

2009 Annual Report on the Status of the Implementation of Proposition 400

PROP 400

September 2009



Maricopa Association of Governments

**2009 ANNUAL REPORT
ON THE STATUS OF THE IMPLEMENTATION OF
PROPOSITION 400**

September 2009

**Maricopa Association of Governments
302 North First Avenue, Suite 300
Phoenix, Arizona 85003
Telephone: (602) 254-6300
FAX: (602) 254-6490**

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SUMMARY OF FINDINGS AND ISSUES

The *2009 Annual Report on the Status of the Implementation of Proposition 400* has been prepared by the Maricopa Association of Governments (MAG) in response to Arizona Revised Statute (ARS) 28-6354. ARS 28-6354 requires that MAG annually issue a report on the status of projects funded through Proposition 400, addressing project construction status, project financing, changes to the MAG Regional Transportation Plan, and criteria used to develop priorities. In addition, background information is provided on the overall transportation planning, programming and financing process. The key findings and issues from the 2009 Annual Report are summarized below.

MAG REGIONAL TRANSPORTATION PLAN

The MAG Regional Transportation Plan (RTP) provides the blueprint for the implementation of Proposition 400. By Arizona State law, the revenues from the half-cent sales tax for transportation must be used on projects and programs identified in the RTP adopted by MAG. The RTP identifies specific projects and revenue allocations by transportation mode, including freeways and other routes on the State Highway System, major arterial streets, and public transportation systems.

- Adoption of the “Regional Transportation Plan - 2010” Update has been targeted for July 2010.

During FY 2008 and FY 2009, the transportation planning process dealt with major project cost increases, as well as significantly reduced revenue collections and forecasts. As a result, the Regional Transportation Plan (RTP) has been undergoing review and updating by MAG to reflect the changing cost and revenue environment. The ongoing RTP update effort is addressing factors such as revenue and financing options, project phasing and scope revisions, and plan and program schedule adjustments. It is anticipated that this process will be completed in early 2010, and a “Regional Transportation Plan - 2010 Update” will be adopted in July 2010.

- The I-10 median, west of I-17 to 83rd Ave., was designated as the Locally Preferred Alternative for high capacity transit improvements.

On July 23, 2008, the Regional Council approved designating the I-10 median, west of I-17, as the Locally Preferred Alternative for high capacity transit improvements. The corridor would extend to 83rd Ave. Further transit options to the west of 83rd Ave., including intermodal connections, will be explored in future transit studies.

- The Sky Harbor Automated Train System (Stage Two) was included in the Regional Transportation Plan as an illustrative project.

On April 22, 2009, the Regional Council included Stage Two of the Sky Harbor Automated Train System (Sky Train) in the RTP as an illustrative project. The Sky Train is a fully automated, grade separated transit system that will connect the major facilities at Sky Harbor International Airport with the Metro light rail transit (LRT) system. Stage One of the project extends from the LRT station at 44th St. to Airport Terminal Four. Stage Two is planned to link the remaining airport terminals with the rental car center.

- A list of freeway noise mitigation projects was approved by the Regional Council.

On July 23, 2008, the Regional Council approved a list of freeway noise mitigation projects that will utilize Proposition 400 funding. A total of \$75 million was originally identified for noise mitigation in the 2003 Regional Transportation Plan, and was directed at improving conditions on the existing freeway system. Approximately \$55 million of this funding was expended for rubberized asphalt, leaving \$20 million for other noise mitigation projects, which were approved in the action by the Regional Council.

HALF-CENT SALES TAX AND OTHER TRANSPORTATION REVENUES

The half-cent sales tax for transportation approved through Proposition 400 is the major funding source for the MAG Regional Transportation Plan (RTP), providing over half the revenues for the Plan. In addition to the half-cent sales tax, there are a number of other RTP funding sources, which are primarily from State and Federal agencies.

- Fiscal Year 2009 receipts from the Proposition 400 half-cent sales tax were 13.6 percent lower than receipts in FY 2008.

Receipts from the Proposition 400 half-cent sales tax for FY 2009 were 13.6 percent lower than FY 2008, and 16.4 percent lower than those in FY 2007. The decline between FY 2007 and FY 2008, which was 3.2 percent, was the first year-over-year revenue decline in the history of the half-cent sales tax since its inception in 1985. The significant decline in FY 2009 testifies to the severe effects of the economic recession, which has been experienced since the fall of 2007.

- Forecasts of Proposition 400 half-cent revenues are 22.5 percent lower for the period FY 2010 through FY 2026, compared to the 2008 Annual Report estimate.

Future half-cent revenues for the period FY 2010 through FY 2026 are forecasted to total \$10.3 billion. This amount is \$3.0 billion, or 22.5 percent, lower than the forecast for the same period presented in the 2008 Annual Report. The total revenues for the FY 2010-2026 period reflect ADOT's interim sales tax forecast posted on its website in April 2009. This forecast will be subject to change during ADOT's annual forecast update process in the fall of 2009, which may result in further reductions in projected future revenues.

- Forecasts of total ADOT Funds dedicated to the MAG area for FY 2010 through FY 2026 are 12.6 percent lower than the 2008 Annual Report Annual Report estimate.

The forecast for ADOT funds totals \$6.1 billion for FY 2010 through FY 2026, which is 12.6 percent lower than the 2008 Annual Report forecast. This funding source represents nearly one-half of the total funding for the Freeway/Highway Life Cycle Program. This decrease is due to lower Arizona Highway User Fund (HURF) revenues and the transfer of a portion of ADOT funds to the Department of Public Safety as a result of the state budget difficulties.

- Forecasts of total MAG Federal Transportation Funds for FY 2010 through FY 2026 are \$1.1 billion lower than the 2008 Annual Report estimate.

The forecasted revenues for the period FY 2010 through FY 2026 total \$4.3 billion. This forecast is \$1.1 billion lower than that presented in the 2008 Annual Report for the same period. Most of this reduction is the result of lower projections in Federal transit funding. The current Federal transportation funding program ends on September 30, 2009, and the successor to the current program may result in significantly different approaches to transportation funding in all modal programs. Future Congressional action in this area will warrant close monitoring.

- In January 2009, \$104 million of the STAN allocation to the MAG area was swept by the Legislature.

In January 2009, \$104 million of the FY 2007 STAN allocation to the MAG area was swept by the Legislature to help balance the FY 2009 State Budget. This meant that three of the projects originally identified for acceleration would no longer receive STAN funding. Approximately \$184 million was originally allocated to the MAG during the spring 2006 Arizona Legislative Session. On December 13, 2006, the MAG Regional Council approved a set of projects to be funded with these monies.

- The MAG area received approximately \$308 million in ARRA funds for transportation infrastructure projects.

The American Recovery and Reinvestment Act (ARRA) was signed by President Obama on February 17, 2009 and contained funding for transportation infrastructure improvements. Approximately \$130 million was obligated for projects on the State Highway System in the MAG area. Also, \$1.1 million was utilized to provide local match for the Union Hills Rd./Beardsley Rd. connection in the ALCP, which was in addition to \$104 million in ARRA funding directed at strictly local jurisdiction projects. In addition, \$66 million in ARRA funding for transit projects and \$7 million for enhancement projects was authorized for the MAG area.

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program extends through FY 2026 and is maintained by the Arizona Department of Transportation (ADOT) to implement freeway/highway projects listed in the MAG Regional Transportation Plan (RTP). The program utilizes funding from the Proposition 400 half-cent sales tax extension, as well as funding from state and Federal revenue sources.

- A number of major freeway/highway construction projects were completed, underway, or advertised for bids during FY 2009.

Completed

- I-10 (SR 143 to US 60): WB auxiliary lane.
- I-17 (Carefree Hwy.): Reconstruct interchange.
- I-17 (Jomax Rd./Dixileta Dr.): New interchange.
- SR 51 (Shea Blvd. to Loop 101): New HOV lanes, including HOV ramp connections at Loop 101.
- SR 85 (MC 85 to Southern Ave) Widen to four lanes.
- SR 85 (MP 139.01 to 141.71): Widen to four lanes.
- SR 87 (Forest Bndry. to New Four Peaks Rd.): Road improvements, including an interchange at Bush Hwy.
- Loop 101 (Princess Dr. to Red Mountain Fwy.): New HOV lanes.
- Loop 101 (64th St.): New interchange.
- Loop 202 (Mill Ave. and Washington St.): Bridge widening.

Under Construction

- I-10 (101L to Sarival Ave): New HOV and general purpose lanes.
- I-17 (Dove Valley Rd.): New interchange.
- I-17 (101L to Jomax Rd.): New HOV and general purpose lanes.
- I-17 (Jomax Rd. to SR 74): New HOV and general purpose lanes.
- US 60 (I-10 to Loop 101): New general purpose lanes.
- SR 85 (MP 130 to MP 137): Widen to four lanes.
- SR 93 (Wickenburg Bypass): New roadway.

- Loop 101 (Tatum Blvd. to Princess Dr.): New HOV lanes.
- Loop 101/Thunderbird Rd.: T.I. improvements.
- Loop 101 (202L/Red Mt. Fwy. To 202L/Santan Fwy.): New HOV lanes.
- Loop 101 (I-17 to SR 51): FMS construction
- Loop 202 (SR 51 to 101L): Design-build freeway widening.
- Loop 202 (101L to Gilbert Rd.): New HOV lanes.
- Loop 303 (Cactus Rd., Waddell Rd., and Bell Rd.) T.I. structures.
- Loop 303 (Happy Valley Rd. to Lake Pleasant Rd.): Interim four-lane divided roadway.
- Loop 303 (Lake Pleasant Rd. to I-17): Interim four-lane divided roadway.

Advertised for Bids *

- I-10 (Verrado Way to Sarival Ave.): New general purpose lanes.
- I-10 (Sarival Ave. to Dysart Rd.): New general purpose lanes. *
- I-17 (SR 74 to Anthem Way): New general purpose lanes.
- US 60 (99th Ave. to 83rd Ave.): Widen to six lanes. *
- US 60 (303L to 99th Ave.): Widen to six lanes. *
- SR 74 (MP 20 to MP 22): New passing lanes. *
- SR 85 (I-10 to Southern Ave.): New mainline. *
- Loop 101 (Beardsley Rd./Union Hills Rd.): Expand interchange. *
- Loop 101 (SR 51 to Princess Dr.): FMS construction.

* Advertised early in FY 2010

- Material cost increases were experienced for several FY 2009 projects and projects in the FY 2010-2026 Life Cycle Program.

During FY 2009, the MAG Regional Council approved cost increases identified by ADOT and MAG totaling \$87 million for freeway/highway projects that were programmed for FY 2009. It was determined that the cost increases could be accommodated within available cash flow. Also, cost increases for projects in FY 2010-2026 Life Cycle Program totaled \$5.2 billion. The latter set of cost increases were not amended into the currently adopted RTP - 2007 Update and are under consideration as part of the 2010 update of the RTP.

- There is a major imbalance between estimated costs and projected revenues for the Freeway/Highway Life Cycle Program.

Funding available for use on freeway and highway projects through FY 2026 has been estimated to total \$9.0 billion (2009 \$'s). The estimated future costs identified in the Life Cycle Program for the period covering FY 2010 through

FY 2026 total \$14.6 billion. Therefore, estimated future costs exceed the projected future funds available by \$5.6 billion.

The potential for cost/revenue imbalances resulting from significant cost increases was identified in previous Annual Reports. The deficit quantified in the 2009 Annual Report reflects estimates made during 2008 and early 2009. The recent economic slowdown has lessened the pressure on construction costs and recent bids have been more favorable. However, those same economic conditions have resulted in decreasing revenue collections and lower long-term revenue forecasts. The outlook regarding construction costs and future transportation revenues remains highly uncertain, and continued adjustments in both costs and revenue estimates may be expected.

- The Freeway/Highway Life Cycle Program is undergoing revision to restore a balance between costs and revenues.

The MAG Transportation Policy Committee is in the process of addressing the imbalance between costs and revenues for the freeway/highway element of the Regional Transportation Plan. A number of measures are being evaluated to restore a balance, including: (1) facility design policies and value engineering, (2) project phasing and re-scoping, (3) project deferrals, (4) program management strategies, and (5) revenue enhancements. It is anticipated that this effort will be completed in early 2010, and an updated RTP considered for adoption by the Regional Council in mid-2010.

ARTERIAL STREET LIFE CYCLE PROGRAM

The Arterial Street Life Cycle Program (ALCP) extends through FY 2026 and is maintained by the Maricopa Association of Governments (MAG) to implement arterial street projects in the MAG Regional Transportation Plan (RTP). The Program receives significant funding from both the Proposition 400 half-cent sales tax and Federal highway programs, as well as a local match component. Although MAG is charged with the responsibility of administering the overall program, the actual construction of projects is accomplished by local government agencies. MAG distributes the regional share of the funding on a reimbursement basis.

- The Arterial Street Life Cycle Program Policies and Procedures, and Project Listing were updated during FY 2009.

On April 22, 2009, MAG adopted changes to the Arterial Life Cycle Program Policies and Procedures to refine closeout and substitution procedures. In addition, on June 24, 2009, the FY 2010 ALCP project listing was adopted to reflect updated information regarding project development status.

- During FY 2009, \$72 million in reimbursements were distributed to local governments from the Arterial Street Life Cycle Program, and work is continuing for reimbursements in FY 2010.

Seven jurisdictions received reimbursements for project work during FY 2009 amounting to over \$72 million. This brings the total reimbursements to \$122 million since the initiation of the Program. A total of eight project agreements were executed in FY 2009. This brings the total of project agreements executed to date to 34. It is anticipated that an additional 11 agreements will be executed during FY 2010. During FY 2010, it is also anticipated that a total of seven jurisdictions will receive reimbursements amounting to approximately \$99 million. Through FY 2009, 12 ALCP projects have been completed.

- Work will be proceeding on a broad range of projects in the Arterial Street Life Cycle Program.

During the period FY 2010 through FY 2014, work will be proceeding on 105 different arterial street projects. Various stages of work will be conducted on these projects, including 71 with design activity, 62 with right-of-way acquisition, and 55 with construction work, at some time during the five-year period.

- Project implementing agencies have deferred \$47 million in Federal and regional funding from FY 2009 to later years.

Lead agencies deferred \$47 million in Federal and regional funding from FY 2009 to later years. Increased project costs, reduced local revenues, and other implementation issues have resulted in the deferral of arterial projects by implementing agencies, due to the inability to provide matching funds, or other scheduling and resource issues.

- Approximately \$22 million in reimbursements were shifted beyond FY 2026 to achieve a balance between costs and revenues in the Arterial Street Life Cycle Program.

The total estimated future regional revenue reimbursements for ALCP projects are in balance with projected revenues. To achieve this balance, approximately \$22 million in programmed reimbursements were deferred to FY 2027, an unfunded year of the program. While these reimbursements fall beyond the ALCP, the affected projects remain funded in the MAG Regional Transportation Plan, which extends through FY 2028.

TRANSIT LIFE CYCLE PROGRAM

The Transit Life Cycle Program is maintained by the Regional Public Transportation Authority (RPTA) and implements transit projects identified in the MAG Regional Transportation Plan. The RPTA maintains responsibility for administering half-cent sales tax revenues deposited in the Public Transportation Fund for use on transit projects, including light rail transit (LRT) projects. Although RPTA maintains responsibility for the distribution of half-cent funds for light rail projects, the nonprofit corporation of Valley Metro Rail, Inc. was created to oversee the design, construction and operation of the light rail starter segment, as well as future corridor extensions planned for the system.

- The Central Phoenix/East Valley (CP/EV) Light Rail Starter Segment was opened in December 2008 and ridership is exceeding initial projections.

The CP/EV light rail service extends from Spectrum Mall at 19th Avenue and Bethany Home Road in Phoenix to west Mesa near the intersection of Main Street and Sycamore Street. Construction and system testing were completed in 2008. Service began for the entire system on December 27, 2008. Half-cent sales tax money from Proposition 400 was not utilized to pay for major route construction of the line, but was allocated toward certain elements of the support infrastructure (regional park-and-rides, bridges, vehicles, and for the cost to relocate utilities). Through the first six months of operation (January – June 2009), the (CP/EV) Light Rail Starter Segment is averaging over 33,000 boardings per day, 30 percent higher than projected.

- Decreases in half-cent sales tax collections and forecasted future revenues will delay the implementation of bus and light rail projects.

The decrease in half-cent sales tax collections and forecasted future revenues has had a significant impact on the ability to complete all of the projects included in the Transit Life Cycle Program. Decreases in construction costs will partially offset this in the short term, but operating costs for service continue to rise. Operations continue to take a larger part of the tax revenues leaving less for capital projects that are necessary to support services.

Significant delays have been made to local and express bus service improvements due to the reduction in revenues. Many routes are delayed beyond the expiration of the tax in FY 2026. The delays were necessary to ensure that enough tax revenues were available to match federal funds to purchase fleet to maintain continuing service on routes that are in operation. Also, very few new capital facilities, such as park-and-ride lots, are funded through FY 2026.

In addition, some delays to construction for LRT extensions have been programmed, although the delays were not as extensive as those needed in

the bus program. However, the Northeast Phoenix LRT corridor has been shifted beyond the TLCP horizon year of FY 2026 for implementation.

- A balanced Transit Life Cycle Program was achieved in FY 2009 only by delaying the implementation of numerous projects due to the decrease in estimated future revenues.

For the remainder of the Transit Life Cycle Program, which covers the period FY 2010 through FY 2026, projected revenues are in balance with future projects costs but with very little left at the end of the program. However, the drastic delays that were needed to balance the program were a major concern to the RPTA Board of Directors. The Board asked that staff, in cooperation with RPTA's members, continue working through December 2009 to re-evaluate priorities and projects, and develop an improved program to meet more communities' needs within the reduced resources available.

- The outlook for Federal discretionary funding for transit will require continuous monitoring.

Another consideration is that a large part of the funding for the LRT system is awarded by the US Department of Transportation through the discretionary "New Starts Program". The timing and amounts of light rail transit new start monies coming to the MAG region will be subject to a highly competitive process at the Federal level. Discretionary funding for the bus capital program is also highly competitive. The prospects for awards from Federal programs will require careful monitoring. The pending reauthorization of Federal Transportation funding legislation will also impact when and how Federal Transit Administration funding flows to the region.

PERFORMANCE MONITORING PROGRAM

The MAG Transportation System Performance Monitoring and Assessment Program has been established to provide a framework for reporting performance at the system and project levels, and serve as a repository of historical, simulated and observed data for the transportation system in the MAG Region.

- During FY 2009, the Performance Measurement Framework study was completed..

During FY 2009, the Performance Measurement Framework consultant study for the regional roadway network was completed, and will provide the basis for an annual MAG Transportation System Monitoring and Performance Report.

CHAPTER ONE

INTRODUCTION

Proposition 400 was passed by the voters of Maricopa County on November 2, 2004, authorizing a 20-year extension of a half-cent sales tax for transportation projects in Maricopa County. The extension was initiated on January 1, 2006 and will be effective through December 31, 2025. The half-cent tax was originally approved by the voters in 1985 through Proposition 300.

Arizona Revised Statute (ARS) 28-6354 requires that the Maricopa Association of Governments (MAG) annually issue a report on the status of projects funded through Proposition 400. MAG produced the first *Annual Report on the Status of the Implementation of Proposition 400* in 2005 and will produce an updated report yearly during the life of the tax. The annual reporting process addresses project construction status, project financing, changes to the MAG Regional Transportation Plan (RTP), and criteria used to develop priorities. In addition, information is provided on the overall transportation planning, programming and financing process.

The Annual Report addresses project status and tabulates expenditures through the fiscal year ending June 30th. In addition, the overall program outlook through FY 2026 for each transportation mode is reviewed, with an emphasis on the balance between projected costs and forecasted revenues. All projects for the major transportation modes (freeways/highways, arterial streets, public transit), as defined in the RTP, are monitored, whether they specifically receive half-cent funding or not. This ensures that progress on the entire RTP is monitored and trends for all revenue sources are tracked. Any amendments to the RTP are also identified as part of the annual reporting process. A database of RTP projects by mode is maintained to track costs, expenditures and accomplishments on a continuing basis.

The following 2009 Annual Report covers progress through the fiscal year ending June 30, 2009, and reviews the program outlook through June 30, 2026. During fiscal year 2009, the life cycle programming process has had to deal with major project cost increases, as well as significantly reduced revenue collections and forecasts. The Regional Transportation Plan (RTP) is undergoing updating by MAG to reflect these changing cost and revenue conditions, but this process is not anticipated to be completed until early 2010.

The Regional Public Transportation Authority (RPTA) has developed a balanced Transit Life Cycle Program, which was adopted by the RPTA Board in June 2009. The Arterial Life Cycle Program was re-balanced by MAG, and it was adopted by the MAG Regional Council in June 2009. These programs are reflected in the 2009 Annual Report and will serve as input to the ongoing RTP

update process. However, a balanced Freeway Life Cycle Program was not established by the end of FY 2009 and awaits the results of the update of the RTP. Therefore, the version of the Freeway Life Cycle Program reviewed in the 2009 Annual Report is indicative of the cost/revenue imbalances that are being addressed in the ongoing update of the RTP.

