,300,000	46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	NEW	21-23	**23-25**	95,700,000	95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	NEW	21-23	**23-25**	64,800,000	64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	NEW	14-16	**15-18**	227,700,000	227,700,000
Construction	SR85	SR 85 at Gila Bend, Phase I	INTRSCT	12-13	12-13	14,248,470	14,248,470
Utility	SR85	SR 85 at Gila Bend, Phase I, Utility	INTRSCT	12-13	12-13	1,400,000	1,400,000
Construction	SR85	SR 85 at Gila Bend, Phase II	WIDEN	18-20	**19-21**	37,000,000	37,000,000
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	17-19	26,500,000	26,500,000
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	NEW	12-14	12-14	148,200,000	**81,700,000**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	**Deleted**	49,900,000	**Deleted**
Construction	SANTAN	US 60, Superstition - Gilbert Rd	HOV	22-24	22-24	46,800,000	46,800,000

Scenario #4 (S. Mtn. First / % Reduc. / Const. Seq.-Exten. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	331,974	485,388	135,329	230,348	267,071	283,435	239,006	179,672	217,047	285,944	340,492	382,191	448,853	221,074	193,002	6,565,780
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	61,260	55,703	48,334	71,292	105,139	47,480	72,030	63,700	8,904	1,953,833
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	26,350	33,755	31,430	34,189	29,519	20,350	31,244	29,396	25,842	772,572
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	743,595	836,537	397,750	472,381	306,862	326,383	339,516	282,130	310,010	404,625	488,549	463,621	565,928	328,170	271,748	9,663,736
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	947,242	1,040,432	623,754	710,483	650,934	548,941	547,819	498,460	546,004	650,831	744,275	723,351	830,873	592,665	506,462	14,368,962
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(26,647)	(301,903)	(63,648)	(148,145)	(33,442)	18,435	2,687	64,765	190,658	(61,128)	(26,340)	(108,954)	(98,555)	10,089	(1,001)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	80,373	46,931	65,366	68,053	132,818	323,476	262,347	236,007	127,054	28,499	38,588	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	80,373	46,931	65,366	68,053	132,818	323,476	262,347	236,007	127,054	28,499	38,588	37,586	
46	Guideline	147,793	104,340	96,445	108,163	89,388	132,565	149,397	77,157	90,415	63,491	67,586	70,393	61,523	66,965	83,657	97,644	94,977	112,611	72,985	62,541	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	461,504	142,768	151,362	(10,042)	(16,561)	(2,220)	(2,340)	71,294	256,511	178,691	138,363	32,077	(84,112)	(34,397)	(24,955)	

Scenario #4 (S. Mtn. First / % Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location		Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
Construction	BL CA	Arizona Canal - SR 101L	WIDEN	16-18	16-18	86,400,000	86,400,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East	WIDEN	25-26	25-26	266,000,000	266,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	21-23	**23-25**	79,400,000	79,400,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	15,000,000	15,000,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	6,300,000	6,300,000
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2	WIDEN	16-18	16-18	50,320,000	50,320,000
Construction	GRAND	SR101L - Aqua Fria - Van Buren St, Phase 2	WIDEN	14-16	14-16	20,500,000	20,500,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	WIDEN	19-21	**21-23**	68,400,000	68,400,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility	WIDEN	13-15	13-15	13,400,000	13,400,000
Construction	PAP-MAR	202L, Santan - Riggs Rd	WIDEN	15-17	15-17	68,900,000	68,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	LOC/EX	13-15	**17-20**	167,400,000	167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	LOC/EX	14-16	**19-21**	114,000,000	114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	LOC/EX	15-17	**20-22**	134,600,000	134,600,000
Construction	PAP-MAR	Sky Harbor West Airport Access	INT	15-17	15-17	37,400,000	37,400,000
Construction	PIMA	I/17 - SR51	GP	24-26	24-26	68,700,000	68,700,000
Construction	PIMA	SR51 - Princess	GP	22-23	22-23	72,800,000	72,800,000
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	21-22	52,700,000	52,700,000
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	14-16	91,000,000	91,000,000
Construction	RED MT	101L - Gilbert Rd	GP	15-17	15-17	56,400,000	56,400,000
Construction	RED MT	Gilbert Rd - Higley Rd	HOV	19-20	19-20	16,800,000	16,800,000
Construction	RED MT	Higley Rd - US60	HOV	22-24	22-24	32,300,000	32,300,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	19-21	**20-22**	49,800,000	49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	NEW	15-17	**17-20**	177,100,000	177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	NEW	15-17	**17-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	NEW	19-21	**21-23**	114,500,000	114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	NEW	20-22	**23-25**	133,000,000	133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	NEW	15-17	**17-19**	46,300,000	46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	NEW	21-23	**23-25**	95,700,000	95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	NEW	21-23	**23-25**	64,800,000	64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	NEW	14-16	**15-18**	227,700,000	227,700,000
Construction	SR85	SR 85 at Gila Bend, Phase I	INTRSCT	12-13	12-13	14,248,470	14,248,470
Utility	SR85	SR 85 at Gila Bend, Phase I, Utility	INTRSCT	12-13	12-13	1,400,000	1,400,000
Construction	SR85	SR 85 at Gila Bend, Phase II	WIDEN	18-20	**19-21**	37,000,000	37,000,000
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	17-19	26,500,000	26,500,000
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	NEW	12-14	12-14	148,200,000	**81,700,000**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	23-25	49,900,000	49,900,000
Construction	SANTAN	US 60, Superstition - Gilbert Rd	HOV	22-24	22-24	46,800,000	46,800,000

Scenario #4 (S. Mtn. First / % Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location	Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
		Costs for program components were factor as shown in adjacent table, representing value engineering, designing to budget, and recent history of more favorable bids and lower real estate/land prices.				

Cost Reduction Factor		FY 12-17	FY 18-26
Construction		**0.9800**	**0.9000**
Mitigation		**1.0000**	**1.0000**
Design		**1.0000**	**0.9000**
Maintenance		**1.0000**	**1.0000**
Right of Way		**1.0000**	**0.9800**

Scenario #5 (I-10 First / % Reduc. / Const. Seq.-Exten. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	331,974	485,388	135,329	215,186	237,323	199,168	262,658	293,121	185,873	182,426	386,350	397,194	324,572	398,055	206,210	6,565,780
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	61,260	55,703	48,334	71,292	105,139	47,480	72,030	63,700	8,904	1,953,833
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	26,350	33,755	31,430	34,189	29,519	20,350	31,244	29,396	25,842	772,572
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	743,595	836,537	397,750	457,219	277,114	242,116	363,168	395,578	278,836	301,107	534,408	478,624	441,647	505,151	284,955	9,663,736
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	947,242	1,040,432	623,754	695,322	621,186	464,673	571,471	611,908	514,830	547,313	790,134	738,354	706,592	769,646	519,670	14,368,962
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(26,647)	(301,903)	(63,648)	(132,984)	(3,694)	102,703	(20,965)	(48,684)	221,832	42,390	(72,199)	(123,957)	25,726	(166,892)	(14,209)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	95,534	91,840	194,543	173,578	124,894	346,726	389,116	316,917	192,961	218,687	51,795	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	95,534	91,840	194,543	173,578	124,894	346,726	389,116	316,917	192,961	218,687	51,795	37,586	
46	Guideline	147,793	104,340	96,445	108,163	89,388	132,565	149,397	77,157	87,888	58,533	53,541	74,335	80,431	61,769	66,404	105,287	97,477	91,898	102,482	64,743	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	461,504	142,768	151,362	7,647	33,307	141,001	99,242	44,463	284,957	322,712	211,630	95,484	126,789	(50,687)	(27,156)	

Scenario #5 (I-10 First / % Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location		Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
Construction	BL CA	Arizona Canal - SR 101L	WIDEN	16-18	16-18	86,400,000	86,400,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East	WIDEN	25-26	25-26	266,000,000	266,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	21-23	**23-25**	79,400,000	79,400,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	15,000,000	15,000,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	6,300,000	6,300,000
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2	WIDEN	16-18	16-18	50,320,000	50,320,000
Construction	GRAND	SR101L - Aqua Fria - Van Buren St, Phase 2	WIDEN	14-16	14-16	20,500,000	20,500,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	WIDEN	19-21	**21-23**	68,400,000	68,400,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility	WIDEN	13-15	13-15	13,400,000	13,400,000
Construction	PAP-MAR	202L, Santan - Riggs Rd	WIDEN	15-17	15-17	68,900,000	68,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	LOC/EX	13-15	**15-18**	167,400,000	167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	LOC/EX	14-16	**17-19**	114,000,000	114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	LOC/EX	15-17	**18-20**	134,600,000	134,600,000
Construction	PAP-MAR	Sky Harbor West Airport Access	INT	15-17	15-17	37,400,000	37,400,000
Construction	PIMA	I/17 - SR51	GP	24-26	24-26	68,700,000	68,700,000
Construction	PIMA	SR51 - Princess	GP	22-23	22-23	72,800,000	72,800,000
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	21-22	52,700,000	52,700,000
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	14-16	91,000,000	91,000,000
Construction	RED MT	101L - Gilbert Rd	GP	15-17	15-17	56,400,000	56,400,000
Construction	RED MT	Gilbert Rd - Higley Rd	HOV	19-20	19-20	16,800,000	16,800,000
Construction	RED MT	Higley Rd - US60	HOV	22-24	22-24	32,300,000	32,300,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	20-22	**21-23**	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	19-21	**21-23**	49,800,000	49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	NEW	15-17	**19-22**	177,100,000	177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	NEW	15-17	**19-22**	99,400,000	99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	NEW	19-21	**22-24**	114,500,000	114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	NEW	20-22	**24-26**	133,000,000	133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	NEW	15-17	**19-21**	46,300,000	46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	NEW	21-23	**24-26**	95,700,000	95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	NEW	21-23	**24-26**	64,800,000	64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	NEW	14-16	**17-20**	227,700,000	227,700,000
Construction	SR85	SR 85 at Gila Bend, Phase I	INTRSCT	12-13	12-13	14,248,470	14,248,470
Utility	SR85	SR 85 at Gila Bend, Phase I, Utility	INTRSCT	12-13	12-13	1,400,000	1,400,000
Construction	SR85	SR 85 at Gila Bend, Phase II	WIDEN	18-20	**19-21**	37,000,000	37,000,000
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	17-19	26,500,000	26,500,000
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	NEW	12-14	12-14	148,200,000	**81,700,000**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	23-25	49,900,000	49,900,000
Construction	SANTAN	US 60, Superstition - Gilbert Rd	HOV	22-24	22-24	46,800,000	46,800,000

Scenario #5 (I-10 First / % Reduc. / Const. Seq.-Exten. Adj.): Project Changes

Phase	Corr	Description/Location	Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
		Costs for program components were factor as shown in adjacent table, representing value engineering, designing to budget, and recent history of more favorable bids and lower real estate/land prices.				

	Cost Reduction Factor	FY 12-17	FY 18-26
Construction		**0.9800**	**0.9000**
Mitigation		**1.0000**	**1.0000**
Design		**1.0000**	**0.9000**
Maintenance		**1.0000**	**1.0000**
Right of Way		**1.0000**	**0.9800**

Scenario #6 (S. Mtn. First / % Reduc. / Const. Seq. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	331,974	485,388	135,329	221,918	299,145	115,950	334,877	243,019	189,928	285,944	340,492	382,191	448,853	221,074	193,002	6,554,038
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	273,615	211,945	196,578	5,250	7,750	61,260	55,703	48,334	71,292	105,139	47,480	72,030	63,700	8,904	1,953,833
37	Design	77,694	48,583	36,242	55,473	47,960	65,903	62,972	38,176	32,955	22,041	22,498	26,350	33,755	31,430	34,189	29,519	20,350	31,244	29,396	25,842	772,572
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	743,595	836,537	397,750	463,951	338,936	158,898	435,387	345,477	282,891	404,625	488,549	463,621	565,928	328,170	271,748	9,651,994
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	947,242	1,040,432	623,754	702,053	683,008	381,456	643,690	561,806	518,886	650,831	744,275	723,351	830,873	592,665	506,462	14,357,220
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(26,647)	(301,903)	(63,648)	(139,715)	(65,516)	185,920	(93,184)	1,418	217,777	(61,128)	(26,340)	(108,954)	(98,555)	10,089	(1,001)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	88,803	23,287	209,207	116,023	117,441	335,218	274,089	247,749	138,796	40,241	50,330	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	594,069	292,166	228,518	88,803	23,287	209,207	116,023	117,441	335,218	274,089	247,749	138,796	40,241	50,330	49,328	
46	Guideline	147,793	104,340	96,445	108,163	89,388	132,565	149,397	77,157	89,010	68,837	39,672	86,372	72,081	62,445	83,657	97,644	94,977	112,611	72,985	62,541	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	461,504	142,768	151,362	(207)	(45,550)	169,535	29,651	45,360	272,773	190,433	150,105	43,819	(72,370)	(22,655)	(13,213)	

Scenario #6 (S. Mtn. First / % Reduc. / Const. Seq. Adj.): Project Changes

Phase	Corr	Description/Location		Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)	DRAIN.	16-17	**17-18**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - SR 101L	WIDEN	16-18	**17-19**	86,400,000	86,400,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd	WIDEN	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East	WIDEN	25-26	25-26	266,000,000	266,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave	WIDEN	21-23	**23-25**	79,400,000	79,400,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	15,000,000	15,000,000
Construction	GRAND	101L, Agua Fria - McDowell Rd, Phase 1	WIDEN	12-13	12-13	6,300,000	6,300,000
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2	WIDEN	16-18	**17-19**	50,320,000	50,320,000
Construction	GRAND	SR101L - Aqua Fria - Van Buren St, Phase 2	WIDEN	14-16	14-16	20,500,000	20,500,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I	WIDEN	19-21	**21-23**	68,400,000	68,400,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility	WIDEN	13-15	13-15	13,400,000	13,400,000
Construction	PAP-MAR	202L, Santan - Riggs Rd	WIDEN	15-17	15-17	68,900,000	68,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 1	LOC/EX	13-15	**17-19**	167,400,000	167,400,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2	LOC/EX	14-16	**19-21**	114,000,000	114,000,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3	LOC/EX	15-17	**20-22**	134,600,000	134,600,000
Construction	PAP-MAR	Sky Harbor West Airport Access	INT	15-17	**16-18**	37,400,000	37,400,000
Construction	PIMA	I/17 - SR51	GP	24-26	24-26	68,700,000	68,700,000
Construction	PIMA	SR51 - Princess	GP	22-23	22-23	72,800,000	72,800,000
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	21-22	52,700,000	52,700,000
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	14-16	91,000,000	91,000,000
Construction	RED MT	101L - Gilbert Rd	GP	15-17	15-17	56,400,000	56,400,000
Construction	RED MT	Gilbert Rd - Higley Rd	HOV	19-20	19-20	16,800,000	16,800,000
Construction	RED MT	Higley Rd - US60	HOV	22-24	22-24	32,300,000	32,300,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	NEW	19-21	**20-22**	49,800,000	49,800,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	NEW	15-17	**18-20**	177,100,000	177,100,000
Construction	S MTN	Salt River Bridge, Segment 7	NEW	15-17	**18-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	NEW	19-21	**21-23**	114,500,000	114,500,000
Construction	S MTN	24th St - 17th Ave - Segment 2	NEW	20-22	**23-25**	133,000,000	133,000,000
Construction	S MTN	Baseline Rd - Salt River, Segment 6	NEW	15-17	**17-19**	46,300,000	46,300,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	NEW	21-23	**23-25**	95,700,000	95,700,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	NEW	21-23	**23-25**	64,800,000	64,800,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	NEW	14-16	**15-17**	227,700,000	227,700,000
Construction	SR85	SR 85 at Gila Bend, Phase I	INTRSCT	12-13	12-13	14,248,470	14,248,470
Utility	SR85	SR 85 at Gila Bend, Phase I, Utility	INTRSCT	12-13	12-13	1,400,000	1,400,000
Construction	SR85	SR 85 at Gila Bend, Phase II	WIDEN	18-20	**19-21**	37,000,000	37,000,000
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	17-19	26,500,000	26,500,000
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I	NEW	12-14	12-14	148,200,000	**81,700,000**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	23-25	49,900,000	49,900,000
Construction	SANTAN	US 60, Superstition - Gilbert Rd	HOV	22-24	22-24	46,800,000	46,800,000

Scenario #6 (S. Mtn. First / % Reduc. / Const. Seq. Adj.): Project Changes

Phase	Corr	Description/Location	Orig. Period	New Period	Orig. Proj. Cost	New Proj. Cost
		Costs for program components were factor as shown in adjacent table, representing value engineering, designing to budget, and recent history of more favorable bids and lower real estate/land prices.				

	Cost Reduction Factor		FY 12-17	FY 18-26
	Construction		**0.9800**	**0.9000**
	Mitigation		**1.0000**	**1.0000**
	Design		**1.0000**	**0.9000**
	Maintenance		**1.0000**	**1.0000**
	Right of Way		**1.0000**	**0.9800**

Scenario #7 (S. Mtn. First / Drop GP Lanes / Const. Seq. Adj. / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual* 2006-07	*Actual* 2008	*Actual* 2009	*Actual* 2010	*Actual* 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	335,095	492,830	141,588	165,165	316,326	244,266	186,556	391,565	195,695	55,232	232,421	523,929	391,147	296,436	217,742	6,510,945
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	237,747	272,978	66,995	79,130	59,270	32,750	30,200	5,200	104,151	155,418	48,449	73,500	65,000	9,086	1,964,727
37	Design	77,694	48,583	36,242	55,473	47,960	61,076	48,409	45,075	37,996	18,381	22,498	25,183	43,156	31,395	32,376	29,684	20,354	31,788	32,662	28,713	774,698
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	741,889	793,549	471,941	282,655	426,337	338,734	257,389	477,921	245,490	204,959	430,923	606,332	510,235	408,098	299,541	9,621,923
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	945,536	997,443	697,945	520,758	770,409	561,291	465,692	694,251	481,484	451,165	686,649	866,062	775,180	672,593	534,255	14,327,149
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(24,942)	(258,915)	(137,838)	41,580	(152,917)	6,085	84,813	(131,026)	255,178	138,538	31,287	(251,664)	(42,862)	(69,839)	(28,794)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	595,775	336,860	199,022	240,602	87,685	93,770	178,583	47,557	302,735	441,273	472,560	220,895	178,033	108,194	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	595,775	336,860	199,022	240,602	87,685	93,770	178,583	47,557	302,735	441,273	472,560	220,895	178,033	108,194	79,400	
46	Guideline	147,793	104,340	96,445	108,163	89,388	132,281	142,233	89,522	58,794	83,404	69,644	56,706	94,155	56,212	50,379	88,040	118,762	103,329	86,306	67,173	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	463,494	194,627	109,500	181,809	4,281	24,126	121,878	(46,598)	246,523	390,894	384,520	102,133	74,704	21,888	12,226	
		316,276	598,896	876,793	562,907	620,717	596,617	336,860	199,022	240,602	87,685	93,770	178,583	47,557	302,735	441,273	472,560	220,895	178,033	108,194	79,400	

Scenario #7 (S. Mtn. First / Drop GP Lanes / Const. Seq. Adj. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**22-24**	86,400,000	86,400,000
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**23-25**	79,400,000	79,400,000
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Grand								
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2		New TI	16-18	**17-19**	50,320,000	50,320,000
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**19**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**21**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**22-24**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**19**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**21**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**23-25**	114,000,000	114,000,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**19-20**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**21-22**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**24-26**	134,600,000	134,600,000
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000

Scenario #7 (S. Mtn. First / Drop GP Lanes / Const. Seq. Adj. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria							
Construction	PAP-MAR	202L, Santan - Riggs Rd	HOV/GP	15-17	**21-23**	68,900,000	68,900,000
Pima							
Design	PIMA	I/17 - SR51	GP	23-24	**Deleted**	4,800,000	**Deleted**
Construction	PIMA	I/17 - SR51	GP	24-26	**Deleted**	68,700,000	**Deleted**
Design	PIMA	SR51 - Princess Dr	GP	20-21	**Deleted**	5,100,000	**Deleted**
Construction	PIMA	SR51 - Princess	GP	22-23	**Deleted**	72,800,000	**Deleted**
Design	PIMA	Princess Dr - Shea Blvd	GP	20-21	**Deleted**	3,700,000	**Deleted**
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	**Deleted**	52,700,000	**Deleted**
Design	PIMA	Shea Blvd - 202L, Red Mountain	GP	12-13	**Deleted**	6,400,000	**Deleted**
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	**Deleted**	91,000,000	**Deleted**
Design	PIMA	Pima Road Extension, JPA	JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA	JPA	13-14	**14-15**	3,634,000	3,634,000
Price							
Design	PRICE	Baseline Rd - 202L, Santan	GP	22-23	**Deleted**	3,500,000	**Deleted**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	**Deleted**	49,900,000	**Deleted**
Red Mountain							
Design	RED MT	101L - Gilbert Rd	GP	14-15	**Deleted**	3,900,000	**Deleted**
Construction	RED MT	101L - Gilbert Rd	GP	15-17	**Deleted**	56,400,000	**Deleted**
Santan							
Design	SANTAN	Lindsay Rd - Gilbert Rd	Path	12-13	**13-14**	500,000	500,000
South Mountain							
Design	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	18-19	18-19	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1	New Fwy.	18-19	18-19	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	19-21	19-21	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**14-15**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**16-17**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2	New Fwy.	20-22	**18-20**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	13-14	13-14	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	14-16	**15-17**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**14-15**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**16-17**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	21-23	**18-20**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**14-15**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**16-17**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	21-23	**18-20**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	14-15	**13-14**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	12, 14-15	12, 14-15	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	15-17	15-17	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7	New Fwy.	14-15	**13-14**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7	New Fwy.	14-15	**13-14**	19,000,000	19,000,000
Construction	S MTN	Salt River Bridge, Segment 7	New Fwy.	15-17	**16-18**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	12-13	**12-13**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	14-15	**13-14**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	15-17	**16-18**	177,100,000	177,100,000
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**14-15**	10,500,000	10,500,000

Scenario #7 (S. Mtn. First / Drop GP Lanes / Const. Seq. Adj. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria							
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**14-15**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**16-17**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	**18-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**18-20**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Scenario #8 (S. Mtn. First / Drop GP Lanes / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	335,095	492,830	141,588	165,165	275,593	183,822	350,738	301,165	220,790	57,532	232,421	523,929	391,147	296,436	217,742	6,510,945
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	217,330	152,895	112,411	186,893	71,710	32,630	5,200	5,200	104,151	155,418	48,449	73,500	65,000	9,086	1,964,727
37	Design	77,694	48,583	36,242	55,473	47,960	55,844	46,475	50,994	40,412	25,213	22,498	22,063	38,276	31,395	32,376	29,684	20,354	31,788	32,662	28,713	774,698
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	736,656	771,197	357,777	330,488	500,199	290,730	418,331	357,641	270,585	207,259	430,923	606,332	510,235	408,098	299,541	9,621,923
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	940,304	975,092	583,781	568,590	844,271	513,287	626,634	573,971	506,579	453,465	686,649	866,062	775,180	672,593	534,255	14,327,149
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(19,709)	(236,563)	(23,674)	(6,252)	(226,779)	54,089	(76,129)	(10,746)	230,083	136,238	31,287	(251,664)	(42,862)	(69,839)	(28,794)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	601,008	364,444	340,770	334,517	107,738	161,827	85,698	74,952	305,035	441,273	472,560	220,895	178,033	108,194	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	601,008	364,444	340,770	334,517	107,738	161,827	85,698	74,952	305,035	441,273	472,560	220,895	178,033	108,194	79,400	
46	Guideline	147,793	104,340	96,445	108,163	89,388	131,408	138,507	70,494	66,766	95,714	61,644	83,529	74,109	60,394	50,762	88,040	118,762	103,329	86,306	67,173	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	469,599	225,937	270,275	267,752	12,024	100,183	2,169	843	244,641	390,510	384,520	102,133	74,704	21,888	12,226	

Scenario #8 (S. Mtn. First / Drop GP Lanes / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**22-24**	86,400,000	86,400,000
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**23-25**	79,400,000	79,400,000
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Grand								
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2		New TI	16-18	**17-19**	50,320,000	50,320,000
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**19**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**21**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**22-24**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**19**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**21**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**23-25**	114,000,000	114,000,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**19-20**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**21-22**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**24-26**	134,600,000	134,600,000
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000

Scenario #8 (S. Mtn. First / Drop GP Lanes / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria							
Construction	PAP-MAR	202L, Santan - Riggs Rd	HOV/GP	15-17	**21-23**	68,900,000	68,900,000
Pima							
Design	PIMA	I/17 - SR51	GP	23-24	**Deleted**	4,800,000	**Deleted**
Construction	PIMA	I/17 - SR51	GP	24-26	**Deleted**	68,700,000	**Deleted**
Design	PIMA	SR51 - Princess Dr	GP	20-21	**Deleted**	5,100,000	**Deleted**
Construction	PIMA	SR51 - Princess	GP	22-23	**Deleted**	72,800,000	**Deleted**
Design	PIMA	Princess Dr - Shea Blvd	GP	20-21	**Deleted**	3,700,000	**Deleted**
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	**Deleted**	52,700,000	**Deleted**
Design	PIMA	Shea Blvd - 202L, Red Mountain	GP	12-13	**Deleted**	6,400,000	**Deleted**
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	**Deleted**	91,000,000	**Deleted**
Design	PIMA	Pima Road Extension, JPA	JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA	JPA	13-14	**14-15**	3,634,000	3,634,000
Price							
Design	PRICE	Baseline Rd - 202L, Santan	GP	22-23	**Deleted**	3,500,000	**Deleted**
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	**Deleted**	49,900,000	**Deleted**
Red Mountain							
Design	RED MT	101L - Gilbert Rd	GP	14-15	**Deleted**	3,900,000	**Deleted**
Construction	RED MT	101L - Gilbert Rd	GP	15-17	**Deleted**	56,400,000	**Deleted**
Santan							
Design	SANTAN	Lindsay Rd - Gilbert Rd	Path	12-13	**13-14**	500,000	500,000
South Mountain							
Design	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	18-19	**14-15**	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1	New Fwy.	18-19	**15-16**	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	19-21	**17-19**	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**14-15**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**16-17**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2	New Fwy.	20-22	**18-20**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	13-14	13-14	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	14-16	**15-17**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**15-16**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**17-18**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	21-23	**19-21**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**15-16**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**17-18**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	21-23	**19-21**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	14-15	**13-14**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	12, 14-15	12, 14-15	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	15-17	15-17	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7	New Fwy.	14-15	**13-14**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7	New Fwy.	14-15	**14-15**	19,000,000	19,000,000
Construction	S MTN	Salt River Bridge, Segment 7	New Fwy.	15-17	**16-18**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	12-13	**13-14**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	14-15	**15-16**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	15-17	**17-19**	177,100,000	177,100,000
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**14-15**	10,500,000	10,500,000

Scenario #8 (S. Mtn. First / Drop GP Lanes / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria							
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**14-15**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**16-17**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	**18-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**18-20**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Scenario #9 (S. Mtn. First / % Reduc. / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual 2006-07*	*Actual 2008*	*Actual 2009*	*Actual 2010*	*Actual 2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	328,393	482,973	140,668	223,293	316,323	182,560	333,201	286,107	209,751	69,043	278,975	521,054	407,800	317,986	209,259	6,632,338
36	Right of Way	49,682	106,988	60,094	90,754	100,355	310,641	212,984	150,537	110,163	183,155	70,276	30,999	4,940	4,940	98,944	147,647	46,027	69,825	61,750	8,631	1,919,331
37	Design	77,694	48,583	36,242	55,473	47,960	57,124	46,636	51,230	41,568	24,709	22,048	20,960	36,362	32,228	34,515	30,380	20,916	32,248	31,029	27,277	775,182
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	724,895	757,156	354,735	387,524	536,687	287,584	398,060	340,409	260,118	215,701	470,402	601,597	523,673	424,764	289,168	9,698,404
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	928,542	961,050	580,739	625,627	880,759	510,142	606,363	556,739	496,113	461,907	726,128	861,327	788,618	689,260	523,882	14,403,630
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(7,947)	(222,522)	(20,632)	(63,289)	(263,267)	57,234	(55,857)	6,486	240,550	127,796	(8,193)	(246,930)	(56,300)	(86,506)	(18,421)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	612,769	390,247	369,615	306,327	43,059	100,294	44,437	50,922	291,472	419,268	411,076	164,146	107,846	21,340	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	612,769	390,247	369,615	306,327	43,059	100,294	44,437	50,922	291,472	419,268	411,076	164,146	107,846	21,340	2,919	
46	Guideline	147,793	104,340	96,445	108,163	89,388	129,448	136,167	69,987	76,272	101,796	61,119	80,151	71,236	58,650	52,169	94,620	117,973	105,569	89,084	65,445	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	483,321	254,080	299,628	230,055	(58,736)	39,175	(35,714)	(20,314)	232,823	367,099	316,456	46,174	2,278	(67,744)	(62,526)	

Scenario #9 (S. Mtn. First / % Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**22-24**	86,400,000	86,400,000
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	150,000,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	130,000,000
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**23-25**	79,400,000	79,400,000
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Grand								
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2		New TI	16-18	**17-19**	50,320,000	50,320,000
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**19**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**21**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**22-24**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**19**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**21**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**23-25**	114,000,000	114,000,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**19-20**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**21-22**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**24-26**	134,600,000	134,600,000

Scenario #9 (S. Mtn. First / % Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000
Construction	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	15-17	**21-23**	68,900,000	68,900,000
Pima								
Design	PIMA	I/17 - SR51		GP	23-24	23-24	4,800,000	4,800,000
Construction	PIMA	I/17 - SR51		GP	24-26	24-26	68,700,000	68,700,000
Design	PIMA	SR51 - Princess Dr		GP	20-21	20-21	5,100,000	5,100,000
Construction	PIMA	SR51 - Princess		GP	22-23	22-23	72,800,000	72,800,000
Design	PIMA	Princess Dr - Shea Blvd		GP	20-21	20-21	3,700,000	3,700,000
Construction	PIMA	Princess Dr - Shea Blvd		GP	21-22	21-22	52,700,000	52,700,000
Design	PIMA	Shea Blvd - 202L, Red Mountain		GP	12-13	12-13	4,983,021	4,983,021
Construction	PIMA	Shea Blvd - 202L, Red Mountain		GP	14-16	14-16	91,000,000	91,000,000
Design	PIMA	Pima Road Extension, JPA		JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA		JPA	13-14	**14-15**	3,634,000	3,634,000
Price								
Design	PRICE	Baseline Rd - 202L, Santan		GP	22-23	22-23	3,500,000	3,500,000
Construction	PRICE	Baseline Rd - 202L, Santan		GP	23-25	23-25	49,900,000	49,900,000
Red Mountain								
Design	RED MT	101L - Gilbert Rd		GP	14-15	14-15	3,900,000	**4,600,000**
Right of Way	RED MT	101L - Gilbert Rd		GP	N/A	**14**	N/A	**1,000,000**
Construction	RED MT	101L - Gilbert Rd		GP	15-17	15-17	56,400,000	**69,000,000**
Santan								
Design	SANTAN	Lindsay Rd - Gilbert Rd		Path	12-13	**13-14**	500,000	500,000
South Mountain								
Design	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	18-19	**14-15**	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1		New Fwy.	18-19	**15-16**	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	19-21	**17-19**	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**14-15**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**16-17**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2		New Fwy.	20-22	**18-20**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	12-13	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	12-13	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	13-14	13-14	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	14-16	**15-17**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**15-16**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**17-18**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	21-23	**19-21**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**15-16**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**17-18**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	21-23	**19-21**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	14-15	**13-14**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	12, 14-15	12, 14-15	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	15-17	15-17	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7		New Fwy.	14-15	**13-14**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7		New Fwy.	14-15	**14-15**	19,000,000	19,000,000
Construction	S MTN	Salt River Bridge, Segment 7		New Fwy.	15-17	**16-18**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	12-13	**13-14**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	14-15	**15-16**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	15-17	**17-19**	177,100,000	177,100,000

Scenario #9 (S. Mtn. First / % Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**14-15**	10,500,000	10,500,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**14-15**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**16-17**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	**18-20**	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**18-20**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Costs for program components were factor as shown in tables below, representing value engineering, designing to budget, and recent history of more favorable bids and lower real estate/land prices.