CHAPTER TWO

PROPOSITION 400 LEGISLATION

Proposition 400 was enabled by House Bill 2292 and House Bill 2456, which were signed by the Governor of Arizona on May 14, 2003 and on February 5, 2004, respectively. These two pieces of legislation were enacted to guide the process leading up to the Proposition 400 election on November 2, 2004 and establish the features of the half-cent tax sales extension. Key elements of House Bills 2292 and 2456 are described below.

2.1 HOUSE BILL 2292

Arizona House Bill 2292, which was passed during the Spring 2003 session of the Arizona Legislature, recognized MAG's establishment of a Transportation Policy Committee (TPC). The TPC, which was tasked with the development of the Regional Transportation Plan (RTP), is a public/private partnership and consists of 23 members. Seventeen seats are from the membership of MAG and six are members who represent region-wide business interests. The MAG members include one representative each from the Citizens Transportation Oversight Committee, the ADOT State Transportation Board, the County Board of Supervisors and the Native American Indian Communities in the County, as well as 13 representatives from a geographic cross-section of MAG cities and towns. The bill required the TPC to develop the RTP in cooperation with the Regional Public Transportation Authority (RPTA) and ADOT, and in consultation with the County Board of Supervisors, Native American Indian Communities, and cities and towns in the County.

The legislation identified the consultation process to be followed by the TPC in developing the RTP, and established a formal procedure for reviewing the Draft Plan. This included reviews at the alternatives stage and final draft stage of the planning process. As part of this process, the TPC was required to vote on, and provide written responses to, individual agency comments on the Draft Plan. After this extensive review and consultation process, the TPC was required to recommend a Plan to the MAG Regional Council for final approval.

Arizona House Bill 2292 also set forth the factors to be considered during the development of the RTP, such as the impact of growth on transportation systems and the use of a performance-based planning approach. It identified key features required in the final Plan, including a twenty-year planning horizon, allocation of funds between highways and transit, and priorities for expenditures. This legislation also established the process for authorizing the election to extend the existing half-cent county transportation excise tax. This existing tax was originally approved by Maricopa County voters under Proposition 300 in October 1985 and expires on December 31, 2005.

In addition, House Bill 2292 contained the requirement that MAG issue an annual report on the status of projects funded through the half-cent sales tax for transportation. This includes a public hearing within thirty days after the report is issued. Specific items to be addressed in the annual report cover the status of projects, changes to the RTP, changes to corridor and corridor segment priorities, project financing and project options, and criteria used to establish priorities.

2.2 HOUSE BILL 2456

House Bill 2456 was passed by the Arizona Legislature and signed by the Governor of Arizona in February 2004. This legislation authorized the election to extend the half-cent sales tax for transportation, known as Proposition 400, which was placed on the November 2, 2004 ballot by the Maricopa County Board of Supervisors. In addition to calling the election, this legislation included a number of requirements regarding the nature of the tax extension and its administration. Several of the key provisions are reviewed below.

2.2.1 Revenue Distribution

House Bill 2456 addresses the allocation of revenues from the collection of sales tax monies from January 1, 2006, to December 31, 2025, among the eligible transportation modes. In accordance with the legislation, the net revenues collected are to be distributed as follows:

- 56.2 percent to the regional area road fund for freeways and other routes in the State Highway System, including capital expense and maintenance.
- 10.5 percent to the regional area road fund for major arterial street and intersection improvements, including capital expense and implementation studies.
- 33.3 percent to the public transportation fund for capital construction, maintenance and operation of public transportation classifications, and capital costs and utility relocation costs associated with a light rail public transit system.

2.2.2 Revenue Firewalls

The legislation creates three “firewalls”, which prohibit the transfer of half-cent funding allocations from one transportation mode to another. These firewall divisions correspond to the categories established for the distribution of revenues and include:

- Freeways and highways (including sub-accounts for capital and maintenance).

- Arterial streets.
- Public transportation (with sub-accounts for capital, maintenance and operations, and light rail).
- Half-cent revenues cannot be moved among transportation modes (freeway/highway, arterial and transit).

2.2.3 Five-Year Performance Audit

As specified in House Bill 2456, beginning in 2010 and every fifth year thereafter, the Auditor General shall contract with a nationally recognized independent auditor with expertise in evaluating multimodal transportation systems and in regional transportation planning, to conduct a performance audit of the Regional Transportation Plan and all projects scheduled for funding during the next five years. The audit will make recommendations regarding whether further implementation of a project or transportation system is warranted, warranted with modification, or not warranted.

2.2.4 Major Amendment Process

House Bill 2456 recognized that the Regional Transportation Plan may be updated to introduce new transportation projects or to modify the existing plan. To ensure that the amendment process receives broad exposure and careful consideration, the concept of a major amendment was established. A major amendment of the Regional Transportation Plan means:

- The addition or deletion of a freeway, a route on the State Highway System, or a Fixed Guideway Transit System.
- The addition or deletion of a portion of a freeway; route on the State Highway System; or a Fixed Guideway Transit System that either exceeds one mile in length, or exceeds an estimated cost of forty million dollars as provided in the Regional Transportation Plan.
- The modification of a transportation project in a manner that eliminates a connection between freeways or fixed guideway facilities.

A major amendment is required if:

- An audit finding recommends that a project or system in the Regional Transportation Plan is not warranted, or requires a modification that is a major amendment.

- The MAG Transportation Policy Committee (TPC) recommends to the Regional Planning Agency a modification of the Regional Transportation Plan that is a major amendment.

The consideration and approval of a major amendment must adhere to a specific and rigorous consultation and review process set forth in the legislation. A major amendment requires that alternatives in the same modal category, which will relieve congestion and improve mobility in the same general corridor, are to be addressed. The TPC may recommend that funds be moved among projects within a mode, but half-cent revenues cannot be moved among transportation modes (freeway/highway, arterial and transit).

2.2.5 Life Cycle Programs

The legislation required that the agencies implementing the regional freeway, arterial, and transit programs are to adopt a budget process ensuring that the estimated cost of the program of improvements does not exceed the total amount of revenues available. These “life cycle programs” are the management tools used by the implementing agencies to ensure that transportation program costs and revenues are in balance, and that project schedules can be met. Responsibilities for maintaining these programs are as follows:

- Freeway/Highway Life Cycle Program: Arizona Department of Transportation.
- Arterial Life Cycle Program: Maricopa Association of Governments.
- Transit Life Cycle Program: Regional Public Transportation Authority.

The life cycle programs develop a schedule of projects through the life of the half-cent sales tax, monitor progress on project implementation, and balance annual and total program costs with estimated revenues. The MAG Annual Report draws heavily on life cycle program data and other life-cycle progress documentation.

2.2.6 Regional Transportation Plan: Enhancements and Material Changes

House Bill 2456 requires that any change in the Regional Transportation Plan and the projects funded that affect the MAG Transportation Improvement Program, including priorities, be approved by the MAG Regional Council. Requests for changes to projects funded in the Regional Transportation Plan that would materially increase costs are also required to be submitted to the MAG Regional Council for approval. If a local authority requests an enhancement to a project funded in the Regional Transportation Plan, the local authority is required to pay all costs associated with the enhancement.

CHAPTER THREE

REGIONAL ROLES AND RESPONSIBILITIES

The responsibility for implementing and monitoring projects and programs funded through Proposition 400 is shared by several regional and State entities. These organizations include:

- Maricopa Association of Governments.
- Transportation Policy Committee.
- Arizona Department of Transportation.
- State Transportation Board.
- Regional Public Transportation Authority.
- Valley Metro Rail.
- Citizens Transportation Oversight Committee.

A brief description of each agency and committee, and their role in implementing freeway/highway, arterial street and transit programs is provided below. It should be noted that local governments also design and construct projects covered in the regional arterial street program, and manage and operate elements of the bus transit system. These agencies are not discussed here.

3.1 MARICOPA ASSOCIATION OF GOVERNMENTS

The Maricopa Association of Governments (MAG), formed in 1967, is a regional planning agency and serves as the designated Metropolitan Planning Organization (MPO) for Maricopa County, including the Phoenix urbanized area. MAG members include the region's 25 incorporated cities and towns, Maricopa County, the Gila River Indian Community, the Fort McDowell Indian Community, the Salt River Pima-Maricopa Indian Community, the Citizens Transportation Oversight Committee, and the Arizona Department of Transportation.

MAG is responsible for the coordination of the following regional planning activities:

- Multi-modal Transportation Planning.
- Air Quality.

- Wastewater.
- Solid Waste.
- Human Services.
- Socioeconomic Projections.

MAG strives to develop plans that are comprehensive and that are consistent and compatible with one another. For example, the Regional Transportation Plan must be in conformance with the air quality plans for the metropolitan area. MAG is responsible for the air quality conformity analysis that shows whether the transportation plan complies with the provisions of air quality plans and other air quality standards. MAG is also responsible for the development of the Arterial Street Life Cycle Program. Individual projects in this program are constructed by the cities, towns and Maricopa County.

The MAG Regional Council is the decision-making body of MAG. The Regional Council consists of elected officials from each member agency. The Chairman of Citizens Transportation Oversight Committee (COTC) and the Maricopa County representatives from the State Transportation Board also sit on the Regional Council, but only vote on transportation-related issues. Many policy and technical committees provide analysis and information to the MAG Regional Council.

The MAG Regional Council is the ultimate approving body for the MAG Regional Transportation Plan and MAG Transportation Improvement Program. Any change in the Regional Transportation Plan or the projects funded that affect the Transportation Improvement Program, including priorities, must be approved by the MAG Regional Council.

3.2 TRANSPORTATION POLICY COMMITTEE

The MAG Transportation Policy Committee (TPC), which met for the first time in September 2002, was initially tasked with the responsibility of developing the Regional Transportation Plan (RTP) and recommending the plan for adoption by the MAG Regional Council. The TPC recommended a Plan in September 2003 and it was adopted unanimously by the MAG Regional Council on November 25, 2003. In addition to developing the RTP, the TPC has continuing responsibilities to advise the Regional Council on transportation issues, including, but not limited to recommendations regarding: the MAG Transportation Improvement Program; the Life Cycle Programs; and requested material changes and amendments to the RTP.

The TPC is comprised of 23 members and is a public/private partnership. Of the total membership, six are members representing business interests and 17 are

from the membership of MAG. The MAG members include 13 representatives from a geographic cross-section of MAG cities and towns, as well as one representative each from the Citizens Transportation Oversight Committee, the ADOT State Transportation Board, the County Board of Supervisors and the Native American Indian Communities in the County. The business representatives are from businesses with region-wide interest, including one representing transit interests and a representative from the freight industry. Three of the business representatives are appointed by the Speaker of the Arizona House of Representatives and the other three are appointed by the President of the Arizona State Senate.

3.3 ARIZONA DEPARTMENT OF TRANSPORTATION

The primary role of the Arizona Department of Transportation (ADOT) is to provide a transportation system that meets the needs of the citizens of Arizona. The transportation system includes the State Highway System, which is designed to provide safe and efficient highway travel around the State. The Governor of Arizona appoints the Director of ADOT. The MAG Regional Freeway/Highway Program is part of the State Highway System, and is the responsibility of ADOT. However, ADOT is not responsible for highways, streets, or roads that are not part of the State Highway System, which are owned and maintained by counties, or cities and towns in Arizona.

ADOT is responsible for the overall management of the Regional Freeway/Highway Program. This includes the design, engineering, right-of-way acquisition, and construction and maintenance activities. ADOT develops and maintains the Freeway/Highway Life Cycle Program, making projections of available revenues and developing financing strategies to fund projects.

ADOT also has a role for the arterial streets component of the MAG Regional Transportation Plan. Although MAG is responsible for the development of the Arterial Street Life Cycle Program, in accordance with ARS 28-6303.D.2, ADOT maintains the arterial street fund and issues bonds on behalf of the MAG Arterial Street Program.

3.4 STATE TRANSPORTATION BOARD

The State Transportation Board has statutory authority over the State Highway System. The State Transportation Board also sets priorities for the State Highway System (except the MAG Regional Freeway/Highway Program), establishes a five-year construction program for individual airport and highway projects, awards construction contracts, issues bonds and sets policy. The Board consists of seven members appointed by the Governor representing six geographic regions of the State. Two members are appointed from Maricopa County. Each member serves a six-year term.

Each year, the Board approves the ADOT Five-Year Highway Construction Program for statewide projects and the Life Cycle Program for the MAG Freeway/Highway System. The Life Cycle Program incorporates the priorities set by the MAG Regional Council. ADOT and MAG cooperatively develop the program for the MAG region. The State Transportation Board cannot approve projects within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program. This limitation provides for the participation of local governments in project selection and to ensure conformity with air quality standards.

The State Transportation Board adopts policies that affect the MAG Regional Freeway/Highway Program. The Board has the authority to issue bonds supported by both the Regional Area Road Fund and the Highway User Revenue Fund and issue other forms of debt. Issuance of these bonds allows for significant acceleration of the MAG Regional Freeway/Highway Program than what would be possible on a pay-as-you-go basis.

3.5 REGIONAL PUBLIC TRANSPORTATION AUTHORITY/VALLEY METRO

The Regional Public Transportation Authority (RPTA)/Valley Metro is a political subdivision of the State of Arizona, and is overseen by a board consisting of an elected official from each member jurisdiction. Membership is open to all municipalities in Maricopa County and to the County government. Currently, the 14 participating communities are Avondale, Chandler, El Mirage, Gilbert, Glendale, Goodyear, Mesa, Peoria, Phoenix, Scottsdale, Surprise, Tempe, Queen Creek, and Maricopa County. In 1993, the RPTA Board adopted Valley Metro as the identity for the regional transit system. The RPTA Board cannot approve projects and programs within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program.

The primary goal of RPTA/Valley Metro is to ensure that a viable public transportation system is provided for regional mobility, and to ease the traffic congestion and improve air quality. The RPTA is responsible for transit public information, the management and operation of regional bus and dial-a-ride services, the Regional Ridesharing program, a regional vanpool program and elements of the countywide Trip Reduction program and Clean Air Campaign. The RPTA is also responsible for maintaining the Transit Life Cycle Program.

In November of 2004, the passage of Proposition 400 increased the amount of funding for public transit from the former amount of approximately two percent of total half-cent sales tax revenues (\$5 million annually inflated), to a figure of over 33 percent, which will begin on January 1, 2006. Over the 20-year life of the half-cent sales tax as approved by Proposition 400, it is anticipated that approximately \$5.0 billion will be raised for public transit projects. These monies will be deposited in the Public Transportation Fund (PTF), which was created as

part of the Proposition 400 legislation. The RPTA is charged with the responsibility of administering monies in the PTF for use on transit projects, including light rail transit projects, identified in the MAG Regional Transportation Plan. The RPTA Board must separately account for monies allocated to: 1) light rail transit, 2) capital costs for other transit, and 3) operation and maintenance costs for other transit.

3.6 VALLEY METRO RAIL

Valley Metro Rail is a non-profit, public corporation overseeing the design, construction, and operation of the light rail transit starter segment, as well as extensions to the project. The Valley Metro Rail Board of Directors is composed of the mayors of each of the participating cities. The five cities currently participating are Phoenix, Tempe, Mesa, Glendale and Chandler.

The Valley Metro Rail Board of Directors establishes procedures for the administration and oversight of the design, construction and operation of light rail, as well as receives and disburses funds and grants from Federal, State, local and other funding sources. The Valley Metro Rail board has the authority to enter into contracts for light rail design and construction, hire or contract for staff for the Light Rail Project, and undertake extensions to the system. The Valley Metro Rail Board cannot approve projects and programs within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program

3.7 CITIZENS TRANSPORTATION OVERSIGHT COMMITTEE

ARS 28-6356 provides for the establishment of a Citizens Transportation Oversight Committee (CTOC) in a county that has a transportation sales tax such as Maricopa County. CTOC consists of seven persons - one member appointed from each of the five supervisory districts in Maricopa County. The Governor appoints an at-large member and the Chair of the committee. Members serve three-year terms. ADOT provides a special assistant to provide staff support to CTOC and to assist in coordination among CTOC, ADOT, MAG, RPTA and local jurisdictions.

The CTOC plays a number of important roles in the regional transportation process. It reviews and advises MAG, RPTA and the State Transportation Board on matters relating to the Regional Transportation Plan, the Transportation Improvement Program, the ADOT 5-year Construction Program and the life cycle management programs. This includes making recommendations on any proposed major amendment of the RTP, on criteria for establishing priorities, and on the five-year performance audit of the RTP. The CTOC is charged with annually contracting for a financial compliance audit of expenditures from the Regional Area Road Fund and the Public Transportation Fund, as well as setting

parameters for periodic performance audits of the administration of those funds (life cycle programs).

The CTOC also holds public hearings and issues reports as appropriate, receives written complaints from citizens regarding adverse impacts of transportation projects funded in the RTP, receives complaints from citizens relating to regional planning agency responsibilities, and makes recommendations regarding transportation projects and public transportation systems funded in the Regional Transportation Plan.

CHAPTER FOUR

REGIONAL TRANSPORTATION PLAN

The MAG Regional Transportation Plan (RTP) provides the blueprint for the implementation of Proposition 400. By Arizona State law, the revenues from the half-cent sales tax for transportation must be used on projects and programs identified in the RTP adopted by MAG. The RTP identifies specific projects and revenue allocations by transportation mode, addressing freeways and other routes on the State Highway System, major arterial streets and intersection improvements, and public transportation systems. An overview of the RTP is provided below, including plan elements, priority criteria, and changes to the RTP during FY 2009.

4.1 PLAN OVERVIEW

The MAG Regional Transportation Plan (RTP) is a comprehensive, performance based, multi-modal and coordinated regional plan, covering all major modes of transportation, including freeways/highways, streets, public mass transit, airports, bicycles and pedestrian facilities, goods movement and special needs transportation. In addition, key transportation related activities are addressed, such as transportation demand management, system management, safety and air quality conformity analysis.

4.1.1 Plan Development Process

The Regional Transportation Plan was developed through a comprehensive, performance-based process, consistent with State legislation. This process followed a specific methodology and evaluated the Plan relative to a range of performance measures. Through the application of computer modeling techniques, this process took into account the effects of population growth on travel patterns to identify future demand for transportation facilities. The steps in the process were: 1) goals and objectives, 2) needs assessment, 3) evaluation methodologies, 4) scenario evaluation, 5) scenario refinement, and 6) phasing and funding.

The transportation planning process also includes broad-based public input, which has been received as the result of an extensive public involvement process that included an aggressive public outreach effort. Public involvement meetings and events are held to accommodate citizens throughout the MAG Region. Additional input is also received through the MAG Web Site. In addition, MAG is committed to ensuring that communities of concern as defined and included in the Title VI Act of 1964, Executive Order 12898 addressing environmental justice, and other Federal directives are specifically considered during the transportation planning and programming process.

As required by the Clean Air Act, air quality conformity analyses are conducted on the RTP and the associated Transportation Improvement Program (TIP). Analyses are conducted on carbon monoxide, volatile organic compounds, and particulate matter (PM-10). These conformity analyses have demonstrated that the RTP and TIP are in conformance with regional air quality plans and will not contribute to air quality violations.

4.1.2 Freeway/Highway Element

The RTP calls for new freeway corridors, as well as improvements to existing freeways and highways. Operation and maintenance of the freeway/highway system are also addressed. All projects are on the State Highway System.

New Freeway/Highway Corridors: New corridors in the RTP add approximately 490 lane miles to the network and include: Loop 202/South Mountain Freeway, Loop 303 Freeway, State Route 801/I-10 Reliever Freeway, and State Route 802/Williams Gateway Freeway.

Freeway/Highway Widening and Other Improvements: These improvements include an additional 530 lane-miles of general-purpose lanes and 300 lane-miles of HOV lanes, covering essentially the entire existing freeway system. Improvements to US 60/Grand Avenue, State Route 85 and other State Highways are also funded. In addition to new travel lanes, additional interchanges with arterial streets on existing freeways are included, as well as improvements at freeway-to-freeway interchanges to provide direct connections between HOV lanes.

Freeway/Highway Maintenance, Operations, Mitigation and System-wide Programs: The RTP provides funding for maintenance of the freeway system, directed at litter pickup, landscaping, and noise mitigation. System-wide programs, such as freeway operations management, are also identified.

Freeway/Highway Priorities: The RTP includes the ADOT Freeway/Highway Life Cycle Program, which is a 20-year schedule of projects that implements the freeway/highway priorities identified in the RTP (see Chapter Six).

4.1.3 Arterial Street Element

The RTP includes a component for major arterial streets in the MAG Region. While MAG is responsible for developing the RTP, local jurisdictions are primarily responsible for design, right-of-way acquisition, construction and maintenance of arterial facilities as identified in the RTP.

New Arterial Facilities, Widening and Intersection Improvements: The RTP provides regional funding for widening existing streets, improving intersections, and constructing new arterial segments. As growth extends into new areas,

widening and extension of the arterial street network will be needed in order to keep up with growing traffic volumes. Congestion on the arterial street network is often caused by inadequate intersection capacity. The RTP calls for a number of intersection improvements, which enhance traffic flow and reduce congestion.

Intelligent Transportation System (ITS): The RTP allocates funding to assist in the implementation of projects identified in the regional ITS Plan. These projects smooth traffic flow and help the transportation system to operate more efficiently.

Arterial Street Priorities: The RTP includes the MAG Arterial Life Cycle Program, which is a 20-year listing of street projects that have been identified in the RTP for regional funding (see Chapter Seven).

4.1.4 Transit Element

The RTP calls for a range of transit facilities and services throughout the region. A regional bus network is included to ensure that reliable service is available on a continuing basis. In addition, light rail corridors are identified to provide a high-capacity backbone for the transit network. Other transit services are included to provide a full range of options, such as paratransit and rural transit service.

Regional Bus: Regional bus services include both arterial grid and express type services that are designed to provide regional connections. Regional bus service consists of three categories of service: Supergrid routes, which provide local fixed route service on the arterial street grid system; Arterial Bus Rapid Transit (BRT) Routes, which operate as express overlays on streets served by local fixed route service; and Freeway BRT Routes, which use freeways to connect remote park-and-ride lots with major activity centers. Funding for both capital and operating needs is identified in the RTP.

Light Rail Transit: The RTP includes a 57.7-mile Light Rail Transit (LRT) system, which incorporates the 20-mile minimum-operating segment (MOS) as designated in the Central Phoenix/East Valley Major Investment Study (MIS); a five-mile Northwest extension; a five-mile extension to downtown Glendale; an 11-mile extension along I-10 west to 79th Avenue; a 12-mile extension to Paradise Valley Mall; a two-mile extension south of the MOS on Rural Road to Southern Avenue; and a 2.7-mile extension from the east terminus of the MOS to Mesa Drive. The technology on the latter segment has not been determined. Funding for LRT capital needs, only, is identified in the RTP. The RTP also provides for the continued investigation of commuter rail implementation strategies for the region.

Other Transit Services: Other transit services provided in the RTP include rural/non-fixed route transit, commuter vanpools, and paratransit transportation.

Transit Priorities: The RTP includes the RPTA Transit Life Cycle Program, which is a 20-year schedule of bus and light rail projects that implements the transit priorities identified in the RTP (see Chapter Eight).

4.1.5 Plan Funding

The half-cent sales tax for transportation is the major funding source for the MAG RTP. In addition, there are other funding sources from State and Federal agencies. These revenue sources, and the half-cent tax, have been termed regional revenues in the RTP. In addition to regional revenues, local governments provide certain funding allocations that support the implementation of the RTP. The regional revenue sources are discussed in detail in Chapter Five.

4.2 PRIORITY CRITERIA

Arizona Revised Statute 28-6354 B. directs MAG to develop criteria that establish the priority of corridors, corridor segments, and other transportation projects. These criteria include public and private funding participation; the consideration of social and community impacts; the establishment of a complete transportation system for the region; the construction of projects to serve regional transportation needs; the construction of segments to provide connectivity on the regional system; and other relevant criteria for regional transportation. The discussion below describes how these kinds of criteria have been applied in the MAG regional transportation planning process, both for the development and the implementation of the Regional Transportation Plan (RTP).

4.2.1 Extent of Local Public and Private Funding Participation

A higher level of local public and private funding participation in the RTP benefits the region by leveraging regional revenues and helping ensure local government commitment to the success of the regional program. The extent of local public and private funding participation is addressed in a number of ways in the MAG transportation planning process.

Project Matching Requirements: In developing funding allocations among the various RTP components and project types, local matching requirements have been established. The local matching requirements in the RTP are:

- 30 percent for major street projects, including ITS elements.
- 30 percent for bicycle and pedestrian projects.
- For air quality and transit projects involving Federal funds, minimum Federal match requirements were assumed. Depending on the specific project funding mix, this match may be provided from regional revenue sources.

Private Funding Participation: As part of the policies and procedures developed for the Arterial Street Life Cycle Program, private funding participation is recognized as applicable local match for half-cent funds for street and intersections projects. This policy helps free local monies that may then be applied to additional transportation improvements.

Local Government Incentives: In the Arterial Street Life Cycle Program, incentives to make efficient use of regional funds have been established by ensuring that project savings by local governments may be applied to new projects in the jurisdiction that achieved those savings.

4.2.2 Social and Community Impacts

Regional transportation improvements can have both beneficial and negative social and community impacts. It is important to conduct a thorough assessment of these impacts, to ensure that they are taken into account in the decision-making process. The MAG planning effort assesses social and community impacts at each key stage of the transportation planning and programming process. In addition, it should be noted that similar efforts are carried out by the agencies implementing specific transportation improvement projects.

Public Participation and Community Outreach: An aggressive citizen participation and outreach program is conducted to obtain public views on the potential community and social impacts of transportation improvements. In particular, input is sought regarding the possible impacts of specific transportation alternatives on the community's social values and physical structure.

Social Impact Assessment: The social impact of transportation options is evaluated as part of the Title VI/Environmental Justice assessment. In this assessment, potential transportation impacts are evaluated for key communities of concern, including minority populations, low-income populations, aged populations, mobility disability populations, and female head of household populations. In addition, community goals are taken into account by basing future travel demand estimates, on local land use plans.

Corridor and Community Impact Assessment: Corridor-level analyses are conducted, which assess the possible social and community impacts of alternative facility alignments based on neighborhood factors such as noise, air quality and land use. Community impacts of transportation facilities are further analyzed by assessing air quality effects through the emissions analysis of plan alternatives, as well as conducting a Federally required air quality conformity analysis of the RTP. In addition, the process for annually updating the Regional Transportation Improvement Program includes project air quality scores, which reflect the potential community impacts of the projects.

4.2.3 Establishment of a Complete Transportation System for the Region

The RTP calls for major investments in all elements of the regional transportation system over the next several decades. It is critical that these expenditures result in a complete and integrated transportation network for the region. The MAG planning process responds directly to this need by conducting transportation planning at the system level, giving priority to segments that can lead to a complete transportation system as quickly as possible, and maintaining a life cycle programming process for all the major modes.

System Level Planning Approach: The regional planning effort is conducted at the system level, taking into account all transportation modes in all parts of the MAG geographic area. This systems level approach is applied in identifying and analyzing alternatives, as well as specifying the final Regional Transportation Plan. In this way, the complete transportation needs of the region, as a whole, are identified and addressed in the planning process.

Project Development Process and Project Readiness: The implementation of regional transportation projects requires a complex development process. This process involves extensive corridor assessments, environmental studies, and engineering concept analyses. This is followed by right-of-way acquisition and final design work, before actual construction may begin. For a variety of reasons, certain projects may progress through this process more rapidly than others. By moving forward, where possible, on those projects with the highest level of readiness for construction, important transportation improvements can be delivered as quickly as possible.

Progress on Multiple Projects: Major needs for transportation improvements exist throughout the MAG area. The scheduling of projects is aimed at proceeding with improvements to the transportation network throughout the planning period in all areas of the region. This will lead toward a complete and functioning regional transportation system that benefits all parts of the MAG area.

Revenues, Expenditures and Life Cycle Programming: Cash flow patterns from revenue sources limit the amount of work that can be accomplished within a given period of time. Project expenditures need to be scheduled to accommodate these cash flows. Life cycle programs have been established that take these conditions into account and implement the projects in the RTP for the major transportation modes: freeways/highways, arterial streets, and transit. The life cycle programs provide a budget process that ensures that the estimated cost of the program of improvements does not exceed the total amount of revenues available. This ensures that a complete transportation system for the region will be developed within available revenues.

As part of the life cycle programming process, consideration is given to bonding a portion of cash flows to implement projects that provide critical connections earlier than might otherwise be possible. This has to be weighed against the reduction in total revenues available for constructing projects, which results from interest costs.

4.2.4 Construction of Projects to Serve Regional Transportation Needs

The resources to implement the RTP are drawn from regional revenue sources and should address regional transportation needs. Transportation projects that serve broad regional needs should have a higher priority than those that primarily only serve a local area. At the same time, the nature of regional transportation needs varies across the MAG area and the same type of transportation solution does not apply everywhere in the region. Enhancing the arterial network may represent the most pressing regional need in one part of the region, whereas adding new freeway corridors may be the key need in another; and expanding transit capacity may represent the best approach in yet another area. The process to develop the RTP recognized that this was the nature of regional transportation needs in the MAG area. As a result, the RTP is structured to respond to different types of needs in different parts of the MAG Region.

Although the modal emphasis of the transportation improvements identified in the RTP varies from area to area, the effects of these improvements can be assessed using common measures of system performance and regional mobility. The measures that were utilized for this purpose are described below. These criteria were applied in the development of the RTP to evaluate alternatives and establish implementation priorities. They can also be applied in the future to evaluate potential adjustments to the priority of corridors, corridor segments, and other transportation projects and services.

Facility/Service Performance Measures: Facility performance measures focus on the amount of travel on specific facilities, the usage of transportation services, the degree of congestion, and other indicators of the level of service as provided:

- Accident rate per million miles of passenger travel.
- Travel time between selected origins and destinations.
- Peak period delay by facility type and geographic location.
- Peak hour speed by facility type and geographic location.
- Number of major intersections at level of service “E” or worse.
- Miles of freeways with level of service “E” or worse during peak period.

- Average Daily Traffic on freeways/highways and arterials.
- Total transit ridership by route and transit mode.
- Cost effectiveness: trips served per dollar invested.

Mobility Measures: Mobility measures focus on the availability of transportation facilities and services, as well as the range of service options as provided:

- Percentage of persons within 30 minutes travel time of employment by mode.
- Jobs and housing within one-quarter mile distance of transit service.
- Percentage of workforce that can reach their workplace by transit within one hour with no more than one transfer.
- Per Capita Vehicle Miles of Travel (VMT) by facility type and mode.
- Households within one-quarter mile of transit.
- Transit share of travel (by transit sub-mode).
- Households within five miles of park-and-ride lots or major transit centers

4.2.5 Construction of Segments that Provide Connectivity with other Elements of the Regional Transportation System

The phasing of the development of the transportation network should be done in a logical sequence, so that maximum possible system continuity, connectivity and efficiency are maintained.

Appropriately located transportation facilities around the region enhance the general mobility throughout the region. To the extent possible, facility construction and transportation service should be sequenced to result in a continuous and coherent network and to avoid gaps and isolated segments, bottlenecks and dead-end routes. Segments that allow for the connection of existing portions of the transportation system should be given a higher priority than segments that do not provide connectivity.

4.2.6 Other relevant criteria developed by the regional planning agency

As part of the RTP, a series of objectives for the regional transportation network were identified. Two key objectives were to achieve broad public support for the needed investments, and to develop a regionally balanced plan that provides geographic equity in the distribution of investments. Specific criteria related to these objectives are:

- Transportation decisions that result in effective and efficient use of public resources and strong public support.
- Geographic distribution of transportation investments.
- Inclusion of committed corridors.

4.3 REGIONAL TRANSPORTATION PLAN CHANGES AND OUTLOOK

The RTP is a long range plan for transportation improvements in the region, covering a period of over two decades. During a program of this length, inevitably, new information will be obtained and changing conditions will be faced as the implementation effort proceeds. As a result, the RTP and the MAG Transportation Improvement Program (TIP) must necessarily be updated periodically to reflect factors such as changes in costs, project schedules, and the outlook for future revenues.

4.3.1 System-Level Activities

Regional Transportation Plan Update:

During FY 2008 and FY 2009, the transportation planning process has had to deal with major project cost increases, as well as significantly reduced revenue collections and forecasts. As a result, the Regional Transportation Plan (RTP) has been undergoing review and updating by MAG to reflect changing cost and revenue conditions. The ongoing RTP update effort is addressing factors such as revenue and financing options, project phasing and scope revisions, and plan and program schedule adjustments. It is anticipated that this process will be completed in the fall of 2009, and a “Regional Transportation Plan - 2010 Update” will be adopted in January 2010.

4.3.2 Corridor-Level, Sub-Area and Modal Activities

Noise Mitigation Projects:

On July 23, 2008, the Regional Council approved a list of freeway noise mitigation projects that will utilize Proposition 400 funding. A total of \$75 million was originally identified for noise mitigation in the 2003 Regional Transportation Plan, and was directed at improving conditions on the existing freeway system. Approximately \$55 million of this funding was expended for rubberized asphalt, leaving \$20 million for other noise mitigation projects. The approved list of projects included the following locations:

- I-17 (Camelback Rd. area)

- I-10 (7th Ave. to 15th Ave.)
- 101L/Agua Fria Fwy. (51st Ave. area)
- 101L/Pima Fwy. (7th St. area)
- 101L/Pima Fwy. (90th St. area)
- 101L/Pima Fwy. (Cactus Rd. area)
- 101L/Agua Fria Fwy. (Peoria Ave. to Grand Ave.)
- 101L/Agua Fria Fwy. (Olive Ave. to Peoria Ave.)
- 101L/Agua Fria Fwy. (Northern Ave. to Olive Ave.)
- 303L (Deer Valley Rd. to Robertson Dr.)
- SR 51 (Greenway Rd. area)

Use of I-10 for High Capacity Transit:

On July 23, 2008, the Regional Council approved designating the I-10 median, west of I-17, as the Locally Preferred Alternative for high capacity transit improvements. The corridor would extend to 83rd Ave. Further transit options to the west of 83rd Ave., including intermodal connections, will be explored in the ongoing MAG Transit Framework Study. No decision was being made regarding the specific transit mode in the alignment. An Alternatives Analysis is underway that will determine the routing, technology and station locations of transit service in the corridor, and is anticipated to be completed in the fall of 2009. An early recommendation from MAG regarding the I-10 median was requested in order to maximize coordination with future highway improvements.

Sky Harbor Automated Train System:

On April 22, 2009, the Regional Council included Stage Two of the Sky Harbor Automated Train System (Sky Train) in the RTP as an illustrative project. The Sky Train is a fully automated, grade separated transit system that will connect the major facilities at Sky Harbor International Airport with the Metro light rail transit (LRT) system. Stage One of the project extends from the LRT station at 44th St. to Airport Terminal Four. Stage Two is planned to link the remaining airport terminals with the rental car center.

As defined in Federal regulations, illustrative projects are those that could potentially be included in a plan, if additional resources beyond the reasonable financial resources identified in the plan were available. They are discussed in the plan for illustrative purposes only. There is no requirement to select any project from an illustrative list of projects in a metropolitan transportation plan at some future date, when funding might become available.

CHAPTER FIVE

HALF-CENT SALES TAX FOR TRANSPORTATION AND OTHER REGIONAL REVENUES

The half-cent sales tax for transportation approved through Proposition 400 is the major funding source for the MAG Regional Transportation Plan (RTP), providing over half the revenues for the Plan. In addition to the half-cent sales tax, there are a number of other RTP funding sources, which are primarily from State and Federal agencies. These revenue sources and the half-cent tax have been termed regional revenues in the RTP. The specific regional revenue sources are:

- Half-cent Sales Tax.
- Arizona Department of Transportation (ADOT) Funds.
- MAG Area Federal Highway Funds.
- MAG Area Federal Transit Funds.

In addition to regional revenues, local governments provide funding that supports implementation of the RTP. These resources provide matching monies for capital projects in the Arterial Street Program and Light Rail Transit Program; subsidize certain transit operating costs; and, in the form of transit farebox monies, contribute significant funding for transit operations. An additional block of funding from State sources, the Statewide Transportation Acceleration Needs (STAN) Account, was available for a time but the remaining funds were swept in January 2009 by the Legislature to balance the FY 2009 State Budget.

Another, non-recurring funding source in the form of the American Recovery and Reinvestment Act (ARRA) was signed by President Obama on February 17, 2009. The ADOT Board determined that approximately \$130 million of this amount would be spent on projects on the State Highway System in the MAG area, with all projects being targeted for obligation by the end of FY 2009. The ARRA also sub-allocates funding to local jurisdictions for road and street improvements. A total of \$1.1 million from this allocation was utilized to provide local match for projects in the Arterial Life Cycle Program.

It should also be noted that revenue projections are expressed in “Year of Expenditure” (YOE) dollars, which reflect the actual number of dollars collected/expended in a given year. Therefore, there is no correction or discounting for inflation. The effect of inflation is accounted for separately through an allowance for inflation that is applied when comparing project costs and revenues, which is included in the modal chapters. In these chapters, costs

reflect currently available, real dollars estimates as of 2009, but may not have been specifically factored, in every case, to a 2009 base year.

5.1 HALF-CENT SALES TAX (*Maricopa County Transportation Excise Tax*)

On November 2, 2004, the voters of Maricopa County passed Proposition 400, which authorized the continuation of the existing half-cent sales tax for transportation in the region (also known as the *Maricopa County Transportation Excise Tax*). This action provides a 20-year extension of the half-cent sales tax through calendar year 2025 and went into affect on January 1, 2006.

The revenues collected from the half-cent sales tax extension are deposited into the Regional Area Road Fund (RARF), and allocated between freeway/highway and arterial street projects; and into the Public Transportation Fund (PTF) for public transit programs and projects. These monies must be applied to projects and programs consistent with the MAG RTP. Table 5-1 displays the actual and projected Proposition 400 half-cent sales tax revenues for the period FY 2006-2026. As specified in ARS 42-6105.E, 56.2 percent of all sales tax collections are distributed to freeways and highways (RARF); 10.5 percent will be distributed to arterial street improvements (RARF); and 33.3 percent of all collections will be distributed to transit (PTF). The use of PTF monies must be separately accounted for based on allocations to: (1) light rail transit, (2) capital costs for other transit, and (3) operation and maintenance costs for other transit.

As displayed in Table 5-1, actual receipts from the Proposition 400 half-cent sales tax have totaled \$1.3 billion through FY 2009. The receipts for FY 2008 were 3.2 percent lower than those for FY 2007, while those for FY 2009 were 13.6 percent lower than FY 2008, and 16.4 percent lower than those in FY 2007. The decline between FY 2007 and FY 2008 was the first year-over-year revenue decline in the history of the half-cent sales tax since its inception in 1985. The further, more significant decline in FY 2009 testifies to the severe effects of the economic recession, which has been experienced since the fall of 2007.

Future half-cent revenues for the period FY 2010 through FY 2026 are forecasted to total \$10.3 billion. This amount is \$3.0 billion, or 22.5 percent, lower than the forecast for the same period presented in the 2008 Annual Report. Of the \$10.3 billion total included in the current forecast, \$5.8 billion will be allocated to freeway/highway projects; \$1.1 billion to arterial street improvements; and \$3.4 billion to transit projects and programs. The total revenues for the FY 2010-2026 period reflect ADOT's revised sales tax forecast posted on its website in April 2009.

5.2 ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) FUNDS

ADOT funding sources include the Arizona State Highway User Revenue Fund (HURF) monies allocated to ADOT to support the State Highway System, ADOT

TABLE 5-1
MARICOPA COUNTY TRANSPORTATION EXCISE TAX: FY 2006-2026
 (Year of Expenditure Dollars in Millions)

Fiscal Year	Regional Area Road Fund (RARF)		Public Transportation Fund (PTF) (33.3%)	Total
	Freeways (56.2%)	Arterial Streets (10.5%)		
Actual (2)				
2006 (1)	86.3	16.1	51.1	153.6
2007	220.6	41.2	130.7	392.5
2008	213.6	39.9	126.6	380.1
2009	184.5	34.5	109.3	328.3
Subtotal	705.0	131.7	417.7	1,254.5
Forecasted				
2010	197.2	36.8	116.8	350.9
2011	207.0	38.7	122.7	368.4
2012	222.6	41.6	131.9	396.0
2013	240.4	44.9	142.4	427.7
2014	259.2	48.4	153.6	461.2
2015	278.6	52.0	165.1	495.7
2016	298.1	55.7	176.7	530.5
2017	319.0	59.6	189.0	567.6
2018	340.1	63.5	201.5	605.2
2019	361.3	67.5	214.1	642.8
2020	385.3	72.0	228.3	685.5
2021	410.1	76.6	243.0	729.7
2022	436.7	81.6	258.8	777.1
2023	465.6	87.0	275.9	828.5
2024	496.5	92.8	294.2	883.4
2025	529.1	98.8	313.5	941.4
2026 (3)	327.4	61.2	194.0	582.6
Subtotal	5,774.1	1,078.8	3,421.3	10,274.2
Total				
Totals	6,479.1	1,210.5	3,839.1	11,528.7

(1) Represents Proposition 400 tax revenues, which began on January 1, 2006.

(2) Fiscal Year totals reflect the lag in actual receipt of revenues by the fund.

(3) Reflects end of Proposition 400 half-cent sales tax on December 31, 2025.

Federal Aid Highway Funds, and other miscellaneous sources.

5.2.1 ADOT Funding Overview

ADOT relies on funding from two primary sources: the Highway User Revenue Fund (HURF) and Federal transportation funds. The HURF is comprised of funds from the gasoline and use fuel taxes, a portion of the vehicle license tax, registration fees and other miscellaneous sources. Of the total funding, approximately 40 percent comes from the gasoline tax and another 15 percent comes from the sale of diesel fuel. The portion of the Vehicle License Tax (VLT) that flows into the HURF accounts for about 25 percent of the total HURF funds. According to the Arizona constitution, HURF funds can only be used on highways and streets, therefore, HURF funds cannot be used for transit purposes.

ADOT, Arizona counties and cities and towns, and the Department of Public Safety (DPS) receive an allocation from HURF. Of the funds remaining after the allocation for DPS, ADOT receives 50.5 percent, 19 percent is allocated to counties, and 27.5 percent is allocated to Arizona cities and towns. The remaining three percent is allocated to cities with populations over 300,000. For the purposes of revenue forecasting, total HURF funds are projected based on forecasted population and economic growth, assuming that there would no change in tax rates. Total forecasted HURF funds are then distributed to ADOT and the other entities based on the current statutory formula and policy.