Overall Cost Reduction Factor	FY 12-17	FY 18-26
Construction	**0.9800**	**0.9500**
Mitigation	**1.0000**	**1.0000**
Design	**0.9800**	**0.9500**
Maintenance	**1.0000**	**1.0000**
Right of Way	**0.9800**	**0.9500**

Fwy GP Proj. Cost Reduction Factor	
Fwy GP Proj.	FY 12-26
Construction	**0.7000**
Design	**0.7000**
Right of Way	**0.7000**

Scenario #10a (S. Mtn. First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual* 2006-07	*Actual* 2008	*Actual* 2009	*Actual* 2010	*Actual* 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	335,095	492,830	144,318	228,453	285,221	231,946	274,832	239,241	289,952	174,303	304,336	405,576	310,188	273,225	221,177	6,535,645
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	217,330	153,895	112,411	186,893	71,710	32,630	5,200	5,200	104,151	155,418	48,449	73,500	65,000	9,086	1,965,727
37	Design	77,694	48,583	36,242	55,473	47,960	59,268	48,034	52,788	43,218	25,213	22,498	22,063	38,276	34,827	37,744	32,799	22,611	34,716	32,662	28,713	801,381
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	740,080	772,756	363,301	396,582	509,827	338,854	342,425	295,717	343,179	329,398	505,953	490,236	432,204	384,887	302,976	9,674,306
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	943,728	976,651	589,305	634,684	853,899	561,412	550,728	512,047	579,173	575,604	761,679	749,966	697,149	649,382	537,690	14,379,532
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(23,133)	(238,122)	(29,198)	(72,346)	(236,407)	5,964	(222)	51,178	157,489	14,099	(43,743)	(135,568)	35,169	(46,628)	(32,229)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	597,583	359,461	330,263	257,916	21,510	27,474	27,251	78,429	235,918	250,017	206,274	70,705	105,874	59,246	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	597,583	359,461	330,263	257,916	21,510	27,474	27,251	78,429	235,918	250,017	206,274	70,705	105,874	59,246	27,017	
46	Guideline	147,793	104,340	96,445	108,163	89,388	131,979	138,767	71,415	77,781	97,319	69,664	70,878	63,788	72,493	71,119	100,545	99,412	90,324	82,438	67,746	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	465,604	220,694	258,848	180,135	(75,809)	(42,191)	(43,627)	14,641	163,425	178,898	105,729	(28,707)	15,551	(23,192)	(40,729)	

Scenario #10a (S. Mtn. First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**Deleted**	86,400,000	**Deleted**
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	**58,800,000**
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**Deleted**	79,400,000	**Deleted**
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Construction	PAP-MAR	Sky Harbor West Airport Access		TI	15-17	**16-18**	37,400,000	37,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**19**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**21**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**22-24**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**19**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**21**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**23-25**	114,000,000	114,000,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**19-20**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**21-22**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**24-26**	134,600,000	134,600,000
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000
Construction	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	15-17	**21-23**	68,900,000	68,900,000

Scenario #10a (S. Mtn. First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Pima							
Design	PIMA	I/17 - SR51	GP	23-24	23-24	4,800,000	4,800,000
Construction	PIMA	I/17 - SR51	GP	24-26	24-26	68,700,000	68,700,000
Design	PIMA	SR51 - Princess Dr	GP	20-21	20-21	5,100,000	5,100,000
Construction	PIMA	SR51 - Princess	GP	22-23	22-23	72,800,000	72,800,000
Design	PIMA	Princess Dr - Shea Blvd	GP	20-21	20-21	3,700,000	3,700,000
Construction	PIMA	Princess Dr - Shea Blvd	GP	21-22	21-22	52,700,000	52,700,000
Design	PIMA	Shea Blvd - 202L, Red Mountain	GP	12-13	12-13	4,983,021	4,983,021
Construction	PIMA	Shea Blvd - 202L, Red Mountain	GP	14-16	14-16	91,000,000	91,000,000
Design	PIMA	Pima Road Extension, JPA	JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA	JPA	13-14	**14-15**	3,634,000	3,634,000
Price							
Design	PRICE	Baseline Rd - 202L, Santan	GP	22-23	22-23	3,500,000	3,500,000
Construction	PRICE	Baseline Rd - 202L, Santan	GP	23-25	23-25	49,900,000	49,900,000
Red Mountain							
Design	RED MT	101L - Gilbert Rd	GP	14-15	14-15	3,900,000	**4,600,000**
Right of Way	RED MT	101L - Gilbert Rd	GP	N/A	**14**	N/A	**1,000,000**
Construction	RED MT	101L - Gilbert Rd	GP	15-17	**19-21**	56,400,000	**69,000,000**
Santan							
Design	SANTAN	Lindsay Rd - Gilbert Rd	Path	12-13	**13-14**	500,000	500,000
South Mountain							
Design	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	18-19	**14-15**	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1	New Fwy.	18-19	**15-16**	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1	New Fwy.	19-21	**17-19**	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**14-15**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2	New Fwy.	19-20	**16-17**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2	New Fwy.	20-22	**18-20**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	12-13	12-13	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	13-14	13-14	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3	New Fwy.	14-16	**15-17**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**15-16**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	20-21	**17-18**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4	New Fwy.	21-23	**19-21**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**15-16**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	20-21	**17-18**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5	New Fwy.	21-23	**19-21**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	14-15	**13-14**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	12, 14-15	12, 14-15	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6	New Fwy.	15-17	15-17	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7	New Fwy.	14-15	**13-14**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7	New Fwy.	14-15	**14-15**	19,000,000	19,000,000
Construction	S MTN	Salt River Bridge, Segment 7	New Fwy.	15-17	**16-18**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	12-13	**13-14**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	14-15	**15-16**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	15-17	**17-19**	177,100,000	177,100,000
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**14-15**	10,500,000	10,500,000

Scenario #10a (S. Mtn. First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**14-15**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**16-17**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**18-20**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
Superstition							
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	**20-22**	26,500,000	26,500,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Scenario #10b (S. Mtn. First / I-17 & 303L Reduc. / 303L Swap / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual* 2006-07	*Actual* 2008	*Actual* 2009	*Actual* 2010	*Actual* 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	335,095	492,830	144,318	228,453	285,221	231,946	274,832	239,241	289,952	152,913	215,986	405,576	377,148	273,225	221,177	6,492,865
36	Right of Way	49,682	106,988	60,094	90,754	100,355	316,981	217,330	153,895	112,411	186,893	71,710	32,630	5,200	5,200	129,726	180,993	48,449	73,500	65,000	9,086	2,016,877
37	Design	77,694	48,583	36,242	55,473	47,960	59,268	48,034	52,788	43,218	25,213	22,498	19,528	36,891	33,793	34,328	32,799	22,611	34,716	32,662	28,713	793,011
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	740,080	772,756	363,301	396,582	509,827	338,854	339,890	294,332	342,145	330,167	443,178	490,236	499,164	384,887	302,976	9,674,306
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	943,728	976,651	589,305	634,684	853,899	561,412	548,193	510,662	578,139	576,373	698,904	749,966	764,109	649,382	537,690	14,379,532
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	(23,133)	(238,122)	(29,198)	(72,346)	(236,407)	5,964	2,313	52,563	158,523	13,330	19,032	(135,568)	(31,791)	(46,628)	(32,229)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	597,583	359,461	330,263	257,916	21,510	27,474	29,786	82,349	240,872	254,202	273,234	137,665	105,874	59,246	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	597,583	359,461	330,263	257,916	21,510	27,474	29,786	82,349	240,872	254,202	273,234	137,665	105,874	59,246	27,017	
46	Guideline	147,793	104,340	96,445	108,163	89,388	131,979	138,767	71,415	77,781	97,319	69,664	70,456	63,557	72,321	71,247	90,082	99,412	101,484	82,438	67,746	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	465,604	220,694	258,848	180,135	(75,809)	(42,191)	(40,669)	18,792	168,551	182,955	183,151	38,253	4,391	(23,192)	(40,729)	

Scenario #10b (S. Mtn. First / I-17 & 303L Reduc. / 303L Swap / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**Deleted**	86,400,000	**Deleted**
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	**58,800,000**
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Design	EST	I/17 - US60, Grand Ave		Widen	18-19	**Deleted**	6,500,000	**Deleted**
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**Deleted**	93,000,000	**Deleted**
Design	EST	I/17 - US60, Grand Ave		Widen	19-20	**Deleted**	6,500,000	**Deleted**
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**Deleted**	93,000,000	**Deleted**
Design	EST	I/17 - US60, Grand Ave		Widen	20-21	**Deleted**	5,600,000	**Deleted**
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**Deleted**	79,400,000	**Deleted**
Design	EST	I/10 - I/10 Reliever/MC85		New Fwy.	N/A	**19-20**	N/A	**10,230**
Right of Way	EST	I/10 - I/10 Reliever/MC85		New Fwy.	N/A	**21-22**	N/A	**51,150**
Construction	EST	I/10 - I/10 Reliever/MC85		New Fwy.	N/A	**23-24**	N/A	**143,220**
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Construction	PAP-MAR	Sky Harbor West Airport Access		TI	15-17	**16-18**	37,400,000	37,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**19**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**21**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**22-24**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**19**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**21**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**23-25**	114,000,000	114,000,000

Scenario #10b (S. Mtn. First / I-17 & 303L Reduc. / 303L Swap / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**19-20**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**21-22**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**24-26**	134,600,000	134,600,000
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000
Construction	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	15-17	**21-23**	68,900,000	68,900,000
Pima								
Design	PIMA	I/17 - SR51		GP	23-24	23-24	4,800,000	4,800,000
Construction	PIMA	I/17 - SR51		GP	24-26	24-26	68,700,000	68,700,000
Design	PIMA	SR51 - Princess Dr		GP	20-21	20-21	5,100,000	5,100,000
Construction	PIMA	SR51 - Princess		GP	22-23	22-23	72,800,000	72,800,000
Design	PIMA	Princess Dr - Shea Blvd		GP	20-21	20-21	3,700,000	3,700,000
Construction	PIMA	Princess Dr - Shea Blvd		GP	21-22	21-22	52,700,000	52,700,000
Design	PIMA	Shea Blvd - 202L, Red Mountain		GP	12-13	12-13	4,983,021	4,983,021
Construction	PIMA	Shea Blvd - 202L, Red Mountain		GP	14-16	14-16	91,000,000	91,000,000
Design	PIMA	Pima Road Extension, JPA		JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA		JPA	13-14	**14-15**	3,634,000	3,634,000
Price								
Design	PRICE	Baseline Rd - 202L, Santan		GP	22-23	22-23	3,500,000	3,500,000
Construction	PRICE	Baseline Rd - 202L, Santan		GP	23-25	23-25	49,900,000	49,900,000
Red Mountain								
Design	RED MT	101L - Gilbert Rd		GP	14-15	14-15	3,900,000	**4,600,000**
Right of Way	RED MT	101L - Gilbert Rd		GP	N/A	**14**	N/A	**1,000,000**
Construction	RED MT	101L - Gilbert Rd		GP	15-17	**19-21**	56,400,000	**69,000,000**
Santan								
Design	SANTAN	Lindsay Rd - Gilbert Rd		Path	12-13	**13-14**	500,000	500,000
South Mountain								
Design	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	18-19	**14-15**	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1		New Fwy.	18-19	**15-16**	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	19-21	**17-19**	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**14-15**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**16-17**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2		New Fwy.	20-22	**18-20**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	12-13	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	12-13	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	13-14	13-14	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	14-16	**15-17**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**15-16**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**17-18**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	21-23	**19-21**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**15-16**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**17-18**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	21-23	**19-21**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	14-15	**13-14**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	12, 14-15	12, 14-15	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	15-17	15-17	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7		New Fwy.	14-15	**13-14**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7		New Fwy.	14-15	**14-15**	19,000,000	19,000,000

Scenario #10b (S. Mtn. First / I-17 & 303L Reduc. / 303L Swap / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Construction	S MTN	Salt River Bridge, Segment 7	New Fwy.	15-17	**16-18**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	12-13	**13-14**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	14-15	**15-16**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8	New Fwy.	15-17	**17-19**	177,100,000	177,100,000
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**14-15**	10,500,000	10,500,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**14-15**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**16-17**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	20-22	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**18-20**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
Superstition							
Construction	SUPER	Crismon Rd - Meridian Rd	HOV/GP	17-19	**20-22**	26,500,000	26,500,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Scenario #12 (I-10 First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Cash Flow

MARICOPA COUNTY REGIONAL AREA ROAD FUND
REGULAR 15%, SPECIAL 15%, RARF CONST. ACCOUNT, AND BOND FUNDS
CASH FLOW FORECAST

Cash Flow Line Item		*Actual* 2006-07	*Actual* 2008	*Actual* 2009	*Actual* 2010	*Actual* 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total 2006-26
	REVENUES																					
1	Proceeds (HURF @ 5.75%, RARF @ 5.00%)	50,138	390,631	483,486	0	206,424	179,868	175,000	100,000	80,000	50,000	75,000	50,000	50,000	250,000	50,000	200,000	50,000	200,000	0	0	2,640,547
2	RARF DS Coverage ratio					2.46	1.68	1.51	1.48	1.46	1.46	1.44	1.45	1.44	1.44	1.41	1.48	1.41	1.43	1.49	1.65	
3	Transportation Excise Tax	531,519	214,958	187,279	183,196	174,168	181,184	193,400	205,000	216,600	228,100	239,700	251,300	264,200	275,300	287,600	300,400	313,000	326,000	341,200	207,900	5,122,004
4	Highway User Revenues	149,669	76,887	60,503	59,104	59,534	44,607	46,577	48,462	58,772	63,659	80,017	82,788	85,400	88,434	91,244	94,107	97,112	99,934	102,932	105,974	1,595,716
5	Federal Aid - GAN Debt Service	77,852	34,100	34,100	34,100	34,100	34,100	34,100	34,100	34,100	12,695	0	0	0	0	0	0	0	0	0	0	363,347
6	Federal Aid - CMAQ	0	3,973	3,693	2,886	1,564	9,500	17,536	9,900	10,400	10,700	11,100	11,500	11,900	12,300	12,800	13,200	13,700	14,100	14,600	15,200	200,552
7	ARRA	0	0	0	51,572	52,122	25,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129,000
8	Interest Income	24,758	19,352	13,892	8,506	4,082	4,217	14,383	5,133	0	0	0	0	0	0	0	0	0	0	0	0	94,323
9	Third Party Billing	21,221	3,434	14,634	34,365	13,376	12,412	0	9,909	26,801	0	0	0	0	0	0	0	0	0	0	0	136,152
10	Other Income	27,755	35,114	954	989	2,477	2,024	700	700	700	700	700	700	700	700	700	700	700	700	700	700	79,113
11	HELP Loans	30,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,500
12	GANS Loan	0	72,026	62,507	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134,533
13	Loan Principle and Interest (Locals COGS and MPO's)	0	0	0	0	0	148,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,200
14	37% Discretionary																					0
15	State Discretionary	145,187	91,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237,128
16	Federal Aid - Discretionary	0	87,464	71,703	77,748	230,943	279,176	305,594	199,789	196,893	170,492	209,983	215,089	225,397	236,117	247,266	261,863	270,923	283,465	296,508	310,100	4,176,513
17	MAG 37% Adjustment	117,350	68,618	84,571	44,639	0	0	(37,000)	(37,000)	(37,000)	111,000	0	0	0	0	0	0	0	0	0	0	315,178
18	STAN Appropriation	106,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106,387
19	STAN Interest	0	8,211	5,005	1,156	171	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,635
20	Miscellaneous Transfers	0	(8,309)	(5,005)	(1,156)	(171)	(92)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(14,733)
21	Subtotal Revenue	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	750,290	575,993	587,266	647,346	616,500	611,377	637,597	862,851	689,610	870,270	745,435	924,199	755,940	639,874	15,509,096
22	Less Discount factor	0	0	0	0	0	0	(11,762)	(15,887)	(24,928)	(29,854)	(49,124)	(60,871)	(74,372)	(126,189)	(99,907)	(152,335)	(131,038)	(191,880)	(153,186)	(134,413)	(1,255,745)
23	**Total Revenues**	1,282,336	1,098,400	1,017,322	497,105	778,791	920,595	738,528	560,107	562,338	617,492	567,376	550,506	563,224	736,662	589,703	717,935	614,397	732,318	602,754	505,461	14,253,351
	EXPENDITURES																					
24	***Debt Service and Fund Transfers***																					
25	RARF Bond Debt Service	81,450	29,778	30,976	71,214	88,263	103,589	119,695	130,378	140,213	148,172	158,263	165,689	174,020	183,558	194,630	194,630	212,477	219,477	219,479	207,000	2,872,951
26	HURF Bond Debt Service	104,526	57,849	57,684	70,881	48,798	28,323	29,689	33,572	31,922	31,367	29,822	35,387	34,955	45,136	44,431	54,096	40,314	38,609	38,150	24,934	880,445
27	GAN Bond Debt Service	24,415	37,412	37,414	40,413	79,553	48,630	47,635	55,197	57,719	37,866	0	0	0	0	0	0	0	0	0	0	466,255
28	Debt Service Reserve Interest	0	0	0	0	0	(1,246)	(2,241)	(2,459)	(2,582)	(2,693)	(2,821)	(3,016)	(3,135)	(3,430)	(3,586)	(3,731)	(3,792)	(3,871)	(3,864)	(3,479)	(45,947)
29	HELP Loan Repayment	41,197	66,205	37,672	3,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,666
30	Loan Debt Service (Local COGS and MPO's)	0	0	0	0	0	0	0	0	1,300	119,600	27,300	0	0	0	0	0	0	0	0	0	148,200
31	Regional Area Transit System	15,972	8,334	8,555	8,742	8,845	8,928	9,116	9,316	9,531	9,759	9,994	10,244	10,489	10,731	10,731	10,731	10,731	10,731	10,731	6,260	198,469
32	Other costs (I-17/Dixileta Drive repayment, $12,268k)	5,662	5,049	3,943	2,777	3,334	15,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,188
33	Subtotal Debt Service and Fund Transfers	273,222	204,627	176,244	197,620	228,793	203,648	203,895	226,004	238,102	344,072	222,558	208,303	216,330	235,994	246,206	255,726	259,730	264,945	264,495	234,714	4,705,227
34	***Construction Program and Related Expenses***																					
35	Construction	677,427	425,641	447,019	449,360	325,506	335,095	492,830	144,318	226,805	235,541	75,319	374,088	263,209	330,266	123,989	439,520	373,885	225,465	342,921	227,442	6,535,645
36	Right of Way	49,682	106,988	60,094	90,754	100,355	290,314	125,497	62,468	111,617	122,917	76,300	152,195	77,411	69,350	84,427	164,444	73,329	73,500	65,000	9,086	1,965,727
37	Design	77,694	48,583	36,242	55,473	47,960	53,028	36,200	38,463	47,498	28,278	28,016	30,762	37,241	39,866	44,576	32,799	22,611	34,716	32,662	28,713	801,381
38	Maintenance	11,267	11,121	14,491	12,189	12,049	12,499	12,100	12,300	12,500	12,500	12,700	12,900	13,000	13,200	13,200	13,400	13,600	13,800	14,000	14,000	256,816
39	Mitigation	23,737	16,625	1,697	21	1,923	12,523	2,463	0	0	0	0	0	0	0	0	0	0	0	0	30,000	88,988
40	Miscellaneous	6,223	2,195	3,639	5,574	4,402	3,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,748
41	Subtotal Construction Program and Related Expenses	846,030	611,153	563,182	613,371	492,195	707,174	669,089	257,549	398,420	399,236	192,335	569,945	390,861	452,682	266,192	650,163	483,425	347,481	454,583	309,241	9,674,306
42	**Total Expenditures**	1,119,252	815,780	739,425	810,990	720,988	910,821	872,984	483,553	636,522	743,308	414,892	778,248	607,191	688,676	512,398	905,889	743,155	612,426	719,078	543,955	14,379,532
43	CHANGE IN BALANCE	163,084	282,620	277,896	(313,885)	57,803	9,774	(134,455)	76,554	(74,184)	(125,816)	152,484	(227,743)	(43,967)	47,986	77,305	(187,954)	(128,757)	119,892	(116,324)	(38,494)	
44	BEGINNING BALANCE	153,192	316,276	598,896	876,793	562,907	620,717	630,490	496,035	572,589	498,405	372,589	525,072	297,330	253,363	301,349	378,654	190,701	61,943	181,835	65,511	
45	ENDING BALANCE	316,276	598,896	876,793	562,907	620,717	630,490	496,035	572,589	498,405	372,589	525,072	297,330	253,363	301,349	378,654	190,701	61,943	181,835	65,511	27,017	
46	Guideline	147,793	104,340	96,445	108,163	89,388	126,495	121,489	53,790	78,088	78,887	45,244	108,798	79,645	90,744	60,584	124,580	98,277	76,203	94,054	68,790	
47	Guideline Variance	168,484	494,556	780,348	454,744	531,329	503,995	374,545	518,799	420,317	293,702	479,828	188,532	173,718	210,606	318,070	66,121	(36,334)	105,632	(28,543)	(41,773)	

Scenario #12 (I-10 First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Agua Fria								
Construction	AGUA	Maryland Ave TI		New TI	N/A	**13-14**	N/A	**14,500,000**
Black Canyon								
Design	BL CA	Arizona Canal - SR101L		Widen	15-16	**20-21**	6,000,000	6,000,000
Construction	BL CA	Arizona Canal - SR 101L		Widen	16-18	**Deleted**	86,400,000	**Deleted**
Construction	BL CA	Peoria Ave - Greenway Rd (Drainage Improv)		Drain.	16-17	**22-23**	16,500,000	16,500,000
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	22-24	22-24	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	23-25	23-25	150,000,000	**78,800,000**
Construction	BL CA	Arizona Canal - McDowell Rd		Widen	24-26	24-26	130,000,000	**58,800,000**
Construction	BL CA	I/10 West - I/10 East		Widen	25-26	25-26	266,000,000	266,000,000
Estrella								
Design	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**14**	N/A	**290,000**
Construction	EST	US 60, Grand Ave TI Interim, Segment G Lndscp.		New Lndscp.	N/A	**15-16**	N/A	**2,900,000**
Construction	EST	Waddell Rd - Mountain View Rd, Seg F, Landscp.		Lndscp.	12-14	**13-15**	4,500,000	4,500,000
Construction	EST	Peoria Ave - Waddell Rd, Seg D, Landscape		Lndscp.	12-14	**13-15**	2,400,000	2,400,000
Design	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	12-13	**13-14**	300,000	300,000
Construction	EST	Glendale Ave - Peoria Ave, Seg B, Landscape		Lndscp.	13-15	**14-16**	3,500,000	3,500,000
Design	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	12-13	**13-14**	200,000	200,000
Construction	EST	Thomas Rd - Camelback Rd, Seg C, Landscape		Lndscp.	13-15	**14-16**	2,400,000	2,400,000
Construction	EST	I/17 - US60, Grand Ave		Widen	19-21	**21-23**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	20-22	**22-24**	93,000,000	93,000,000
Construction	EST	I/17 - US60, Grand Ave		Widen	21-23	**Deleted**	79,400,000	**Deleted**
Gateway								
Construction	GATEWAY	202L, Santan - Ellsworth Rd, Phase I		New Fwy.	12-14	12-14	148,200,000	**81,700,000**
Grand								
Construction	GRAND	303L -Estrella - 99th Ave, Phase 2		New TI	16-18	**17-19**	50,320,000	50,320,000
Papago								
Design	PAP-MAR	Perryville Rd		New TI	12-13	**Deleted**	1,300,000	**Deleted**
Construction	PAP-MAR	Perryville Rd		New TI	13-14	13-14	18,000,000	**23,300,000**
Design	PAP-MAR	101L, Agua Fria - I/17, Phase 1		Widen	17-18	17-18	4,800,000	4,800,000
Construction	PAP-MAR	101L, Agua Fria - I-17, Phase I		Widen	19-21	19-21	68,400,000	68,400,000
Design	PAP-MAR	101L, Agua Fria - I/17, Utility		Widen	12-13	**13-14**	1,000,000	1,000,000
Utility	PAP-MAR	101L, Agua Fria - I-17, Utility		Widen	13-15	**14-16**	13,400,000	13,400,000
Maricopa								
Design	PAP-MAR	32nd St - 202L, Santan Phase 1		Loc./Exp.	12-13	**13**	11,700,000	11,700,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 1		Loc./Exp.	12-13	**14**	54,692,779	54,692,779
Construction	PAP-MAR	32 St -202L, Santan, Ph 1		Loc./Exp.	13-15	**15-17**	167,400,000	167,400,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 2		Loc./Exp.	12-13	**15**	8,000,000	8,000,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 2		Loc./Exp.	12-13	**16**	24,900,000	24,900,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 2		Loc./Exp.	14-16	**17-19**	114,000,000	114,000,000
Design	PAP-MAR	32nd St - 202L, Santan Phase 3		Loc./Exp.	13-14	**14-15**	9,400,000	9,400,000
Right of Way	PAP-MAR	32nd St - 202L, Santan, Phase 3		Loc./Exp.	13-14	**16-17**	72,200,000	72,200,000
Construction	PAP-MAR	32 St -202L, Santan, Ph 3		Loc./Exp.	15-17	**18-20**	134,600,000	134,600,000