From the ADOT HURF allocation, State statute provides that 12.6 percent of the HURF funds flowing to ADOT are earmarked for the MAG Region, and the region comprising the Pima Association of Governments (PAG), which includes metropolitan Tucson, Arizona. In addition, the State Transportation Board has established a policy that another 2.6 percent of ADOT HURF funds would be allocated to the two regions. These funds are divided into 75 percent for the MAG Region and 25 percent for the PAG Region. These funds are referred to as “15 Percent Funds”.

After the deduction of the 15 Percent Funds, ADOT must pay for operations and maintenance and debt service on outstanding bonds. This includes funds for the Motor Vehicle Division, administration, highway maintenance and additional funding for DPS. The remaining HURF funds are then combined with Federal highway funds to provide the basis for the ADOT Highway Construction Program. This block of funds is often referred to as “ADOT Discretionary Funds”.

5.2.2 ADOT Funding in the MAG Area

Table 5-2 summarizes ADOT funds applicable to projects in the MAG Regional Transportation Plan. As displayed in Table 5-2, actual receipts from ADOT Funds through FY 2009 totaled \$1.3 billion, and forecasted revenues for the period FY 2010 through FY 2026 total \$6.1 billion. This forecast is 12.6 percent lower than that presented in the 2008 Annual Report for the same period.

TABLE 5-2
ADOT FUNDING IN MAG AREA: FY 2006-2026
 (Year of Expenditure Dollars in Millions)

Fiscal Year	15% Funds	ADOT Discretionary	Total Funding
Actual			
2006	72.8	110.9	183.7
2007	76.9	161.4	238.3
2008	77.0	312.7	389.7
2009	67.3	379.0	446.3
Subtotal	294.0	964.0	1,258.0
Forecasted			
2010	82.0	165.6	247.6
2011	85.8	160.5	246.3
2012	90.2	178.1	268.3
2013	94.8	165.6	260.4
2014	99.4	199.8	299.2
2015	104.4	196.9	301.3
2016	109.7	203.9	313.6
2017	114.7	209.4	324.1
2018	120.1	215.1	335.2
2019	125.8	225.4	351.2
2020	131.2	236.1	367.3
2021	137.7	247.3	385.0
2022	144.1	261.9	406.0
2023	150.8	270.9	421.7
2024	158.2	283.5	441.7
2025	165.4	296.5	461.9
2026	173.4	525.3	698.7
Subtotal	2,087.7	4,041.8	6,129.5
Total			
Totals	2,381.7	5,005.8	7,387.5

15 Percent Funding: The MAG area receives annual funding from the Arizona Department of Transportation (ADOT) in the form of 15 Percent Funds, which are allocated from the Highway User Revenue Fund (HURF). This source represents about one-third of the total ADOT funding in the Freeway/Highway Life Cycle Program. These funds are spent for improvements on limited access facilities on the State Highway System.

MAG Share of ADOT Discretionary Funds: A 37 percent share of ADOT Discretionary Funds is targeted to the MAG Region. Arizona Revised Statute 28-

304 C. 1 states that the percentage of ADOT discretionary monies allocated to the MAG region in the Regional Transportation Plan shall not increase or decrease unless the State Transportation Board, in cooperation with the regional planning agency, agrees to change the percentage of the discretionary monies.

5.3 MAG AREA FEDERAL TRANSPORTATION FUNDS

In addition to the half-cent sales tax revenues and ADOT funding, Federal transportation funding directed to the MAG region is available for use in implementing projects in the MAG Regional Transportation Plan. These sources are summarized in Table 5-3, which displays actual and forecasted receipts. As displayed in Table 5-3, actual receipts from Federal sources totaled \$395 million through FY 2009. The forecasted revenues for the period FY 2010 through FY 2026 total \$4.3 billion. This forecast is \$1.1 billion lower than that presented in the 2008 Annual Report for the same period. Most of this reduction is the result of lower projections in Federal transit funding. The current Federal transportation funding program ends on September 30, 2009, and the successor to the current program may result in significantly different approaches to transportation funding in all modal programs. Future Congressional action in this area will warrant close monitoring.

5.3.1 Federal Transit (5307) Funds

These Federal transit formula grants are available to large urban areas to fund bus purchases and other transit capital projects. Purchases made under this program must include a 20 percent local match. This funding source is expected to generate \$1.0 billion for transit development from FY 2010 through FY 2026. This forecast is 35.1 percent lower than that presented in the 2008 Annual Report for the same period.

5.3.2 Federal Transit (5309) Funds Federal

Transit 5309 funds are available through discretionary grants from the Federal Transit Administration (FTA), and applications are on a competitive basis. They include grants for bus transit development and “new starts” of Light Rail Transit (LRT) and other high capacity systems. Bus transit development requires a 20 percent local match, while new starts are expected to require a 50 percent local match. These funds are granted at the discretion of the FTA, following a very thorough evaluation process. Over the planning horizon, it is estimated that \$1.1 billion in 5309 funds for bus and rail transit projects will be made available to the MAG Region from the FTA, during FY 2010 through FY 2026. This total does not include the \$587 million in 5309 funds for the 20-mile light rail starter segment, which has already been committed to the region. This forecast is 33.0 percent lower than that presented in the 2008 Annual Report for the same period.

TABLE 5-3
MAG FEDERAL TRANSPORTATION FUNDS: FY 2006-2026
 (Year of Expenditure Dollars in Millions)

Year	Transit			MAG STP			MAG CMAQ					Grand Total	
	5307	5309	Total	Fwy/Hwy	Arterial	Total	Fwy/Hwy	Arterial	Transit	Bk/Ped	AQ		Total
Actual													
2006	9.1	0.0	9.1	34.1	3.2	37.3	0.0	0.0	1.3	0.0	0.0	1.3	47.7
2007	33.8	4.0	37.8	34.1	13.5	47.6	0.0	0.0	0.0	0.0	0.0	0.0	85.4
2008	23.8	28.9	52.7	34.1	13.2	47.3	0.0	5.9	15.7	7.5	6.4	35.5	135.5
2009 *	25.5	17.6	43.0	34.1	13.5	47.6	0.0	5.9	15.9	7.5	6.5	35.8	126.5
Subtotal	92.2	50.4	142.6	136.4	43.4	179.8	0.0	11.8	32.9	15.0	12.9	72.6	395.0
Forecasted													
2010	38.1	8.4	46.5	34.1	19.1	53.2	9.2	6.5	17.3	8.2	7.0	48.2	147.9
2011	40.0	8.0	48.0	34.1	20.0	54.1	9.3	6.6	17.6	8.3	7.2	49.0	151.1
2012	42.0	10.8	52.8	34.1	20.8	54.9	9.5	6.7	17.8	8.5	7.3	49.8	157.5
2013	44.1	35.4	79.5	34.1	21.7	55.8	9.7	6.8	18.1	8.6	7.4	50.6	185.9
2014	46.3	67.5	113.8	34.1	22.6	56.7	9.9	6.9	18.4	8.7	7.5	51.4	221.9
2015	48.7	75.8	124.5	34.1	24.9	59.0	10.4	7.3	19.5	9.2	7.9	54.3	237.8
2016	51.1	98.9	150.0	12.7	48.1	60.8	10.7	7.5	20.2	9.6	8.2	56.2	267.0
2017	71.0	138.4	209.4		62.9	62.9	11.1	7.8	20.9	9.9	8.5	58.2	330.5
2018	62.6	144.9	207.5		65.1	65.1	11.5	8.1	21.6	10.2	8.8	60.2	332.8
2019	65.7	141.5	207.2		67.4	67.4	11.9	8.4	22.4	10.6	9.1	62.4	337.0
2020	62.1	131.1	193.2		69.8	69.8	12.3	8.6	23.2	11.0	9.4	64.5	327.5
2021	65.2	84.4	149.6		72.2	72.2	12.8	9.0	24.0	11.4	9.8	67.0	288.8
2022	76.8	55.1	131.9		74.7	74.7	13.2	9.3	24.8	11.8	10.1	69.2	275.8
2023	71.9	20.9	92.8		77.3	77.3	13.7	9.6	25.7	12.2	10.4	71.6	241.7
2024	79.3	17.5	96.8		80.0	80.0	14.1	9.9	26.6	12.6	10.8	74.0	250.8
2025	96.1	49.1	145.2		82.9	82.9	14.6	10.3	27.5	13.0	11.2	76.6	304.7
2026	55.9	55.8	111.7		85.8	85.8	15.2	10.6	28.5	13.5	11.6	79.4	276.9
Subtotal	1,016.9	1,143.5	2,160.4	217.3	915.3	1,132.6	199.1	139.9	374.1	177.3	152.2	1,042.6	4,335.6
Total													
Totals	1,109.1	1,193.9	2,303.0	353.7	958.7	1,312.4	199.1	151.7	407.0	192.3	165.1	1,115.2	4,730.6

* Estimated as of 9-8-09. Subject to revision.

5.3.3 Federal Highway (MAG STP) Funds

MAG Surface Transportation Funds (STP) are the most flexible Federal transportation funds and may be used for highways, transit or streets. During the period from FY 2010 through FY 2026, it is estimated that \$1.1 billion will be available from STP funds. Of this amount, approximately \$34 million per year has been allocated through FY 2015 to retire debt related to the completion of the Proposition 300 program, and the remainder is dedicated to the RTP arterial program.

5.3.4 Federal Highway (MAG CMAQ) Funds

MAG Congestion Mitigation and Air Quality (CMAQ) funds are available for projects that improve air quality in areas that do not meet clean air standards (“non-attainment” areas). Projects may include a wide variety of highway, transit and alternate mode projects that contribute to improved air quality. While they are allocated to the State, Arizona’s funds have been dedicated entirely to the MAG Region, due to the high congestion levels and major air quality issues in the area. MAG CMAQ funds are projected to generate \$1.0 billion from FY 2010 through FY 2026.

5.4 STATEWIDE TRANSPORTATION ACCELERATION NEEDS (STAN) ACCOUNT

During the spring 2006 legislative session, the Arizona Legislature provided \$307 million to accelerate highway projects statewide, of which \$184 million was allocated to the MAG region. On December 13, 2006, the MAG Regional Council approved a set of projects to be funded with these monies. In January 2009, \$104 million of the STAN allocation to the MAG area was swept by the Legislature to help balance the FY 2009 State Budget. This meant that three of the projects originally identified for acceleration would not be funded, specifically:

- I-10 (Verrado Way to Sarival Ave.) - General Purpose lanes, advanced from 2023 to 2009;
- I-17 (Anthem Wy. to Carefree Hwy.) - General Purpose Lanes, advanced from 2024 to 2009;
- SR 802/Williams Gateway Fwy. (202/Santan Fwy. to Meridian Rd.) - Major Right-of-Way Protection, advanced from 2016/20 to 2007.

Subsequently, in the spring of 2009, the projects on I-10 and I-17 were re-accelerated for bid advertisement by the end of FY 2009, as a result of funding from the American Recovery and Reinvestment Act (see Chapter 6.2.2).

5.5 AMERICAN RECOVERY AND REINVESTMENT ACT

The American Recovery and Reinvestment Act (ARRA) was signed by President Obama on February 17, 2009 and contains a national highway infrastructure component that provides approximately \$350 million to the Arizona Department of Transportation (ADOT) for highway infrastructure improvements throughout Arizona. The ADOT Board determined that approximately \$130 million of this amount would be spent on projects on the State Highway System in the MAG area, with all projects being targeted for obligation by the end of FY 2009. On February 25, 2009, the MAG Regional Council approved the projects to utilize these funds (see Chapter 6.2.2).

The ARRA also sub-allocated \$105 million in funding to local jurisdictions in the MAG area for road and street improvements. On March 25, 2009, the MAG Regional Council approved allocation of these funds to MAG jurisdictions on the basis of a minimum allocation of \$500,000, plus an allocation proportional to population. A total of \$1.1 million from this allocation was utilized to provide local match for the Union Hills Rd./Beardsley Rd. connection in the ALCP, freeing up funding that can be applied later in the ALCP for local match on other projects for that jurisdiction (see Chapter 7.3.1).

In addition, the ARRA directed approximately \$66 million in funding to the MAG area for transit projects. On March 25, 2009, the MAG Regional Council approved allocation of these funds to transit projects such as park-and-ride lots, maintenance facilities, transit centers, and bus stop improvements (see Chapter 8.2). It is also expected that transportation enhancement projects totaling \$7 million will be selected from the MAG area, as part of a statewide ARRA funding process.

5.6 REGIONAL REVENUES SUMMARY

Actual and forecasted regional revenue sources for the MAG RTP between FY 2006 and FY 2026 are summarized in Table 5-4. Actual receipts from all regional revenue sources through FY 2009 totaled \$3.0 billion. Future regional revenues are projected to total \$20.9 billion for the period FY 2010 through FY 2026. Total revenues for the period FY 2006 through FY 2026 amount to \$23.9 billion, which is 17.3 percent lower than the estimate in the 2008 Annual Report for this period.

In addition to the funding sources listed in Table 5-4, bonding and other debt financing assumptions, as well as allowances for inflation, are applied in each modal life cycle program. These amounts are listed in the respective modal chapters (see Chapters Six, Seven and Eight).

TABLE 5-4
REGIONAL REVENUES SUMMARY
 (Year of Expenditure Dollars in Millions)

Sources	FY 2006 - 2009 Actual	FY 2010 - 2026 Forecast	Total
Proposition 400: Half Cent Sales Tax Extension	1,254.5	10,274.2	11,528.7
ADOT Funds	1,258.0	6,129.5	7,387.5
American Recovery and Reinvestment Act (Freeways)	0.0	130.0	130.0
American Recovery and Reinvestment Act (Arterials) *	0.0	1.1	1.1
Statewide Transportation Acceleration Needs (STAN)	80.0	0.0	80.0
Federal Transit (5307 Funds)	92.2	1,016.9	1,109.1
Federal Transit (5309 Funds)	50.4	1,143.5	1,193.9
Federal Highway (MAG STP)	179.8	1,132.6	1,312.4
Federal Highway (MAG CMAQ)	72.6	1,042.6	1,115.2
Total	2,987.5	20,870.4	23,857.9

* Represents amount applied to ALCP projects only.

CHAPTER SIX

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program extends through FY 2026 and is maintained by the Arizona Department of Transportation (ADOT) to implement freeway/highway projects identified in the MAG Regional Transportation Plan (RTP). The program utilizes funding from the Proposition 400 half-cent sales tax extension, as well as funding from State and Federal revenue sources.

It is important to note that the ADOT Life Cycle Certification of the Regional Transportation Plan Freeway Program (RTPFP), January 2009 indicates that the estimated costs and revenues for the program are not currently in balance. It points out that:

“This is due to higher than originally anticipated costs to purchase needed right-of-way and construct the RTPFP as presently proposed, plus shrinking revenue due to the economic slowdown of the past six months. ADOT and MAG are reviewing this situation and working together to evaluate and modify corridors and individual elements of the remaining RTPFP Life Cycle Program so that estimated costs and anticipated revenue will be back in balance....”

The Regional Transportation Plan (RTP), which establishes priorities for the modal life cycle programs, is undergoing updating by MAG to reflect the changing cost and revenue conditions mentioned above. This update process is not anticipated to be completed until early 2010. Thus, the following review of the Freeway Life Cycle Program reflects costs and revenues prior to any revisions or adjustments that may result from the updating of the RTP. The costs included in the following were taken from a system-wide cost assessment conducted by ADOT in late 2008, and reflect the facility design concepts in place at that time. Both the design concepts and cost estimates will be subject to revision during the RTP update process.

6.1 STATUS OF FREEWAY/HIGHWAY PROJECTS

The Freeway/Highway Life Cycle Program includes both new freeway corridors to serve growth in the region and improvements to the existing system to address current and future congestion. In addition, effective operation and maintenance of the existing and future system are addressed. Figure 6-1, as well as appendix Tables A-1 through A-7, provide information on the locations and costs associated with Freeway/Highway Life Cycle projects. The projects depicted in Figure 6-1 are cross-referenced with the data in the tables by the code associated with each project. In the following discussion of project status, the following abbreviations are used:

Figure 6-1



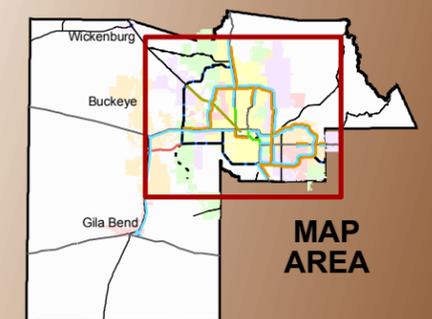
MAG 2009 Annual Report
on Proposition 400

Freeways/Highways

- New Traffic Interchange
- New High Occupancy Vehicle Ramp Connection
- New Freeway/Highway Construction
- New General Purpose Lanes
- New High Occupancy Vehicle Lanes
- Grand Avenue Corridor Improvements
- Corridor Capacity Improvements
- Long Term Capacity Improvements
- Interim Corridor Development
- Right of Way Preservation
- Existing Freeway
- Project Segment Separators
- Highways
- Other Roads
- County Boundary

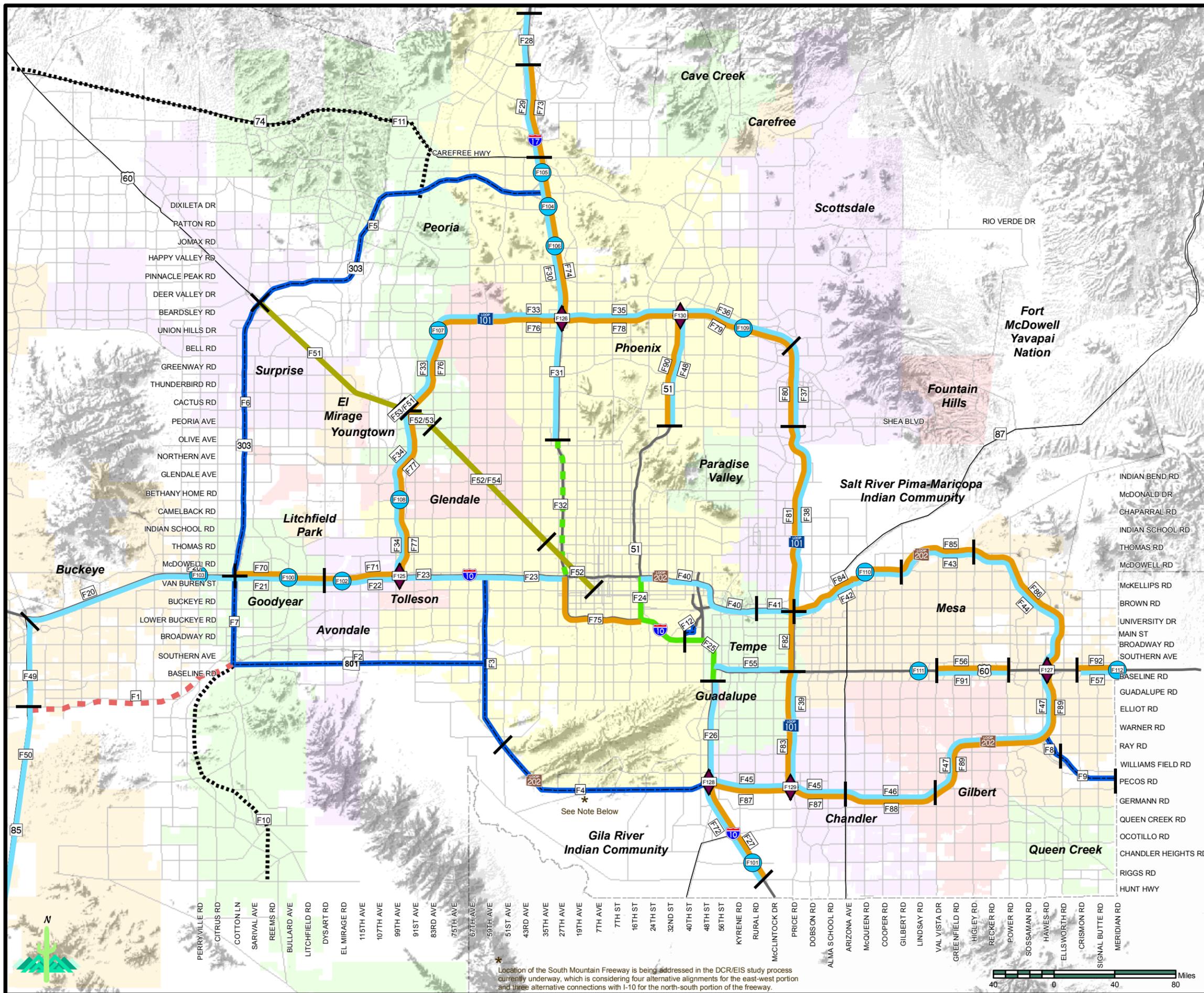
Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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MAP AREA

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- DCR: Design Concept Report
- EIS: Environmental Impact Statement
- EA: Environmental Assessment
- CE: Categorical Exclusion

6.1.1 New Corridors

SR 153 (Sky Harbor Expressway)

- On July 25, 2007, the MAG Regional Council deleted SR 153/Sky Harbor Expressway from the RTP, and shifted the funding to improvements on SR 143/Hohokam Expressway. This action was taken in accordance with the requirements of Arizona Revised Statute (A.R.S.) 28-6353 and met applicable Federal air quality conformity requirements. In October 2007, the State Transportation Board approved deleting SR 153 from the Arizona State Highway System and transferring the facility to the City of Phoenix.

Loop 202 (South Mountain Freeway):

- The South Mountain Freeway is planned as a freeway loop facility south of the central area of the region, connecting the western terminus of the Santan Freeway with I-10 in the West Valley.
- A DCR/EIS is currently progressing for the South Mountain Freeway corridor. Completion and approval of a final EIS, as well as a U.S. Department of Transportation "Record-of-Decision" on the recommended alternative for the corridor, is anticipated sometime during calendar year 2011.
- The estimated total cost for the South Mountain Freeway has been increased to \$2.5 billion from the \$1.1 billion estimate shown in the 2008 Annual Report.

Loop 303 (Estrella Freeway):

- Loop 303 is planned as a freeway facility extending west from I-17 at Lone Mountain Rd., swinging southwest to Grand Ave., running south in the vicinity of Cotton Lane to I-10, and then to SR 810, plus right-of-way preservation south to Riggs Rd.
- An interim two-lane roadway was constructed in the 1990's from I-10 to Grand Ave. by ADOT.
- An interim four-lane divided roadway has been constructed between Grand Ave. and Happy Valley Rd. by Maricopa County, and full freeway right-of-way has also been acquired along most of this segment.

- Construction is underway on an interim four-lane divided roadway between Happy Valley Rd. and I-17. It is estimated that this project will be completed by December 2011. Construction is also underway on future T.I.s at Bell Rd., Waddell Rd. and Cactus Rd. and is anticipated to be completed in June 2010. These projects were accelerated from 2011/2015 to 2008 through the use of STAN funding.
- A DCR/EA on the segment between I-10 and Grand Ave. (US 60) for construction of a freeway facility has been completed, and a “Finding of No Significant Impact” issued.
- DCR/EA’s on the segment between I-10 and MC 85, and the segment between Grand Ave. and Happy Valley Rd., are scheduled for completion by December 2012 and July 2010, respectively. These studies will cover construction of full freeway facilities in the corridor.
- A DCR/EA on the segment between SR 801 and Riggs Rd. is underway for a freeway concept.
- The estimated total cost for Loop 303 has been increased to \$2.8 billion from the \$1.7 billion estimate shown in the 2008 Annual Report.

SR 801 (I-10 Reliever):

- The I-10 Reliever (SR 801) is planned as an east-west facility south of I-10 connecting the South Mountain Freeway (Loop 202) and SR 85. The route is identified as a freeway between Loop 202 and Loop 303; and as an arterial roadway, with right-of-way preservation for a future freeway facility, between Loop 303 and SR 85.
- DCR/EA’s are underway on the segment between Loop 202 and Loop 303, and the segment between Loop 303 and SR 85, and are targeted for completion by December 2012.
- The estimated total cost for SR 801 has been increased to \$1.9 billion from the \$820 million estimate shown in the 2008 Annual Report.

SR 802 (Williams Gateway Freeway):

- The Williams Gateway Freeway is planned as a six-lane freeway extending from Loop 202 south to the Williams Gateway Airport, and east to the Pinal County line at Meridian Rd.
- In FY 2006, a preferred location for this facility within Maricopa County was adopted by MAG. A DCR/EA is underway for the entire corridor (including the Pinal County portion) and is anticipated to continue through FY 2010.

- On May 27, 2009, the MAG Regional Council approved advancing the design and right-of-way for an interim connection of the Williams Gateway Freeway between the Santan Freeway and Ellsworth Rd. by approximately three years from FY 2013/2015 to FY 2010.
- The estimated total cost for SR 802 has been increased to \$546 million from the \$355 million estimate shown in the 2008 Annual Report.

Other Right-of-Way Protection on SR 74 and Loop 303 (Buckeye Rd. to Riggs Rd.):

- Funding for right-of-way protection on SR 74 is maintained early in the freeway program and enhanced in later years, in an effort to meet potentially growing right-of-way protection requirements in this area.
- Funding for right-of-way has also been identified for Loop 303 (MC 85 to Riggs Rd.) in later years. An alignment for Loop 303 south of MC 85 has not yet been defined.

6.1.2 Widen Existing Facilities: General Purpose Lanes and HOV Lanes

I-10:

- Additional general purpose lanes have been identified for construction along essentially the entire length of I-10, between State Route 85 on the west and Riggs Rd. on the east (no additional lanes are planned between I-17 and SR 51). HOV lanes will also be added along several segments to provide continuous HOV service on I-10, between Loop 303 on the west and Riggs Rd. on the east.
- A DCR/EIS for local/express lanes that would ease congestion between State Route 51 and Loop 202/Santan is scheduled for completion in March 2011. The early focus of the project will be on the segment between 32nd St. and Loop 202.
- The estimated total Life Cycle Program cost for the local/express lanes has been increased to \$721 million from the \$585 million estimate shown in the 2008 Annual Report. The limits of the project has also been reduced and now extend from 32nd St. to the Loop 202 (Santan).
- Construction work is underway to add HOV and general purpose lanes in the median of I-10 between Sarival Ave. and Loop 101, which is targeted for completion by October 2009. The addition of general purpose lanes along the outside of the facility between Sarival Ave. and Dysart Rd. was advertised for bids in June 2009.

- \$43 million had been programmed in FY 2009 for construction of general purpose lanes between Sarival Ave. and Verrado Way. This project was originally advanced from 2023 to 2009 by making use of the STAN funding approved by the Legislature in FY 2006. However, the STAN funds were swept by the Legislature in spring 2009 to balance the FY 2009 State Budget. These funds were replaced by ARRA funds and the project was advertised for bids in March 2009.
- A DCR/EA is underway on the segment between I-17 and Loop 101 (Agua Fria) for increased capacity. The approach taken will be contingent on the design and timing of the South Mountain Freeway.
- A DCR/EA is underway on the segment between Loop 202 (Santan) and I-8 for freeway widening concepts. The project to construct both general purpose and HOV lanes between Loop 202 (Santan Freeway) and Riggs Rd. is being analyzed as part of a study on improvement of I-10 as far south as I-8.
- A new westbound auxiliary lane from Southern Ave. to SR 143 was opened to traffic in August 2008.

I-17:

- Construction of additional general purpose lanes has been identified for the stretch of I-17 between McDowell Rd. on the south and New River Rd. on the north. HOV lanes are also being added to fill gaps, and to extend the HOV system along I-17 from I-10 (in the area of Sky Harbor), to Anthem Way.
- Construction work is underway to widen the segment between Loop 101 and Carefree Highway. HOV lanes and general purpose lanes will be completed along this segment by early 2010.
- A total of \$31 million had been programmed in FY 2009 for the construction of general purpose lanes between Carefree Highway and Anthem Way. This project was originally advanced from 2023 to 2009 by making use of the STAN funding approved by the Legislature in FY 2006. However, the STAN funds were swept by the Legislature in spring 2009 to balance the FY 2009 State Budget. These funds were replaced by ARRA funds and the construction project was awarded in June 2009.
- A DCR/EIS addressing capacity improvements along I-17 between Loop 101 and I-10 (Split) is anticipated to be underway in early 2010, with study completion targeted for the end of 2012.

SR 51 (Piestewa Freeway):

- Construction of additional general purpose lanes and HOV lanes has been identified for the stretch of SR 51 between Shea Boulevard and Loop 101.
- The project to construct the HOV lanes, including ramps at the system interchange between SR 51 and Loop 101, has been completed and was opened to traffic in January 2009.

US 60 (Grand Ave.):

- A series of improvement projects have been identified for construction along various segments of Grand Ave. between Loop 303 and McDowell Rd., including the addition of general purpose lanes, grade separations and other improvements.
- A project to widen the segment between 99th Ave. and 83rd Ave was advertised for bids in June 2009. A project to widen Grand Ave. to six lanes between Loop 303 and 99th Ave. will be advertised for bids in July or August 2009 and funded with ARRA funds.
- A DCR/CE for corridor improvement projects between Loop 101 and McDowell Rd. was completed in October 2008, and design work is underway.
- A feasibility study on potential grade separation projects identified for Grand Ave. between Loop 303 and Loop 101 was completed in January 2009.

US 60 (Superstition Freeway):

- Widening projects have been identified for construction along several segments of the Superstition Freeway, providing a combination of additional general purpose and HOV lanes. These projects will increase general purpose lane capacity along certain segments and provide continuous HOV lane service between I-10 and Meridian Rd.
- Construction work on the addition of both general purpose and HOV lanes from Gilbert Rd. to Power Rd. was completed and was opened in June 2007.
- Construction is underway for additional general purpose lanes between I-10 and Loop 101 and is anticipated to be completed in late 2009.

SR 74:

- Projects for the construction of passing lanes along mile-post 20-22, and mile-post 13-15, will be advertised for bids in August 2009 and April 2010, respectively.

SR 85:

- Plans call for the widening of SR 85 to a four-lane, divided roadway between I-10 and I-8.
- Construction has recently been completed on frontage roads between MC 85 and Southern Ave., and the construction of an improved connection between Southern Ave. and I-10 is scheduled for bids in July 2009. Construction is also underway along mile-post 130-137, and is anticipated to be completed by January 2010. Along with earlier widening projects, completion of these projects will provide a four-lane, divided roadway for the entire distance between I-10 and Gila Bend.

SR 87:

- A project for improvements between Forest Boundary and New Four Peaks Rd., including an interchange at Bush Hwy., was completed in late 2008.
- Construction of a climbing lane and shoulder widening between New Four Peaks Rd. and Dos S Ranch Rd. is scheduled to be advertised for bids in November 2009, with a current cost estimate of \$23 million.

US 93 (Wickenburg Bypass):

- A bypass of the downtown Wickenburg area is currently under construction, with completion expected in late 2009.

Loop 101:

- Additional general purpose lanes and HOV lanes have been identified for construction along most of the length of Loop 101 (the Agua Fria, Pima, and Price Freeways). Only additional HOV lanes are planned between the Red Mountain Freeway and Baseline Rd.
- HOV lanes between Loop 202 and Via De Ventura on the Pima Freeway were completed and opened to traffic in November 2008.
- The construction of HOV lanes on the Pima Freeway between Princess Dr. and Via De Ventura is currently underway and is expected to be completed in May 2009. Construction of HOV lanes from Tatum Boulevard to Princess Dr. on the Pima Freeway is also underway and anticipated to be completed in July 2009. In addition, on the Price Freeway HOV lanes are being constructed between Loop 202/Red Mountain and Loop 202/Santan, with completion targeted for November 2009.

- Installation of freeway management system equipment is underway on the Pima Freeway between I-17 and SR 51.
- A project to provide improvements along 99th Ave. between I-10 and Van Buren Rd at the southern terminus of Loop 101/Agua Fria is scheduled to be advertised for bids in September 2009.
- A DCR/CE is underway for HOV lanes between I-10 and SR 51 on the Agua Fria and Pima Freeways, with completion of the study scheduled for December 2010. In addition, a DCR/EA is underway for general purpose lanes on the Pima Freeway between Princess Dr. and Loop 202, with study completion targeted for September 2009.

Loop 202:

- Construction of additional general purpose and HOV lanes has been identified along essentially the entire length of Loop 202 (Red Mountain and Santan Freeways). The segment of the Red Mountain Freeway from SR 51 to Loop 101 already has HOV lanes.
- The widening of structures at Washington Ave. and Mill Ave. has been completed, as part of the project to widen the Red Mountain Freeway between State Route 51 and Loop 101. Construction of the entire project is now underway through a design/build contract for \$218 million, which has an estimated completion date of July 2010.
- Construction is also underway on HOV lanes on the Red Mountain Freeway between 101 and Gilbert Rd., with an estimated completion date of July 2010.
- A DCR/EA is underway for HOV lanes on the remainder of Loop 202 between Gilbert Rd. and I-10, with study completion targeted for March 2011.

6.1.3 New Interchanges and New HOV Ramps on Existing Facilities

New Interchanges at Arterial Streets:

- The RTP identifies a total of thirteen new traffic interchanges (T.I.s) to be constructed on existing freeways at arterial street crossings. These projects are located along most of the major segments of the regional freeway system, including I-10, I-17, Loop 101, Loop 202, and US 60 (Superstition Freeway).
- A new traffic interchange at Jomax Rd./Dilxileta Dr. and I-17 was opened to traffic in September 2008, and the reconstruction of the T.I. at SR

74/Carefree Hwy. was completed and opened to traffic in October 2008. The construction of a new traffic interchange at 64th St. was completed in October 2008.

- A new traffic interchange at Dove Valley Rd. and I-17 is under construction and anticipated to be completed by January 2010.
- The widening of the Union Hills traffic interchange bridge at Loop 101 is scheduled for bid advertisement in August 2009. Previously, the project was accelerated from FY 2012 to FY 2009, allowing the project to be constructed concurrently with a project for a Beardsley Rd. connector with Loop 101. Both projects will utilize ARRA funding.
- A DCR/EA is underway for a new T.I. at Perryville Rd.

New HOV Ramps at Existing Freeway-to-Freeway Interchanges:

- The RTP identifies a total of six locations at freeway-to-freeway interchanges on existing freeways where HOV ramps will be constructed to provide a direct connection through the interchange. These projects are located at major connections among components of the Regional Freeway System, including I-10, I-17, Loop 101, Loop 202, US 60 (Superstition Freeway) and SR 51.
- Construction of new HOV ramps at the SR 51/101L freeway-to-freeway interchange, which was programmed in FY 2007 as part of the addition of HOV lanes on SR 51, has been completed as part of that project.

Other Interchange Improvements:

- A total of \$37 million has been programmed in FY 2009 and FY 2010 for the design and construction of improvements to the interchange between SR 143 and the Loop 202 access road to Sky Harbor Airport. It is anticipated that this project will be advertised for bids in June 2010.
- The Freeway Life Cycle Program also funds improvements at certain existing traffic interchanges. Work is underway on improvements to the traffic interchange at Thunderbird Rd./Loop 101 (Agua Fria), with completion expected in late 2010. It is anticipated that bids will be requested for improvements to the Olive Rd./Loop 101 (Agua Fria) traffic interchange in November 2009. Improvements at the Avondale Blvd./I-10 and Chaparral Rd./Loop 101 T.I.'s are also scheduled to be made as part of this program.

6.1.4 Maintenance, Operations and Mitigation Programs

Freeway Management System:

- A block of funding for the freeway management system (FMS) has been identified for the MAG area. This includes projects to enhance FMS on existing facilities, as well as to expand the system to new corridors. FMS covers items such as ramp metering, changeable message signs, and other measures to facilitate traffic flow.
- Enhancement and operation of the freeway management system has proceeded since the start of the Proposition 400 program. Approximately \$10 million has been obligated through FY 2010 to activities in this system-wide program area.

Maintenance:

- A block of regional funding for the freeway system in the MAG area has been dedicated to litter pick-up, landscaping maintenance and landscaping restoration. The remainder of maintenance functions are funded through ADOT state-level sources.
- Since the start of the Proposition 400 program, ADOT has provided an increased level of landscaping, litter pick up and sweeping maintenance on existing freeways in the Valley, and will expand this effort as RTP projects are constructed. Approximately \$ 52 million has been obligated through FY 2010 to activities in this system-wide program area.

Noise Mitigation:

- A block of funding has been identified for noise mitigation projects on the freeway system in the MAG area. This funding will be used for mitigation projects such as rubberized asphalt overlays and noise walls.
- Approximately \$55 million of this funding has been expended for rubberized asphalt on freeway facilities, leaving \$20 million for other noise mitigation projects. A list of noise wall projects at 11 locations was developed for use of these funds and approved by the Regional Council in 2008. It is anticipated that a project to construct these walls will be advertised for bids in approximately June 2010.

6.1.5 System-wide Preliminary Engineering, Advance Right-of-Way Acquisition, Property Management/Plans and Titles, and Risk Management

- The overall highway development process involves a number of steps that are necessary to prepare projects for eventual construction. Key elements of the development process include: (1) Preliminary Engineering - preparation of preliminary plans defining facility design concepts, right-of-way requirements and environmental factors; (2) Advance Right-of-Way

Acquisition - acquisition of right-of-way to respond to development pressures in a corridor; (3) Property Management/Plans and Titles - procedures to acquire property and manage it until needed for construction; and (4) Risk Management - programs to minimize risk of litigation.

- Since the start of the Proposition 400 program, ADOT has pursued engineering studies on essentially every corridor in the freeway plan. This has led to final designs on four projects, 95 percent plans on three projects, 60 percent plans on one project, 30 percent plans on ten projects, 15 percent plans on two projects, and one design-build project. In addition, ADOT has acquired approximately 2,080 acres of land required for freeway and highway construction, since the start of program.

6.1.6 Proposition 300 - Regional Freeway Program

- The Proposition 300/Regional Freeway Program was drawn to a close with the opening of the freeway segment between University Dr. and Power Rd. on the Red Mountain Freeway on July 21, 2008.
- Although sales tax collections for Proposition 300 ended on December 31, 2005, work utilizing State and Federal funding sources continued through FY 2008 to complete the last segment of the program. In addition, certain debt service requirements and other financial obligations for the program continue through FY 2026. These obligations have been taken fully into account in the planning process for the current Freeway/Highway Life Cycle Program, so that there are no conflicting demands on revenues.

6.2 FREEWAY/HIGHWAY PROGRAM CHANGES

Arizona Revised Statute 28-6353 requires that MAG approve any change in the RTP, and projects funded in the RTP that affect the agency's transportation improvement program, including priorities. In addition, requests for changes to transportation projects funded in the RTP that would materially increase costs must be submitted to MAG for approval.

6.2.1 FY 2009 Material Cost Increases

Generally, material cost increases that affect projects programmed in the current fiscal year are approved individually prior to the projects going to bid. According to the MAG Material Cost Change Policy, a material cost change is defined as: "An increase in the cost of a project that is more than five (5) percent of the adopted budget, but not less than \$500,000, or any increase greater than \$2.5 million." During FY 2009, the MAG Regional Council approved cost increases requested by ADOT totaling approximately \$87 million for the freeway/highway projects shown in Table 6-1, which were programmed for FY 2009. It was

determined that the cost increases could be accommodated within available cash flow.

**TABLE 6-1
FY 2009 FREEWAY/HIGHWAY MATERIAL COST INCREASES**

Route	Project	Budget (000 \$'s)		
		From	To	Increase
101A	Union Hills Dr. / Beardsley Rd. (T.I.)	\$18,000	\$27,500	\$9,500
60 S	I-10 to Loop 101 (GP Lanes)	\$19,500	\$27,000	\$7,500
10	Sarival Ave. to Dysart Rd. (GP Lanes)	\$35,000	\$59,000	\$24,000
801	Loop 303 to Loop 202 (R/W)	\$3,000	\$5,000	\$2,000
202 RM	Loop 101 to Gilbert Rd. (HOV Lanes)	\$29,000	\$33,000	\$4,000
202 SM	I-10/West to 51st Ave. (R/W)	\$38,000	\$20,000	(\$18,000)
303	I-10 to 60 G (R/W)	\$5,500	\$10,000	\$4,500
303	I-10 T.I. /Realignment (GP Lanes Design)	\$0	\$13,800	\$13,800
85	Southern Ave. to I-10 (GP Lanes)	\$29,600	\$34,000	\$4,400
SYS	Maintenance (Landscape/Litter)	\$11,000	\$13,000	\$2,000
SYS	Management Consultants (30% Plans)	\$18,000	\$22,200	\$4,200
101 PI	SR 51 to Princess Dr. (FMS)	\$1,100	\$4,048	\$2,948
303	Happy Valley Rd. to Lake Pleasant Rd. (Interim Freeway)	\$175,500	\$162,000	(\$13,500)
303	Lake Pleasant Rd. to I-17 (Interim Freeway)	\$134,000	\$147,500	\$13,500
303	Happy Valley Rd. to Lake Pleasant Rd. (Landscape)	\$0	\$750	\$750
303	Lake Pleasant Rd. to I-17 (Landscape)	\$0	\$750	\$750
60 G	99th Ave. to 83rd Ave. (Widen Roadway)	\$10,000	\$11,000	\$1,000
101 PR	Galveston St. (Drainage)	\$0	\$2,100	\$2,100
202 SM	I-10/West to 51st Ave. (R/W)	\$20,000	\$3,000	(\$17,000)
303	I-10 to 60 G (R/W)	\$10,000	\$37,000	\$27,000
303	Bell Rd. (T.I.)	\$11,000	\$16,700	\$5,700
303	Cactus Rd. and Waddell Rd. (T.I.)	\$9,200	\$15,000	\$5,800
			TOTAL:	\$86,948

6.2.2 Project Advancements

On May 27, 2009, the MAG Regional Council approved advancing the design and right-of-way for an interim connection of the Williams Gateway Freeway between the Santan Freeway and Ellsworth Rd. by approximately three years from FY 2013/2015 to FY 2010. This would allow acquisition of the needed property at current land values and take advantage of attractive interest rates.

The City of Mesa would issue Highway Project Advancement Notes (HPAN), which are secured by the city's excise tax, to provide the funding. The current Freeway Life Cycle Program includes \$8 million for right-of-way protection for FY 2009-2012, which provided reimbursement for interest expense.