Scenario #12 (I-10 First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location			Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Design	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	14-15	**20-21**	4,800,000	4,800,000
Construction	PAP-MAR	202L, Santan - Riggs Rd		HOV/GP	15-17	**21-23**	68,900,000	68,900,000
Pima								
Design	PIMA	I/17 - SR51		GP	23-24	23-24	4,800,000	4,800,000
Construction	PIMA	I/17 - SR51		GP	24-26	24-26	68,700,000	68,700,000
Design	PIMA	SR51 - Princess Dr		GP	20-21	20-21	5,100,000	5,100,000
Construction	PIMA	SR51 - Princess		GP	22-23	22-23	72,800,000	72,800,000
Design	PIMA	Princess Dr - Shea Blvd		GP	20-21	20-21	3,700,000	3,700,000
Construction	PIMA	Princess Dr - Shea Blvd		GP	21-22	21-22	52,700,000	52,700,000
Design	PIMA	Shea Blvd - 202L, Red Mountain		GP	12-13	12-13	4,983,021	4,983,021
Construction	PIMA	Shea Blvd - 202L, Red Mountain		GP	14-16	14-16	91,000,000	91,000,000
Design	PIMA	Pima Road Extension, JPA		JPA	12-13	**13-14**	297,000	297,000
Construction	PIMA	Pima Rd Extension, JPA		JPA	13-14	**14-15**	3,634,000	3,634,000
Price								
Design	PRICE	Baseline Rd - 202L, Santan		GP	22-23	22-23	3,500,000	3,500,000
Construction	PRICE	Baseline Rd - 202L, Santan		GP	23-25	23-25	49,900,000	49,900,000
Red Mountain								
Design	RED MT	101L - Gilbert Rd		GP	14-15	14-15	3,900,000	**4,600,000**
Right of Way	RED MT	101L - Gilbert Rd		GP	N/A	**14**	N/A	**1,000,000**
Construction	RED MT	101L - Gilbert Rd		GP	15-17	15-17	56,400,000	**69,000,000**
Santan								
Design	SANTAN	Lindsay Rd - Gilbert Rd		Path	12-13	**13-14**	500,000	500,000
South Mountain								
Design	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	18-19	**18-19**	8,000,000	8,000,000
Right of Way	S MTN	I/10 Maricopa - 24th Street, Segment 1		New Fwy.	18-19	**19-20**	50,000,000	50,000,000
Construction	S MTN	I/10 Maricopa - 24th St, Segment 1		New Fwy.	19-21	**21-23**	114,500,000	114,500,000
Design	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**18-19**	9,300,000	9,300,000
Right of Way	S MTN	24th St - 17th Ave, Segment 2		New Fwy.	19-20	**20-21**	13,600,000	13,600,000
Construction	S MTN	24th St - 17th Ave - Segment 2		New Fwy.	20-22	**22-24**	133,000,000	133,000,000
Design	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	**14-15**	16,000,000	16,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	12-13	**14-15**	80,000,000	80,000,000
Right of Way	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	13-14	**15-16**	115,500,000	115,500,000
Construction	S MTN	17th Ave - 51st Ave, Segment 3		New Fwy.	14-16	**17-19**	227,700,000	227,700,000
Design	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**20-21**	4,500,000	4,500,000
Right of Way	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	20-21	**22-23**	23,000,000	23,000,000
Construction	S MTN	51st Ave - Elliot Rd, Segment 4		New Fwy.	21-23	**24-26**	64,800,000	64,800,000
Design	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**20-21**	6,700,000	6,700,000
Right of Way	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	20-21	**22-23**	39,200,000	39,200,000
Construction	S MTN	Elliot Rd - Baseline Rd, Segment 5		New Fwy.	21-23	**24-26**	95,700,000	95,700,000
Design	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	14-15	**17-18**	3,200,000	3,200,000
Right of Way	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	12, 14-15	12, **18-19**	30,564,999	30,564,999
Construction	S MTN	Baseline Rd - Salt River, Segment 6		New Fwy.	15-17	**19-21**	46,300,000	46,300,000
Design	S MTN	Salt River Bridge , Segment 7		New Fwy.	14-15	**16-17**	7,000,000	7,000,000
Right of Way	S MTN	Salt River Bridge, Segment 7		New Fwy.	14-15	**17-18**	19,000,000	19,000,000
Construction	S MTN	Salt River Bridge, Segment 7		New Fwy.	15-17	**19-21**	99,400,000	99,400,000
Design	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	12-13	**15-16**	12,400,000	12,400,000
Right of Way	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	14-15	**17-18**	131,000,000	131,000,000
Construction	S MTN	Salt River - Van Buren St, Segment 8		New Fwy.	15-17	**19-21**	177,100,000	177,100,000

Scenario #12 (I-10 First / I-17 & 303L Reduc. / 5-Yr. Prgm. Adj.): Project Changes

	Corr	Description/Location		Orig. Period	New Period	Orig. Cost (12-26)	New Cost (12-26)
Design	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**19-20**	10,500,000	10,500,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	14-15	**19-20**	64,700,000	64,700,000
Right of Way	S MTN	I/10 Papago/SR202L, System Interchange, Segment 9	New Fwy.	18-19	**21-23**	49,600,000	49,600,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	20-22	**24-26**	99,400,000	99,400,000
Construction	S MTN	I/10 Papago/SR202L System Interchange (Segment 9)	New Fwy.	19-21	**21-23**	49,800,000	49,800,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	20,000,000	20,000,000
Right of Way	S MTN	I/10 East - I/10 West	New Fwy.	12-13	12-13	60,000,000	60,000,000
SR-85							
Construction	SR85	SR 85 at Gila Bend, Phase II	Widen	18-20	**19-21**	37,000,000	37,000,000
Construction	SR85	Warner Sreet Bridge	Overpass	13-14	**14-15**	5,300,000	5,300,000

Agenda Item #7

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY… for your review

DATE:
May 1, 2012

SUBJECT:
Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

SUMMARY:
The new MAG 2012 Five Percent Plan for PM-10 is designed to meet the requirements of Section 189(d) of the Clean Air Act and address the technical approvability issues with the prior 2007 Five Percent Plan identified by the Environmental Protection Agency (EPA). The plan contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. While the 2007 Five Percent Plan was withdrawn to include new information, a wide range of control measures in that plan continue to be implemented to reduce PM-10 and are being resubmitted. The plan demonstrates that the measures will reduce emissions by five percent per year and demonstrates attainment of the PM-10 standard as expeditiously as practicable, which is 2012.

As required by the Clean Air Act, the 2012 Five Percent Plan for PM-10 also includes contingency measures, which achieve emissions reductions beyond those measures relied upon for the five percent reductions in emissions and attainment of the standard. The contingency measures were implemented early and include PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt.

The region will also need at least three years of clean data as measured by the air quality monitors for attainment of the PM-10 standard (2010, 2011, and 2012). A resolution to adopt the MAG 2012 Five Percent Plan for PM-10, executive summary, public hearing transcript, written comments from the Arizona Center for Law in the Public Interest, and response to comments are attached.

PUBLIC INPUT:
On April 12, 2012 a public hearing was conducted on the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The draft document was made available for public review on March 12, 2012. Two individuals testified at the hearing. One citizen expressed concern regarding the dust generated by vacant lots and agricultural activities. A Sierra Club representative commented that the Maricopa Association of Governments is not the right entity for leading the planning effort since MAG is really about transportation and expending federal highway dollars; when many exceptional events occur, they are no longer exceptional; the plan should include a demonstration of best available control measures; contingency measures should not be implemented early; and agricultural best management practices should be enforceable. Written comments were received from the Arizona Center for Law in the Public Interest, on behalf of the Sierra Club. On April 26, 2012, the MAG Air Quality Technical Advisory Committee considered the staff responses to the comments received.

PROS & CONS:

PROS: The MAG 2012 Five Percent Plan for PM-10 is designed to meet the requirements of Section 189(d) of the Clean Air Act. The measures in the plan reduce emissions by at least five percent in 2008-2012. The plan demonstrates attainment of the PM-10 standard in 2012. The MAG 2012 Five Percent Plan for PM-10 is a replacement for the prior 2007 Five Percent Plan, which was voluntarily withdrawn.

CONS: If the MAG 2012 Five Percent Plan for PM-10 is not submitted and determined to be complete by August 14, 2012, the first Clean Air Act sanction of tighter controls on major industries (two to one offsets) could be imposed. If a complete plan is not submitted by February 14, 2013, the second sanction involving the loss of the federal highways funds could be imposed. To avoid a Federal Implementation Plan, the Environmental Protection Agency must approve the MAG 2012 Five Percent Plan for PM-10 by February 14, 2013.

TECHNICAL & POLICY IMPLICATIONS:

TECHNICAL: The new MAG 2012 Five Percent Plan for PM-10 contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. While the 2007 Five Percent Plan was withdrawn, a wide range of control measures in that plan continue to be implemented to reduce PM-10 and are being resubmitted. The plan includes the Arizona Statutes, Maricopa County Rules, and a Maricopa County Ordinance for the resubmitted measures and a new high risk measure to be approved into the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area.

Emissions reduction credit is also taken for one new measure, the Dust Action General Permit, which was passed by the Arizona Legislature in April 2011. In accordance with A.R.S. § 49-457.05, this Dust Action General Permit identifies a series of Best Management Practices (BMPs) for specific dust generating operations. When ADEQ's Maricopa County Dust Control Forecast predicts that a day is at high risk for dust generation, those dust generating operations that are not already required to control dust through a permit issued by the Arizona Department of Environmental Quality or the Maricopa County Air Quality Department are expected to choose and implement at least one BMP to reduce or prevent PM-10 emissions. Implementation of a BMP is expected to occur as soon as practicable before and during the high risk event. Although the BMPs in the Dust Action General Permit only apply to those sources that do not already have a permit, even dust generating operations with an air quality permit are also expected to implement the dust controls in their permit at the same time.

According to state statute, BMPs identified in the Dust Action General Permit are expected to be employed absent the requirement to obtain an air quality permit. If the owner or operator of a dust-generating operation is found by ADEQ's Director to have failed to choose and implement an applicable BMP as soon as practicable before and during a day that is forecast to be at high risk of dust generation, then the owner or operator can be required to obtain an Authorization to Operate under the Dust Action General Permit.

A new 2008 periodic emissions inventory for PM-10 was prepared to serve as the foundation for the plan. According to the inventory, the primary sources of PM-10 are: Unpaved Road Fugitive Dust - 24 percent; Construction Activities (residential, commercial, road, and other earthmoving) - 17 percent; Paved Road Fugitive Dust - 14 percent; Windblown Dust - 10 percent; and Onroad Mobile Vehicle Exhaust, Tire Wear and Brake Wear - 7 percent. The remaining categories in the inventory individually contribute 6 percent or less to the total annual emissions.

The measures in the plan reduce PM-10 emissions between 2007 and 2012 by 16,089 tons, which represents a 27.2 percent reduction in total 2007 base case emissions. The annual five percent reduction requirements are met in 2008-2012 and there is a surplus margin of benefit in each year. The total surplus in 2012 is 1,284 tons. The surplus is needed to model attainment at all monitors in the PM-10 nonattainment area by December 31, 2012 under high wind conditions.

The 2012 Five Percent Plan includes a request to extend the attainment date from June 6, 2012 to December 31, 2012. The Dust Action General Permit was needed for the modeling attainment demonstration under high wind conditions and did not become effective until December 30, 2011. An extension of the attainment date from June 6, 2012 to December 31, 2012 is needed to allow for a full year of implementation of the Dust Action General Permit required to demonstrate attainment at all monitors in 2012.

The 2012 Five Percent Plan also includes contingency measures that were implemented early such as PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt. The total PM-10 emissions reduction in 2012 is 3,439 tons, which exceeds the contingency target of 3,218 tons by 221 tons.

For conformity analyses, the onroad mobile source emissions budget includes reentrained dust from travel on paved roads; vehicular exhaust, tire wear, and brake wear; travel on unpaved roads; and road construction. Collectively, these emissions comprise 54.9 metric tons per day in 2012 for the PM-10 nonattainment area.

POLICY: The MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency by the federal deadline of December 31, 2007. Collectively, the Five Percent Plan included fifty-three control measures from the State, Maricopa County, and local governments. The plan demonstrated that the measures would reduce PM-10 emissions by at least five percent per year and demonstrated attainment of the PM-10 standard in 2010. The region needed three years of clean data at the monitors in 2008, 2009 and 2010 in order for the region to be in attainment of the PM-10 standard in 2010. There have been no violations of the standard during stagnant conditions since the plan was submitted in 2007.

On September 9, 2010, EPA had published a notice of proposed partial approval and disapproval of the plan in the Federal Register. There were two major reasons for the proposed disapproval: the EPA nonconcurrence with four high wind exceptional events at the West 43rd Avenue monitor in 2008 resulted in a violation, which negated the attainment demonstration, and that the 2005 baseline emissions inventory was inaccurate since it overestimated construction and other emissions.

On January 25, 2011, the Arizona Department of Environmental Quality voluntarily withdrew the MAG 2007 Five Percent Plan for PM-10 to address technical approvability issues and include new information, such as the new EPA equation for paved road dust emissions. While the plan was withdrawn, the measures continue to be implemented to reduce PM-10.

On February 14, 2011, the Environmental Protection Agency published a final notice in the Federal Register to make a Finding of Failure to Submit as a result of the withdrawal of the 2007 Five Percent Plan for PM-10, which was effective on that date. This finding triggered the start-up of the EPA sanction and federal implementation plan processes. The submittal of a new plan and a completeness determination by EPA will stop the sanctions clocks. A plan approval action by EPA will stop the imposition of a federal plan.

Consequently, the MAG 2012 Five Percent Plan for PM-10 has been prepared to meet the requirements in Section 189(d) of the Clean Air Act and improve air quality in the Maricopa County nonattainment area. The plan is required to reduce PM-10 emissions by at least five percent per year until the standard is attained as measured by the monitors. The Clean Air Act specifies that the plan must be based upon the most recent emissions inventory for the area and also include a modeling demonstration of attainment. The 2012 Five Percent Plan is designed to be a replacement for the 2007 plan that was withdrawn.

ACTION NEEDED:

Recommend adoption of the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area.

PRIOR COMMITTEE ACTIONS:

MAG Air Quality Technical Advisory Committee: On April 26, 2012, the MAG Air Quality Technical Advisory Committee considered the comments from the public hearing in the Draft MAG 2012 Five Percent Plan for PM-10 and then recommended adoption of the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The motion passed with one abstention (shaded).

MEMBERS ATTENDING

Oddvar Tveit, Tempe, Chairman
Elizabeth Biggins-Ramer, Buckeye, Vice Chair
Sue McDermott for Kristen Sexton, Avondale
Jon Sherrill for Jim Weiss, Chandler
Jamie McCullough, El Mirage
Jessica Koberna for Kurt Sharp, Gilbert
Doug Kukino, Glendale
Cato Esquivel, Goodyear
* Scott Bouchie, Mesa
William Mattingly, Peoria
Philip McNeely, Phoenix
Tim Conner, Scottsdale
Antonio DeLaCruz, Surprise
Mark Hannah, Youngtown
Ramona Simpson, Queen Creek
* American Lung Association of Arizona
Wendy Crites for Kristin Watt, Salt River Project
* Brian O'Donnell, Southwest Gas Corporation
Mark Hajduk, Arizona Public Service Company
Gina Grey, Western States Petroleum Association
Dawn M. Coomer, Valley Metro/RPTA
* Dave Berry, Arizona Motor Transport Association
Jeannette Fish, Maricopa County Farm Bureau
Steve Trussell, Arizona Rock Products Association
Amy Bratt, Greater Phoenix Chamber of Commerce
Amanda McGennis, Associated General Contractors
Spencer Kamps, Homebuilders Association of Central Arizona
Mannie Carpenter, Valley Forward
Kai Umeda, University of Arizona Cooperative Extension
Beverly Chenausky, Arizona Department of Transportation
Eric Massey for Diane Arnst, Arizona Department of Environmental Quality
* Environmental Protection Agency
Jo Crumbaker, Maricopa County Air Quality Department
* Duane Yantorno, Arizona Department of Weights and Measures
* Ed Stillings, Federal Highway Administration
Mary Springer for Judi Nelson, Arizona State University
Christopher Horan, Salt River Pima-Maricopa Indian Community

* Those members neither present nor represented by proxy.
\# Participated by telephone conference call. + Participated by videoconference call.

CONTACT PERSON:

Lindy Bauer, Environmental Director, (602) 254-6300.

RESOLUTION TO ADOPT THE MAG 2012 FIVE PERCENT PLAN FOR PM-10
FOR THE MARICOPA COUNTY NONATTAINMENT AREA

WHEREAS, the Maricopa Association of Governments (MAG) is a Council of Governments composed of twenty-five cities and towns within Maricopa County and the contiguous urbanized area, the County of Maricopa, the Gila River Indian Community, the Salt River Pima-Maricopa Indian Community, Fort McDowell Yavapai Nation, Arizona Department of Transportation, and Citizens Transportation Oversight Committee; and

WHEREAS, the Governor of Arizona designated MAG as the regional air quality planning agency and metropolitan planning organization for transportation in Maricopa County; and

WHEREAS, the Maricopa County nonattainment area is classified as a Serious Area for PM-10 particulate matter according to the Clean Air Act; and

WHEREAS, the MAG 2007 Five Percent Plan for PM-10 was required by the Clean Air Act since the Maricopa County nonattainment area failed to attain the PM-10 standard by December 31, 2006; and

WHEREAS, the MAG 2007 Five Percent Plan for PM-10 was voluntarily withdrawn on January 25, 2011 to include new information, such as the new Environmental Protection Agency equation for paved road dust emissions; and

WHEREAS, the MAG 2012 Five Percent Plan for PM-10 is a replacement for the 2007 plan that was withdrawn; and

WHEREAS, the plan is required to reduce PM-10 emissions by at least five percent per year until the standard is met; and

WHEREAS, MAG has prepared the 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area; and

WHEREAS, A.R.S. 49-406 H. requires that the governing body of the metropolitan planning organization adopt the nonattainment area plan.

NOW THEREFORE, BE IT RESOLVED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS REGIONAL COUNCIL as follows:

SECTION 1. That the MAG Regional Council adopts the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area which contains control measures from the State and local governments.

SECTION 2. That the MAG Regional Council further recommends implementation of the appropriate measures by the MAG cities and towns, Maricopa County, and the State of Arizona and authorizes the submission of the plan to the Arizona Department of Environmental Quality and the U.S. Environmental Protection Agency.

PASSED AND ADOPTED BY THE REGIONAL COUNCIL OF THE MARICOPA ASSOCIATION OF GOVERNMENTS THIS TWENTY-THIRD DAY OF MAY 2012.

_____
Hugh Hallman, Chair
MAG Regional Council

ATTEST: _____
Dennis Smith
Executive Director

DRAFT

MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

EXECUTIVE SUMMARY

MARICOPA ASSOCIATION of GOVERNMENTS

MAG 2012 FIVE PERCENT PLAN FOR PM-10
EXECUTIVE SUMMARY

Within the Maricopa County nonattainment area, the National Ambient Air Quality Standard has not yet been attained for PM-10 particulate pollution. The area is classified as a Serious Area under the Clean Air Act. The Maricopa Association of Governments (MAG) was designated by the Governor of Arizona in 1978 and recertified by the Arizona Legislature in 1992 to serve as the Regional Air Quality Planning Agency to develop plans to address air pollution problems. The plans are prepared through a coordinated effort with the Arizona Department of Environmental Quality (ADEQ), Arizona Department of Transportation, and Maricopa County Air Quality Department (MCAQD).

To meet the requirements of Section 189(d) of the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency (EPA) by the federal deadline of December 31, 2007. Collectively, the Five Percent Plan included fifty-three control measures from the State, Maricopa County, and local governments. The plan demonstrated that the measures would reduce PM-10 emissions by at least five percent per year and demonstrated attainment of the PM-10 standard in 2010. The region needed three years of clean data at the monitors in 2008, 2009 and 2010 in order for the region to be in attainment of the PM-10 standard in 2010. There have been no violations of the standard during stagnant conditions since the plan was submitted in 2007.

On September 9, 2010, EPA had published a notice of proposed partial approval and disapproval of the plan in the Federal Register. There were two major reasons for the proposed disapproval: the EPA nonconcurrence with four high wind exceptional events at the West 43rd Avenue monitor in 2008 resulted in a violation, which negated the attainment demonstration, and that the 2005 baseline emissions inventory was inaccurate since it overestimated construction and other emissions.

On January 25, 2011, the Arizona Department of Environmental Quality voluntarily withdrew the MAG 2007 Five Percent Plan for PM-10 to address technical approvability issues and include new information, such as the new EPA equation for paved road dust emissions. While the plan was withdrawn, the measures continue to be implemented to reduce PM-10.

Consequently, the MAG 2012 Five Percent Plan for PM-10 has been prepared to meet the requirements in Section 189(d) of the Clean Air Act and improve air quality in the Maricopa County nonattainment area. The plan is required to reduce PM-10 emissions by at least five percent per year until the standard is attained as measured by the monitors. The Clean Air Act specifies that the plan must be based upon the most recent emissions inventory for the area and also include a modeling demonstration of attainment. The 2012 Five Percent Plan is designed to be a replacement for the 2007 plan that was withdrawn.

The formation of PM-10 particulate pollution is dependent upon several factors. Among

these factors are stagnant air masses, severe temperature inversions in the winter, high winds from thunderstorms and frontal systems, and fine, silty soils characteristic of desert locations. In the nonattainment area, high PM-10 concentrations generally occur in September through March, on days with stagnant or near-stagnant conditions. High PM-10 concentrations can also occur during thunderstorm outflows and frontal systems which create high winds that entrain soil particles from bare surfaces.

The trend in PM-10 levels for the Maricopa County nonattainment area is presented in Figure ES-1. The 24-hour PM-10 standard is 150 micrograms per cubic meter. In 2008, there were 11 exceedance days of the 24-hour standard. Most of these exceedances were exceptional events. However, EPA did not concur with four high wind exceptional event days at the West 43rd Avenue monitor in 2008, resulting in a violation of the PM-10 standard. All of the seven exceedance days in 2009 have been flagged as exceptional events and EPA concurrence is pending. In 2010, only one exceedance day of the PM-10 standard occurred, which did not constitute a violation of the standard. Figure ES-2 indicates the monitors where exceedances have occurred.

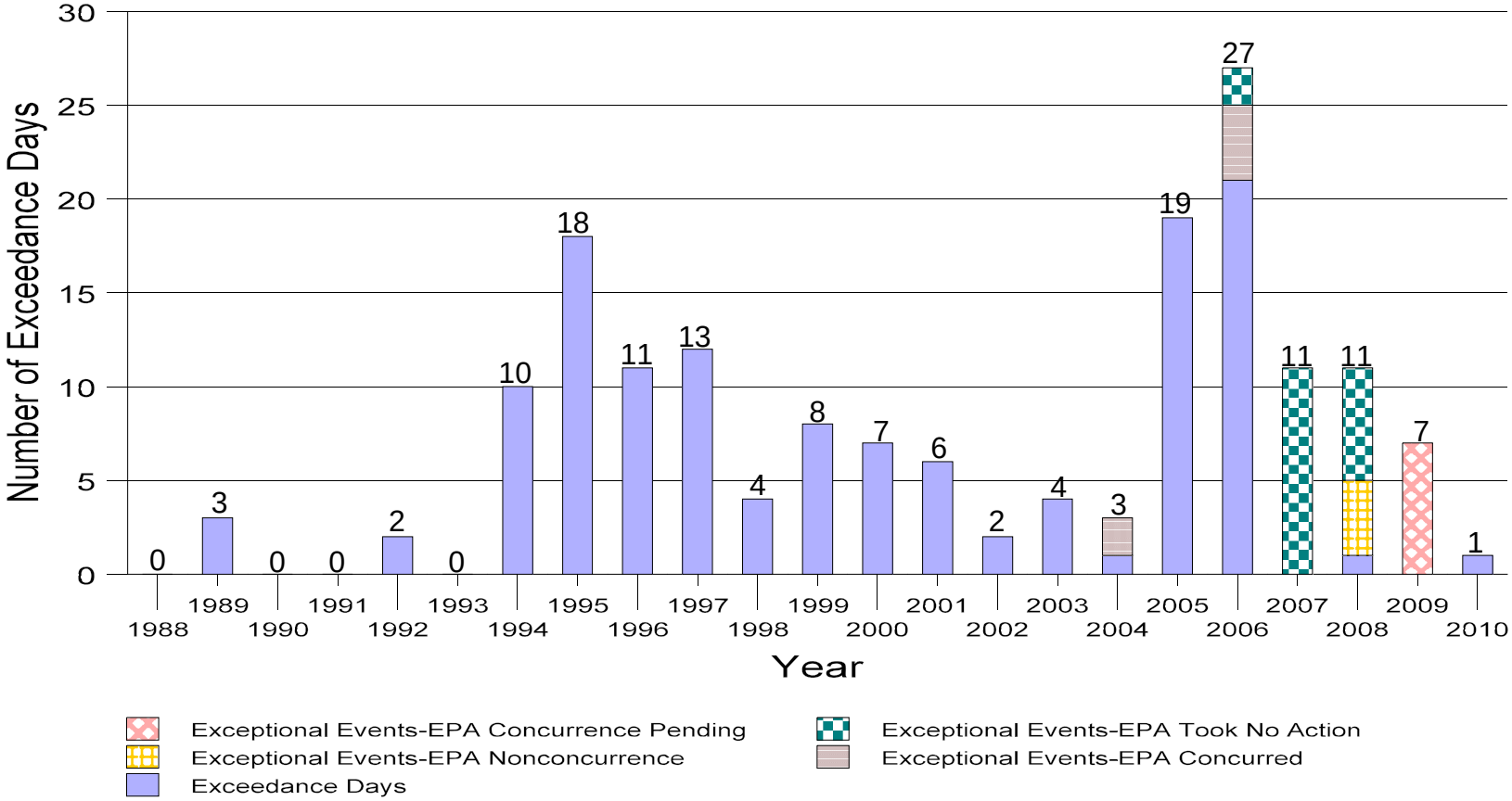
It is important to note that beginning in 2004, the Arizona Department of Environmental Quality began flagging exceptional events. These are uncontrollable natural events (e.g., high winds, wildfires) or human-caused events that are not expected to recur at a given location (e.g., fireworks). The data and a demonstration of the exceptional event are submitted to EPA for concurrence.

Based upon the Maricopa County Air Quality Department 2008 Periodic Emissions Inventory (PEI) for PM-10 for the Maricopa County Nonattainment Area, the primary sources of PM-10 are: Unpaved Road Fugitive Dust - 24 percent; Construction Activities (residential, commercial, road, and other earthmoving) - 17 percent; Paved Road Fugitive Dust - 14 percent; Windblown Dust - 10 percent; and Onroad Mobile Vehicle Exhaust, Tire Wear and Brake Wear - 7 percent. The remaining categories in the inventory individually contribute 6 percent or less to the total annual emissions. The sources are depicted in Figure ES-3.

The 2007 and 2009-2012 base case emissions were derived from the 2008 PEI emissions, using annual population and employment growth factors published in August 2011 by Marshall Vest of the Economic and Business Research Center at the University of Arizona. These projections are based on the 2010 U.S. Census and the latest economic forecasts for the Phoenix-Mesa metropolitan area. Since the economic outlook for Arizona remains extremely unstable, the actual population and employment levels in 2011 and 2012 may differ somewhat from the projections. However, the University of Arizona growth factors represent the most reliable data currently available.

The annual five percent reduction target was calculated by multiplying the total 2007 PM-10 emissions in Table ES-1 (59,218 tons) by five percent, which results in 2,961 tons. To meet the 189(d) requirement, the 2008 emissions must be at least 2,961 tons less than

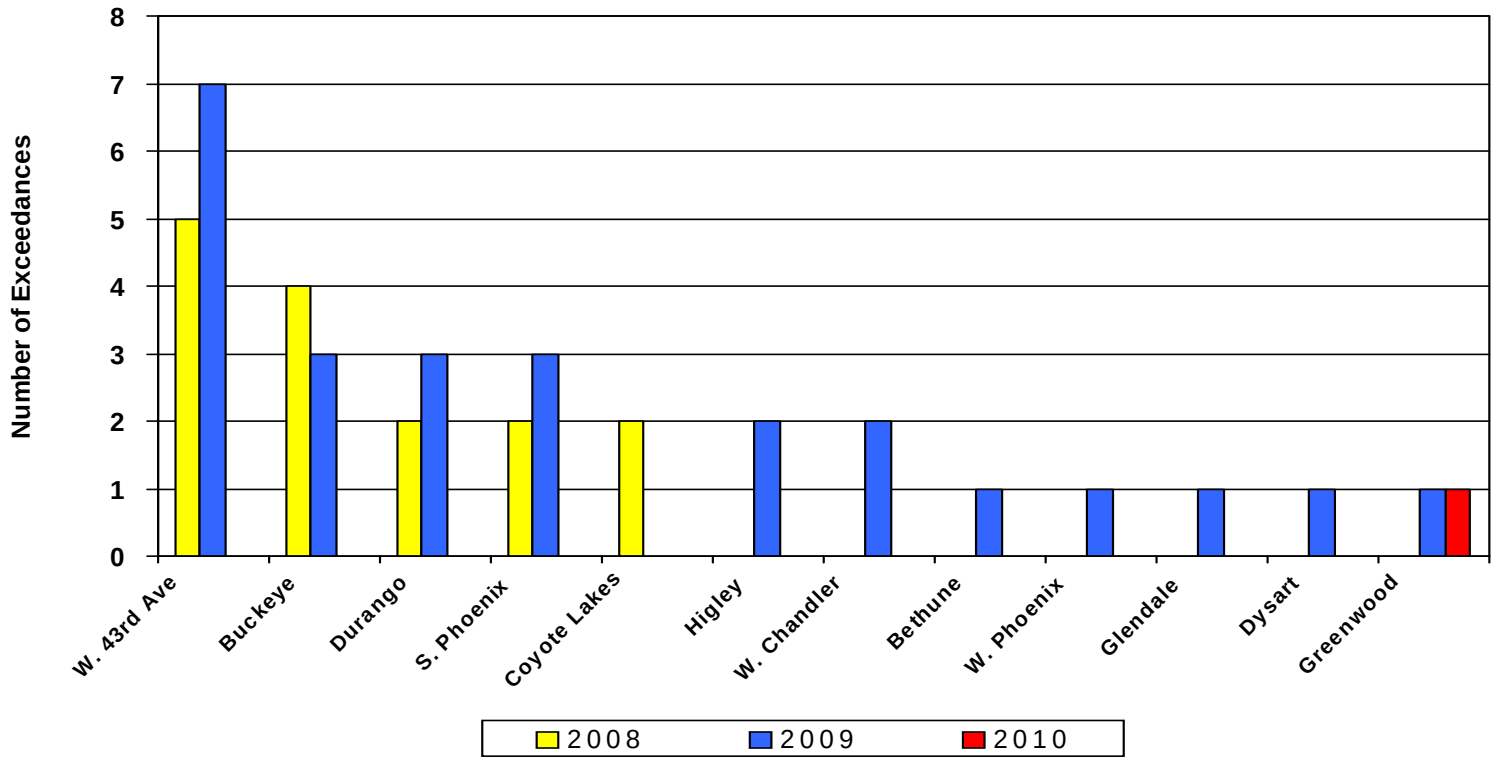
Figure ES-1
Number of 24-Hour PM-10 Exceedance Days



Notes: -The Arizona Department of Environmental Quality began flagging exceptional events in 2004.
-The chart includes exceedance days at the Buckeye monitor, which is located outside the PM-10 nonattainment area.
-On July 19, 2007, the exceedance at the Buckeye monitor was not associated with the exceptional event that also occurred on that day.