On February 24, 2009, the MAG Regional Council approved a prioritized set of projects to utilize funding from the American Recovery and Reinvestment Act (ARRA). The projects listed below made use of the available ARRA funding, as the highest priority projects. Certain projects in this list previously had been funded through the "Statewide Transportation Acceleration Needs Account" (STAN), but were delayed by the legislative sweep of STAN funds from the MAG area (see Chapter 5.4). The ARRA funding resulted in a re-acceleration of the projects, except for SR 802/Williams Gateway Freeway.

- I-10 (Verrado Way to Sarival Ave.)	Gen. Purp. Ln.	\$43.2 million
- I-17 (SR 74 to Anthem Way)	Gen. Purp. Ln.	22.5 million
- US 60 (303L to 99 th Ave.)	Widening	45.0 million
- US 60 (99 th Ave. to 83 rd Ave.)	Widening	11.2 million
- 101L (Beardsley Rd./Union Hills)	Imprv. T.I.	\$ 9.1 million

* Due to cost savings on the above projects, it was possible to fund two additional projects from the set approved by the Regional Council: SR 85 (Southern Ave. to I-10) and SR 74 (MP 20 to MP 22).

6.2.3 FY 2010-2026 Program Changes

For projects programmed in later years, cost increases and schedule changes are normally addressed through approval of the Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) at the beginning of the program period. For FY 2009, these cost increases were not included in the adopted RTP - 2007 Update and are under consideration as part of the 2010 update of the RTP.

Table 6-2 identifies significant cost and schedule changes that were identified for projects in the FY 2010 - 2026 program period. These changes are based on the total project cost, as estimated in the 2008 Annual Report, versus the total cost as estimated in the 2009 Annual Report. The net total of these project cost changes amounts to \$5.2 billion. As noted earlier, the costs in the 2009 Annual Report were based on a system-wide cost assessment conducted by ADOT during 2008, and reflect the facility design concepts in place at that time.

In addition, it should be noted that Tables 6-1 and 6-2 are not comprehensive in their coverage of program changes and are not designed to provide a financial accounting reconciliation between totals reported in past and the current Annual Report. Instead, they are intended to alert decision-makers and the public to significant cost trends in projects included in the Life Cycle Program.

TABLE 6-2
FY 2010-2026 SIGNIFICANT FREEWAY/HIGHWAY PROJECT
COST AND SCHEDULE CHANGES
(2009 and Year of Expenditure Dollars in Millions)

Route	Project	FY Programmed for Final Construction		Estimated Total Costs			Comments
		From	To	From	To	Change	
10	Chandler Heights (T.I.)	--	--	13.8	25.4	11.6	
10	El Mirage (T.I.)	--	--	17.3	22.5	5.2	
10	Perryville Road (T.I.)	--	--	9.0	23.4	14.4	
10	Avondale Blvd. at I-10 (T.I.)	--	2010	0.0	2.0	2.0	Included in program in FY 2009
10	Olive Ave. at Loop 102 (T.I.)	--	2009	0.0	3.0	3.0	Included in program in FY 2009.
10	Chaparral Rd. at Loop 101 (T.I.)	--	2010	0.0	0.9	0.9	Included in program in FY 2009.
10	SR 85 to Loop 303 (GP Lanes)	2023	2009/2022	128.2	83.6	(44.6)	Includes FY2009 ARRA project.
10	Loop 101 to I-17 (GP Lanes)	2010	2015	71.7	416.6	344.9	
10	SR 51 to Loop 202 Santan (Local/Expr. Lanes)	--	--	584.8	720.6	135.8	
10	Loop 202/Santan Freeway to Riggs Rd. (GP/HOV Lanes)	2011	2015	--	--	--	
17	Anthem Way to Carefree Highway (GP/HOV Lanes)	2009/2023	2009/2024	72.0	120.5	48.5	Includes FY2009 ARRA project.
17	Loop 101 to Arizona Canal (GP Lanes)	2013	2015	50.6	102.5	51.9	
17	Peoria Ave./Cactus Rd. (Drainage Improvements)	2013	2015	--	--	--	
51	Loop 101/Pima to Shea Boulevard (GP Lanes)	--	--	51.0	81.7	30.7	
60 G	Loop 303 to Loop 101 (Phase I & II Improvements)	--	--	101.7	111.1	9.4	Includes FY2009 ARRA project.
60 S	Val Vista to Power (landscape)	--	--	4.6	5.8	1.2	
85	I-10 to I-8 (Widen to 4-Lanes)	2010	2011	209.3	245.8	36.5	
88	Fish Creek Hill (Miscel. Improvement)	2009	2010	1.5	1.7	0.2	
101 A	US 60/Grand Avenue to I-17 (GP Lanes)	--	--	102.0	161.8	59.8	
101 A	I-10 to US 60/Grand Avenue (GP Lanes)	--	--	85.0	136.0	51.0	
101 A	I-10 (Sys. T.I. HOV Ramps)	--	--	60.0	68.1	8.1	
101 A	I-17 (Sys. T.I. HOV Ramps)	--	--	72.0	81.1	9.1	
101 PI	I-17 to SR 51 (GP Lanes)	--	--	59.0	88.0	29.0	
101 PI	I-17 to SR 51/Tatum (HOV Lanes)	--	--	35.5	37.5	2.0	
101 PI	SR 51 to Shea Blvd. (GP Lanes)	--	--	85.0	136.0	51.0	
101 PI	Shea Boulevard to Loop 202RM (GP Lanes)	--	--	90.7	106.7	16.0	
101 PI	Pima Road Extension (JPA)	2009	2011	3.9	3.9	0.0	
202 RM	Loop 101 to Gilbert Road (GP Lanes)	--	--	48.5	69.8	21.3	
202 RM	Gilbert Road to Higley Road (GP Lanes)	--	--	42.0	57.8	15.8	
202 RM	Higley Road to US 60/Superstition (GP Lanes)	--	--	85.0	136.0	51.0	
202 RM	US 60/Superstition (Sys. T.I. HOV Ramps)	--	--	20.4	22.7	2.3	
202 RM	Mesa Drive (T.I. Ramps Only)	--	--	4.6	15.0	10.4	
202 SAN	I-10 to Dobson Rd. (GP Lanes)	--	--	43.0	57.8	14.8	
202 SAN	I-10 to Dobson Road (HOV Lanes)	--	--	46.0	49.5	3.5	
202 SAN	Val Vista Road to US 60 (GP Lanes)	--	--	93.0	128.9	35.9	
202 SAN	Val Vista Road to US 60 (HOV Lanes)	--	--	55.0	58.9	3.9	
202 SAN	Dobson Rd. to Val Vista Dr. (GP Lanes)	--	--	59.0	80.9	21.9	
202 SAN	Lindsey Rd. to Gilbert Rd. (Multi-Use Path)	2008	2010	--	--	--	
202 SAN	Loop 101 / Price (Sys. T.I. HOV Ramps)	--	--	20.4	22.7	2.3	
202SM	I-10 (West) to 51st Avenue (New Frwy.)	2011	2018	539.0	1,490.8	951.8	
202SM	51st Avenue to Loop 202/I-10 (New Frwy.)	2015	2017	588.3	986.4	398.1	
303	I-17 to US 60/Grand Avenue (New Frwy.)	2015	2018	807.8	691.1	(116.7)	Project limits redefined.
303	US 60/Grand Avenue to I-10 (New Frwy.)	2013	2014	675.6	1,686.7	1,011.1	
303	I-10 to I-10R/MC 85 (New Frwy.)	--	--	220.0	390.2	170.2	
801	SR 85 to Loop 303 (New Frwy.)	--	--	81.0	211.0	130.0	
801	Loop 303 to Loop 202 (New Frwy.)	--	--	739.0	1,652.5	913.5	
802	Loop 202 to Ellsworth Road (New Frwy.)	--	--	179.3	281.3	102.0	
802	Ellsworth Road to Meridian Road (New Frwy.)	--	--	176.0	264.9	88.9	
SW	Freeway Management System	--	--	180.0	209.7	29.7	
SW	Noise Mitigation	--	--	61.1	389.1	328.0	Rehab of quiet pavement added.
SW	Preliminary Engineering, Design Change Orders, Fwy. Serv. Patrol, and Risk Management	--	--	384.7	493.2	108.5	
SW	Ramp Meters, T.I. Improvements, Park & Ride Lots	2008-2012	2010-2026	25.8	55.8	30.0	
					TOTAL	5,205.8	

6.3 FREEWAY/HIGHWAY PROGRAM EXPENDITURES, ESTIMATED FUTURE COSTS, AND FISCAL STATUS

6.3.1 Program Expenditures and Estimated Future Costs

Table 6-3 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Freeway/Highway Life Cycle Program. Detailed data on costs at the project level is included in Tables A-1 through A-7 in the Appendix. In the Life Cycle Program, future costs reflect currently available, real dollars estimates as of 2009, but may not have been specifically factored, in every case, to a 2009 base year. In addition, as noted earlier, these costs are based on a system-wide cost assessment conducted by ADOT during 2008, and reflect the facility design concepts in place at that time. Both the design concepts and cost estimates will be subject to revision during the ongoing update of the Regional Transportation Plan.

As indicated in Table 6-3, expenditures through FY 2009 equal \$1.3 billion (YOE \$'s) and estimated future costs covering the period FY 2010-2026 amount to \$14.6 billion (2009 \$'s). The total FY 2006-2026 cost for the program is currently estimated to be \$15.8 billion. This estimate is approximately \$5.0 billion more than the total cost of \$10.8 billion presented in the 2008 Annual Report.

TABLE 6-3
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010 -2026 (2009 Dollars)	Total Cost: FY 2006-2026 (2009 and YOE Dollars)
	Design	Right-of-Way	Construction	Total		
New Corridors	33.7	31.4	32.6	97.7	7,656.2	7,753.9
Widen Existing Facilities: Add General Purpose Lanes	36.7	141.4	423.3	601.4	4,607.3	5,208.7
Widen Existing Facilities; Add HOV Lanes	16.2	0.0	143.8	160.0	505.9	665.9
New Interchanges on Existing Facilities: Freeway/Arterial	11.9	9.3	141.9	163.1	156.0	319.1
New HOV Ramps on Existing Facilities: Freeway/Freeway	0.0	0.0	0.0	0.0	194.6	194.6
Maintenance, Operations, Mitigation and Systemwide Programs	101.1	7.9	44.6	153.6	1,357.1	1,510.7
Other Projects	2.3	0.0	73.9	76.2	87.3	163.5
Total	201.9	190.0	860.1	1,252.0	14,564.4	15,816.4

The potential for significant cost increases was identified in previous Annual Reports, and quantified in the 2008 Annual Report. The 2008 Annual Report indicated that for the five-year period between 2003, when the Regional Transportation Plan was first adopted, and 2008, the Highway Construction Cost Index experienced a price increase of approximately 52 percent. For this same period, it was estimated that, right-of-way costs increased in the range of 82 percent, while the Consumer Price Index increased 16 percent. The overall inflation factor for the Freeway/Highway Life Cycle Program was estimated to be in the range of 40 to 45 percent. In addition to the effects of price inflation, the refinement and, in some cases, enhancement of project design features also resulted in cost increases. These design changes were identified, as ADOT proceeded with detailed engineering and environmental studies for projects contained in the Freeway/Highway Life Cycle Program. In the 2008 Annual Report, it was estimated that approximately 42 percent of the total cost increase was due to project design/scope increases and 58 percent was due to construction price level increases.

The economic slowdown has lessened the pressure on construction costs and recent bids have been more favorable. However, the long term outlook regarding construction and right-of-way costs remains highly uncertain, and continued adjustments in cost estimates may be expected.

6.3.2 Future Fiscal Status

Table 6-4 summarizes the future funding sources and uses for the Freeway/Highway Life Cycle Program between FY 2010 and FY 2026. Sources for the Life Cycle Program between FY 2010 through FY 2026 include the Proposition 400 half-cent sales tax extension (\$5.8 billion); ADOT funds, (\$6.1 billion); Federal highway funds, including ARRA funding (\$546 million); bond and loan proceeds (\$3.4 billion); and other income (\$133 million). Expenses totaling \$6.1 billion are deducted from these sources, which includes an RTP implementation allowance identified in legislation, estimated future debt service, and repayment of other financing. In addition, an allowance for inflation of \$2.0 billion is deducted. Including a beginning balance of \$1.1 billion, there is a net total of \$9.0 billion (2009 \$'s) for use on freeway and highway projects through FY 2026.

Table 6-4 also lists the estimated future uses identified in the Life Cycle Program for the period covering FY 2010 through FY 2026, which total \$14.6 billion (2009 \$'s) As shown, Life Cycle Program costs exceed projected future funds available by \$5.6 billion. As noted previously, the Regional Transportation Plan is undergoing updating by MAG to address the imbalance between costs and revenues.

TABLE 6-4
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2010-2026
(2009 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	Projected Future Funding: FY 2010-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	5,774.1
ADOT Funds	6,129.5
MAG CMAQ and STP (Federal Highway)	416.4
American Recovery and Reinvestment Act (ARRA)	130.0
Other Income	133.4
Bond and Loan Proceeds	3,372.0
Plus Beginning Balance	1,144.8
Less Debt Service and Other Expenses	(6,094.0)
Less Inflation Allowance	(1,984.2)
Total (2009 \$'s)	9,022.0
USES OF FUNDS	
Category	Estimated Future Costs: FY 2010-2026 (2009 Dollars)
New Corridors	7,656.2
Widen Existing Facilities: Add General Purpose Lanes	4,607.3
Widen Existing Facilities: Add HOV Lanes	505.9
New Interchanges on Existing Facilities: Freeway/Arterial	156.0
New HOV Ramps on Existing Facilities: Freeway/Freeway	194.6
Maintenance, Operations, Mitigation and Systemwide Programs	1,357.1
Other Projects	87.3
Total (2009 \$'s)	14,564.4

6.4 FREEWAY/HIGHWAY PROGRAM OUTLOOK

During the past several years, major cost increases for the construction of roads, buildings and other capital facilities have been experienced in Arizona, and throughout the United States as well. More recently, the worldwide recession in economic activity has resulted in a significant decline in transportation revenue collections, as well as major reductions in the forecast of funds available for future transportation improvements.

Based on figures taken from a system-wide cost assessment conducted by ADOT in 2008 and recent interim revenue forecasts, it has been estimated that,

during FY 2010-2026, Freeway Life Cycle Program costs will total \$14.6 billion, while funding will total only \$9.0 billion. Thus, expressed in 2009 dollars, estimated costs may exceed projected future funds by as much as \$5.6 billion. The economic slowdown has lessened the pressure on construction costs and recent bids have been more favorable. However, the long term outlook regarding construction and right-of-way costs, as well as transportation revenues, remains highly uncertain.

The Regional Transportation Plan (RTP), which establishes priorities for the Freeway Life Cycle Program, is undergoing review and updating by MAG to address the identified cost/revenue imbalances. This ongoing effort is addressing factors such as revenue and financing options, project phasing and scope revisions, and plan and program schedule adjustments. It is anticipated that this process will be completed in early 2010. Potential strategic approaches to achieving program balance include:

- Application of value engineering principles to produce facility designs that result in less costly facilities that still serve their intended purpose.
- Project phasing strategies and/or revised concept designs that produce project scopes that are in scale with available funding, so that plan elements can be implemented within future funding levels.
- Extension of the planning and programming period, while maintaining adopted project priorities, which provides further funding for project implementation.
- Adjustment of project schedules, to accommodate reduced cash flows and the extensive time required to complete environmental and design studies in certain corridors.
- Financial approaches that enhance revenues and cash flow such as additional or extended revenue sources, more aggressive bonding of future revenues, and public/private partnerships.
- Review of assumptions regarding future revenue, inflation and design contingencies warrant thorough review, in view of the continuing uncertainties regarding economic conditions.

CHAPTER SEVEN

ARTERIAL LIFE CYCLE PROGRAM

The Arterial Life Cycle Program extends through FY 2026 and is maintained by the Maricopa Association of Governments (MAG) to implement arterial street projects identified in the MAG Regional Transportation Plan (RTP). The Program meets the requirements of State legislation calling on MAG to conduct a budget process to ensure the estimated costs of the programmed arterial street improvements do not exceed the total amount of revenues available for these improvements.

The Arterial Life Cycle Program (ALCP) provides MAG with a management tool to administer regional funding for arterial street improvements. The Program receives major funding from both the Proposition 400 half-cent sales tax extension and Federal highway programs. Although MAG is charged with the responsibility of administering the overall program, the actual construction of projects is accomplished by local government agencies that provide funding to match regional level revenues.

During FY 2008 and 2009, forecasted revenue from the Proposition 400 half-cent sales tax extension declined significantly over the life of the program. Section 270 of the ALCP Policies and Procedures, which addresses a deficit in program funding was implemented to maintain the fiscal balance of the program. The impacts of the deficit as well as efforts to maintain the fiscal balance of the ALCP are discussed in greater detail in Section 7.3.2.

Figure 7-1, as well as Appendix Tables B-1 and B-2, provides information on the locations and costs associated with Arterial Street Life Cycle projects. The projects depicted in Figure 7-1 are cross-referenced with the data in the tables by the code associated with each project. The data presented in the tables and figures do not include program expenditures and reimbursements that were deferred past FY 2026 due to the deficit of program funds.

7.1 STATUS OF ARTERIAL PROJECTS

The ALCP provides regional funding to widen existing streets, improve intersections, and construct new arterial segments. The program also provides information on MAG planning studies and project implementation of the regional arterial Intelligent Transportation System (ITS) Plan funded in the program.

It should be noted that the funding for the construction of arterial improvements is spread throughout the 20-year period covered by the Life Cycle Program. In certain cases, local governments plan to construct projects sooner than originally scheduled in the Regional Transportation Plan in response to local priorities and

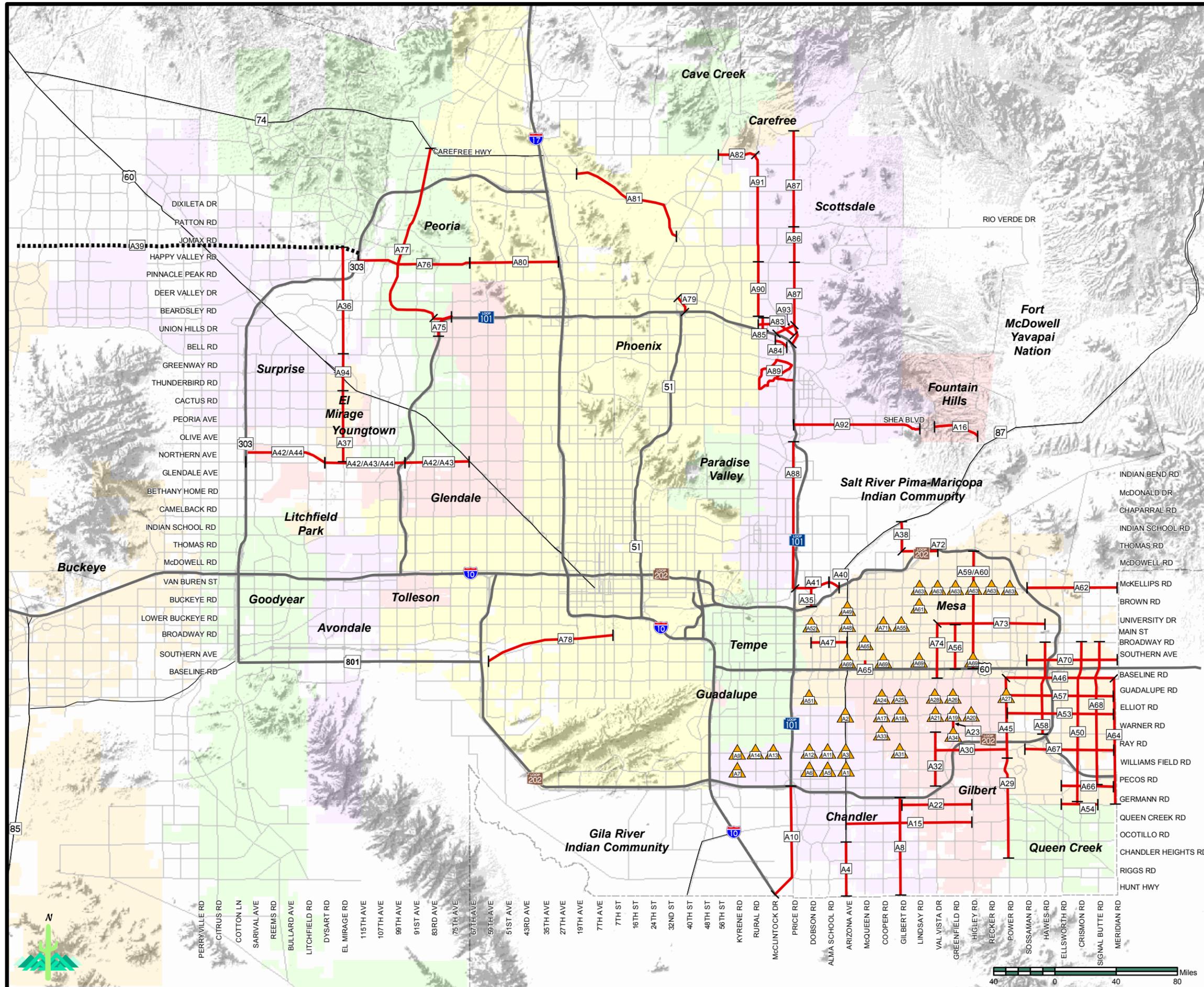
Figure 7-1



MAG 2009 Annual Report on Proposition 400

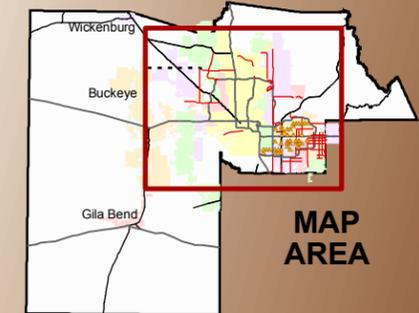
New/Improved Arterials

- New/Improved Arterials
- ▲ Improved Intersections
- Right of Way Preservation
- Freeways
- Highways
- Other Roads
- County Boundary



Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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development issues. When this occurs, the local jurisdiction implementing the project will be reimbursed according to the original arterial street program schedule identified in the RTP adopted in November 2003, even though construction occurs earlier. In cases when a project is deferred, the reimbursement does not occur until work is completed.

The following sections provide an overview of the status of the projects in the Arterial Life Cycle Program (ALCP). In the discussion, emphasis is placed on reviewing work anticipated during the five year period from FY 2010 through 2014.

7.1.1 Arterial Capacity/Intersection Improvements

A total of 94 arterial capacity/intersection improvement projects were originally identified in the RTP and included in the Arterial Life Cycle Program. As the engineering process proceeds, the specific types of improvements are defined and detailed designs are prepared. After the detailing of project concepts and phasing, the original 94 projects have been segmented into a total of 193 individually defined projects.

During the period FY 2010 through FY 2014, work will proceed on 105 arterial street project segments. Various stages of work will be conducted on the projects and all segments may not be completed during this period. Arterial street segments that will undergo work (design, right-of-way acquisition or construction), including projects advanced by local governments from later stages of the program, are listed in Table 7-1. Of the 105 project segments underway between FY 2010 and FY 2014, 71 projects will have design activity in progress, 62 projects will have right-of-way acquisition, and 55 projects will undergo construction at some time during the five-year period. Of these projects, 51 will undergo all three activities; i.e. design, right-of-way acquisition, and construction.

**TABLE 7-1
ARTERIAL STREET PROJECTS UNDERWAY FY 2010 - 2014**

PROJECT/SEGMENT	PROJECT/SEGMENT
Arizona Ave: Ocotillo Rd to Hunt Hwy	Northern Parkway: Northern Aven at L101
Avenida Rio Salado: 7th St to SR 202L	Northern Parkway: Reems Overpass
Beardsley Rd: Loop 101 to 83rd Ave/LPP	Northern Parkway: Sarival Overpass
Black Mountain Blvd: SR51/Loop 101 to Deer Valley Rd	Northern Parkway: Sarival to Dysart
Broadway Rd: Dobson Rd to Country Club Dr	Northsight Blvd: Hayden to Frank Lloyd Wright
Carefree Hwy: Cave Creek Rd to Scottsdale Rd	Pecos Rd: Ellsworth Rd to Meridian Rd
Chandler Blvd at Dobson Rd	Pima Rd: Dynamite Blvd to Stagecoach Pass

TABLE 7-1 (continued)	
Country Club Dr at Brown Rd	Pima Rd: McKellips Rd to Via Linda
Country Club Dr at University Dr	Pima Rd: Pinnacle Peak Rd to Happy Valley Rd
Crismon Rd: Broadway to Guadalupe	Pima Rd: Stagecoach Rd to Cave Creek
Dobson Rd at Guadalupe Rd	Pima Rd: Thompson Peak Pkwy to Pinnacle Peak Rd
Dobson Rd at University Dr	Power Rd: EMF to Santan Fwy/Loop 202
Dobson Road Bridge over the Salt River	Power Rd: Santan Fwy to Pecos Rd
El Mirage Rd: Bell Rd to Deer Valley Dr	Queen Creek Rd: Greenfield to Higley
El Mirage Rd: Thunderbird Rd to Bell Rd	Queen Creek Rd: Lindsay Rd to Val Vista Drive
Elliot Rd at Greenfield Rd	Queen Creek Rd: McQueen Rd to Lindsay Rd
Frank Lloyd Wright (FLW) -Loop 101 Traffic Interchange	Queen Creek Rd: Val Vista to Greenfield
FLW Frontage Rd: Northsight to Greenway-Hayden Loop	Raintree -Loop 101 Traffic Interchange
Germann Rd: Gilbert Rd to Val Vista Rd	Ray Rd at Alma School Rd
Germann Rd: Val Vista Dr to Higley	Ray Rd: Sossaman Rd to Ellsworth Rd
Gilbert Rd: Chandler Heights Rd to Hunt Hwy	Ray Rd: Val Vista Dr to Power Rd
Gilbert Rd: Queen Creek Rd to Chandler Heights Rd	Redfield Rd: Scottsdale Rd to Hayden
Gilbert Road Bridge over the Salt River	Scottsdale Rd: Pinnacle Peak to Jomax Rd
Greenfield Rd: Baseline Rd to Southern Ave	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Rd
Greenfield Rd: Elliot Rd to Ray Rd	Shea at 120/124th Streets
Greenfield Rd: Southern Ave to University Dr	Shea at Via Linda (Phase 2)
Guadalupe Rd at Cooper Rd	Shea Auxiliary Lane from 90th St to Loop 101
Guadalupe Rd at Gilbert Rd	Shea Blvd - 96th St to 144th St ITS Improvements
Guadalupe Rd: Power Rd to Hawes Rd	Shea Blvd at 110th Street
Happy Valley Rd: 35th Ave to 43rd Ave	Shea Blvd at 114th Street
Happy Valley Rd: 43rd Ave to 55th Ave	Shea Blvd at 115th Street
Happy Valley Rd: 55th Ave to 67th Ave	Shea Blvd at 125th Street
Hawes Rd: Santan Fwy to Ray Rd	Shea Blvd at 135th Street
Lake Pleasant Pkwy: Dynamite Blvd to L303	Shea Blvd at 136th Street
Lindsay Rd at Brown Rd	Shea Blvd at Frank Lloyd Wright Blvd
L101 N Frontage Rd: Pima Rd/Princess Dr to Hayden Rd	Shea Blvd at Loop 101
Loop 101 at Beardsley Rd/Union Hills Dr	Shea Blvd: Palisades Blvd. to Fountain Hills Blvd.
McKellips Rd at Greenfield Rd	Shea Blvd: Technology Dr to Cereus Wash
McKellips Rd at Higley Rd	Sonoran Blvd: 10th St to 26th St
McKellips Rd at Lindsay Rd	Sonoran Blvd: 15th Ave to 10th St
McKellips Rd at Power	Sonoran Blvd: 26th St to Cave Creek
McKellips Rd at Recker	Southern Ave at Country Club Dr
McKellips Rd at Val Vista Dr	Southern Ave at Higley Rd
McKellips Rd: Loop 101 to SRP-MIC/Alma School Rd	Southern Ave at Lindsay Rd
McKellips Road Bridge over the Salt River	Southern Ave at Stapley Dr
Mesa Dr at Broadway Rd	Stapley Dr at University Dr
Mesa Dr: US-60 (Superstition Fwy) to Southern	Val Vista Dr: Baseline Rd to Southern Ave
Northern Parkway: Agua Fria Bridge	Val Vista Dr: Southern Ave to University Dr
Northern Parkway: Corridorwide ROW Protection	Warner Rd at Cooper Rd
Northern Parkway: Dysart to 111th	Warner Rd at Greenfield Rd
Northern Parkway: Litchfield Overpass	

7.1.2 Intelligent Transportation Systems (ITS)

The RTP allocates funding to assist in the implementation of projects identified in the Regional ITS Plan. The ITS projects smooth traffic flow and help the transportation system to operate more efficiently (see Appendix Table B-2 for project listing). An estimated \$29 million (2009 \$'s) in reimbursements from regional funds will be made for ITS projects between FY 2010 and FY 2014.

The focus of the arterial ITS program is to assist MAG member agencies with the development of their arterial traffic management systems to better address jurisdictional needs. The process for identifying and recommending arterial ITS projects for funding is overseen by the MAG ITS Committee. The ITS Committee has used an objective project rating system, which is linked to the region's ITS Strategic Plan and Regional ITS Architecture, to provide guidance in prioritizing projects.

7.2 ARTERIAL STREET PROGRAM CHANGES

During FY 2009, a number of fiscal adjustments were made to the Arterial Life Cycle Program (ALCP). Lead agencies deferred over \$47 million in Federal and regional funding from FY 2009 to later years. To reduce the amount deferred from FY 2009, Federal funds were reprogrammed for the Beardsley Connector projects and Northern Parkway according to Section 200 of the ALCP Policies and Procedures. As a result, \$22.9 million in STP funds for the Beardsley Connector were obligated in FY 2009.

In addition to the fiscal adjustments to the ALCP, scheduling changes were also made in response to various project factors encountered by the implementing agencies. The changes are documented in Appendix Table B-3. Consistent with MAG ALCP Policies and Procedures, none of the changes affected total reimbursements by jurisdiction. Significant ALCP project scope changes that occurred in FY 2009 are listed below.

- **Scottsdale Airpark Tunnel:** Project was deleted from the ALCP after the City of Scottsdale voted not to pursue the tunnel in the City's approved Transportation Master Plan. Substitute projects in the vicinity of the airpark were added to the program to address capacity needs in the area.
- **Sonoran Parkway:** Project was re-scoped and re-segmented to correspond with design efforts underway, as well as the anticipated construction schedule. The total funding amount for the project was not affected by the changes.

Appendix Table B-3 also lists completed ALCP projects. As of FY 2009, 12 ALCP projects have been completed. These projects included arterial street

widenings, capacity improvement projects, and intersection improvements at the following locations.

- Queen Creek Rd: Arizona Ave to McQueen Rd
- Arizona Ave at Elliot Rd
- Arizona Ave/Ray Rd: Intersection Improvement
- Arizona Ave at Chandler Blvd
- El Mirage Rd: Deer Valley Drive to L303
- Val Vista Dr: Warner Rd to Pecos Rd
- Happy Valley: I-17 to 35th Ave
- Pima Rd: SR101L to Thompson Peak Pkwy
- Lake Pleasant Pkwy: Union Hills to Dynamite Rd
- Shea Blvd at 90th/92nd/96th: Intersection Improvements
- Shea Blvd at Via Linda (Phase1): Intersection Improvements
- Shea Blvd at Mayo/134th St: Intersection Improvements

7.3 ARTERIAL PROGRAM REIMBURSEMENTS AND FISCAL STATUS

7.3.1 Program Reimbursements

The Arterial Life Cycle Program (ALCP) is based on the principle of project budget caps. Under this approach, regional funding allocated to a specific project is fixed (on an inflation adjusted basis) in the Regional Transportation Plan. The budgeted amount must be matched by the implementing, or lead, agency with a 30 percent minimum contribution to the total project costs. Any project costs above the amount budgeted are the responsibility of the lead agency. Under this funding scheme, program administration focuses on tracking actual project expenditures and determining the corresponding regional share. As a result, data monitoring is primarily directed at regional funding reimbursements and total project expenditures.

The ALCP Policies and Procedures details the three required documents for each ALCP project - the Project Overview, the Project Agreement, and Project Reimbursement Requests. The Project Overview describes the general design features of the project, the implementation schedule, estimated costs, and the relationships among participating agencies. The Project Overview provides the basis for the preparation of the Project Agreement, which must be executed before the lead agency may be reimbursed from the program.

The Project Agreement is signed by the project's lead agency and MAG. The agreement is developed jointly between the lead agency and MAG and determines the responsibilities of each party. Generally, the Project Agreement is initiated by MAG once a Project Overview is submitted.

Project Reimbursement Requests may be submitted by jurisdictions once a Project Agreement has been executed. The Project Reimbursement Request

requires an invoice, progress report, and request for payment signed by the lead agency and MAG. The signed request for payment form is submitted to the Arizona Department of Transportation, who, in turn, reimburses the lead agency.

Table 7-2 provides a summary of past and estimated future regional funding reimbursements and total project expenditures for the Arterial Life Cycle Program. Detailed data showing regional funding reimbursements and estimated total expenditures at the project level is included in Appendix Tables B-1 and B-2. Future regional funding reimbursements have been factored to represent 2009 dollars. Local match elements of total future expenditures reflect currently available, real dollar estimates as of 2009, but may not have been specifically factored, in every case, to a base year of 2009.

TABLE 7-2
ARTERIAL STREET LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Regional Funding Disbursements			Total Expenditures		
	Disburse. through FY 2009 (YOE Dollars)	Estimated Future Disburse.: FY 2010-2026 (2009 Dollars)	Total Disburse.: FY 2006-2026 (2009 and YOE Dollars)	Expenditures through FY 2009 (YOE Dollars)	Estimated Future Expenditures: FY 2010-2026 (2009 Dollars)	Total Expenditures: FY 2006-2026 (2009 and YOE Dollars)
Capacity / Intersection Improvements	108.7	1,553.1	1,661.8	330.6	2,628.4	2,959.0
Intelligent Transportation Systems	11.2	48.4	59.6	16.0	69.2	85.2
MAG Implementation Studies	1.7	27.1	28.8	1.7	27.1	28.8
Total	121.6	1,628.6	1,750.2	348.3	2,724.7	3,073.0

As indicated in Table 7-2, a total of \$122 million (YOE\$) has been disbursed through FY 2009 for projects in the Arterial Life Cycle Program. An estimated \$1.6 billion (2009 \$'s) will be disbursed during the remainder of the program (FY 2010 through FY 2026). It should be noted that actual future project reimbursement amounts will be adjusted for inflation based on the Consumer Price Index, as adopted in the MAG Arterial Life Cycle Program Policies and Procedures. Total expenditures for projects, including local government expenditures, amounted to \$348 million through FY 2009. The total future

expenditures for the remainder of the program (FY 2010 through FY 2026) are estimated to reach \$2.7 billion.

As part of the American Recovery and Reinvestment Act (ARRA), the MAG area will receive approximately \$105 million that must be obligated by March 2, 2010 for local government projects. Approximately \$1.1 million from this allocation was utilized to provide local match for the Union Hills Rd./Beardsley Rd. connection in the ALCP, freeing up funding that can be applied later in the ALCP for local match on other projects for that jurisdiction (see Chapter 5.5). The remainder of the ARRA funding is being applied to local government projects not in the ALCP.

7.3.2 Deficit of Program Funds

Each year, the Arizona Department of Transportation (ADOT) updates the forecasted revenues for the Proposition 400 half-cent sales tax extension. When warranted, ADOT may revise the forecasted revenue stream more frequently. During FY 2009, ADOT forecasted a significant decrease in projected revenues from the Proposition 400 half-cent sales tax extension over the life of the program.

The decrease in forecasted revenues required the adjustment of reimbursements in the ALCP to maintain the fiscal balance of the program. Section 270 of the ALCP Policies and Procedures addresses a deficit in program funding and was implemented. According to Section 270, "ALCP projects will be delayed in priority order of the ALCP" if there is a deficit of program funds. After extensive coordination with MAG Member Agencies and consultation with MAG Policy and Technical Committee, a revised, fiscally balanced Arterial Life Cycle Program was approved by the MAG Regional Council on June 24, 2009.

To maintain the fiscal balance of the program, approximately \$22 million in programmed reimbursements were deferred to FY 2027, an unfunded year of the program. The amount deferred represents 1.3 percent of the programmed reimbursements from FY 2010 - FY 2026. In accordance with Section 270 of the ALCP Policies and Procedures, the \$22 million in unfunded programmed reimbursements will be funded in priority order of the ALCP, if forecasted revenues increase or other program adjustments occur. While total estimated funding for the period FY 2010 - FY 2026 exceeds the total future reimbursements by approximately \$61 million (see Table 7-3), the excess funds that would be available would not be in the proper funding category to be applied to the projects that were deferred. While these reimbursements fall beyond the ALCP, the affected projects remain in the MAG Regional Transportation Plan, which extends through FY 2028.

7.3.3 Future Fiscal Status

Table 7-3 summarizes the future funding sources and uses applicable to the Arterial Life Cycle Program for FY 2010 through FY 2026. Sources for the Life

Cycle Program include the Proposition 400 half-cent sales tax extension (\$1.1 billion); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$140 million); Federal Highway Surface Transportation Program (STP) funds (\$915 million); and bond proceeds (\$318 million).

**TABLE 7-3
ARTERIAL STREET LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2010-2026
(2009 and Year of Expenditure Dollars in Millions)**

SOURCES OF FUNDS	
Source	Projected Future Regional Funding FY 2010-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	1,078.8
Federal Highway / MAG CMAQ	139.9
Federal Highway / MAG STP	915.3
Other Income	-
Bond and Loan Proceeds	317.7
Plus Beginning Balance	73.3
Less Debt Service	(400.1)
Less Inflation Allowance	(462.4)
Total (2009 \$'s)	1,662.5
USES OF FUNDS	
Category	Estimated Future Regional Disbursements: FY 2010-2026 (2009 Dollars)
Capacity / Intersection Improvements	1,553.1
Intelligent Transportation Systems	48.4
MAG Implementation Studies	27.1
Total (2009 \$'s)	1,628.6

(Note that the bonding program is adjusted annually with the objective of lowering the overall level of bonding for the Arterial Street Program.) Expenses totaling \$400 million are deducted from the funding sources, representing estimated future debt service and repayment of other financing.

In addition, an allowance for inflation of \$462 million has been deducted (a discount factor of 3.0% was used for all years). Including a beginning balance of

\$73 million, this yields a net total of \$1.7 billion (2009 \$'s) for use on arterial street projects through FY 2026. Table 7-3 also lists the estimated future regional funding reimbursements identified in the Life Cycle Program for the period FY 2010 through FY 2026. As shown, Life Cycle Program reimbursements are in balance with the projected available future funds, with funding in excess of disbursements by about two percent.

7.4 ARTERIAL STREET PROGRAM OUTLOOK

The Arterial Life Cycle Program (ALCP) is based on the principle of project budget caps, with a fixed amount of regional funding allocated to individual projects (on an inflation adjusted basis). The total estimated future regional revenue reimbursements for ALCP projects are in balance with projected revenues. To achieve this balance, approximately \$22 million in programmed reimbursements were deferred to FY 2027, an unfunded year of the program. While these reimbursements fall beyond the ALCP, the affected projects remain in the MAG Regional Transportation Plan, which extends through FY 2028.

On April 22, 2009, MAG adopted changes to the Arterial Life Cycle Program Policies and Procedures to facilitate smooth administration of the Arterial Street Program. Changes from the previous Policies included refining the Regional Area Road Fund (RARF) Closeout procedures, proposed project changes and substitutions procedures, as well as the application of dedicated funding for high priority projects listed in the ALCP. In addition, on June 24, 2009 the FY 2010 ALCP project listing was adopted to reflect updated information regarding project development status. This version of the ALCP is reflected in the 2009 Annual Report in Appendix B-1.

During FY 2009, project overview reports were prepared by the lead agencies for five projects in the ALCP. Since the inception of the program, 45 project overviews have been submitted to MAG. These reports describe the general design features of the project, estimated costs, implementation schedules and relationships among participating agencies. The project overview reports provide the basis for preparation of project agreements, which must be executed before agencies may receive any reimbursements from the program.

A total of eight project agreements were executed in FY 2009. In all, 34 project agreements have been executed to date. For FY 2010, MAG Staff anticipates the execution of 11 additional agreements. Seven jurisdictions received reimbursements for project work during FY 2009 totaling over \$72 million. During FY 2010, MAG anticipates the reimbursement of \$99 million to seven jurisdictions for eligible project expenditures.

As indicated previously, lead agencies deferred \$47 million in Federal and regional funding from FY 2009 to later years. It is anticipated that project scope

changes and deferments may continue to occur in the future, as local jurisdictions continue to face a variety of fiscal issues.

CHAPTER EIGHT

TRANSIT LIFE-CYCLE PROGRAM

The Transit Life Cycle Program is maintained by the Regional Public Transportation Authority (RPTA) and implements transit projects in the MAG Regional Transportation Plan (RTP). The Program meets the requirements of state legislation calling on the RPTA to conduct a budget process that ensures the estimated cost of the Regional Public Transportation System does not exceed the total amount of revenues expected to be available. This includes expenses such as bus purchases and operating costs, passenger facilities, maintenance facilities, park-and-ride lot construction, light rail construction and other transit projects.

The Transit Life Cycle Program will receive major funding from the Proposition 400 half-cent sales tax extension, as well as federal transit funds and local sources. The half-cent sales tax extension started on January 1, 2006 and revenues from the tax were available beginning in March 2006. The RPTA maintains responsibility for administering half-cent revenues deposited in the Public Transportation Fund (ARS 48-5103) for use on transit projects, including light rail transit (LRT) projects as identified in the MAG RTP. The RPTA Board must separately account for monies allocated to light rail transit, capital costs, and operation and maintenance costs for other transit modes.

Although the RPTA maintains responsibility for the distribution of half-cent funds for light rail projects, Valley Metro Rail, Inc., a public nonprofit corporation, was created to form a partnership among the cities of Phoenix, Tempe, Mesa and Glendale to implement the LRT system. Valley Metro Rail Inc. is responsible for overseeing the design, construction and operation of the light rail starter segment, as well as future corridor extensions to the system. It should be noted that the RPTA often uses the term “*Valley Metro*” for the agency, having adopted the name in 1993 as the marketing identity for the regional transit system.