Sources: 1988 - 1997 - Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, February 2000.
1998 - 2010 - EPA Air Quality System.

Figure ES-2
Exceedances of the 24-Hour PM-10 Standard at Monitors in Maricopa County

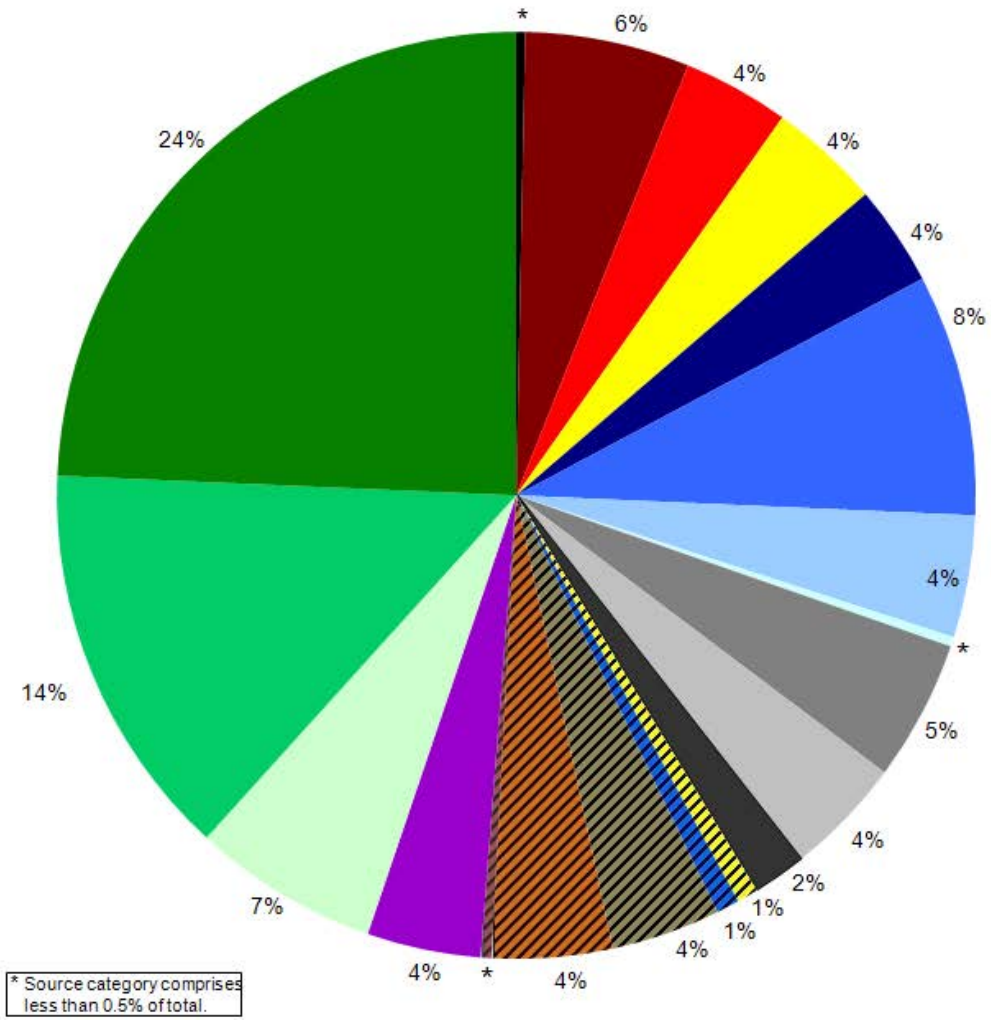


Notes:
1. Exceedances are based on data from the EPA Air Quality System (AQS).
2. All exceedances in 2008 except for one at the Durango Complex monitor have been flagged as exceptional events. EPA did not concur with four exceptional events at the West 43rd Avenue monitor and has not taken action on the remaining events.
3. All exceedances in 2009 have been flagged as exceptional events. EPA concurrence is pending.
4. The one exceedance in 2010 was not flagged as an exceptional event.
5. The chart includes exceedances from the Buckeye monitor, which is outside the PM-10 nonattainment area.

Figure ES-3

2008 PM-10 Emissions Inventory

PM-10 Nonattainment Area Total = 48,148 tons/yr



Source Categories	%
Major stationary point sources	(<0.5%)
All other industrial processes	(6%)
Fuel combustion and fires	(4%)
Agricultural tilling/harvesting	(4%)
Construction, residential	(4%)
Construction, commercial	(8%)
Construction, road	(4%)
Other earthmvg: trenching, weed control	(<0.5%)
Travel on unpaved parking lots	(5%)
Offroad recreational vehicles fugitive dust	(4%)
Leaf blowers fugitive dust	(2%)
Windblown: agricultural land	(1%)
Windblown: developing land	(1%)
Windblown: vacant land	(4%)
Windblown: open areas	(4%)
Windblown: S&G, landfills, test tracks	(<0.5%)
Nonroad mobile sources	(4%)
Vehicle exhaust, tire wear, brake wear	(7%)
Paved road fugitive dust, including trackout	(14%)
Unpaved road fugitive dust	(24%)

Table ES-1
2007-2012 Base Case PM-10 Emissions in the PM-10 Nonattainment Area

Source Category	2007	2008	2009	2010	2011	2012
	(tons/year)					
POINT	159	150	133	127	128	135
AREA						
Fuel combustion	1,276	1,301	1,307	1,311	1,316	1,328
Commercial cooking	974	993	998	1,001	1,005	1,014
Construction (includes windblown dust)	16,672	13,811	9,692	8,359	8,102	8,223
Tilling, harvesting and cotton ginning	936	893	893	893	893	893
Travel on unpaved farm roads	769	731	731	731	731	731
Livestock	261	261	261	261	261	261
Travel on unpaved parking lots	2,376	2,422	2,434	2,441	2,451	2,473
Offroad recreational vehicles	2,139	2,180	2,191	2,198	2,206	2,226
Leaf blowers	878	895	899	902	906	914
Windblown agriculture	448	448	448	448	448	448
Other windblown sources	5,430	5,430	5,430	5,430	5,430	5,430
Fires	497	497	497	497	497	497
Mining/quarrying (includes windblown dust)	752	721	661	641	643	667
Travel on industrial paved/unpaved roads	771	728	645	618	621	654
Other industrial sources	1,033	976	865	828	832	877
NONROAD						
Aircraft	194	184	152	142	143	146
Airport ground support equipment	29	27	23	21	20	20
Locomotives	34	34	34	34	34	34
Other nonroad equipment	1,710	1,683	1,661	1,641	1,595	1,513
ONROAD						
Exhaust	2,943	2,836	2,647	2,371	1,843	1,407
Tire wear	246	256	257	257	258	261
Brake wear	728	758	767	771	773	787
Paved roads	7,749	8,155	8,214	8,289	8,323	8,422
Unpaved roads and alleys	10,218	10,312	10,284	10,284	10,284	10,312
Totals	**59,218**	**56,681**	**52,123**	**50,497**	**49,743**	**49,673**

the 2007 base case emissions. Each year after 2008 imposes yet another 2,961 ton reduction requirement. Thus, the cumulative reduction requirements (relative to 2007 base case emissions) are at least 5,922 tons in 2009, 8,883 tons in 2010, 11,844 tons in 2011, and 14,805 tons in 2012.

The new MAG 2012 Five Percent Plan for PM-10 contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. While the 2007 Five Percent Plan was withdrawn, a wide range of control measures in that plan continue to be implemented to reduce PM-10 and are being resubmitted. Table ES-2 includes the Arizona Statutes, Maricopa County Rules, a Maricopa County Ordinance, and Appendices for the resubmitted measures and a new high risk measure to be approved into the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The 2012 Five Percent Plan also includes contingency measures that were implemented early such as PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt.

As described in Table ES-2, the Arizona Statutes, Maricopa County Rules, and Maricopa County Ordinance include requirements to reduce PM-10 emissions from a broad range of sources. The requirements apply to unpaved roads and shoulders, leaf blowers, unpaved parking lots, vacant lots, sweeping streets with certified sweepers, off-road vehicle use, open and recreational burning, residential woodburning, covered vehicle loads, dust generating operations, nonmetallic mineral processing, and other unpermitted sources.

To meet the annual five percent reduction requirement in Section 189(d) of the Clean Air Act, the MAG 2012 Five Percent Plan takes credit for increases in rule effectiveness for Maricopa County Rules 310 (Fugitive Dust from Dust-Generating Operations), 310.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust) and 316 (Nonmetallic Mineral Processing). The increases in rule effectiveness are attributable to strengthened enforcement and increased compliance with these rules. EPA has approved Rules 310 and 310.01 in 2010 and Rule 316 in 2009, as part of the State Implementation Plan. Compliance with these rules has increased every year since 2007.

These Maricopa County rules also reduce emissions from a wide variety of sources and apply to the Maricopa County area. Maricopa County Rule 310 (Fugitive Dust from Dust-Generating Operations) regulates fugitive dust emissions from sources and activities such as: land clearing, earthmoving, weed abatement, excavating, construction, demolition, bulk material handling, storage and transporting operations, outdoor equipment, motorized machinery, staging areas, parking areas, material storage areas, haul roads, disturbed surface areas, initial landscapes and trackout onto paved surfaces from these sources.

Maricopa County Rule 310.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust) regulates fugitive dust emissions from sources and activities such as: vehicle use in

Table ES-2
Arizona Statutes, Maricopa County Rules, Maricopa County Ordinance, and Appendices to be Approved into the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

Arizona Revised Statutes (A.R.S.)	Description	Effective Dates
A.R.S. § 9-500.04. Only A.3., A.5., A.6., A.7., A.8., A.9. and H.	Air quality control; definitions [city and town requirements in Area A regarding targeting unpaved roads and shoulders; leaf blower restrictions; restrictions related to parking, maneuvering, ingress and egress areas and vacant lots; requirement for certified street sweepers]	9/19/07
A.R.S. § 9-500.27.	Off-road vehicle ordinance; applicability; violation; classification	9/19/07
A.R.S. § 11-871. Only A., B. and D.4.	Emissions control; no burn; exemptions; penalty [no burn restriction for any HPA day, increased civil penalty]	9/19/07
A.R.S. § 11-877.	Air quality control measures [county leaf blower restrictions]	9/19/07
A.R.S. § 28-1098. Only A. and C.1.	Vehicle loads; restrictions; civil penalties [for safety or air pollution prevention purpose]	9/19/07
A.R.S. § 49-424. Only 11.	Duties of department [develop and disseminate air quality dust forecasts for the Maricopa County PM-10 nonattainment area]	7/20/11
A.R.S. § 49-457.01.	Leaf blower use restrictions and training; leaf blower equipment sellers; informational material; outreach; applicability	9/19/07
A.R.S. § 49-457.03.	Off-road vehicles; pollution advisory days; applicability; penalties	9/19/07
A.R.S. § 49-457.04.	Off-highway vehicle and all-terrain vehicle dealers; informational material; outreach; applicability	9/19/07
A.R.S. § 49-457.05. Only A., B., C., D. and I.	Dust action general permit; best management practices; applicability; definitions	7/20/11
A.R.S. § 49-474.01. Only A.4., A.5., A.6., A.7., A.8., A.11., B. and H.	Additional board duties in vehicle emissions control areas; definitions [county requirements for stabilization of targeted unpaved roads, alleys and shoulders; restrictions related to parking, maneuvering, ingress and egress areas and vacant lots; requirement for certified street sweepers]	9/19/07
A.R.S. § 49-474.05.	Dust control; training; site coordinators	9/19/07
A.R.S. § 49-474.06.	Dust control; subcontractor registration; fee	9/19/07
A.R.S. § 49-501. Only A.2., B.1., C., F. and G.	Unlawful open burning; exceptions; civil penalty; definitions [ban on outdoor fires from May 1 to September 30; deletion of recreational purpose exemption; no burn day restrictions; penalty provision]	9/19/07
A.R.S. § 49-541. Only 1.	Definitions [Area A]	8/9/01

Table ES-2 Continued

Maricopa County Air Quality Department Rules	Description	Effective Dates
310	Fugitive Dust from Dust-Generating Operations Adopted 1/27/10 and submitted to EPA 4/12/10 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
310.01	Fugitive Dust From Non-Traditional Sources of Fugitive Dust Adopted 1/27/10 and submitted to EPA 4/12/10 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
314	Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments Adopted 3/12/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 74 FR 57612; 11/9/09]	EPA approved effective 1/8/10
316	Nonmetallic Mineral Processing Adopted 3/12/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 74 FR 58553; 11/13/09]	EPA approved effective 1/8/10
Appendix C	Fugitive Dust Test Methods Adopted 3/26/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
Maricopa County Ordinance	Description	Effective Dates
P-26	Residential Woodburning Restriction Adopted 3/26/08 and submitted to EPA 7/10/08; [Notice of Final Rulemaking 74 FR 57612; 11/9/09]	EPA approved effective 1/8/10
Appendices	Description	Effective Dates
Appendix C, Exhibit 1	Arizona Revised Statutes Listed in Table 4-1	
Appendix C, Exhibit 2	Maricopa County Resolution to Evaluate Measures in the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area	11/16/11
Appendix C, Exhibit 3	Arizona Department of Environmental Quality Dust Action General Permit	12/30/11
Appendix C, Exhibit 4	Arizona Department of Environmental Quality Commitment to Revise the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area if Necessary for the Emerging and Voluntary Measure	

open areas and vacant lots, open areas, vacant lots, unpaved parking lots, unpaved roadways (including alleyways), easements, rights-of-way, access roads and trackout onto paved surfaces from these activities.

Maricopa County Rule 316 (Nonmetallic Mineral Processing) regulates fugitive dust and process dust emissions from sources and activities such as: mining, excavating, separating, combining, crushing and grinding any nonmetallic mineral, asphaltic concrete plants, raw material storage and distribution, concrete plants, bagging operations, open storage piles, material handling, haul roads, and trackout onto paved surfaces from these sources.

Emissions reduction credit is also taken for one new measure, the Dust Action General Permit, which was passed by the Arizona Legislature in April 2011. In accordance with A.R.S. § 49-457.05, this Dust Action General Permit identifies a series of Best Management Practices (BMPs) for specific dust generating operations. When ADEQ's Maricopa County Dust Control Forecast predicts that a day is at high risk for dust generation, those dust generating operations that are not already required to control dust through a permit issued by the Arizona Department of Environmental Quality or the Maricopa County Air Quality Department are expected to choose and implement at least one BMP to reduce or prevent PM-10 emissions. Implementation of a BMP is expected to occur as soon as practicable before and during the high risk event. Although the BMPs in the Dust Action General Permit only apply to those sources that do not already have a permit, even dust generating operations with an air quality permit are also expected to implement the dust controls in their permit at the same time.

According to state statute, BMPs identified in the Dust Action General Permit are expected to be employed absent the requirement to obtain an air quality permit. If the owner or operator of a dust-generating operation is found by ADEQ's Director to have failed to choose and implement an applicable BMP as soon as practicable before and during a day that is forecast to be at high risk of dust generation, then the owner or operator can be required to obtain an Authorization to Operate under the Dust Action General Permit.

This new measure is expected to raise rule effectiveness for Rule 310.01 by one percent during high wind hours and was fully implemented by January 1, 2012. Credit for this measure is allowed under the EPA guidance, *Incorporating Emerging and Voluntary Measures in a State Implementation Plan*. The measures used to demonstrate the annual five percent reductions are also necessary to model attainment of the PM-10 standard under high wind conditions at all monitors as expeditiously as practicable, which is 2012.

Table ES-3 shows the impact of the increases in rule effectiveness on PM-10 emissions in 2008 through 2012. This table also quantifies the annual five percent reductions for 2008 through 2012. The total reduction in PM-10 emissions between 2007 and 2012 with the increases in rule effectiveness is 16,089 tons, which represents a 27.2 percent reduction in total 2007 base case emissions.

Table ES-3
2008-2012 PM-10 Emissions with Increased Rule Effectiveness

Source Category	2008	2009	2010	2011	2012
	(tons/year)				
POINT	150	133	127	128	135
AREA					
Fuel combustion	1,301	1,307	1,311	1,316	1,328
Commercial cooking	993	998	1,001	1,005	1,014
Construction (includes windblown dust)	8,355	5,333	4,139	4,014	4,073
Tilling, harvesting and cotton ginning	893	893	893	893	893
Travel on unpaved farm roads	731	731	731	731	731
Livestock	261	261	261	261	261
Travel on unpaved parking lots	2,422	2,434	2,441	2,451	2,473
Offroad recreational vehicles	2,180	2,191	2,198	2,206	2,226
Leaf blowers	895	899	902	906	914
Windblown agriculture	448	448	448	448	448
Other windblown sources	3,938	3,788	3,788	3,788	3,639
Fires	497	497	497	497	497
Mining/quarrying (includes windblown dust)	476	401	355	356	369
Travel on industrial paved/unpaved roads	472	382	331	333	351
Other industrial sources	976	865	828	832	877
NONROAD					
Aircraft	184	152	142	143	146
Airport ground support equipment	27	23	21	20	20
Locomotives	34	34	34	34	34
Other nonroad equipment	1,683	1,661	1,641	1,595	1,513
ONROAD					
Exhaust	2,836	2,647	2,371	1,843	1,407
Tire wear	256	257	257	258	261
Brake wear	758	767	771	773	787
Paved roads	8,155	8,214	8,289	8,323	8,422
Unpaved roads and alleys	10,312	10,284	10,284	10,284	10,312
Totals	**49,231**	**45,600**	**44,062**	**43,438**	**43,130**
5% Reduction Targets (tons/year)	**2,961**	**5,922**	**8,883**	**11,844**	**14,805**
Actual Plan Reductions (tons/year)	**9,987**	**13,618**	**15,157**	**15,781**	**16,089**

Table ES-4 confirms that the annual five percent reduction requirements are met in 2008-2012 and there is a surplus margin of benefit in each year. The total surplus in 2012 is 1,284 tons. This surplus is needed to model attainment at all monitors in the PM-10 nonattainment area by December 31, 2012.

In accordance with the Clean Air Act, the MAG 2012 Five Percent Plan for PM-10 also includes contingency measures. The contingency measures are required to achieve emissions reductions beyond those measures relied upon to model attainment of the standard and demonstrate progress toward attainment (five percent reductions, reasonable further progress, and milestones). They are required to be undertaken without further action by the State or the EPA Administrator if the area fails to make reasonable further progress or meet the standard by the attainment date. EPA encourages early implementation of contingency measures to reduce emissions as expeditiously as practicable.

EPA guidance indicates that contingency measures should provide emissions reductions equivalent to one year of reasonable further progress. For the Five Percent Plan, one year of reasonable further progress is equivalent to a reduction in PM-10 emissions of 3,218 tons.

The contingency requirement is met in the MAG 2012 Five Percent Plan by quantifying projects that were completed in 2008-2011. A summary of the miles of roads, alleys and shoulders impacted by the paving and stabilization, speed limit reduction, and rubberized asphalt overlay projects that were quantified to meet the contingency requirement is presented in Table ES-5. These PM-10 reduction projects were implemented in the PM-10 nonattainment area by twenty-one cities and towns, Maricopa County, Pinal County, Arizona Department of Transportation and the Gila River Indian Community. All of the projects for which credit was taken were open to traffic by September 2011.

The emissions reductions for all measures quantified to meet the contingency requirement are summarized in Table ES-6. Table ES-6 includes the benefits of the PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt. The total PM-10 emissions reduction in 2012 is 3,439 tons, which exceeds the contingency target of 3,218 tons by 221 tons.

The total 2012 PM-10 emissions, with the air quality benefits from the wide variety of control measures and contingency projects applied, are 39,691 tons per year (see Table ES-7), which represents a reduction, relative to 2007 base case PM-10 emissions, of 19,527 tons or 33 percent. A pie chart of the 2012 nonattainment area PM-10 emissions with the five percent measures and contingency projects applied is shown in Figure ES-4.

For conformity analyses, the onroad mobile source emissions budget includes reentrained dust from travel on paved roads; vehicular exhaust, tire wear, and brake wear; travel on unpaved roads; and road construction. In 2012, the PM-10 emissions from these four source categories total 54.9 metric tons per day for the PM-10 nonattainment area. This represents the onroad mobile source emissions budget for conformity.

Table ES-4
PM-10 Emission Reductions and Five Percent Reduction Requirements

Year	5% Reduction Requirement (tons/year)	Total PM-10 Emission Reductions due to Increases in Rule Effectiveness (tons/year)	Excess Benefit = Total PM-10 Emission Reductions minus 5% Reduction Requirement (tons/year)	(%)
2008	2,961	9,987	7,026	237%
2009	5,922	13,618	7,696	130%
2010	8,883	15,157	6,274	71%
2011	11,844	15,781	3,937	33%
2012	14,805	16,089	1,284	9%

Table ES-5
Miles of Roads/Alleys/Shoulders in PM-10 Reduction Projects

Miles Impacted by Project Type	2008	2009	2010	2011	Total 2008-2011
Miles of dirt roads paved	41	18	8	16	83
Miles of dirt roads stabilized	39	39	36	31	145
Miles of dirt alleys paved	66	4	0	63	134
Miles of dirt alleys stabilized	164	106	124	106	501
Total miles of roads/alleys paved & stabilized	310	168	168	216	862
Miles of dirt shoulders paved	70	107	49	6	233
Miles of curb and gutter paved	19	0	0	0	19
Miles of dirt shoulders stabilized	235	236	236	200	906
Total miles of shoulders paved & stabilized	324	343	285	207	1,158
Miles of roads/alleys with lower speed limits	7	11	3	0	20
Miles of highway overlaid w/rubberized asphalt	13	0	0	0	13

Table ES-6
2008-2012 PM-10 Reductions to Meet Contingency Requirements

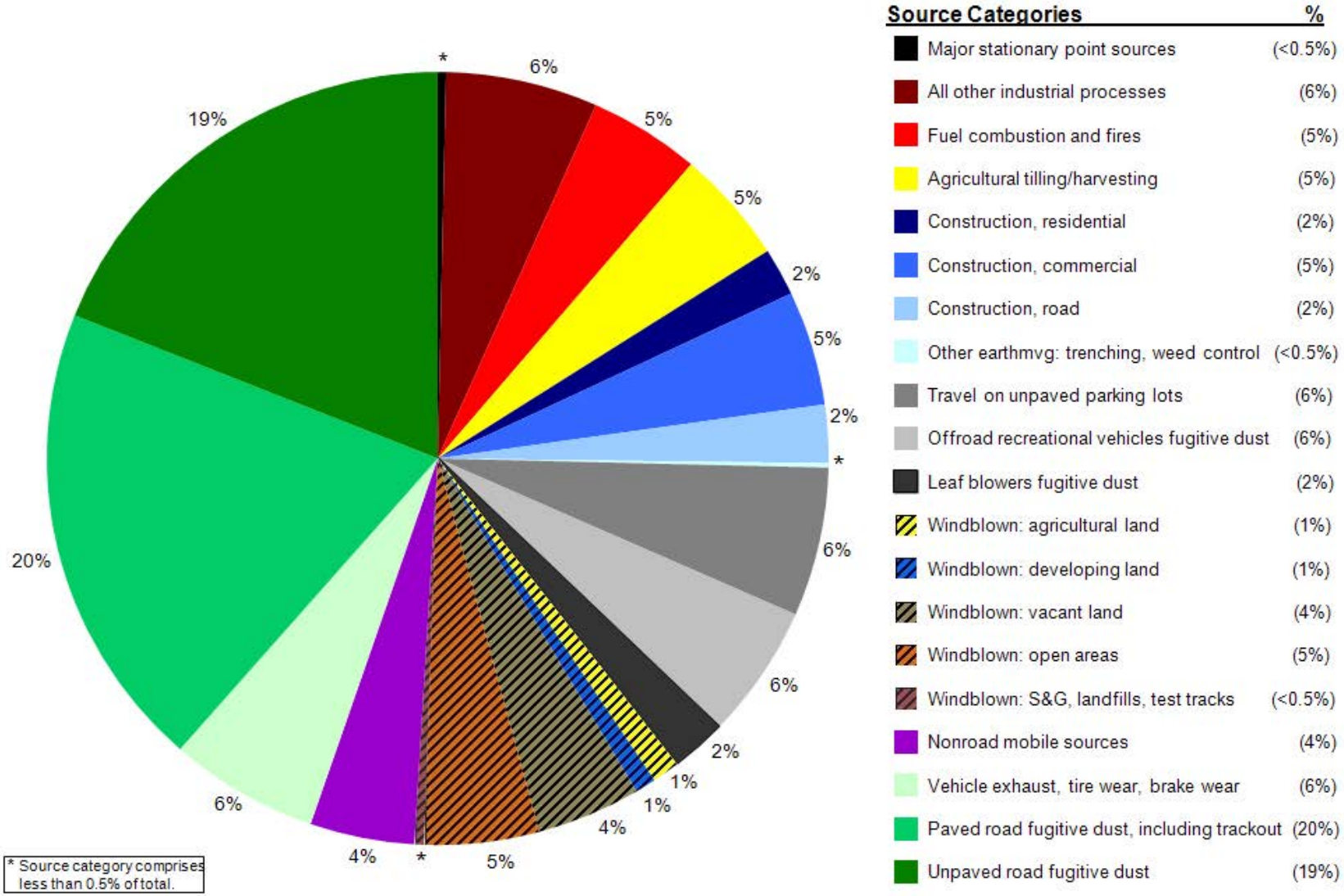
Completed Projects	Implementing Entities	2008	2009	2010	2011	2012
		(tons/year)				
Sweep streets with PM-10 certified sweepers Contracted sweeping of freeways, ramps and frontage roads - 100% compliant, effective 2/20/10 25 PM-10 certified sweepers purchased with CMAQ funds: 1/1/07-12/31/09	ADOT	0	0	294	342	344
	Cities, towns	59	116	153	154	155
	Total for Street Sweeping	**59**	**116**	**447**	**495**	**499**
Pave or stabilize existing public dirt roads and alleys Paving/stabilization projects completed in 2008-2011	Cities, towns, Maricopa and Pinal County, and Gila River Indian Community	461	1,352	2,124	2,662	2,625
	Total for Road/Alley Paving/Stabilization	**461**	**1,352**	**2,124**	**2,662**	**2,625**
Lower speed limits on dirt roads and alleys Speed limits lowered in 2008-2011	Cities, towns, Maricopa County	4	78	161	161	161
	Total for Lower Speed Limits	**4**	**78**	**161**	**161**	**161**
Pave or stabilize unpaved shoulders Paving/stabilization projects completed in 2008-2011	Cities, towns, Maricopa County	173	242	265	293	150
	Total for Shoulder Paving/Stabilizing	**173**	**242**	**265**	**293**	**150**
Repave or overlay paved roads with rubberized asphalt Rubberized asphalt overlays completed in 2008-2011	ADOT	0	3	3	3	3
	Total for Overlays	**0**	**3**	**3**	**3**	**3**
	Total for Completed Projects	**697**	**1,790**	**2,999**	**3,614**	**3,439**

Table ES-7
2008-2012 PM-10 Emissions with Five Percent Plan Measures and Contingency Projects

Source Category	2008	2009	2010	2011	2012
POINT	150	133	127	128	135
AREA					
Fuel combustion	1,301	1,307	1,311	1,316	1,328
Commercial cooking	993	998	1,001	1,005	1,014
Construction (includes windblown dust)	8,355	5,333	4,139	4,014	4,073
Tilling, harvesting and cotton ginning	893	893	893	893	893
Travel on unpaved farm roads	731	731	731	731	731
Livestock	261	261	261	261	261
Travel on unpaved parking lots	2,422	2,434	2,441	2,451	2,473
Offroad recreational vehicles	2,180	2,191	2,198	2,206	2,226
Leaf blowers	895	899	902	906	914
Windblown agriculture	448	448	448	448	448
Other windblown sources	3,938	3,788	3,788	3,788	3,639
Fires	497	497	497	497	497
Mining/quarrying (includes windblown dust)	476	401	355	356	369
Travel on industrial paved/unpaved roads	472	382	331	333	351
Other industrial sources	976	865	828	832	877
NONROAD					
Aircraft	184	152	142	143	146
Airport ground support equipment	27	23	21	20	20
Locomotives	34	34	34	34	34
Other nonroad equipment	1,683	1,661	1,641	1,595	1,513
ONROAD					
Exhaust	2,836	2,647	2,371	1,843	1,407
Tire wear	256	254	255	255	259
Brake wear	758	767	771	773	787
Paved roads	7,922	7,857	7,578	7,534	7,772
Unpaved roads and alleys	9,847	8,854	7,999	7,461	7,525
Totals	**48,534**	**43,810**	**41,062**	**39,823**	**39,691**
Total PM-10 Emissions Reduction 2007-2012:				**19,527 tons, 33.0%**	

Figure ES-4

2012 PM-10 Emissions Inventory with Five Percent Plan Measures and Contingency Projects
PM-10 Nonattainment Area Total = 39,691 tons/yr



MARICOPA ASSOCIATION OF GOVERNMENTS

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

PUBLIC HEARING ON THE MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

Phoenix, Arizona

April 12, 2012

5:30 p.m.

Prepared By:

Maricopa Association of Governments

(Original)

Prepared By:

KARA JOHNSON

Administrative Assistant

I N D E X

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Ms. Bahr	19

MARICOPA ASSOCIATION OF GOVERNMENTS

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

PUBLIC HEARING ON THE MAG 2012 FIVE PERCENT PLAN

FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

commenced at 5:30 p.m. on April, 12, 2012 at the offices of Maricopa Association of Governments, 302 North First Avenue, Suite 300, Phoenix, Arizona before KARA JOHNSON, Administrative Assistant for the Environmental Division of Maricopa Association of Governments.

* * * * *

A P P E A R A N C E S

Maricopa Association of Governments:

Lindy Bauer

Cathy Arthur

Arizona Department of Environmental Quality:

Eric Massey

Phoenix, Arizona

April 12, 2012

5:30 p.m.

PROCEEDINGS

MS. BAUER: I'd like to welcome everyone to our public hearing this evening. My name is Lindy Bauer and I am the Environmental Director with MAG.

This public hearing is being held jointly by the Arizona Department of Environmental Quality and the Maricopa Association of Governments to receive public comments on the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area.

MAG serves as a designated regional air quality planning agency. Our regional air quality plans are prepared through a coordinated effort with the Arizona Department of Environmental Quality, Maricopa County Air Quality Department, and the Arizona Department of Transportation.

Those driving to the meeting this evening, who parked in the garage, can have their tickets validated by the MAG staff. Kara has the validation for the parking tickets.

Now the public hearing this evening will begin with some introductory remarks by the Arizona Department of Environmental Quality and then there will be an overview presentation by the MAG staff. Following the presentation hearing participants are invited

to make comments for the public record. A record of the public hearing will be prepared. Written comments are also welcome at this public hearing.

For those participants wishing to speak, please fill out a form on the table and place it in the box.

If you need to leave early because of a bus schedule, please tell the MAG staff; and we will accommodate your request.

As you come up to the podium, please state some information for the record: your name and who you represent.

I would like to note that we have a timer to assist the public with their presentations. We have a three minute time limit. When two minutes have elapsed, the yellow light will come on, notifying the speaker that they have one minute to sum up. At the end of the three minute time period, the red light will come on.

And now I would like to introduce Eric Massey, the Director of the Air Quality Division at the Arizona Department of Environmental Quality.

MR. MASSEY: Thank you, Lindy.

I will try to keep my comments pretty brief, but what I wanted to acknowledge was that today's activities are really the culmination of the efforts of many people, through our stakeholder process that ran through the entirety of 2011. The process was co-chaired by Representative Amanda Reeve and also our Director Henry Darwin and included a number of efforts from the people that were

in our stakeholder group which also included Maricopa County, MAG, ADEQ staff. And so I wanted to take just a moment to appreciate the efforts of everybody that was involved because we were meeting sometimes twice a month trying to come up with a solution to the issues that EPA had addressed in-- or had raised in its proposed partial approval/partial disapproval back in 2010.

For me, the project is one of collaboration. It's a real source of pride for me because I think we've had a chance to work closely together as regulatory entities with our regulated community to find a solution to a problem that has persisted here in the valley for a very long time. And what I really liked about our major efforts, was the collaboration, specifically between ADEQ, MAG, Maricopa County, and even EPA as we work through some of the technical meetings that occurred behind the scenes, once every two weeks for nearly the entirety of 2011.

So there was a tremendous amount of technical effort that went into this, a tremendous amount of effort from all of the stakeholders involved and I think the result is a really effective piece of work. And the other piece that I really like, about what we've done in this plan, is that we built upon prior efforts. One of the things that was important to MAG, to Maricopa County, to ADEQ through this whole process is that we were, um, cognizant of the efforts that went into 2007's Senate Bill 1552 and that we didn't wipe out the benefits that really came from that rule.

Some of the things that we have seen is just a declining

concentration of PM-10 here in Phoenix. And while there has been some work to do and some issues like exceptional events that have clouded our issues; there has been a tremendous amount of effort that's been done throughout the entire air shed. And we really wanted to take a moment to acknowledge that and notice that we're building on past efforts.

We also have some really new innovative ideas that are part of this plan, some of the forecasting that DEQ is doing, the Dust Action General Permit which came as a collaborative effort from all of us here, to really find a solution to the ongoing issues of high wind days and its just a great opportunity to kind of meld the past effort with new thinking and its been a true honor for me to have been involved in this particular process. I'm looking forward to the continued process that goes through with EPA review and working together with our partners to make sure that this plan itself is one that can be approved.

With that Lindy, I just wanted to say thank you again and the opportunity to be here today. And this is really a tremendous effort and I think a day to be celebrated.

MS. BAUER: Thank you very much, Eric. We really appreciate all of your efforts as well as the efforts of all of the stakeholders that worked with us and Representative Reeve's leadership as well. So, thank you for your comments.

And now we will have an overview presentation on the MAG 2012 Five Percent Plan for PM-10.

Cathy Arthur with the Maricopa Association of Governments.

MS. ARTHUR: Thank you, Lindy and Eric.

This is an overview of this plan. And as those of you have read it know, that it would probably take quite some time to go into a lot of detail so we are just going to do the highlights and hopefully look at the very important points that this plan represents.

The new plan has a large number of control measures that address a variety of sources and many of these have already been implemented. In fact, most of them were in the 2007 Five Percent Plan- there were 53 measures in that plan. And although that plan was withdrawn in January of 2011 by the Arizona Department of Environmental Quality, most of those measures continue to be implemented. And we are resubmitting many of those measures in table 4-1 of the plan.

There is one new measure in this plan and it focuses on high wind events. And this is generally because our 2007 plan focused on stagnant conditions and PM-10 exceedances during those conditions. So we needed to look at additional measures that would help us control PM-10 levels during high wind events and this plan does that.

There have been no violations of the PM-10 standard under stagnant conditions since the 2007 plan was submitted in December 2007. So we feel the plan that we submitted was very

effective-- the control measures were very effective with respect to PM-10 violations under stagnant conditions, but we needed to do additional work under high wind events.

Just to show you some of the sources that we are controlling through the measures in this 2012 Five Percent Plan and you can see there is a large variety of sources, including: trackout, open burning, unpaved shoulders, unpaved roads, vacant lots, earthmoving activities, ATV's, weed abatement operations, leaf blowing activity, street sweeper requirements- PM-10 Certified Street Sweepers, and then nonmetallic mineral processing operations are all being controlled through the measures that are in the 2012 plan.

In terms of monitoring data and this is a fairly complicated bar graph here, we can focus on the fact that in 2010, there was only one exceedance of the PM-10 standard.

In 2011, however, you will see that there are 22; 21 of those, however, we feel are exceptional events. Now an exceptional event is an uncontrollable natural event, which here in the Phoenix area tends to be high wind caused. ADEQ is in the process of documenting 21 exceptional events that occurred in 2011 and in addition we will be working on seven of them that are in purple here for 2009.

Just to add a little information, in 2012 we have already had 3 days that would be considered in purple, so there is going to have to be documentation of those as well by DEQ. And MAG and the

Maricopa County Air Quality Department are working with DEQ to prepare that documentation which is very time consuming, but it is necessary for us to show attainment by 2012.

This is a pie chart that shows you the total emissions of PM-10 in the nonattainment area in 2008 and it totals about 50,000 tons per year. And the top two contributors in 2008, which is the first year of the plan, were unpaved roads at 24 percent and if you add up all the construction activities- 17 percent. So those are the top two in 2008. Keep those in mind because it changes by the time we get to the attainment year of 2012. Not only do the emissions go down, but the sources that contribute the most are different.

The 2012 Five Percent Plan relies on a number of measures in order to demonstrate five percent reductions and show reductions due to contingency measures. And the most important one in terms of the five percent reductions is increasing rule effectiveness for three rules that Maricopa County Air Quality Department has passed. And EPA has approved these rules.

Rule 310, which is for dust generating operations, such as earthmoving.

Rule 310.01, which is for sources of nontraditional dust, such as unpaved roads, vacant lots, and unpaved parking lots.

And Rule 316, which is nonmetallic mineral processing, which is for mining and sand and gravel operations.

So those just give you an idea of the types of sources

1 covered by these rules.

2 Compliance with these rules has increased every year
3 since 2007 and that is being measured by the county using a method
4 that was approved by EPA.

5 So we are using the increases in compliance with these
6 three rules to demonstrate five percent reductions per year. And
7 we are also using the new Dust Action General Permit, which I will
8 talk about in a minute.

9 The other bullet points here- PM-10 certified street
10 sweeping, road/alley/shoulder paving and stabilization projects,
11 speed limit reductions, and rubberized asphalt overlay- are all
12 measures that have been accomplished. In other words, they are
13 projects that have been completed and we are taking credit for
14 those as contingency measures.

15 Now I mentioned that we have one new measure called the
16 Dust Action General Permit that addresses high wind events. And
17 the Dust Action General Permit identifies best management practices
18 that need to be implemented before and during a high risk event.
19 And ADEQ is going to give the sources-- hopefully up to five days
20 of notice, when a high risk day is going to occur. And then they
21 are going to expect sources that are uncontrolled to implement at
22 least one best management practice before and during that event.
23 The Dust Action General Permit was passed by the legislature in
24 April 2011 and went into full effect on January 1, 2012.

25 Now I am just going to go over briefly what the

requirements are for a five percent plan under section 189(d) of the Clean Air Act. First of all it requires five percent reductions per year and in our case we are saying attainment is going to be achieved in 2012. So we need to show five percent per year in 2008, 2009, 2010, 2011, and 2012.

So if we look at the base year emissions in 2007, it is actually close to 60,000 tons and we multiply that by five percent; that tells us what amount of reduction, about three thousand tons that you need each year for five years. So our target is almost 15 thousand tons, over that period.

And you can see from the second bullet point, um, under total PM-10 emissions that we've been able to achieve by applying increased rule effectiveness for those three rules, plus the Dust Action General Permit. We have been able to achieve a reduction to 43,000 tons which means that we exceed the requirement by 1,284 tons or nine percent. So we have been able to meet that five percent reduction requirement.

Now I also mentioned that there are measures or projects that have been implemented which will achieve the requirement for contingency. And the Clean Air Act requires this as well and EPA gives you guidance as to how much you should achieve in the way of tonnage reduction and it's one year of reasonable further progress, which turns out to be about 3,000 tons. And so you need to show that you are reducing 3,000 tons more than you did in order to achieve the five percent reductions. There are quite a few

projects that have been implemented and I will show you a table in a minute and with all of those projects- which cover paving, stabilization, speed limit reduction, and street sweeping- we are able to achieve 3,400 tons. So, we are 220 tons higher than we need to be to achieve the contingency requirement.

Now this slide is just a summary of all of the projects that were completed-- and by the way these were all completed by September 2011 so that way we knew they had been open to traffic when we produced this plan. You can see just as a summary the total miles of roads and alleys that have been paved and stabilized over the period of 2008 to 2011 is 862 miles. So quite a lot of mileage has been stabilized and of course that significantly reduces PM-10. And then the other major statistic here is the total miles of shoulders paved and stabilized over that same period which is 1,158. So between the shoulder and the road paving/stabilization we are able to achieve a very large percentage of what we needed for the contingency requirement.

On the next page it shows you that the benefit we took for PM-10 Certified Street Sweeping-- there are really two aspects to this, ADOT signed a contract on February 20, 2010 which requires their contractor that's sweeping freeways, ramps and frontage roads in the PM-10 nonattainment area to use PM-10 Certified Street Sweepers. Most of the credit, is due to that, but in addition there were 27 PM-10 Certified Street Sweepers purchased between 2007 and 2009 with Congestion Mitigation Air Quality Improvement

funds through MAG. Those are being used to sweep arterials in the PM-10 nonattainment area.

Here is another pie chart. Now this one is for 2012 and so I told you to keep in mind what the top two contributors were in 2008 before a lot of these measures were taken into consideration and now we are showing really the highest contributor is paved roads and unpaved roads which was the highest before is now second at 19 percent. So the percentages change, but more importantly the total amount of tons contributed is down almost 10,000, between 2007 and 2012. This is how we are able to achieve the reductions that we need for both five percent per year and contingency.

So in conclusion the plan meets the five percent reduction requirement, the contingency requirement,-- something I haven't talked about is that EPA requires that your plan demonstrate through modeling that you can attain this standard in 2012 as well. There were two days that we modeled, both high PM-10 and high wind days and one was May 4, 2007 and the other June 6, 2007 and we were able to show attainment in 2012 for both of those scenarios using the same measures that we did to show the five percent reductions which is the increase in rule effectiveness and the Dust Action General Permit. So, those things allowed us show attainment through modeling as well as for five percent reductions.

Now this plan also includes a request to extend the attainment date for a little over six months- from June 6, 2012, which is the date that we were required to meet the five year

extension past 2006. And, we are asking for an extension because the Dust Action General Permit was not implemented fully until January 1, 2012 and we really need a whole year of benefit for the high wind days in order to be able to demonstrate attainment through modeling. So that's why we are asking for this six month extension.

Now in general the overall reduction as I mentioned is about 10,000 tons which is about a third, versus 2007 emissions. The reductions are due to the broad sweeping measures for many, many sources that were included in this plan. And then perhaps most importantly, the bottom line here, is that we need three years of clean data at the monitors, in 2010, 2011, and 2012 in order to demonstrate attainment in the real world as opposed to through this plan. Of course that is going to be dependent on exceptional event documentation that DEQ is preparing for 2011 and 2012. So EPA will need to concur with our documentation in order for us to be able to show attainment and we are hopeful that we will not have any more days in the remainder of 2012, but there are a few months left to go. If they are exceptional events that will put a burden again on us to document them. But we will be up to the task.

And then finally, this is the schedule that we are under for this plan. The plan was released for public review on March the 12th and today is the public hearing. In two weeks we will go to our Air Quality Technical Advisory Committee and ask for a recommendation and then we will be going to the Management

Committee the first part of May. Assuming those two committees recommend that this plan go forward then the Regional Council will adopt the plan on May 23rd. And then at that point we turn the plan over to DEQ and they submit the plan to EPA.

Two other important dates- August 14 th of 2012 is the deadline, about two and a half months we are going to give EPA to find this plan to be complete. If they do that by this date, then that will stop the sanction clocks that are currently ticking. The 18 month and 24 month sanction clocks are ticking right now because we withdrew the 2007 plan. And then February 14th of 2013 is the deadline for EPA to approve the plan, not just find it complete, but approve all the control measures and all the other things that were fulfilled in the plan in order to avoid EPA developing a federal implementation plan.

That completes my overview here and I think we will turn it over to Lindy to entertain comments.

MS. BAUER: Okay, Thank you very much, Cathy.

And now for the public comment period.

PUBLIC COMMENTS

MS. BAUER: At this time public comments are welcome at the hearing. Again, if you would like to speak, please fill out a speaker form and place it in the box and please adhere to the three minute time limit. We have the speaker forms over here, to

1 the left.

2 So first we have a speaker form from Jerry Greenberg.

3 MR. GREENBERG: Hello, my name is Jerry Greenberg and I

4 am from Chandler. Uh, first of all I would like to thank you for

5 all of your hard work, for those of you who have been involved in

6 this; I really appreciate it.

7 Let me tell you a little about who I am and why in the

8 world I am here in the middle of rush hour and everything else to

9 participate in this meeting.

10 I have kind of an interesting background. I am a

11 retired registered nurse. I am also a retired Air Force officer,

12 served our Country during two wars and believe it or not, I was a

13 first responder to both the Oklahoma City bombing and 9/11 at the

14 Pentagon. As a result, my lungs were affected because needless

15 to say none of us were protected against everything that was in

16 the air. Particularly pieces of building, fiberglass, you name

17 it, including literally glass fibers, um, that we all inhaled.

18 As a result, I am kind of sensitive and I had no idea when we

19 moved here from the east coast, in 2007, that perhaps my lung

20 sensitivity would come to the forefront. However, they did.

21 Last, we bought a foreclosed home, sunk a bit of our

22 life savings into it in Chandler in just a regular, nice

23 neighborhood. Last fall, after living in the home for about a

24 year and a half I was having trouble breathing. And so I went to

25 the doctor and they kind of checked me out, did a chest X-ray,

that kind of thing. On my way back I stopped at the intersection of McClintock and Chandler. It was a little bit windy and I looked over to my right, with, and its all vacant lots on the north of that area and dust was just blowing like crazy right into my neighborhood. And so I thought perhaps-- okay, you know where I am going from there. I looked around and I realized my neighborhood, Twelve Oaks, Stellar Air Park, that neighborhood there is surrounded-- I have one minute left? Okay-- is surrounded by dirt lots. So all of sudden I became interested.

I called the City; I called the County, and made formal complaints which were responded to. However, frankly if I kept my front yard like the people keep the vacant lots that they owned, I'd be fined, but yet people are allowed to dump construction dirt on these-- in these lots. They are allowed to dump construction debris. They are allowed to just let it be bare dirt, literally bare dirt, on these lots. And, so, what I would ask of you is why are we coddling these vacant lot owners? The economic recovery is well, you know, going on and another is would you please, maybe you are doing this and I don't know, monitor residential areas for PM-10 and then report on them.

Can I go over just a little bit?

I have a new grandson who was born at Chandler Regional Hospital. On the way, on Frye Road, which was at sunset, I saw huge tractor with a plow on the back of it, raising huge clouds of dust half mile from where my grandson is and I called the City

the next day. They said we'll talk to him about it and they said he'll stop doing that. Thank you, he should have known not to do that and he did it at sunset because he knew that all the offices were closed.

We can't have that kind of thing going on in a City. Chandler is over 250,000 residents and yet this is the kind of thing that is going on. I can't speak for Glendale, or any place else, I can only speak for the City I live in and so what I would ask you is, please continue to enforce this. Lobby the State, the Government, to really be stronger on this and help us to grow up as a community, so that it can be healthier.

Thank you.

MS. BAUER: Thank you very much. Next we have Sandy Bahr.

MS. BAHR: Hi, good afternoon. Thank you for the opportunity to speak this afternoon. My name is Sandy Bahr; I am the Chapter Director for the Sierra Club here in Arizona. And I live in Phoenix and in the PM-10 nonattainment area and have lived in the PM-10 nonattainment area ever since there has been one. Because as far as I know ever since there has been one we haven't met the standards.

Um, as you know PM-10 has been a serious problem in the Valley for more than two decades and there's a long history of inadequate plans being submitted and failure to reach attainment.

We have raised the issue before about the Maricopa

Association of Governments not being the right entity for leading this effort. No offense, I know people work really hard, but I think politically it is a difficult place to try to get clean air when the purpose of the organization is really about transportation and facilitating expenditure of federal highway dollars.

A couple of things, specific to-- so that is kind of an overarching comment and I don't expect that MAG will address that one, but I just wanted to make sure that you were aware that we continue to have that concern.

One of the issues that I wanted to raise this afternoon is this issue of three years of clean data and the fact that you are looking at seeking to identify 21 of the 22 exceedances for 2011 as exceptional events. Uh, I think by anyone's common sense definition, when you start having that many exceptional events they fail to be exceptional, and we strongly question that. We have, I know-- probably used most of my time so I'll try to be quick. We are submitting some written comments.

The other thing is this plan is supposed to demonstrate best available control measures and maximum measures as well and we didn't see where you had demonstrated that in the plan. And, so, I would love for someone to point that out, but I believe you have to demonstrate in the plan as well.

One thing we have raised before, and it just doesn't make a whole lot of sense-- from just when you think about a

contingency measure? How can it be a contingency measure if its already implemented. Contingency measures are supposed to be for, you know, if something else doesn't work, you have a contingency. And what has happened with a lot of previous measures is, we are implementing a contingency and then there is no contingency, right, there is nothing left. And so, we would like to have you take a look at that as well.

Finally, we just continue to have concerns about enforcement and I think the gentleman before me raised some of the issues with that and I know that there have been changes relative to the BMP's for agriculture, but I still think there are good questions about whether those are truly, uh, enforceable and would like to see more information in the plan on that as well. And there are some other issues, but I am out of time.

I appreciate the opportunity. Thank you.

MS. BAUER: Thank you very much.

Do we have any other forms for people wishing to speak?

Okay, thank you very much. The Maricopa Association of Governments appreciates your interest in regional air quality and your comments. Your comments will be presented to the MAG Air Quality Technical Advisory Committee at the April 26, 2012 meeting at 1:30 p.m. A response to comments will be prepared and included in the plan documents.

Again, we thank you for your participation this evening.

(The proceedings concluded at approximately 6:05 p.m.)

STATE OF ARIZONA

COUNTY OF MARICOPA

I HEREBY CERTIFY that the foregoing was taken before me, KARA JOHNSON; that I was present at the public hearing and that the public hearing was video taped, and thereafter reduced to writing by me based upon my presence at the hearing and the video tape; and that the foregoing 22 pages contain a full, true, and correct transcript of said record, all done to the best of my skill and ability.

WITNESS my hand this 20th day of April,2012.

Kara Johnson

KARA JOHNSON

Administrative Assistant

MAG Environmental Division

ACLPI ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST
dedicated to ensuring government accountability and protecting the legal rights of Arizonans

April 12, 2012

VIA FACSIMILE (602) 254-6490
Lindy Bauer
Maricopa Association of Governments
302 N. 1st Avenue, Suite 300
Phoenix, AZ 85003

RE: Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

Dear Ms. Bauer:

Thank you for the opportunity to comment on the draft State Implementation Plan revision ("5% Plan") referenced above. We provide the following comments.

Particulate pollution has been a serious problem in the Valley for the past two decades. Since they were first adopted, the Phoenix metropolitan area has never attained the PM-10 standards and has a long history of proposing inadequate plans to address the problem. Now, having once again failed to meet its attainment deadline, the state is required under Section 189(d) of the Clean Air Act (CAA) to submit "plan revisions which provide for attainment of the PM-10 air quality standard and, from the date of such submission until attainment, for an annual reduction in PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for such area." 42 U.S.C. §7513(a)(d). In addition to the attainment demonstration and 5 percent requirements, the plans under section 189(d) must address all applicable requirements of the CAA. With respect to the draft plan, we raise the following concerns:

1. BACM and MSM.

As a serious nonattainment area for PM10, the Phoenix area plan must include BACM for all significant sources of PM10 and PM10 precursors. BACM, best available control measures, are the maximum degree of emissions reductions possible after considering technical and economic feasibility and environmental impacts of the control. These must be implemented independent of attainment requirements. Also, because Phoenix obtained a five year extension of its attainment deadline, its plan must include MSM (most stringent measures). In the General Preamble (59 FR 41998), EPA sets forth a multi-step process for identifying BACM/BACT for serious areas. The proposed 5% plan does not include a BACM or MSM demonstration that follows this process,

3205 E. SPEEDWAY BLVD. TUCSON, AZ 85716 PH 520-326-1796 FX 520-326-2827 WB WWW.ACLPI.ORG

therefore, it is initially difficult to even determine whether the plan satisfies the BACM/MSM requirement. The state cannot rely upon the BACM/MSM demonstrations in the 1999 Serious Area SIP, as that demonstration was prepared more than ten years ago, and, and as the EPA recognized in its proposed disapproval of the 2007 Draft 5% Plan, control measures that previously satisfied the BACM requirement, may no longer represent the "best available" control measure. *See*, 75 FR 54806, 54812. Therefore, an updated BACM/MSM analysis should be included in the 5% plan.

2. 2008 PM-10 Emissions Inventory.

In its proposed disapproval of the 2007 Draft 5% Plan, EPA found that the 2005 emissions inventory relied upon by the state to be insufficiently accurate because it overestimated the baseline emissions for construction and other sources. See 75 FR 54808. In the current plan, MAG is relying upon a 2008 periodic emissions inventory which, like the 2005 inventory, was prepared by Maricopa County Air Quality Department. At first glance, this more recent inventory appears to address EPA's concerns as it shows emissions from residential construction to be a smaller percentage of the overall emissions. However, a comparison of the two inventories (and the two draft plans) reveals a discrepancy that MAG does not appear to either acknowledge or explain, and that is drastic reduction in the estimated emissions overall. In the 2005 inventory, total PM-10 emissions in the nonattainment area were calculated to be 84,753 tons per year. The 2008 inventory puts that total at 48,148 tons per year—a reduction of more than 40% in just three years. It seems highly unlikely that the area achieved such a reduction in emissions by the implementation of control measures. As noted above, we did not see anywhere in the plan where this huge disparity in the data was acknowledged or explained. This oversight should be addressed. Also, because the inventory is the principal basis for calculating the 5% annual reduction required under the CAA, it is important to the public health that the amount of current emissions are not understated.

3. Reliance upon EPA's Concurrence Regarding Exceedances Claimed As Exceptional Events

We are concerned that the attainment demonstration in the 2012 5% Plan, like the 2007 5% Plan, relies upon the concurrence by EPA regarding exceptional events. As the plan acknowledges there were 7 exceedances in 2009 alone that must be treated as exceptional events in order for the area to meet the extended attainment deadline. Further, although the 2011 data has not yet been finalized, the initial data indicates that there once again a significant number of exceedances over multiple days and multiple monitors. The likelihood of eliminating all of these exceedances as exceptional events would appear both remote and contrary to the public interest. Therefore, we believe that a plan that proposes to achieve "attainment" simply by whitewashing over severely unhealthful conditions is both irresponsible and contrary to the public interest.

4. General Permit BMPs and Agricultural Permit BMPs

While we generally support the adoption of the general permit requirement for all dust generating activities and the increased stringency of the agricultural permit requirements, the plan does not adequately demonstrate that either of these control measures satisfy the BACM and MSM requirement. The plan did not mention the concerns raised by EPA in its proposed rulemaking in

2010 regarding the agricultural BMPs or indicate whether and how those concerns had been addressed.

5. Enforceability of Control Measures

We have concerns about the enforceability of control measures in the plan. As you know, citizen enforcement is encouraged under the Clean Air Act. However, in recent years, when citizens have brought actions to enforce control measures that the state is responsible for implementing, the state has invoked the Eleventh Amendment in an effort to avoid the enforcement of its obligation to comply with the SIP. *See Paisley v. Brewer*, CV 2:10-cv-01253-DGC (D.Ariz.) and *Sweat v. Hull*, 200 F. Supp. 2d. 1162 (D. Ariz. 2001). Although the defense did not preclude injunctive relief in either case, it unnecessarily protracted the litigation and demonstrated a lack of commitment on the part of the state to fulfilling its obligations under the SIP. Therefore, we believe that where the state or one of its subdivisions (i.e. a county) assumes responsibility for the implementation of specific control measures, that commitment should include an unequivocal consent to federal jurisdiction if enforcement is sought under the citizen suit provision. This consent will ensure that the measures are fully enforceable by both EPA and affected citizens, as the enforcement scheme adopted by the Act contemplates.

6. Technical issues and concerns

Attached to this letter is a technical review of the plan which raises questions and concerns regarding the modeling included in the plan and supporting documents.

These comments are submitted on behalf of the Sierra Club-Grand Canyon Chapter.

Sincerely,

Joy E. Herr-Cardillo

Technical Review of **MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA**

On March 12, 2012, The Maricopa Association of Governments (MAG) published a new 2012 Draft Five Percent Plan for 24-hour PM10 for public review. This paper provides comments based on the technical work comprising the draft plan.

GENERAL

Editorial Comments:

- The report provides very limited examples and few calculations to support the reported values.
- The report is also lacking equations to support reported values.
- The reported values are in a variety of units, which makes comparisons difficult.

MODELING

Model Selection:

- The air quality modeling demonstration for the 24-hour PM10 standard is based on U.S. EPA's rollback modeling method. Federal regulations state that "all applications of air quality modeling involved in this subpart shall be based on the applicable models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models). " 40 CFR part § 51.160(f).
- Appendix W section 5.2.2.2 PM10; "Refined models such as those discussed in subsection 4.2.2 are recommended for PM–10."
- Appendix W Section 4.2.2(b) Refined Analytical Techniques; "For a wide range of regulatory applications in all types of terrain, the recommended model is AERMOD."
- Appendix W Section 5.2.2.2(e): "Due to the difficult nature of characterizing and modeling fugitive dust and fugitive emissions, it is recommended that the proposed procedure be cleared by the Regional Office for each specific situation before the modeling exercise is begun."
- The rollback approach is not one of U. S. EPA's preferred methods for demonstrating attainment of the PM10 NAAQS

Weighted Rollback:

- The report does not present any of the rollback equations used and so it is unclear which rollback method was used.
- If the analysis is based on the modified rollback method, was a spatial distribution analysis performed?
- In appendices Volume 2 p. V - 5, under the Weighted Rollback section, the report states: "The reduction factor is calculated on the basis of the distance between each source and the impacted monitoring site."
    - Please provide the equation(s) used for the weighted rollback analysis. Based on the statement above, it is not clear how MAG has calculated the emissions weighting. The equations[1] used in EPA's proportional or modified rollback method do not involve any interactions among individual sources, only each individual source and a monitor.
- Rollback typically requires speciated profiles of soil dust from ambient measurements and chemical analysis for source apportionment calculations, using CMB (Chemical Mass Balance). Did MAG use any source profiles to support the modeling analysis? Please refer to: "Guidelines to PM10 Sampling and Analysis Applicable to Receptor Modeling"
- MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA. P. 6-44: "The attainment modeling for the nonattainment area demonstrates that the 24-hour PM-10 standard will be met by a relatively narrow margin in 2012 (i.e., 153.8 ug/m3 at the West 43rd Avenue monitor)." Was a sensitivity analysis performed to evaluate the degree of confidence in their results? A sensitivity analysis may reveal conditions where the modeling fails or requires improvement, so as to ensure the NAAQS are attained according to the plan.
- Rollback only works if the monitor is at the point of highest impact. Since air pollution standards must be attained within the entire planning area and not simply at the monitors, how confident is MAG in their choice to use a single point to represent the entire Maricopa County nonattainment area? Dispersion modeling typically provides for a more credible product, since they more realistically account for spatial and temporal patterns.
- Is MAG confident that the receptor location in the high-wind micro inventory domain is representative of worst case conditions? Are there any locations within the high-wind domain where predicted concentrations can be potentially higher than the monitor site?
- According to the charts in Fig. V4. Appendix 2. ~98.6% of the total exceeding PM10 concentration originates from sources within 2km of the monitor. Under the current modeling scenario, sand & gravel sources are by far the greatest contributor to PM10. Yet, the source sand and gravel source category is also the source category with the

[1] Rollback Modeling: Basic and Modified. Air Waste and Management Association 25:9 (September 1975)

greatest estimated improvement in Rule Effectiveness. While nearly all of the vacant lots, agricultural sources and open areas are beyond 2km from the W43rd monitor and contribute less than to 1.4% of their total potential emissions to the monitor.

- So, the weighted emissions scenario for this model design favors an increase in Rule Effectiveness of approximately 73%, from 40% yielding a net change of ~33%.
- A quick comparison with the average *% Reduced of Weighted Emissions* in Appendix 2. P. V – 68, Tables V-25 : V-36, provides a check of the assumptions. The average reduction according to the current model design is very close to the net increase in Rule Effectiveness for sand and gravel operations.
- If a receptor is placed in the middle of the domain, where there are no sand and gravel sources, will the emissions benefits still work? What are the new impacts from vacant lots and other nearby sources?

General Modeling:

- There are a number of inaccuracies in appendix 2 p. V-5, Available Modeling Concepts.
- MAG's assertion that AERMOD is less accurate than rollback models is baseless. There are a number of model evaluation studies[2] that test AERMOD against a variety of regulatory scenarios. In the vast majority of cases, AERMOD provides an adequate level of conservatism for NAAQS protection.
- MAG concludes that AERMOD model performance is poor for high winds. Yet, the weighted rollback (1/d) method used in the 2012 5% plan attainment modeling is calculated from AERMOD model result.

Back trajectory:

- Appendix 2, V- 55. Please provide a citation for the back trajectory equations?
  - X=X1+WS*0.447*60*5*SIN(WD*2*PI/360)
  - Y=Y1+WS*0.447*60*5*COS(WD*2*PI/360)
- It appears that the trajectories may actually be tangential streamlines and not parcel trajectories. According to the equations above, X and Y are calculated for each hour of meteorological data. This method creates a simplified representation of a path, because streamlines are actually a series of straight line tangents to a path, in this case one tangent for each new hourly record. Trajectories are based on motion equations are more representative of a true path. Considering the "relatively narrow margin" of modeled attainment, MAG should perform an additional trajectory sensitivity analysis so that the most conservative domain size and source mix is selected for modeling.

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[2] AERMOD AERMOD Evaluations Under the Evaluations Under the 1-hour NO_2 and SO2 NAAQS. 10th Conference on Air Quality Modeling March 14, 2012; AERMOD Evaluation for Non-Guideline Applications. 9th Conference on Air Quality Modeling October 9, 2008; AERMOD: Latest Features and Evaluation Results. U.S. EPA, 2003

- Did MAG consider using ensemble or matrix trajectories using NOAA's HYSPLIT model? The variation in trajectory start times and location could prove to be a valuable form of sensitivity test for calculating domain size and source-mix.
- Are high wind back trajectories calculated for each monitor and event with high winds in 2007? How about other years? Will 2008, 2009, 2010 or 2011 have a day that is more conservative?

Emissions:

- Appendix 2. P. V - 62 High Wind Inventories; Were emissions calculated based on winds speeds from meteorological monitor, or wind speeds calculated at each back trajectory location?
- Appendix 2. P. V - 67 "The calculated emissions for each land use parcel are divided by the distance (feet) from the modeled monitor." Please provide these calculations.
- Appendix 2. P. V – 68, Tables V-25 : V-36. It is very difficult to compare tons to tons/feet (if at all). Please explain the units tons/feet. Are the tons/feet estimates the emissions equivalent to the source receptor interaction coefficient (x/Q)? If so, please explain.
- Appendix 2. P. V – 68, Tables V-25 : V-36. A comparison of *% Reduction of Weighted Emissions* for both un-weighted and distance-weighted emissions would be helpful.
- Dust Action General Permit claims a 1% benefit in 2012. The DAGP is for windblown emissions, yet windblown inventory is largely crushing & screening.

Temporary Monitor Insights:

- In the Temporary Monitor Study, did the temporary meteorological sites conform to EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications?
- What was the height of each met tower?
- Were they monitors calibrated before the research started? Were they audited during the study?
- Did the study meet data completeness standards?
- The wind direction data are organized into five-degree increments, so concentration differences could be computed as a function of wind direction V – 3. Did the anemometer used to collect the data provide an accuracy better than +-5 degrees?

RESPONSE TO PUBLIC COMMENTS ON THE DRAFT MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

APRIL 12, 2012 PUBLIC HEARING

The Maricopa Association of Governments (MAG) appreciates the comments made during the public comment period for the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. An advertised public hearing was conducted on April 12, 2012. Verbal testimony was presented at the April 12, 2012 public hearing. One submittal of written comments was received.

COMMENTS FROM JERRY GREENBURG (Testimony at the April 12, 2012 public hearing)

Comment: We bought a foreclosed home, sunk a bit of our life savings into it, in Chandler, in just a regular, nice neighborhood. Last fall, after living in the home for about a year and a half I was having trouble breathing. So I went to the doctor and they checked me out, did a chest X-ray, that kind of thing. On my way back I stopped at the intersection of McClintock and Chandler and it was a little bit windy and I looked over to my right and its all vacant lots on the north of that area and dust was just blowing like crazy right into my neighborhood. So I thought perhaps, OK, you know where I am going, from there. I looked around and I realized my neighborhood, Twelve Oaks, Stellar Air Park, is surrounded by dirt lots. So all of a sudden I became interested. I called the City, I called the County, and made formal complaints which were responded to. However, frankly, if I kept my front yard like the people keep the vacant lots that they owned, I'd be fined, but yet people are allowed to dump construction dirt on these lots. They are allowed to dump construction debris. They are allowed to just let it be bare dirt, literally bare dirt, on these lots. What I would ask you is, why are we coddling these vacant lot owners? The economic recovery is well going on and another is, would you please, maybe you are doing this and I don't know, monitor residential areas for PM-10 and then report on them?

Response: Thank you for your concern. Fugitive dust produced by vacant lots is regulated under Maricopa County Air Pollution Control Rule 310.01, Fugitive Dust from Non-Traditional Sources of Fugitive Dust. http://www.maricopa.gov/aq/divisions/planning_analysis/rules/docs/310.01.pdf. The Rule requires the owner and/or operator of a vacant lot to keep the soil stabilized at levels that pass tests specified in the rule. A stabilized surface can appear to be bare dirt. Control measures commonly utilized include applying dust suppressants, establishing vegetative ground cover, and covering the surface with gravel.

All County Dust Control inspectors have been trained to inspect vacant lots and regularly conduct proactive as well as complaint inspections throughout Maricopa County. Between 2008 and 2010, Maricopa County conducted a total of 21,753 vacant lot inspections. Given the size of the County and the large number of vacant lots, Maricopa County Air Quality Department (MCAQD) encourages residents to call and report any problem vacant lot or dust creating activity such as illegal

dumping. To report a violation, call (602)372-2703 or log onto http://www.maricopa.gov/aq/contact_us/ReportViolation.aspx.

Vehicles traveling or parking on vacant lots (e.g., to dump construction dust or debris) are also restricted by both County and local government ordinances. The City of Chandler has an ordinance that restricts vehicular use and parking on vacant lots. If you observe vehicles traveling or parking on vacant lots in your neighborhood, call City of Chandler Code Enforcement at (480) 782-4320.

The Maricopa County Air Quality Department operates a monitoring network with a number of monitors sited to measure particulate matter at the neighborhood scale where residents live. Other monitors represent various source types and profiles common in the county such as industrial, commercial, etc. Monitoring data is summarized annually by location in a network review report submitted to the Environmental Protection Agency. In addition, the department prepares an annual report that summarizes its compliance inspection and enforcement activity. Both documents are available on the Maricopa County Air Quality Department website. The network review reports available at http://www.maricopa.gov/aq/divisions/monitoring/network.aspx and the annual report at http://www.maricopa.gov/AQ/media/docs/pdf/NewsItemDocs/2011%20-%20Annual%20Report.pdf.

Comment: I have a new grandson who was born at Chandler Regional Hospital. On the way, on Frye Road, at sunset, I saw a huge tractor with a plow on the back of it, raising huge clouds of dust, a half mile from where my grandson is and I called the City the next day. They said they would talk to him about it and they said oh, he'll stop doing that. Thank you, he should have known not to do that and he did it at sunset because he knew that all the offices were closed. We can't have that kind of thing going on in a City. Chandler is over 250,000 residents and yet this is the kind of thing that is going on. I can't speak for Glendale, or any place else, I can only speak for the City I live in and so what I would ask you is, please continue to enforce this lobby. The State, the Government, to really be stronger on this and really help us to grow up as a community, so that it can be healthier.

Response: The Arizona Department of Environmental Quality (ADEQ) is responsible for controlling dust emissions from agricultural activities in Area A, which includes the Maricopa County PM-10 nonattainment area. Under Senate Bill 1552, passed by the Arizona Legislature in 2007, farmers are required to implement two best management practices (BMPs) to reduce PM-10 emissions in each of the following categories: tillage and harvest, non-cropland, and cropland. Additional information on the BMPs can be obtained at http://www.azdeq.gov/environ/air/plan/download/webguide.pdf. When you observe high levels of dust being generated by a tractor or vacant parcel that is being farmed, you should call Emily Bonnani, ADEQ, (602) 771-2324, to issue a complaint.

COMMENTS FROM SANDY BAHR, SIERRA CLUB IN ARIZONA (Testimony at the April 12, 2012 public hearing)

Comment: We have raised the issue before about the Maricopa Association of Governments not being the right entity for leading the effort. No offense, I know people work really hard, but I think

politically it is a difficult place to try to get clean air when the purpose of the organization is really about transportation and facilitating expenditure of federal highway dollars. A couple of things, so that is kind of an overarching comment and I don't expect that MAG will address that one, but I just wanted to make sure that you were aware that we continue to have that concern.

Response: The Maricopa Association of Governments serves as the designated Regional Air Quality Planning Agency for the Maricopa area. The regional air quality plans are prepared through a coordinated effort with the Arizona Department of Environmental Quality, Arizona Department of Transportation, Maricopa County Air Quality Department, and Maricopa Association of Governments. Over time, significant progress has been made to improve air quality due to the implementation of the aggressive measures in the MAG regional air quality plans by the State and local governments.

The MAG region has met the federal air quality standard for carbon monoxide. There have been no violations of the carbon monoxide standard since 1996. The Environmental Protection Agency redesignated the Maricopa nonattainment area to attainment for carbon monoxide on April 8, 2005. EPA also approved the MAG Carbon Monoxide Redesignation Request and Maintenance Plan, which demonstrated that the standard would be maintained through 2015.

The MAG region has met the federal air quality standard for one-hour ozone. There have been no violations of the one-hour ozone standard since 1996. EPA redesignated the Maricopa nonattainment area to attainment on June 14, 2005. EPA also approved the MAG One-Hour Ozone Redesignation Request and Maintenance Plan, which demonstrated that the standard would be maintained through 2015.

The MAG region has met the federal air quality standard for the 1997 eight-hour ozone standard of 0.08 parts per million. There have been no violations of the 1997 standard since 2004. On April 12, 2012, EPA published a proposed rule to approve the MAG 2007 Eight-Hour Ozone Plan. Regarding the newly implemented, stricter ozone standard of 0.075 parts per million, the region had only one monitor that violated the standard in 2011.

The MAG region meets the fine particulate standard for PM-2.5.

Regarding PM-10, the Revised MAG 1999 Serious Area Particulate Plan for PM-10 was one of the first in the nation and included 77 aggressive measures to reduce coarse particulate matter. On July 25, 2002, the Environmental Protection Agency approved the Revised MAG 1999 Serious Area Particulate Plan for PM-10. The plan was heralded by EPA as one of the most comprehensive in the country. Every city and town within the nonattainment area and Maricopa County have implemented dust control measures to reduce PM-10. In addition, the MAG Regional Council has allocated $24.9 million in Congestion Mitigation and Air Quality Improvement Funds over the last 12 years to purchase clean, dust-reducing street sweepers.

While the MAG 2007 Five Percent Plan for PM-10 was voluntarily withdrawn, the aggressive

measures in that plan continue to be implemented to reduce PM-10. In 2010, there were no violations of the PM-10 standard.

Again, significant strides have been made to improve air quality in the MAG region. Air quality is an important issue to the Maricopa Association of Governments.

Comment: One of the issues that I wanted to raise this afternoon is this issue of three years of clean data and the fact that you are looking at seeking to identify 21 of the 22 exceedances for 2011 as exceptional events. I think by anyone's common sense definition, when you start having that many exceptional events, they fail to be exceptional, and we strongly question that.

Response: The EPA Exceptional Event Rule (EER) became effective on May 21, 2007. The EER allows the ambient air quality data which is submitted to EPA and used in making regulatory decisions, to be flagged and, where appropriate, excluded from calculations in determining whether or not an area has attained the standard. The data flagged as "exceptional" must have been affected by an exceptional event, which is defined as an event that affects air quality; is not reasonably controllable or preventable; is an event caused by human activity that is unlikely to recur at a particular location or a natural event; and is determined by the EPA in accordance with 40CFR 50.14 to be an exceptional event.

In order for PM-10 monitoring data on an exceedance day to be excluded from the attainment calculations for the nonattainment area, ADEQ must prepare documentation that meets requirements of the EER and receives approval from EPA. For the Maricopa County PM-10 nonattainment area, exceptional events are generally caused by high winds. In 2010, there was only one exceedance of the PM-10 standard at one monitor in the nonattainment area, which did not occur on a windy day. In 2011, the PM-10 standard was exceeded on 21 of 22 days during either strong frontal system winds or summer monsoon thunderstorm outflows. The summer thunderstorm outflows produced dust storms (haboobs) that were so unusual that they received national media attention (e.g., July 5, 2011). ADEQ is in the process of preparing documentation that meets EER requirements and justifies that the 21 exceedances were unavoidable due to the uncontrollable meteorological conditions that occurred during 2011.

Additionally, while crafting the EER, EPA acknowledged that natural events like high winds need not be rare in order to qualify as an exceptional event, *"It is important to note that natural events, which are one form of exceptional events according to this definition, may recur, sometimes frequently (e.g. western wildfires)"* (72 FR 13563). The fact that 2011 had an unusually high amount of dust storms does not preclude those dust storms from being considered as exceptional events under the current definition of exceptional events in EPA's EER.

Comment: The other thing is this plan is supposed to demonstrate best available control measures and maximum measures as well and we didn't see where you had demonstrated that in the plan. And so, I would love for someone to point that out, but I believe you have to demonstrate in the plan as

well.

Response: The MAG 2012 Five Percent Plan for PM-10 is designed to meet the requirements in Section 189(d) of the Clean Air Act. Section 189(d) indicates that "In the case of a Serious PM-10 nonattainment area in which the PM-10 standard is not attained by the applicable attainment date, the State in which such area is located shall, after notice and opportunity for public comment, submit within 12 months after the applicable attainment date, plan revisions which provide for attainment of the PM-10 air quality standard and, from the date of submission until attainment, for an annual reduction in PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory for such area."

The Best Available Control Measure (BACM) and Most Stringent Measure (MSM) demonstrations are required under Section 189(b)(1) and 188(e) of the Clean Air Act. The MAG 2012 Five Percent Plan for PM-10 includes control measures above and beyond the measures in the Revised MAG 1999 Serious Area Plan for PM-10, which addressed the BACM/MSM requirements.

On July 25, 2002, the Environmental Protection Agency approved the Revised MAG 1999 Serious Area Plan for PM-10 that included the BACM/MSM demonstrations. On August 14, 2008, EPA again took final action to approve the Best Available Control Measure and the Most Stringent Measure demonstrations in the Revised MAG 1999 Serious Area Plan for PM-10 for the Maricopa County Nonattainment Area (see 73 FR 47542).

Comment: One thing we have raised before, and it just doesn't make a whole lot of sense - from just when you think about a contingency measure. How can it be a contingency measure if it's already implemented? Contingency measures are supposed to be for, you know, if something else doesn't work, you have a contingency. And what has happened with a lot of previous measures is, we are implementing a contingency and then there is no contingency, right, there is nothing left. And so, we would like to have you take a look at that as well.

Response: Section 172(c)(9) of the Clean Air Act requires that nonattainment plans contain contingency measures. Such measures are to be undertaken without further action by the State or the EPA Administrator if the area fails to make reasonable further progress or meet the standard by the attainment date. EPA encourages early implementation of contingency measures to reduce emissions as expeditiously as practicable. (See EPA, Early Implementation of Contingency Measures for Ozone and Carbon Monoxide (CO) Nonattainment Areas, August 13, 1993.)

The contingency requirement is met in the MAG 2012 Five Percent Plan by quantifying the benefits of PM-10 reduction projects that were implemented early (i.e., in 2008-2011). These projects included PM-10 certified street sweeping of freeways and arterials; paving and stabilizing unpaved roads, alleys and shoulders; reducing speed limits on unpaved roads and alleys; and overlaying state highways with rubberized asphalt. It is important to note that there were many other measures in the MAG 2007 Five Percent Plan that have been implemented, for which no credit is taken in the MAG 2012 Five Percent Plan. These additional measures will also assist the area in demonstrating

attainment at all monitors by 2012.

Comment: Finally, we just continue to have concerns about enforcement and I think the gentleman before me raised some of the issues with that and I know that there have been changes relative to the BMPs for agriculture, but I still think there are good questions about whether those are truly enforceable and would like to see more information in the plan on that as well.

Response: The Arizona Department of Environmental Quality (ADEQ) is responsible for controlling dust emissions from agricultural activities in Area A, which includes the Maricopa County PM-10 nonattainment area. Under Senate Bill 1552, passed by the Arizona Legislature in 2007, farmers are required to implement two best management practices (BMPs) to reduce PM-10 emissions in each of the following categories: tillage and harvest, non-cropland, and cropland. Additional information on agricultural BMPs is available at http://www.azdeq.gov/environ/air/plan/download/webguide.pdf. For more information on enforcement of agricultural BMPs, contact Emily Bonnani at ADEQ, (602) 771-2324.

COMMENTS FROM THE ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST (Letter from Joy E. Herr-Cardillo dated April 12, 2012)

1. BACM and MSM

Comment: As a serious nonattainment area for PM-10, the Phoenix area plan must include BACM for all significant sources of PM-10 and PM-10 precursors. BACM, best available control measures, are the maximum degree of emissions reductions possible after considering technical and economic feasibility and environmental impacts of the control. These must be implemented independent of attainment requirements. Also, because Phoenix obtained a five year extension of its attainment deadline, its plan must include MSM (most stringent measures). In the General Preamble (59 FR 41998), EPA sets forth a multi-step process for identifying BACM/BACT for serious areas. The proposed 5% plan does not include a BACM or MSM demonstration that follows this process, therefore, it is initially difficult to even determine whether the plan satisfies the BACM/MSM requirement. The state cannot rely upon the BACM/MSM demonstrations in the 1999 Serious Area SIP, as that demonstration was prepared more than ten years ago, and, as the EPA recognized in its proposed disapproval of the 2007 Draft 5% Plan, control measures that previously satisfied the BACM requirement, may no longer represent the "best available" control measure. See, 75 FR 54806, 54812. Therefore, an updated BACM/MSM analysis should be included in the 5% plan.

Response: The MAG 2012 Five Percent Plan for PM-10 is designed to meet the requirements in Section 189(d) of the Clean Air Act. Section 189(d) indicates that "In the case of a Serious PM-10 nonattainment area in which the PM-10 standard is not attained by the applicable attainment date, the State in which such area is located shall, after notice and opportunity for public comment, submit within 12 months after the applicable attainment date, plan revisions which provide for attainment of the PM-10 air quality standard and, from the date of submission until attainment, for an annual reduction in PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the

amount of such emissions as reported in the most recent inventory for such area."

The Best Available Control Measure (BACM) and Most Stringent Measure (MSM) demonstrations are required under Section 189(b)(1) and 188(e) of the Clean Air Act. The MAG 2012 Five Percent Plan for PM-10 includes control measures above and beyond the measures in the Revised MAG 1999 Serious Area Plan for PM-10, which addressed the BACM/MSM requirements.

On July 25, 2002, the Environmental Protection Agency approved the Revised MAG 1999 Serious Area Plan for PM-10 that included the BACM/MSM demonstrations. On August 14, 2008, EPA again took final action to approve the Best Available Control Measure and the Most Stringent Measure demonstrations in the Revised MAG 1999 Serious Area Plan for PM-10 for the Maricopa County Nonattainment Area (see 73 FR 47542).

2. 2008 PM-10 Emissions Inventory

Comment: In its proposed disapproval of the 2007 Draft 5% Plan, EPA found that the 2005 emissions inventory relied upon by the state to be insufficiently accurate because it overestimated the baseline emissions for construction and other sources. See 75 FR 54808. In the current plan, MAG is relying upon a 2008 periodic emissions inventory which, like the 2005 inventory, was prepared by Maricopa County Air Quality Department. At first glance, this more recent inventory appears to address EPA's concerns as it shows emissions from residential construction to be a smaller percentage of the overall emissions. However, a comparison of the two inventories (and the two draft plans) reveals a discrepancy that MAG does no appear to either acknowledge or explain, and that is drastic reductions in the estimated emissions overall. In the 2005 inventory, total PM-10 emissions in the nonattainment area were calculated to be 84,753 tons per year. The 2008 inventory puts that total at 48,148 tons per year - a reduction of more than 40% in just three years. It seems highly unlikely that the area achieved such a reduction in emissions by the implementation of control measures. As noted above, we did not see anywhere in the plan where this huge disparity in the data was acknowledged or explained. This oversight should be addressed,. Also, because the inventory is the principal basis for calculating the 5% annual reduction required under the CAA, it is important to the public health that the amount of current emissions are not understated.

Response: The *2008 PM-10 Periodic Emissions Inventory for the Maricopa County, Arizona, Nonattainment Area* was revised by the Maricopa County Air Quality Department (MCAQD) to address EPA concerns about the 2005 PM-10 Periodic Emission Inventory (PEI) expressed in the proposed partial approval and disapproval of the MAG 2007 Five Percent Plan published by EPA on September 9, 2010. (See 75 FR 54808.) MCAQD and EPA staff worked together to revise the 2008 PEI finalized in June 2011. In accordance with EPA guidance, MAG used the revised 2008 PEI as the basis for developing 2007-2012 emissions for the Draft MAG 2012 Five Percent Plan.

Ninety-two percent of the reduction in total PM-10 emissions from 84,753 tons per year in the 2005 PEI to 48,148 tons per year in the revised 2008 PEI can be attributed to four factors: (1) a decrease

in the number of acres permitted for construction activities and increases in compliance with Maricopa County Rule 310, (2) a reduction in the material burned by wild fires, (3) annual variations in meteorological data and use of a new and improved methodology to estimate windblown dust emissions, and (4) decreases in PM-10 emissions from paved roads due to application of a new AP-42 equation released by EPA in January 2011. Each of these factors is discussed in more detail below.

(1) One reason for the reduction in PM-10 emissions between 2005 and 2008 is the significant decline in construction activity that took place during that period. In 2005, MCAQD issued construction permits for 68,664 acres in Maricopa County; in 2008, this number was reduced to 42,130 acres, a 39 percent decline in three years.

In addition, to address EPA concerns (in 75 FR 54808) regarding potential overestimation of PM-10 emissions from construction activities, MCAQD staff worked closely with EPA to improve the methodology used to quantify rule effectiveness (i.e., compliance with Maricopa County dust control rules). (See Appendix 3 of the revised 2008 PEI contained in Appendix A, Exhibit 1 of the Draft MAG 2012 Five Percent Plan.) The new methodology developed in concert with EPA is used in the revised 2008 PEI, as well as the Draft MAG 2012 Five Percent Plan, to estimate rule effectiveness for Rule 310 (Fugitive Dust from Dust-Generating Operations), Rule 301.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust), and Rule 316 (Nonmetallic Mineral Processing). Table 5-1 in the Draft MAG 2012 Five Percent Plan shows the new rule effectiveness rates that were calculated for 2007 through 2010 using the new methodology and actual compliance data. The rule effectiveness rate for construction activities in the 2005 PEI was 51 percent; using the new methodology, the rule effectiveness rate for construction activities in the 2008 PEI is 90 percent. This represents a 76 percent increase in compliance with Rule 310 between 2005 and 2008.

Due to the 39 percent reduction in construction activity and 76 percent increase in rule effectiveness, the PM-10 emissions from construction activities in 2005, 32,130 tons, declines to 7,964 tons in 2008, a 75 percent reduction. This reduction of 24,166 tons per year represents the largest proportion (66 percent) of the decrease in total PM-10 emissions (36,605 tons) between 2005 and 2008.

(2) In the 2005 PEI, wild fires produced 4,860 tons of PM-10 emissions based on 345,909 tons of material burned within the nonattainment area. In the 2008 PEI, the comparable values for wild fires are 424 tons of PM-10 emissions based on 33,479 tons of material burned. Due to the significant reduction in material burned in the nonattainment area between 2005 and 2008, the PM-10 emissions for wild fires are 91 percent lower in the 2008 PEI. This reduction of 4,436 tons explains another 12 percent of the decrease in total PM-10 emissions between 2005 and 2008.

(3) Windblown dust PM-10 emissions in the 2005 PEI are 7,380 tons for the nonattainment area, compared with 4,815 tons in the 2008 PEI. MCAQD contracted with ENVIRON to estimate windblown dust emissions for the 2005 PEI. ENVIRON applied the windblown dust emissions model developed by the Western Regional Air Partnership (WRAP) to 2004 land use and 2005 meteorological data for Maricopa County. The ENVIRON methodology is documented in Appendix

3.2 of the 2005 PEI.

For the revised 2008 PEI, MAG developed a new PM-10 emissions estimation methodology using the latest scientific research on windblown dust in the arid southwest. (See Appendix 4 of the revised 2008 PEI contained in Appendix A, Exhibit 1 of the Draft MAG 2012 Five Percent Plan.) The methodology uses local data from observed windblown dust events, combined with empirical data from wind tunnel studies performed in the deserts of the southwest. The windblown dust estimates in the 2008 PEI are based on 2008 wind speed and precipitation data from 34 meteorological stations and the most recent land use data (2009) available for the nonattainment area. The new methodology produces a more accurate estimate of the contribution of windblown dust to the 2008 PEI.

The 35 percent reduction in PM-10 emissions from windblown dust between 2005 and 2008 can be attributed to the use of different methodologies, as well as different land use and meteorological data for these years. The 2,565 ton reduction in 2008 represents seven percent of the decrease in total PM-10 emissions between 2005 and 2008.

(4) In January 2011, EPA released a new version of the AP-42 equation that estimates particulate emissions from vehicles traveling on paved roads. The new equation is documented in EPA, *Emission Factor Documentation for AP-42, Section 13.2.1, Paved Roads*, January 2011. The paved road PM-10 emissions in the revised 2008 PEI were developed using this new equation. Application of the previous AP-42 equation (November, 2006) for the 2005 PEI resulted in paved road PM-10 emissions of 13,783 tons for the nonattainment area; paved road emissions estimated with the new AP-42 equation are 6,694 tons, a reduction of 51 percent in the 2008 PEI.

The reduction in paved road PM-10 emissions of 7,089 tons in the 2008 PEI is partially offset by increases in emissions from exhaust, tire wear, brake wear, and vehicles traveling on unpaved roads. The exhaust, tire wear and brake wear emissions are 1,404 tons higher in 2008, due to use of the new EPA MOVES2010a mobile source emissions model, rather than the EPA MOBILE6.2 model used in the 2005 PEI. In the 2008 PEI, unpaved road PM-10 emissions are also 3,221 tons higher, due to use of updated information collected on unpaved roads and alleys. Overall, PM-10 emissions from all onroad mobile sources are reduced from 24,013 tons in the 2005 PEI to 21,549 tons in the 2008 PEI. This net decline of 2,464 tons represents seven percent of the decrease in total PM-10 emissions between 2005 and 2008.

The sum of the emission reductions discussed in (1) through (4) above is 33,631 tons, which represents 92 percent of the total decrease in PM-10 emissions between 2005 and 2008. The remaining eight percent reduction can be attributed to factors such as increased rule effectiveness for Rules 310.01 and 316 and decreased industrial activity, due to the economic recession that commenced in 2008. The factors described above (decline in construction activity, increased compliance with Rule 310, reduced impact of wild fires, improved windblown dust methodology using 2008 meteorological and 2009 land use data, and the new EPA paved road dust equation) explain the reduced emissions in the 2008 PEI and reinforce the accuracy of the 2008 PM-10

emissions used as the basis for the Draft MAG 2012 Five Percent Plan.

It is also important to note that the calculation of annual five percent reductions in the Draft MAG 2012 Five Percent Plan is based on 2007 base case emissions of 59,218 tons per year, which are 23 percent higher than the 2008 emissions of 48,148 tons per year in the revised 2008 PEI. (See Page ES-2 and Table ES-1 in the Draft MAG 2012 Five Percent Plan.) Therefore, the five percent reductions calculated in the Draft MAG 2012 Five Percent Plan are not understated.

3. Reliance upon EPA's Concurrence Regarding Exceedances Claimed As Exceptional Events:

Comment: We are concerned that the attainment demonstration in the 2012 5% Plan, like the 2007 5% Plan, relies upon the concurrence by EPA regarding exceptional events. As the plan acknowledges there were 7 exceedances in 2009 alone that must be treated as exceptional events in order for the area to meet the extended attainment deadline. Further, although the 2011 data has not yet been finalized, the initial data indicates that there [sic] once again a significant number of exceedances over multiple days and multiple monitors. The likelihood of eliminating all of these exceedances as exceptional events would appear both remote and contrary to the public interest. Therefore, we believe that a plan that proposes to achieve "attainment" simply by whitewashing over severely unhealthful conditions is both irresponsible and contrary to the public interest.

Response: Section 319(b)(2) of the Clean Air Act required EPA to publish and finalize regulations governing the review and handling of air quality monitoring data influenced by exceptional events. In establishing the requirement, Congress provided EPA with a definition of exceptional event that recognized that not all episodes of air pollution can be controlled or prevented by means of implementing the Clean Air Act. Specifically, Section 319(a)(1)(A) defined the term exceptional event to include, among other things, those events that are not "reasonably controllable or preventable" or are "…an event caused by human activity that is unlikely to recur at a particular location or a natural event".

On March 22, 2007, EPA adopted the Exceptional Events Rule, codified in Code of Federal Regulations, Title 40, Parts 50 and 51. In the implementing rules, EPA allows States to request the exclusion of data showing exceedances or violations of the national ambient air quality standard that are directly the result of an exceptional event, provided the State submits a demonstration justifying the exclusion of the data. All such demonstrations must undergo public comment prior to submission for concurrence by EPA.

Section 110 of the Clean Air Act requires all State Implementation Plans (SIPs) to address reasonably controllable sources of air pollution, as well as any reasonably controllable or preventable activities. Through the development of the proposed 5% Plan, ADEQ, MAG and MCAQD have evaluated the exceedances that occurred in 2009 and 2011, and have compared them to the requirements in EPA's Exceptional Events Rule, as well as EPA's Draft 2011 Exceptional Events Guidance document. Based upon that analysis it was concluded that the overwhelming majority of

exceedances that occurred during 2009 and 2011 were the direct result of events that could not be prevented or that overwhelmed the controls required by the existing non-attainment area plans.

On March 14, 2012, after 30 days of public comment and in accordance with EPA's Exceptional Event Rule and Draft 2011 Exceptional Events Guidance document ADEQ submitted to EPA documentation demonstrating that the PM-10 exceedances recorded between July 2 and July 8, 2011, were the result of exceptional events that were not preventable or were beyond any reasonable control. EPA's decision regarding this documentation is expected by July 2012. Based on the submitted analysis, the similarity of other 2011 exceedances to those observed between July 2 through 8, and a review of the likelihood of EPA concurrence under both the Exceptional Events Rule and the Draft 2011 Exceptional Events Guidance, ADEQ, MCAQD, and MAG have concluded that there is a relatively low risk of nonconcurrence.

Finally, recognizing that the public is still exposed to these high concentrations of PM-10, regardless if they are reasonably preventable or controllable, ADEQ is required by Arizona Revised Statute § 49-424(11) to develop and disseminate air quality dust forecasts for the Maricopa County PM-10 nonattainment area. These forecasts are required to identify the risk of dust generation for the next five consecutive days, and must be posted, at a minimum, on ADEQ's web site, five days each week. In addition to the dust forecasts, ADEQ also publishes a forecast that predicts the air quality index for the upcoming days, and issues health watches or high pollution advisories on days where exceedances of the PM-10 standard are expected to occur. ADEQ has taken the additional step of making these forecasts available to any interested party via electronic mail. To sign up for these or other ADEQ issued forecasts, please visit
https://public.govdelivery.com/accounts/AZDEQ/subscriber/new.

4. General Permit BMPs and Agricultural Permit BMPs:

Comment: While we generally support the adoption of the general permit requirement for all dust generating activities and the increased stringency of the agricultural permit requirements, the plan does not adequately demonstrate that either of these control measures satisfy the BACM and MSM requirement. The plan did not mention the concerns raised by EPA in its proposed rulemaking in 2010 regarding the agricultural BMPs or indicate whether or how these concerns have been addressed.

Response: As part of the stakeholder process for this revision to the State Implementation Plan, ADEQ, MCAQD and MAG analyzed the conditions under which Maricopa County's PM-10 exceedances occurred. Since 2007, the most common factor associated with PM-10 exceedances in Maricopa County was elevated wind speed. In reviewing other PM-10 control programs, ADEQ, MCAQD and MAG were unable to identify another comprehensive SIP program that was specifically designed to control dust on days with high winds. As a result, a new, innovative method for controlling dust was required.

ADEQ agreed to legislation that requires the Department to issue a pollution forecast that identifies the risk of dust generation on subsequent days. Based upon ADEQ's forecast, all owners or operators of dust generating activities within Maricopa County are required to implement air pollution controls as soon as practicable before and during a day forecast to be at high risk of dust generation. Those owners and operators that already have an air quality permit are required to continue complying with the conditions of their permit on those days. If the owner or operator of the dust generating activity did not require an air quality permit, ADEQ was given the authority to require these owners or operators to obtain a Dust Action General Permit. The controls that were included in the Dust Action General Permit build upon the existing Best Available Control Measure (BACM) requirements of MCAQD Rule 310 that was approved into the Arizona State Implementation Plan on July 25, 2002 (at 67 FR 48716). In addition to these controls, the permit also adds additional monitoring, record keeping and reporting requirements that enhance the enforceability of these control measures. Because there is no other program in the Country that is similar to the Dust Action General Permit, the control measure is being submitted in accordance with EPA's September 2004 guidance entitled *Incorporating Emerging and Voluntary Measures in a State Implementation Plan (SIP)*, and there are no benchmarks for it.

This plan is being submitted pursuant to Clean Air Act § 189(d) which provides for annual emission reductions of 5% until attainment is demonstrated. This plan includes a commitment to evaluate the effectiveness of MCAQD Rule 310.01 in calendar year 2013. If the evaluation does not result in sufficient emissions reductions, ADEQ has committed to submitting a SIP revision that contains replacement measures to reduce PM_{10} emissions by an amount equal to or more than the total PM_{10} emissions reductions that were not achieved by these measures.

With respect to the Agricultural Best Management Practices (Ag BMP) program, portions of the current program have already been approved into the SIP and those commitments remain on-going. This Section 189 plan did not rely on any improvements to the previously approved Ag BMP program to achieve the required annual 5% emissions reductions or to demonstrate that the plan results in attainment. As a result, the improvements that were made to the program in 2007, 2009, 2010 and in 2011, have not been included as part of this SIP revision.

In 2009 and 2010, the statutes authorizing the Ag BMP program have changed such that after June 1, 2009, this program automatically becomes effective in all areas that are re-designated as moderate or serious nonattainment for PM-10. Operations subject to the program in areas that are re-designated as moderate nonattainment are required to apply at least one BMP in each applicable category, whereas operations in areas that are re-designated as serious nonattainment are required to apply at least two BMPs in each applicable category. Because of the statewide applicability of this program, the Arizona Department of Environmental Quality will submit the program as a separate, independent revision to the State Implementation Plan.

5. Enforceability of Control Measures:

Comment: We have concerns about the enforceability of control measures in the plan. As you know, citizen enforcement is encouraged under the Clean Air Act. However, in recent years, when citizens have brought actions to enforce control measures that the state is responsible for implementing, the state has invoked the Eleventh Amendment in an effort to avoid the enforcement of its obligation to comply with the SIP. *See Paisley v. Brewer*, CV2:10-cv-01253-DGC (D.Ariz.) and *Sweat v. Hull*, 200 F. Supp. 2d. 1162 (D. Ariz. 2001). Although the defense did not preclude injunctive relief in either case, it unnecessarily protracted the litigation and demonstrated the lack of commitment on the part of the state to fulfilling its obligation under the SIP. Therefore, we believe that where the state or one of its subdivisions (i.e., a county) assumes responsibility for the implementation of specific control measures, the commitment should include an unequivocal consent to federal jurisdiction if enforcement is sought under the citizen suit provision. This consent will ensure that the measures are fully enforceable by both EPA and affected citizens, as the enforcement scheme adopted by the Act contemplates.

Response: As noted in the comment, the legal strategy employed by Arizona did not preclude injunctive relief and it did not affect the enforceability of the SIP by either EPA or affected citizens. Because the merits of each lawsuit must be reviewed on a case-by-case basis, the response to the lawsuit must address the merits of each case, and the defense strategy in question did not affect the enforceability of the SIP, it is not prudent to unnecessarily limit future defense strategies.

6. Technical Issues and Concerns:

GENERAL

Editorial Comments:

Comment:

- The report provides very limited examples and few calculations to support the reported values.
- The report is also lacking equations to support reported values.
- The reported values are in a variety of units, which makes comparisons difficult.

Response: The technical analyses conducted to support the attainment demonstration in the Draft MAG 2012 Five Percent Plan for PM-10 were performed by MAG, with assistance from Sierra Research. Some of the calculations and equations used to perform the rollback modeling for the attainment demonstration were too voluminous to be included in the Draft Plan. However, all of the technical assumptions, equations and reported values documented in the Draft MAG 2012 Five Percent Plan have been reviewed by and received concurrence from EPA and other members of the 5% PM-10 Plan Technical Committee.

The 5% PM-10 Plan Technical Committee was formed by the Arizona Department of Environmental Quality (ADEQ) in response to a stakeholder meeting conducted on February 8, 2011. The meeting

was held to discuss the withdrawal of the *MAG 2007 Five Percent Plan for PM10 for the Maricopa County Nonattainment Area* and to allow EPA to directly discuss what portions of the 5% Plan required additional work in order to be considered an approvable plan. During the meeting it was determined that a technical workgroup comprised of members from ADEQ, the Maricopa County Air Quality Department, the Maricopa Association of Governments and the U.S. EPA would be formed to meet on Wednesday of every other week. The first meeting of the 5% PM-10 Plan Technical Committee occurred on February 9, 2011.

The stated mission and purpose of the Maricopa 5% PM-10 Plan Technical Committee was to provide technical work to support a SIP submission to EPA by January 2012; investigate and resolve stated plan deficiencies and support improvements in emission inventories, exceptional event documentation and conceptual model of air quality problem/control measures.

The 5% PM-10 Plan Technical Committee met more than twenty times to review technical work related to the revised 2008 PM-10 emissions inventory, exceptional events documentation, the Dust Action General Permit, and the modeling assumptions and protocol for the Draft MAG 2012 Five Percent Plan. The Technical Support Document for the Draft Plan describes the Committee-endorsed modeling methodology that demonstrates attainment of the PM-10 standard in 2012.

MODELING

Model Selection:

Comment:

- The air quality modeling demonstration for the 24-hour PM10 standard is based on U.S. EPA's rollback modeling method. Federal regulations state that "all applications of air quality modeling involved in this subpart shall be based on the applicable models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models)." 40 CFR Part 51.160(f).

- Appendix W section 5.2.2.2 PM10; "Refined models such as those discussed in subsection 4.2.2 are recommended for PM-10."

- Appendix W Section 4.2.2(b) Refined Analytical Techniques: "For a wide range of regulatory applications in all types of terrain, the recommended model is AERMOD."

- Appendix W Section 5.2.2.2(e): "Due to the difficult nature of characterizing and modeling fugitive dust and fugitive emissions, it is recommended that the proposed procedure be cleared by the Regional Office for each specific situation before the modeling exercise is begun."

- The rollback approach is not one of U.S. EPA's preferred methods for demonstrating

attainment of the PM10 NAAQS

Response: Use of distance-weighted rollback was cleared by staff from EPA Region IX before the modeling exercise for the Draft MAG 2012 Five Percent Plan began. As discussed in the previous response to the editorial comments, EPA was an active member in the 5% PM-10 Plan Technical Committee and reviewed all of the technical assumptions and methods to be used prior to the commencement of attainment modeling for the draft Plan.

In an August 5, 2011 e-mail from Greg Nudd, EPA, to the 5% PM-10 Plan Technical Committee, Scott Bohning, EPA, provided the following comments on the Draft Conceptual Model for Demonstrating PM-10 Attainment document, July 25, 2011: "The chosen distance-weighted rollback seems like a good approach. It gets the main benefit of dispersion modeling over simple rollback in that it accounts for source distance from the monitor, but with less work and without the misleading precision that can accompany dispersion modeling of fugitive dust. Back-trajectories along with judgement based on available wind speed and direction measurements are a reasonable basis for choosing the emission inventory domain."

Although AERMOD was used to model attainment in the MAG 2007 Five Percent Plan for PM-10, EPA's preferred model for demonstrating attainment in the replacement 2012 Plan is distance-weighted rollback, rather than AERMOD. In addition to model selection, EPA provided other technical recommendations that are reflected in the attainment modeling described in Chapter V of the Technical Support Document in Appendix B, Exhibit 1 of the Draft MAG 2012 Five Percent Plan.

Weighted Rollback:

Comment: The report does not present any of the rollback questions used so it is unclear which rollback method was used.

Response: The calculations made using the rollback model are better understood through stepwise text descriptions rather than by a single or set of equations. The steps used in the weighted rollback model used in the 2012 Five Percent Plan are described as follows:

1. Determine the hourly concentrations recorded at the designated monitoring station on the design day.

2. Parse the hourly concentrations into high wind and low wind bins.

3. Determine the background PM_{10} concentration for the design day.

High Wind Hours (Baseline Year):

4. Plot hourly back-trajectories for each high wind hour using the 5-minute meteorological data recorded at the designated monitoring station.

5. From a GIS land use database, extract the land use designations and coordinates of each 10-acre grid cell within 1 mile laterally of the back-trajectory path.

6. For each 5-minute segment of a high wind hour, use the average measured windspeed to calculate the emissions for each of 11 land use classes and 2 disturbance states (disturbed and undisturbed) and then sum the 5-minute contributions to derive an hourly emission rate for each land use and disturbance state.

7. For each 10-acre grid cell, apply the appropriate hourly emission rate and then divide by the distance in feet between the grid cell and the monitor to calculate the distance-weighted emission rate for that parcel.

8. Sum over all of the 10-acre grid cells in the hourly modeling domain to compute total distance-weighted emissions for that hour and domain.

High Wind Hours (Attainment Year):

9. Apply the appropriate reduction factor by land use and disturbance state to the emissions from each 10-acre grid cell. Divide the resulting emissions by the distance to the monitor to calculate the attainment year distance-weighted emissions for each grid cell.

10. Sum over of the 10-acre grid cells to compute total distance-weighted emissions for that hour and domain.

High Wind Hour Reduction Factor:

11. Divide each hour's Attainment Year total distance-weighed emissions by the appropriate baseline year total distance-weighted emissions and subtract these fractions from one to compute the high wind hourly reduction factors.

12. Compute the attainment year high wind hour PM_{10} concentration at the monitor by subtracting the background concentration from the baseline year high wind hour concentration, multiply this result by the appropriate high wind hour reduction factor, and add this result to the background concentration.

Low Wind Hours (Baseline Year):

13. Compute annual ton/acre PM_{10} emission rates by dividing nonattainment area-wide land use-specific annual emissions by total acres devoted to that land use to derive annual ton/acre emission rates by land use.

14. Extract total acres per land use within the low wind modeling domain from a GIS land use database.

15. Multiply total acres per land use by the appropriate annual emission rate to derive total annual emissions per land use type in the low wind modeling domain. Sum over all land uses to derive total annual baseline emissions within the low wind modeling domain.

Low Wind Hours (Attainment Year):

16. Apply land use-specific reduction factors to appropriate annual baseline emissions by land use to derive total attainment year emissions by land use category in the low wind modeling domain. Sum over all land uses to compute total annual attainment year emissions with the low wind modeling domain.

Low Wind Hour Reduction Factor:

17. Divide the annual attainment year domain-wide emissions by the annual baseline year domain-wide emissions and subtract from one to determine the low wind hour reduction factor.

18. Compute the attainment low wind hour PM10 concentration at the monitor by subtracting the background concentration from the baseline year low wind hour concentration, multiply this result by the appropriate low wind hour reduction factor, and add this result to the background concentration.

Design Day Attainment Year PM10 Concentration:

19. Sum over all high and low wind hourly attainment year PM_{10} concentrations to determine the attainment year 24-hour PM_{10} concentration for the design day.

The basic equations for high wind and low wind hour PM10 concentrations are:

For a high wind hour: $C_{future} = ((C_{baseline} - C_{background}) * (1 - HW_{reduction})) + C_{background}$
For a low wind hour: $C_{future} = ((C_{baseline} - C_{background}) * (1 - LW_{reduction})) + C_{background}$

where: C = PM_{10} concentration, ug/m3
HW = percent high wind reduction,
LW = percent low wind reduction.

This methodology is described in more detail on p. V-62 to V-78 in Appendix B, Exhibit 1.

Comment: If the analysis is based on the modified rollback method, was a spatial distribution analysis performed?

Response: A spatial analysis was performed when the reductions in distance-weighted emissions were evaluated for high wind hours on the June 6, 2007 design day. For each high wind hour, back-trajectories were plotted, and emissions per grid cell in the back-trajectory modeling domain were calculated. Control factors applicable to individual land uses in the attainment year, 2012, were applied to 2007 baseline emissions. Baseline and horizon year emissions for each grid cell were adjusted by the distance-related weighting factor and then summed over the entire back-trajectory to arrive at total distance-weighted emissions. The overall fractional reductions in emissions were calculated for each high wind hour, and the results were presented in Table V-31 of Appendix B, Exhibit 1.

The results in percent reduction of weighted emissions shown in this table for each high wind hour cluster remarkably closely. During the June 6th design day, wind directions measured at the West 43rd Avenue station varied from 220° to 255°, resulting in corresponding variations in fractional land uses between each hourly back-trajectory. Regardless of these differences, the resulting fractional reductions in weighted emissions varied by less than 12%, from a low of 33.2% to a high of 37.1%. This result demonstrates that reductions in concentrations measured at the monitoring station are relatively independent of wind azimuth – and accompanying emission source spatial distribution - during high wind hours.

Comment: In appendices Volume 2 p. V-5, under the Weighted Rollback section, the report states: "The reduction factor is calculated on the basis of the distance between each source and the impacted monitoring site"

- Please provide the equation(s) used for the weighted rollback analysis. Based on the statement above, it is not clear how MAG has calculated the emissions weighting. The equations[1] used in EPA's proportional or modified rollback method do not involve any interactions among individual sources, only each individual source and a monitor.

Response: Please see the Response to the first Weighted Rollback Comment above.

Comment: Rollback typically requires speciated profiles of soil dust from ambient measurements and chemical analysis for source apportionment calculations, using CMB (Chemical Mass Balance). Did MAG use any source profiles to support the modeling analysis? Please refer to "Guidelines to Sampling and Analysis Applicable to Receptor Modeling"

Response: The first sentence of the referenced report states "Chemical characterization of suspended particles is necessary, along with the application of receptor models to apportion ambient concentrations to their sources for the development of emission reduction strategies." The methods

[1] Rollback Modeling Basic and Modified, Air Waste Management Association 25:9 (September 1975)

outlined in the report are designed to guide the collection and chemical characterization of ambient aerosol samples. The role of CMB is to then establish the relative contribution of sources with known unique chemical signatures to the ambient samples collected in the field. Under high wind conditions, the dominant PM-10 emission source is fugitive dust. Unfortunately, there are no chemical signatures available to characterize fugitive dust from different land uses within the nonattainment area. Without this information, it is not possible for the rollback methodology to use CMB to address source apportionment.

Comment: MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA. P. 6-44: " The attainment modeling for the nonattainment area demonstrates that the 24-hour PM-10 standard will be met by a relatively narrow margin in 2012 (i.e., 153.8 ug/m^3 at the West 43rd Avenue monitor)." Was a sensitivity analysis performed to evaluate the degree of confidence in the results? A sensitivity analysis may reveal conditions where the modeling fails or requires improvement, so as to ensure NAAQS are attainment according to the plan.

Response: The dominance of near upwind sources on monitored concentrations during high wind hours, as evidenced by the analysis conducted to determine the appropriate distance-weighting factor, and the tight cluster of back-trajectory hour reduction factors presented in Tables V-25 through V-31, demonstrate the relative insensitivity of monitored PM_{10} concentrations to emission source spatial distribution during high wind hours. The variability in source spatial distribution is the greatest uncertainty with respect to determining locations of peak PM_{10} concentrations. Distributions of meteorological parameters and soil surface emissions rates during high wind conditions have been measured and better characterized than land use distributions. Thus, a sensitivity analysis was conducted on the emission parameter possessing the greatest uncertainty, and no further analysis is needed.

Comment: Rollback only works if the monitor is at the point of highest impact. Since air pollution standards must be attained within the entire planning area and not simply at the monitors, how confident is MAG in their choice to use a single point to represent the entire Maricopa County nonattainment area? Dispersion modeling typically provides for a more credible product, since they more realistically account for spatial and temporal patterns.

Response: The analysis of the temporary monitoring data shows that when winds exceeded 12 mph and were coming from the dominant high wind direction (220° to 290°), the maximum concentrations were always recorded at the West 43rd Avenue monitoring site. Additional analysis, presented in Table V-19, demonstrates that the highest wind gusts in 2007 were recorded at the West 43rd Avenue monitor. Given the frequency and magnitude of exceedances at this site, it is reasonable that it was selected and approved by EPA for one of the design day attainment demonstrations (i.e., May 4th). However, to ensure that a single location does not bias the attainment demonstration, a second high wind day was selected, one in which multiple monitors exceeded the standard (i.e., June 6th) and attainment demonstrations were prepared for the six monitoring sites in the nonattainment area with meteorological measurements. The use of rollback to demonstrate

attainment at six widely dispersed monitoring sites with varying back trajectories capturing a variety of land uses, activity and emissions provides ample evidence that a single point was not used to demonstrate attainment. The fact that EPA participated in the development of this approach and ultimately approved it further demonstrates the validity of the methodology.

Comment: Is MAG confident that the receptor location in the high-wind micro inventory domain is representative of worst case conditions? Are there any locations within the high-wind domain where predicted concentrations can be potentially higher than the monitor site?

Response: The temporary monitoring study provides insight into concentrations recorded at multiple locations between the West 43rd Avenue monitor and the edge of the desert (west of Buckeye at the Arlington monitor), a distance of roughly 35 miles. The results of that study, presented in V-7 – V-20, show that when winds exceeded 12 mph and were coming from the dominant high wind direction (220° to 290°), the maximum concentrations were always recorded at the West 43rd Avenue monitoring site. Empirically this data supports the conclusion that the receptor location in the high-wind micro inventory is located at the worst case location. The fact that attainment was demonstrated on June 6th at six widely dispersed monitoring sites adds further confidence that the modeled domain represents worst case conditions.

Comment: According to the charts in Fig. V4 Appendix 2. ~98.6% of the total exceeding PM10 concentration originates from sources within 2km of the monitor. Under the current modeling scenario, sand & gravel sources are by far the greatest contributor to PM10. Yet, the source sand and gravel source category is also the source category with the greatest estimated improvement in Rule Effectiveness. While nearly all of the vacant lots, agricultural sources and open areas are beyond 2km from the W43rd monitor and contribute less than to 1.4% of their total potential emissions to the monitor.

Response: It is incorrect to assume that sand and gravel land uses are by far the greatest contributor to PM10 under the distance-weighted rollback modeling performed at the West 43rd Avenue monitor. In fact, a close examination of the land uses nearest to the West 43rd Avenue monitor within the high wind domains do not support that conclusion. The land uses nearest the monitor in the high wind domains are industrial and commercial lots. Under the distance-weighted rollback methodology, these high wind emissions have the highest weight. There are also vacant lots that are closer to the monitor within the high wind domain than sand and gravel land uses. Also, open areas of the Salt River that are not mined for sand and gravel (displayed as "wash" land use in Figure V-16 as an example) within the high wind domain are closer to the West 43rd Avenue monitor than active sand and gravel operations. As such, these land uses contribute far more distance-weighted emissions than 1.4% assumed by the commenter.

Comment: So, the weighted emissions scenario for this model design favors an increase in Rule Effectiveness of approximately 73%, from 40% yielding a net change of ~33%.

Response: Between 2007 and 2012, rule effectiveness for sand and gravel operations (Rule 316) does increase from 40% to 73%. The impact of this increase directly impacts un-weighted emissions and has an indirect effect on distance-weighted emissions, as distance to the modeled monitor has a greater impact on distance-weighted emissions than increases in rule effectiveness in the land use categories.

Comment: A quick comparison with the average *% Reduced of Weighted Emissions* in Appendix 2. P. V – 68, Tables V-25 : V-36, provides a check of the assumptions. The average reduction according to the current model design is very close to the net increase in Rule Effectiveness for sand and gravel operations.

Response: The average percent reduction in distance-weighted high wind emissions ranges from 26.9% to 35.6% in Tables V-25 through V-31 from a variety of monitors across the nonattainment area, not just the monitor located at West 43rd Avenue. Many of the modeled high wind emissions are from domains that have little to no sand and gravel land uses (e.g., Central Phoenix monitor, Table V-26 or Higley monitor, Table V-29). The commenter's observation that the percent reductions in high wind emissions is around the increase in rule effectiveness for sand and gravel operations (33%) is merely a mathematical coincidence.

Comment: If a receptor is placed in the middle of the domain, where there are no sand and gravel sources, will the emissions still work? What are the new impacts from vacant lots and other nearby sources?

Response: As noted above, many of the modeled high wind emissions are from domains where sand and gravel land use is limited or nonexistent. The increased rule effectiveness impacting these land uses is clearly not required to demonstrate attainment within these domains.

General Modeling:

Comment: There are a number of inaccuracies in Volume 2 p. V-5, Available Modeling Concepts.

Response: Without identification of the specific inaccuracies alleged, it is impossible to respond.

Comment: MAG's assertion that AERMOD is less accurate than rollback models is baseless. There are a number of model evaluation studies[2] that test AERMOD against a variety of regulatory scenarios. In the vast majority of cases, AERMOD provides an adequate level of conservatism for NAAQS protection.

[2] AERMOD ADERMD Evaluations Under the Evaluations Under the 1-hour NO_2 and SO_2 NAAQS. 10th Conference on Air Quality Modeling March 14, 2012; AERMOD Evaluation for Non-Guideline Applications. 9th Conference on Air Quality Modeling October 9, 2008; AERMOD Latest Features and Evaluation Results: U.S. EPA, 2003

Response: The limitations of using AERMOD in high wind day attainment demonstrations are discussed on p. V-5 and V-6 of Appendix 2, Exhibit 1.

Comment: MAG concludes that AERMOD model performance is poor for high winds. Yet, the weighted rollback (1/d) method used in the 2012 5% plan attainment modeling is calculated from AERMOD model results.

Response: AERMOD was used in the attainment demonstration to determine the appropriate width of high wind hour modeling domains and to determine the appropriate form of the distance-weighting factor. These model runs used hypothetical source configurations typical of bare soil areas predominately contributing to fugitive dust emissions on high wind hours. Further detail on these analyses are provided on pp. V-21 to V-27 and V-55 to V-58.

Back Trajectory:

Comment: Appendix 2, V-55. Please provide a citation for the back trajectory equations?

- X=X1+WS*0.447*60*5*SIN(WD*2*PI/360)
- Y=Y1+WS*0.447*60*5*COS(WD*2*PI/360)

Response: The back trajectory equations are based on the wind direction and wind speed measurements recorded at each monitoring site. The equations back calculate where the air parcel would be based on these 2 variables in a 2_D wind field. The calculations begin with the ending 5-minute values recorded each hour and calculate the location of where the air parcel was located at the end of the previous 5-minute period, etc. A similar approach has been used in "Analysis of Ozone in the Southeast Desert Air Basin on the Case Study Day of April 29, 1989, June 25, 1991. Sierra Research Inc."

Comment: It appears that the trajectories may actually be tangential streamlines and not parcel trajectories. According to the equations above, X and Y are calculated for each hour of meteorological data. This method creates a simplified representation path, because streamlines are actually a series of straight line tangents to a path, in this case one tangent for each new hourly record. Trajectories are based on motion equations are more representative of a true path. Considering the "relatively narrow margin" of modeled attainment, MAG should perform additional trajectory sensitivity analysis so that the most conservative domain size and source mix is selected for modeling.

Response: It is correct that X and Y represent the end point of tangential streamlines, however, they are based on 5-minute measurements, not hourly measurements. It is important to note that the weighted rollback methodology places a premium on the accuracy of the location of sources producing nearby emissions relative to those located farther away. Thus, insight provided by 5-minute measurements have much higher value than those provided by hourly values. The principle difference between the air parcel-based method and the method used in the report is 3D versus 2D (i.e., representation of vertical air movement). High wind conditions, however, are usually

characterized by elevated mixing layers and greater instability. Under these conditions, emissions from upwind sources should be well mixed in the vertical structure, therefore, the gradient between concentrations aloft and nearer the ground are not expected to be significant. Thus, the air parcel-based method and the one employed in this effort are expected to produce similar results if they employ the same time step and employ a similar spatial representation.

With regard to investigating alternate domains and source mixes, the attainment demonstration methodology has rendered domain size to be mute because emissions from nearby sources have dramatically greater influence on monitored concentrations than emissions from sources located farther upwind. A review of trajectories over nearby sources, however, shows that they vary substantially as the high wind arc shifts within the southwest quadrant (roughly 220° to 260°). Within this domain the share of passive open space drops by an order of magnitude as the arc shifts toward the west. While this shift produces a large change in the land use distribution and the related distance weighted emissions, there is little difference in the 2007 versus 2012 reductions observed across any the high wind days. A review of Tables V-25 to V 31 shows little variance between individual high wind hourly reductions and the overall daily mean reduction, despite the fact that there are large differences in the hourly wind directions and land uses. Given the relatively tight cluster of observed reductions there is no need to investigate the effect of alternate source mixes on demonstrating attainment.

Comment: Did MAG consider using ensemble or matrix trajectories using NOAA's HYSPLIT model? The variation in trajectory start times and location could prove to be a valuable form of sensitivity test for calculating domain size and source mix.

Response: Yes, we considered using HYSPLIT, but the following technical and accuracy concerns led us to choose the method we used in the report.

1. HYSPLIT is structured to run on an hourly basis. Meteorological data is typically supplied from hourly 3-D meteorological model (e.g., WRF, MM5, etc.) outputs. Readily available meteorological models addressing the PM-10 nonattainment area are structured to represent a relatively coarse hourly 12 km by 12 km grid domain.

2. 5-minute wind speed and wind direction measurements are available from many of the monitoring sites. These data provide the best representation of air movement impacting each of these monitors. To use these data in HYSPLIT requires that they be assimilated into one of the available meteorological models.

3. Discussions with NOAA indicated the data need to be gridded into a specific format and the preferred approach would be to use something like WRF-ARW.

Our concern is that once the 5-minute data is entered into WRF or a similar model, it would be modified to reflect the physical principals governing the operation of the model. Uncertainty about the magnitude of these changes and the coarse size of the available grid structure were considered

relative to the demands of the weighted rollback methodology which places a premium on emissions of nearby sources relative to those located farther away. We determined that more accurate estimates of the location of nearby sources impacting the monitors would be produced by using un-altered 5-minute measurements in the back trajectory calculations and for that reason did not pursue the use of HYSPLIT.

Comment: Are high wind back trajectories calculated for each monitor and event with high winds in 2007? How about other years? Will 2008, 2009, 2010 and 2011 have a day that is more conservative?

Response: High wind back trajectories were calculated for May 4th for the West 43rd Avenue monitor (when it alone exceeded the standard) and on June 6th for six monitors (i.e., West 43rd Avenue, Central Phoenix, Durango Complex, Greenwood, Higley, and West Phoenix) that collected meteorological data (when both the West 43rd Avenue and Higley monitors exceeded the standard). Since EPA accepted and approved the selection of these design days, there was no need to investigate high wind conditions on other days or years.

Emissions:

Comment: Appendix 2. P. V – 62 High Wind Inventories; Were emissions calculated based on wind speeds from meteorological monitor, or wind speeds calculated at each back trajectory location?

Response: High wind emissions were calculated using the five-minute or hourly average wind speeds as measured by the anemometer co-located at each modeled PM-10 monitor (i.e., West 43rd Avenue, Higley, etc.).

Comment: Appendix 2. P. V – 67 "The calculated emissions for each land use parcel are divided by the distance (feet) from the modeled monitor." Please provide these calculations.

Response: As described on page V – 62, the maximum size of a land use parcel within the high wind domain is 10 acres. Many of the parcels within the high wind domain are less than 10 acres, as land use types and property boundaries change frequently within the high wind domain. Through the use of GIS, the distance from each parcel within the high wind domain to the modeled monitor is calculated. This distance can then be used to weight the high wind emissions of each parcel by distance from the modeled monitor (i.e., emissions from land uses closest to the monitor are weighted higher than land uses farther away from the monitor). There are thousands of individual land uses parcels within each hourly high wind domain. It would be impractical to provide each individual land use parcel distance-weighted calculation, for each modeled high wind hour (over 200,000 individual calculations). As such, the sum of un-weighted and distance-weighted emissions for all land use parcels within each hourly high wind domain are provided in Tables V – 25 through V – 31 (pages V – 68 through V – 73).

Comment: Appendix 2. P. V – 68, Tables V – 25 : V – 36. It is very difficult to compare tons to

tons/feet (if at all). Please explain the units tons/feet. Are the tons/feet estimates the emissions equivalent to the source receptor interaction coefficient (x/Q)? If so, please explain.

Response: In Tables V – 25 through V – 31 both un-weighted and distance weighted emissions are provided for each modeled high wind hour. The unit of measure for un-weighted emissions is tons. The descriptor of tons/feet in the distance-weighted column of tables V – 25 through V – 31 is provided to remind the reader that these tons have been weighted by distance from the monitor (1/d), as measured in feet. For example: If land use parcel *X* in the high wind domain has un-weighted emissions of 100 tons, and is 1000 feet away from the monitor, its distance weighted emissions are 0.1. If land use parcel *Y* in the high wind domain has un-weighted emissions of 100 tons and is 2000 feet away from the monitor, its distance weighted emissions are 0.05. If there were only land use parcels *X* and *Y* in a hypothetical high wind domain, total un-weighted emissions for that hypothetical high wind domain would be 200 tons and distance-weighted emissions would be 0.15. As such, Tables V – 25 through V – 31 provide the sum of un-weighted and distance-weighted emissions for all land use parcels within each hourly high wind domain. (Note: Tables V – 32 through V – 36 do not discuss distance-weighted emissions (tons/feet) as incorrectly implied by the comment.)

Comment: Appendix 2. P. V – 68, Tables V – 25 : V – 36. A comparison of *% Reduction of Weighted Emissions* for both un-weighted and distance-weighted emissions would be helpful.

Response: The percent reduction of un-weighted emissions in Tables V – 25 through V – 31 can be obtained by a simple formula; 1-(2012 emissions/2007 emissions). For example: In Table V – 25, the un-weighted emissions for high wind hour 12 are 3.05 tons in 2007 and 2.09 tons in 2012. Using the formula above (1-(2.09/3.05)) the percent reduction of un-weighted emissions for hour 12 in Table V – 25 is 31.5%. This compares to 33.8% reduction in distance-weighted emissions. (Note: Tables V – 32 through V – 36 do not discuss percent reductions of high wind emissions as incorrectly implied by the comment.)

Comment: Dust Action General Permit claims a 1% benefit in 2012. The DAGP is for windblown emissions, yet windblown inventory is largely crushing & screening.

Response: The one percent increase in 2012 rule effectiveness attributable to the Dust Action General Permit applies to land use parcels that are regulated by Maricopa County Rule 310.01 (e.g., vacant lots, unpaved roads, etc.). Each high wind domain, upon which high wind emissions are calculated, contains a wide variety of land uses beyond crushing or screening or other sand & gravel activities. Each hourly high wind domain is unique (see Figure 6–5 on page 6–17 of main plan) based upon the local meteorology of that hour. There are many high wind domains that do not include crushing and screening or other sand and gravel activities as sources of windblown PM-10 emissions. The largest land uses by area within the high wind domains are vacant and open areas. Also, as shown in Figure 3–1 on page 3–5 of the main plan, the 2008 PM-10 emissions inventory for the nonattainment area list windblown PM-10 from sand and gravel sources as less than 0.5% of the inventory, while windblown PM-10 from vacant and open areas each comprise 4% of the

nonattainment area PM-10 inventory. It is therefore inaccurate to assume that the windblown inventory within the high wind domains is largely crushing and screening activities.

Temporary Monitor Insights:

Comment:

- In the Temporary Monitor Study, did the temporary meteorological sites conform to EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications?

- What was the height of each met tower?

- Were they monitors calibrated before the research started? Were they audited during the study?

- Did the study meet data completeness standards?

- The wind direction data are organized into five-degree increments, so concentration differences could be computed as a function of wind direction V-3. Did the anemometer used to collect the data provide an accuracy better than +- 5 degrees?

Response: The Temporary Monitor Insights, described on pages V-7 through V-20, in Chapter V of the Technical Support Document, Appendix B, Exhibit 1 of the Draft MAG 2012 Five Percent Plan, were derived from monitoring data collected by the Maricopa County Air Quality Department (MCAQD) beginning in February 2010. Consistent with the study protocol, MCAQD sited, installed, operated and maintained all instruments in conformance with applicable EPA regulations and guidance. MCAQD uses the same instruments and applies the same protocols to its existing monitoring network. Specifically:

- All of the temporary meteorological sites conformed to the EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications.

- Both met towers were ten meters high (above ground level).

- All anemometers were calibrated before, during and after the study. In addition, all EPA quality assurance methods were followed for all particulate monitors.

- All particulate and anemometer instruments had data completeness ratios above 90% meeting EPA's data completeness standards.

- The anemometer used to collect the data provided an accuracy better than ± 3 degrees.

Agenda Item #10

MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY… for your review

DATE:
May 1, 2012

SUBJECT:
Approval of the Draft FY 2013 MAG Unified Planning Work Program and Annual Budget and the Member Dues and Assessments

SUMMARY:
Each year staff develops the MAG Unified Planning Work Program and Annual Budget. The Work Program is reviewed in early spring by the federal agencies and approved by the Regional Council in May. The proposed budget information was presented incrementally each month, and adjustments have been made as information was received.

The Management Committee reviewed the development of the Work Program and Annual Budget at its meetings on January 11, February 8, March 14, and April 11, 2012. The Regional Council reviewed the draft budget document at its meetings on January 25, February 22, March 28 and April 25, 2012.

MAG Dues and Assessments were presented in January 2012 with a proposed overall decrease of 50 percent due to economic conditions.

Each year new projects are proposed for inclusion in the MAG planning efforts. The proposed new projects for FY 2013 were first presented at the February 8, 2012, Management Committee meeting, the February 13, 2012, Executive Committee meeting, and the February 22, 2012, Regional Council meeting. These new project proposals come from the various MAG technical committees, policy committees and other discussions with members and stakeholders regarding joint efforts within the region. These projects are subject to review and input by the committees as they go through the budget process. No additional revisions have been made to proposed projects from last month's presentations.

The review of the draft Work Program and Annual Budget for the Intermodal Planning Group (IPG) meeting on March 27, 2012, resulted in some formatting changes to the budget document but we have not received any other recommendations for the FY 2013 Work Program and Annual Budget document at this time.

The draft FY 2013 draft Work Program and Annual Budget reflects a decrease that is primarily due to lower anticipated costs in overhead, consultants, and capital expenditures. There is an overall increase in personnel and overhead budgeted costs of 6.63 percent. This net increase is mostly due to a budgeted increase in personnel costs. There is a decrease in budgeted overhead of 2.73% which reflects reduced costs in a number of overhead items with the highest dollar decreases in telephone charges, meetings, and noncapital equipment and software. These decreases are reflected in the budgeted amounts for FY 2013. MAG acquired a new telephone system in early FY 2012 and telephone charges have decreased with this new system. Meeting costs were budgeted higher in FY 2012 than in FY 2013 due to the meeting work being done for economic development and the Desert Peaks event in the current year. Increases were also anticipated for equipment maintenance costs in FY 2012 as a result of the remodel of the meeting space and the additional equipment added to the second floor. Although equipment maintenance costs have increased, the total overhead budgeted costs are lower for FY 2013. Overall, without including carryforward consultant estimates, the budget for FY 2013 reflects a decrease of 13.2 percent from the budgeted amount in the current year. Including carryforward consultant budgeted amounts, there is an overall decrease in the FY 2013 budget of 12.04 percent

The draft of the FY 2013 MAG Unified Planning Work Program and Annual Budget has narrative by division and associated program costs, and draft schedules in the budget appendix, including overall program allocations, allocation of funding by funding source, budgeted positions, dues and assessments, and consultant pages for new and carryforward consultants.

The MAG region, as a Transportation Management Area and as a Metropolitan Planning Organization, is required (by federal regulations 23 CFR 450.314) to describe all of the regional transportation-related activities within the planning area, regardless of funding sources or agencies conducting activities. The regional transportation projects received from other organizations are noted in the Work Program.

PUBLIC INPUT:
None.

PROS & CONS:
PROS: MAG is presenting the final draft FY 2013 budget, which provides for an incremental review of key budget details of the complete draft budget.

CONS: None.

TECHNICAL & POLICY IMPLICATIONS:
TECHNICAL: The Federal Intermodal Surface Transportation Efficiency Act of 1991 requires a metropolitan planning organization to develop a unified planning work program that meets the requirements of federal law. Additionally, the MAG By-Laws require approval and adoption of a budget for each fiscal year and a service charge schedule.

POLICY: As requested by the MAG Executive Committee and subsequently approved by the Regional Council in May 2002, the MAG Work Program and Annual Budget detail is being presented earlier to the Management Committee and there is increased notice to members on the budget as it is drafted. MAG is providing a budget summary, "MAG Programs in Brief," that outlines new programs and presents the necessary resources to implement these programs. This summary allows member agencies to quickly decipher the financial implications of such programs prior to their approval for implementation. The draft FY 2013 Unified Planning Work Program and Annual Budget is also provided.

ACTION NEEDED:
Recommend approval of the resolution adopting the Draft FY 2013 MAG Unified Planning Work Program and Annual Budget and the member dues and assessments.

PRIOR COMMITTEE ACTIONS:
Regional Council: This item was on the April 25, 2012, Regional Council agenda for information and input.

MEMBERS ATTENDING

Mayor Hugh Hallman, Tempe, Chair
Vice Mayor Stephanie Karlin for Mayor Marie Lopez Rogers, Avondale
* Councilwoman Robin Barker, Apache Junction
Mayor Jackie Meck, Buckeye
Mayor David Schwan, Carefree
Councilman Dick Esser, Cave Creek
Mayor Jay Tibshraeny, Chandler
Mayor Lana Mook, El Mirage
* President Clinton Pattea, Fort McDowell Yavapai Nation
Mayor Jay Schlum, Fountain Hills
* Mayor Ron Henry, Gila Bend
* Governor Gregory Mendoza, Gila River Indian Community
Mayor John Lewis, Gilbert
Mayor Elaine Scruggs, Glendale
Mayor Georgia Lord, Goodyear
* Mayor Yolanda Solarez, Guadalupe
Mayor Thomas Schoaf, Litchfield Park
Supervisor Max W. Wilson, Maricopa Co.
Mayor Scott Smith, Mesa
Vice Mayor Mary Hamway for Mayor Scott LeMarr, Paradise Valley
Mayor Bob Barrett, Peoria
Mayor Greg Stanton, Phoenix

Mayor Gail Barney, Queen Creek
* President Diane Enos, Salt River Pima-Maricopa Indian Community
Mayor W. J. "Jim" Lane, Scottsdale
Mayor Sharon Wolcott, Surprise
* Mayor Adolfo Gamez, Tolleson
Councilman Rui Pereira, Wickenburg
Mayor Michael LeVault, Youngtown
Victor Flores, State Transportation Board
Joseph La Rue, State Transportation Board
Roc Arnett, Citizens Transportation Oversight Committee

* Those members neither present nor represented by proxy.
# Attended by telephone conference call. + Attended by videoconference

Executive Committee: This item was on the April 16, 2012, Executive Committee agenda for information and input.

MEMBERS ATTENDING

Mayor Hugh Hallman, Tempe, Chair
Mayor Marie Lopez-Rogers, Avondale, Vice Chair
* Mayor Scott Smith, Mesa, Treasurer
# Mayor Jim Lane, Scottsdale
Mayor Michael LeVault, Youngtown
* Mayor Thomas L. Schoaf, Litchfield Park
Mayor Greg Stanton, Phoenix

* Not present # Participated by video or telephone conference call

Management Committee: This item was on the April 11, 2012, Management Committee agenda for information and input.

MEMBERS ATTENDING

Charlie Meyer, Tempe, Chair
* David Cavazos, Phoenix, Vice Chair
# George Hoffman, Apache Junction
Charlie McClendon, Avondale
* Stephen Cleveland, Buckeye
# Gary Neiss, Carefree
* Usama Abujbarah, Cave Creek
Rich Dlugas, Chandler
Dr. Spencer Isom, El Mirage
* Phil Dorchester, Fort McDowell Yavapai Nation
Ken Buchanan, Fountain Hills
Rick Buss, Gila Bend
* David White, Gila River Indian Community
Marc Skocypec for Patrick Banger, Gilbert
Brent Stoddard for Ed Beasley, Glendale
Brian Dalke, Goodyear
* Bill Hernandez, Guadalupe
* Darryl Crossman, Litchfield Park
Christopher Brady, Mesa
Jim Bacon, Paradise Valley
Susan Thorpe for Carl Swenson, Peoria
John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
David Richert, Scottsdale
Chris Hillman, Surprise
Reyes Medrano, Tolleson
Joshua Wright, Wickenburg
Lloyce Robinson, Youngtown
Floyd Roehrich for John Halikowski, ADOT
John Hauskins for David Smith, Maricopa Co.
Bryan Jungwirth for Steve Banta, Valley Metro/RPTA

* Those members neither present nor represented by proxy.
# Participated by telephone conference call. + Participated by videoconference call.

Regional Council: This item was on the March 28, 2012, Regional Council agenda for information and input.

MEMBERS ATTENDING

Mayor Hugh Hallman, Tempe, Chair
Mayor Marie Lopez Rogers, Avondale, Vice Chair
Councilwoman Robin Barker, Apache Junction
Mayor Jackie Meck, Buckeye
Mayor David Schwan, Carefree
Councilman Dick Esser, Cave Creek
Mayor Jay Tibshraeny, Chandler
Mayor Lana Mook, El Mirage

* President Clinton Pattea, Fort McDowell Yavapai Nation
Mayor Jay Schlum, Fountain Hills
* Mayor Ron Henry, Gila Bend
* Governor Gregory Mendoza, Gila River Indian Community
Mayor John Lewis, Gilbert
* Mayor Elaine Scruggs, Glendale
Mayor Georgia Lord, Goodyear
* Mayor Yolanda Solarez, Guadalupe
Mayor Thomas Schoaf, Litchfield Park
Supervisor Max W. Wilson, Maricopa Co.
\# Mayor Scott Smith, Mesa
* Mayor Scott LeMarr, Paradise Valley
* Mayor Bob Barrett, Peoria
Mayor Greg Stanton, Phoenix
\# Mayor Gail Barney, Queen Creek
* President Diane Enos, Salt River Pima-Maricopa Indian Community
Mayor W. J. "Jim" Lane, Scottsdale
Mayor Sharon Wolcott, Surprise
* Mayor Adolfo Gamez, Tolleson
\# Councilman Rui Pereira, Wickenburg
\# Mayor Michael LeVault, Youngtown
Victor Flores, State Transportation Board
Joseph La Rue, State Transportation Board
\# Roc Arnett, Citizens Transportation Oversight Committee

* Those members neither present nor represented by proxy.
\# Attended by telephone conference call. + Attended by videoconference

Executive Committee: This item was on the March 20, 2012, Executive Committee agenda for information and input.

MEMBERS ATTENDING

Mayor, Hugh Hallman, Tempe, Chair
\# Mayor, Marie Lopez-Rogers, Avondale, Vice Chair
Mayor Scott Smith, Mesa, Treasurer
\# Mayor Jim Lane, Scottsdale
Mayor Michael LeVault, Youngtown
Mayor Thomas L. Schoaf, Litchfield Park
Mayor Greg Stanton, Phoenix

* Not present
\# Participated by video or telephone conference call

Management Committee: This item was on the March 14, 2012, agenda for information and input.

MEMBERS ATTENDING

Charlie Meyer, Tempe, Chair
David Cavazos, Phoenix, Vice Chair
\# Matt Busby for George Hoffman, Apache Junction
Charlie McClendon, Avondale
\# Stephen Cleveland, Buckeye
* Gary Neiss, Carefree
Wayne Anderson for Usama Abujbarah, Cave Creek
Rich Dlugas, Chandler
Dr. Spencer Isom, El Mirage
Alfonso Rodriguez for Phil Dorchester, Fort McDowell Yavapai Nation
\# Ken Buchanan, Fountain Hills
Rick Buss, Gila Bend
* David White, Gila River Indian Community
Patrick Banger, Gilbert
Horatio Skeete for Ed Beasley, Glendale
John Fischbach, Goodyear
* Bill Hernandez, Guadalupe
Darryl Crossman, Litchfield Park
Kari Kent for Christopher Brady, Mesa
Jim Bacon, Paradise Valley
Carl Swenson, Peoria
\# Patrick Flynn for John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
David Richert, Scottsdale
Chris Hillman, Surprise
\# Chris Hagen for Reyes Medrano, Tolleson
Joshua Wright, Wickenburg
* Lloyce Robinson, Youngtown
Floyd Roehrich for John Halikowski, ADOT
David Smith, Maricopa Co.
Carol Ketcherside for Steve Banta, Valley Metro/RPTA

* Those members neither present nor represented by proxy.
\# Participated by telephone conference call. + Participated by videoconference call.

Regional Council: This item was on the February 22, 2012, Regional Council agenda for information and input.

MEMBERS ATTENDING

Mayor Hugh Hallman, Tempe, Chair
Mayor Marie Lopez Rogers, Avondale, Vice Chair
Councilwoman Robin Barker, Apache Junction
Councilman Eric Orsborn for Mayor Jackie Meck, Buckeye
Mayor David Schwan, Carefree
Councilman Dick Esser, Cave Creek
Councilman Jack Sellers for Mayor Jay Tibshraeny, Chandler
Mayor Lana Mook, El Mirage
* President Clinton Pattea, Fort McDowell Yavapai Nation
* Mayor Jay Schlum, Fountain Hills
* Mayor Ron Henry, Gila Bend
* Governor Gregory Mendoza, Gila River Indian Community
Mayor John Lewis, Gilbert
Mayor Elaine Scruggs, Glendale
Mayor Georgia Lord, Goodyear
* Mayor Yolanda Solarez, Guadalupe
Mayor Thomas Schoaf, Litchfield Park
Supervisor Mary Rose Wilcox, Maricopa Co.
Mayor Scott Smith, Mesa
* Mayor Scott LeMarr, Paradise Valley
Mayor Bob Barrett, Peoria
Mayor Greg Stanton, Phoenix
Mayor Gail Barney, Queen Creek
* President Diane Enos, Salt River Pima-Maricopa Indian Community
* Mayor W. J. "Jim" Lane, Scottsdale
Mayor Sharon Wolcott, Surprise
* Mayor Adolfo Gamez, Tolleson
Councilman Rui Pereira, Wickenburg
Mayor Michael LeVault, Youngtown
Victor Flores, State Transportation Board
* Vacant, State Transportation Board
Roc Arnett, Citizens Transportation Oversight Committee

* Those members neither present nor represented by proxy.
# Attended by telephone conference call. + Attended by videoconference

Executive Committee: This item was on the February 13, 2012, MAG Executive Committee agenda for information and input.

MEMBERS ATTENDING

* Mayor, Hugh Hallman, Tempe, Chair
Mayor, Marie Lopez Rogers, Avondale, Vice Chair
Mayor Scott Smith, Mesa, Treasurer
Mayor Jim Lane, Scottsdale
Mayor Michael LeVault, Youngtown
Mayor Greg Stanton, Phoenix
Mayor Thomas L. Schoaf, Litchfield Park

* Not present
# Participated by video or telephone conference call

Management Committee: This item was on the February 8, 2012, MAG Management Committee agenda for information and input.

MEMBERS ATTENDING

Charlie Meyer, Tempe, Chair
David Cavazos, Phoenix, Vice Chair
George Hoffman, Apache Junction
Charlie McClendon, Avondale
Stephen Cleveland, Buckeye
Gary Neiss, Carefree
Wayne Anderson for Usama Abujbarah, Cave Creek
Rich Dlugas, Chandler
Dr. Spencer Isom, El Mirage
Alfonso Rodriguez for Phil Dorchester, Fort McDowell Yavapai Nation
Julie Ghetti, Fountain Hills
Rick Buss, Gila Bend
* David White, Gila River Indian Community
Leah Hubbard for Patrick Banger, Gilbert
Brent Stoddard for Ed Beasley, Glendale
John Fischbach, Goodyear
* Bill Hernandez, Guadalupe
Darryl Crossman, Litchfield Park

Christopher Brady, Mesa
* Jim Bacon, Paradise Valley
Carl Swenson, Peoria
John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
David Richert, Scottsdale
Chris Hillman, Surprise
Reyes Medrano, Tolleson
Joshua Wright, Wickenburg
Lloyce Robinson, Youngtown
Floyd Roehrich for John Halikowski, ADOT
John Hauskins for David Smith, Maricopa Co.
Bryan Jungwirth, Valley Metro/RPTA

* Those members neither present nor represented by proxy.
# Participated by telephone conference call. + Participated by videoconference call.

This item was on the January 17, 2012, Executive Committee agenda for information and input.

MEMBERS ATTENDING

Mayor, Hugh Hallman, Tempe, Chair
Mayor, Marie Lopez-Rogers, Avondale, Vice Chair
Mayor Scott Smith, Mesa, Treasurer
* Mayor Jim Lane, Scottsdale
# Mayor Michael LeVault, Youngtown
Vice Mayor Thelda Williams, Phoenix
Mayor Thomas L. Schoaf, Litchfield Park

* Not present
# Participated by video or telephone conference call

This item was on the January 11, 2012, Management Committee agenda for information and input.

MEMBERS ATTENDING

Chad Heinrich for Charlie Meyer, Tempe
David Cavazos, Phoenix, Vice Chair
George Hoffman, Apache Junction
Charlie McClendon, Avondale
* Stephen Cleveland, Buckeye
Gary Neiss, Carefree
Wayne Anderson for Usama Abujbarah, Cave Creek
Patrice Kraus for Rich Dlugas, Chandler
Spencer Isom, El Mirage
* Phil Dorchester, Fort McDowell Yavapai Nation
Julie Ghetti, Fountain Hills
* Rick Buss, Gila Bend
* David White, Gila River Indian Community
Leah Hubbard for Patrick Banger, Gilbert
Horatio Skeete for Ed Beasley, Glendale
Paul Luizzi for John Fischbach, Goodyear
* Bill Hernandez, Guadalupe
Darryl Crossman, Litchfield Park
Kari Kent for Christopher Brady, Mesa
Jim Bacon, Paradise Valley
Carl Swenson, Peoria
Patrick Flynn for John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
David Richert, Scottsdale
Chris Hillman, Surprise
Chris Hagen for Reyes Medrano, Tolleson
Joshua Wright, Wickenburg
* Lloyce Robinson, Youngtown
Floyd Roehrich for John Halikowski, ADOT
John Hauskins for David Smith, Maricopa Co.
Bryan Jungwirth for Valley Metro/RPTA

* Those members neither present nor represented by proxy.
# Participated by telephone conference call. + Participated by videoconference call.

CONTACT PERSON:

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