8.1 STATUS OF BUS PROJECTS

The Transit Life Cycle Program includes funding for operations, vehicle fleet and new capital facility improvements to the regional bus network. This includes Freeway Bus Rapid Transit (BRT)/Express, Arterial BRT, Supergrid, and other bus service. The following sections provide an overview of the status of the bus operations and capital projects in the Transit Life Cycle Program. In these discussions, the emphasis is placed on reviewing ongoing activities, as well as service additions anticipated during the next five years (FY 2010 through FY 2014).

8.1.1 Bus Operations: Bus Rapid Transit (BRT)/Express

Regional BRT/Express transit services are comprised of Arterial BRT and Freeway BRT/Express routes. Arterial BRT routes are intended to operate as overlays on corridors served by local fixed route service, but provide higher speed services by operating with limited stops and with other enhancements, such as bus only lanes, queue-jumpers or signal priority systems. The proposed Arterial BRT routes as identified in the RTP are intended to operate during peak and off-peak periods. In addition to Arterial BRT routes, the RTP also includes Freeway routes, which use existing and proposed high occupancy vehicle (HOV) facilities to connect park-and-ride lots with major activity centers, including core downtown areas. Freeway routes provide suburb-to-suburb and suburb to central city connections using the regional freeway system and intermediate stops. Figure 8-1 and Table C-1 provide information on the locations and costs associated with BRT/Express Transit Services. The routes depicted in Figure 8-1 are cross-referenced with the data in Table C-1 by the code associated with each route. Table 8-1 lists route termini as an aid in interpreting Figure 8-1. Final routing is subject to operational planning.

Collectively, the Regional BRT/Express transit services account for a total of \$166 million (2009 and YOY \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026 (see Table 8-4). This total represents approximately four percent of the total regional funding budget allocated for transit. There are a total of 19 BRT/Express routes identified for funding during the RTP planning period from FY 2006 through 2026. Five routes were implemented in FY 2009. An additional 12 routes are in the regional transportation plan but are currently unfunded through FY 2026. Since funding became available, a total of eleven routes have been implemented. During the next five years, FY 2010 through FY 2014, one additional route is planned for implementation. The routes generally operate in the peak direction at 30-minute intervals, during the three-hour morning and afternoon commute periods.

Routes Implemented During FY 2009

- East Loop 101 Connector (T12); Implemented as Route 511.
- Main Street Arterial BRT (T15); Implemented as LINK.
- Papago Freeway Connector (T19); Implemented as Route 562.
- Red Mountain Express (T22); Implemented as Routes 535 and 536.
- West Loop 101 Connector (T31); Implemented as Routes 575 and 576.

Route Planned for Implementation During FY 2010 through FY 2014

- Arizona Avenue Arterial BRT (T5); Service start: FY 2011.

Figure 8-1



MAG 2009 Annual Report
on Proposition 400

Bus Rapid Transit (BRT)

- Light Rail Transit Minimum Operating Segment
- Arterial BRT Routes
- Freeway BRT Routes
- Freeways
- Highways
- Other Roads
- County Boundary

Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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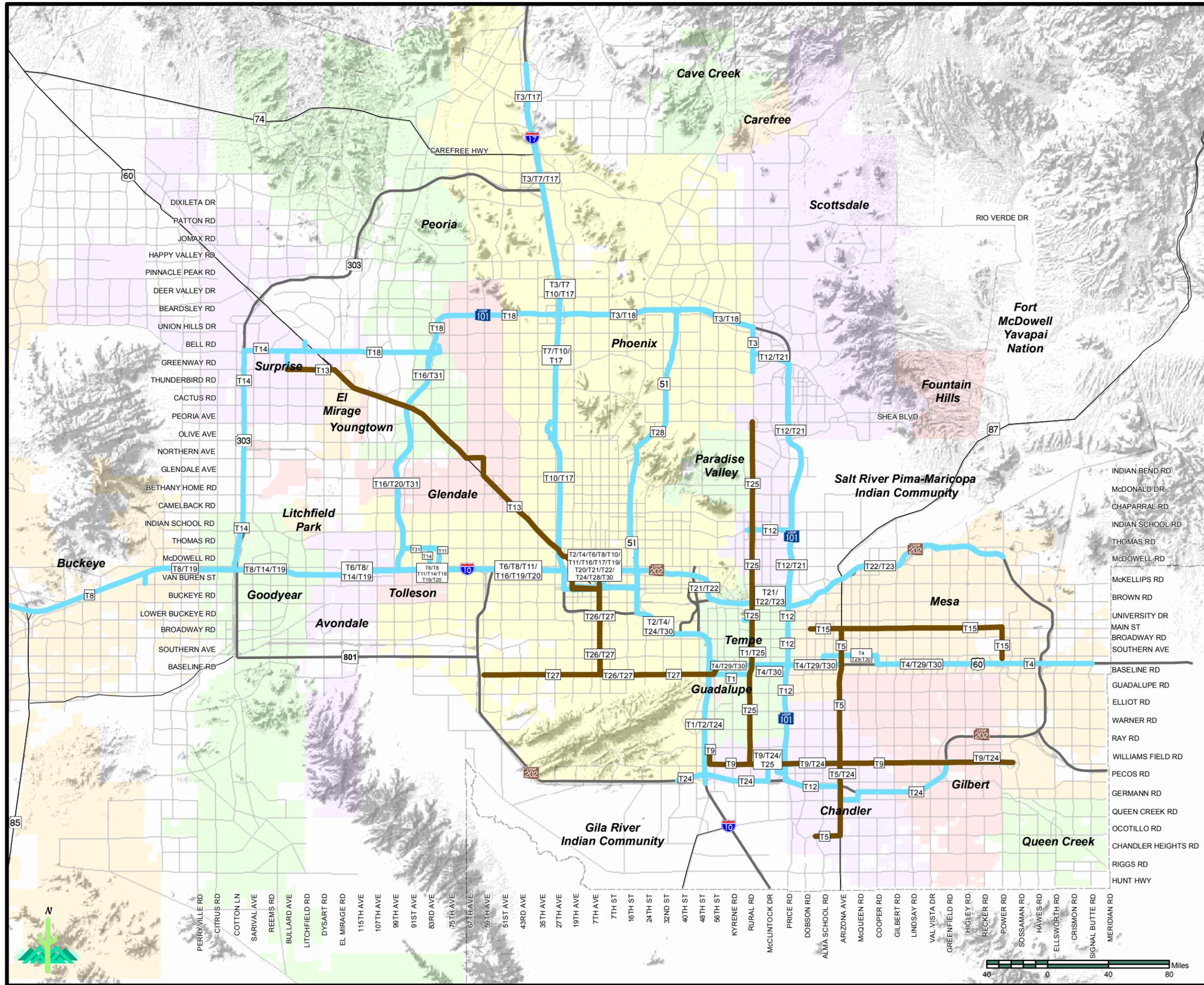


TABLE 8-1 BUS RAPID TRANSIT/EXPRESS ROUTE TERMINI

Note: Route termini are listed as an aid in interpreting maps. Final routing subject to operational planning.

T1	<u>Ahwatukee Connector</u> South terminus: 40 th Street park & ride lot in Ahwatukee. North terminus: College Avenue Transit Center.	T10	<u>Deer Valley Express (I-17 RAPID)</u> North terminus: Williams Gateway/ASU East Campus. West terminus: Galveston Street (Coyotes Ice Rink).	T22	<u>Red Mountain Express</u> North terminus: Scottsdale Airpark. South terminus: State Capitol.
T2	<u>Ahwatukee Express</u> South terminus: 40 th Street park & ride lot in Ahwatukee. North terminus: State Capitol.	T11	<u>Desert Sky Express (I-10 West RAPID)</u> North terminus: Happy Valley Road park & ride lot. South terminus: State Capitol.	T23	<u>Red Mountain Fwy Connector</u> East terminus: Future Park & ride lot near Power Road and Loop 202. West terminus: State Capitol.
T3	<u>Anthem Express</u> North terminus: Future park & ride lot at Anthem Master Planned Development. South terminus: Scottsdale Airpark.	T12	<u>East Loop 101 Connector</u> West terminus: Desert Sky Transit Center. East terminus: State Capitol.	T24	<u>San Tan Express</u> East terminus: Future Park & ride lot near Power Road and Loop 202. West terminus: College Avenue Transit Center.
T4	<u>Apache Junction Express</u> East terminus: Future park & ride lot near Signal Butte Road and US60. West terminus: State Capitol.	T13	<u>Grand Avenue Limited</u> North terminus: Scottsdale Airpark. South terminus: Future Park & Ride near Germann Road & McQueen Road.	T25	<u>Scottsdale/Rural Arterial BRT</u> East terminus: Williams Gateway/ASU East Campus. West terminus: State Capitol.
T5	<u>Arizona Avenue Arterial Bus Rapid Transit</u> South Terminus: Future Snediger Transit Center near Alma School Road and Ocotillo Road. North terminus: Sycamore & Main St LRT Station.	T14	<u>Loop 303 Express</u> East terminus: Phoenix Central Station. West terminus: Surprise park & ride lot at Bullard Avenue.	T27	<u>South Central Avenue Arterial BRT (A Pattern)</u> North terminus: Scottsdale Road and Shea Blvd. South terminus: Chandler Mall Transit Center.
T6	<u>Avondale Express</u> West terminus: Dysart Road park & ride lot in vicinity of Interstate 10. East terminus: State Capitol.	T15	<u>Main Street Arterial BRT</u> North terminus: Arrowhead Towne Center. South terminus: Desert Sky Mall Transit Center.	T28	<u>SR 51 Express (SR51 RAPID)</u> North terminus: State Capitol. South terminus: South Mountain Community College campus.
T7	<u>Black Canyon Freeway Connector</u> North terminus: Park & ride lot at future regional shopping center at Carefree Highway and I-17. South terminus: Metro Center Transit Center.	T16	<u>North Glendale Express</u> East terminus: Broadway and Power Road. West terminus: Light rail station at Sycamore Street.	T29	<u>Superstition Fwy Connector</u> North terminus: Phoenix Central Station. South terminus: Arizona Mills Transit Center.
T8	<u>Buckeye Express</u> West terminus: Future park & ride lot located north of I-10 and approximately three miles west of the Sun Valley Parkway T1. East terminus: State Capitol.	T17	<u>North I-17 Express</u> North terminus: Interim Arrowhead Towne Center. South terminus: State Capitol.	T30	<u>Superstition Springs Express</u> East terminus: Phoenix Central Station. South terminus: 59 th Avenue and Baseline Rd.
T9	<u>Chandler Boulevard Arterial Bus Rapid Transit</u>	T18	<u>North Loop 101 Connector (Surprise to Scottsdale)</u> North terminus: Future park & ride lot at Anthem Master Planned Development. South terminus: State Capitol.	T31	<u>West Loop 101 Connector (to North Glendale P&R)</u> East terminus: Superstition Springs Center. West terminus: Arizona Mills Transit Center.
		T19	<u>Papago Fwy Connector (to Buckeye)</u> East terminus: Loop 101 and Scottsdale Road. West terminus: Surprise park & ride lot at Bullard Avenue.		
		T20	<u>Peoria Express</u> West terminus: Future East Buckeye park & ride lot in the vicinity of Verado Way and Van Buren Street. East terminus: State Capitol.		
		T21	<u>Pima Express</u> North terminus: Peoria park & ride lot (south of Peoria Avenue, near Loop 101). South terminus: State Capitol.		

8.1.2 Bus Operations: Supergrid

Regional Grid bus routes, which are also commonly referred to as “Supergrid Routes,” include bus routes that are situated along major roads on the regional arterial grid network. The supergrid network addresses a major weakness of the current fixed route bus network. The operational efficiency of the current bus network is hampered by varying service levels across routes and jurisdictions, which is a direct result of the variability of local funding from jurisdiction to jurisdiction. The supergrid addresses this problem by regionally funding key routes at a consistent level of service across all served jurisdictions. Regional funding of bus operations along the arterial grid network ensures a degree of consistency in service levels across jurisdictions, which may not otherwise be possible due to current funding limitations at the local level. Figure 8-2 and Table C-2 provide information on the locations and costs associated with the regional bus grid. The routes depicted in Figure 8-2 are cross-referenced with the data in Table C-2 by the code associated with each route. Table 8-2 lists route termini as an aid in interpreting Figure 8-2. Final routing is subject to operational planning.

Regional Grid bus operations account for a total of \$572 million (2009 and YOE \$'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-4). This represents approximately 10.6 percent of the total regional funding budget allocated for transit. There are a total of 15 Regional Grid routes identified for funding during the RTP planning period from FY 2006 through 2026. Three routes were implemented during FY 2009. An additional 19 routes are in the Regional Transportation plan but are currently unfunded through FY 2026. Since funding became available, six routes have been implemented. During the next five years, FY 2010 through FY 2014, one route is planned for implementation. In most cases these routes operate in the peak direction at 15-minute intervals during the two-hour morning and afternoon commute periods, and at 30-minute intervals during the rest of the service day. In addition, 30-minute service on Saturday and Sunday is provided.

Routes Implemented During FY 2009

- Main Street (T60); Implemented as Route 40.
- Dobson Road (T45); Implemented as Route 96.
- Southern Avenue (T45); Implemented as Route 61.

Routes Planned for Implementation During FY 2009 through FY 2013

- Gilbert Road (T54); Service start: FY 2010.

Figure 8-2



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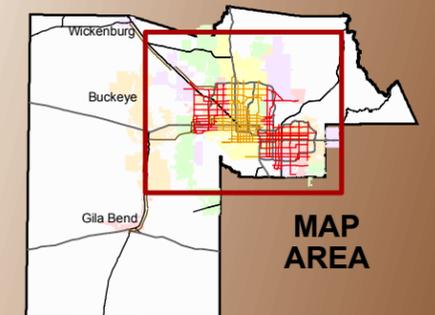
Super Grid Bus System

- Regional Grid Routes
- Grid Routes Funded by City of Phoenix
- New Rural Routes
- Freeways
- Highways
- Other Roads
- County Boundary

Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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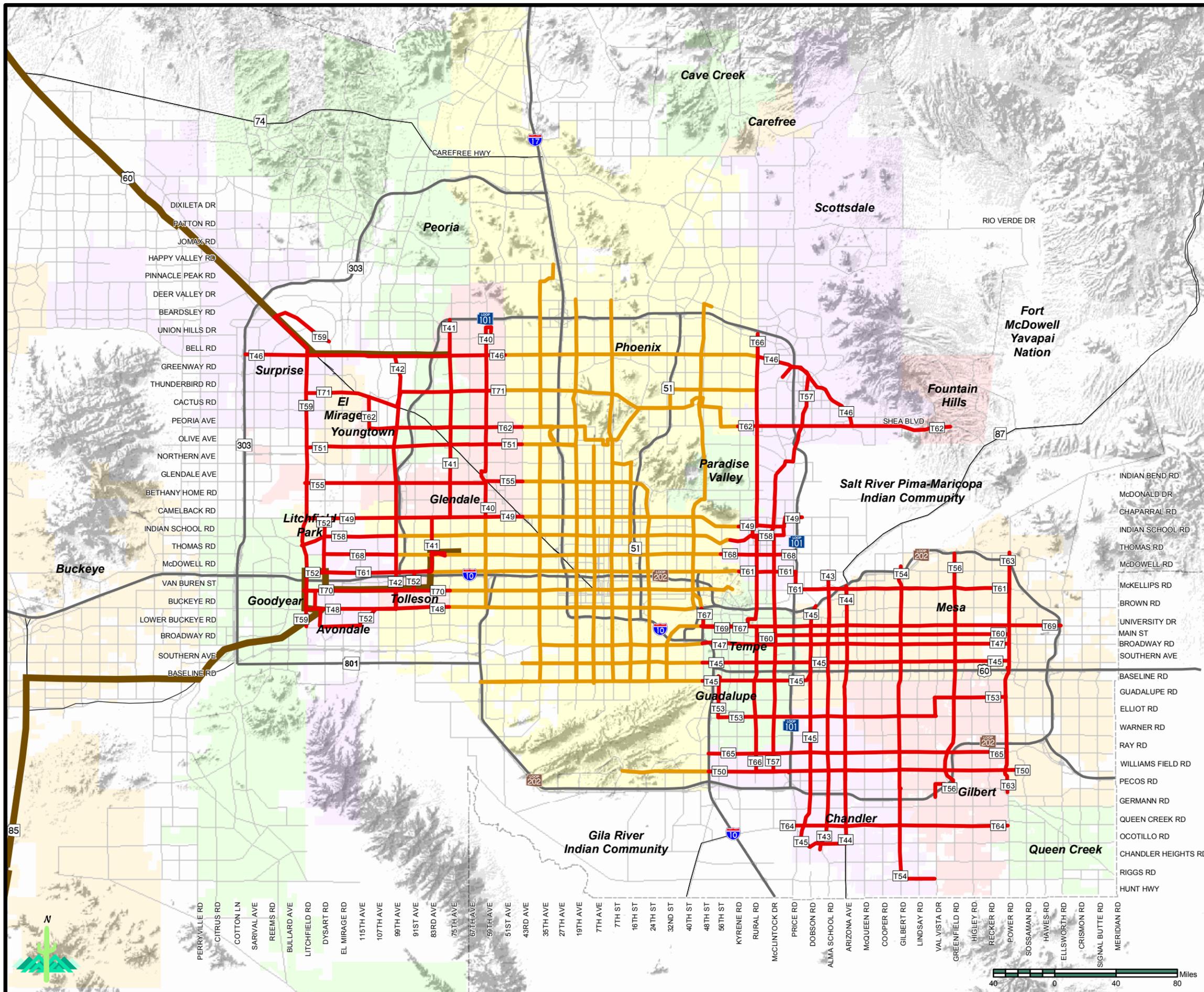


TABLE 8-2 REGIONAL GRID BUS ROUTE TERMINI

Note: Route termini are listed as an aid in interpreting maps. Final routing subject to operational planning.

T40	<u>59th Avenue</u> South terminus: Buckeye Road. North terminus: Midwestern University campus.	T47	<u>Broadway Road</u> West terminus: Manzanita Speedway near 35 th Avenue. East terminus: Superstition Springs Center.	T60	<u>Main Street</u> West terminus: College Avenue Transit Center. East terminus: Superstition Springs Center.
T41	<u>83rd Avenue/75th Avenue</u> South terminus: Desert Sky Mall Transit Center. North terminus: Arrowhead Towne Center.	T48	<u>Buckeye Road</u> West terminus: Litchfield Road. East terminus: LRT station at 44 th Street and Washington Street.	T61	<u>McDowell Road/McKellips Road</u> West terminus: Litchfield Road. East terminus: Power Road and future Loop 202 park & ride lot.
T42	<u>99th Avenue</u> South terminus: Buckeye Road. North terminus: Bell Road.	T49	<u>Camelback Road</u> West terminus: Litchfield Road. East terminus: Scottsdale Community College.	T62	<u>Peoria Avenue/Shea Boulevard</u> West terminus: Thunderbird Boulevard. at 103 rd Avenue. East terminus: Fountain Hills Boulevard.
T43	<u>Alma School Road</u> South terminus: Future Snediger Transit Center near Alma School Road and Ocotillo Road. North terminus: McDowell Rd and Alma School Road.	T50	<u>Chandler Boulevard</u> West terminus: Desert Foothills Parkway. East terminus: Williams Gateway Airport/ASU East Campus.	T63	<u>Power Road</u> South terminus: Rittenhouse Road. North terminus: Power Road at planned park & ride lot to Loop 202.
T44	<u>Arizona Avenue/Country Club Drive</u> South terminus: Future Snediger Transit Center near Alma School Road and Ocotillo Road. North terminus: McKellips Road and Center Street.	T51	<u>Dunlap Avenue /Olive Avenue</u> West terminus: Litchfield Road. East terminus: Metrocenter Transit Center.	T64	<u>Queen Creek Road</u> West terminus: Price Road. East terminus: Power Road.
T45	<u>Baseline Road</u> West terminus: 59th Avenue. East terminus: Dobson Rd. <u>Southern Avenue</u> West terminus: 43 rd Avenue. East terminus: Superstition Springs Center. <u>Dobson Road</u> North terminus: Mesa Riverview near Dobson Road and Loop 202. South terminus: Future Snediger Transit Center near Alma School Road and Ocotillo Road.	T52	<u>Dysart Road</u> East terminus: Desert Sky Transit Center. West terminus: Camelback Road and Litchfield Road.	T65	<u>Ray Road</u> West terminus: Interstate 10. East terminus: Williams Gateway Airport/ASU East Campus.
T46	<u>Bell Road</u> West terminus: Loop 303. East terminus: Shea Boulevard and Frank Lloyd Wright.	T53	<u>Elliot Road</u> West terminus: Arizona Mills Transit Center. East terminus: Superstition Springs Center.	T66	<u>Scottsdale Road/Rural Road</u> North terminus: Loop 101. South terminus: Chandler Fashion Mall Transit Center.
		T54	<u>Gilbert Road</u> South terminus: Riggs Road and Val Vista Drive. North terminus: McDowell Road.	T67	<u>Tatum Boulevard/44th Street</u> South terminus: College Avenue Transit Center. North terminus: Desert Ridge Market Place.
		T55	<u>Glendale Avenue</u> West terminus: Litchfield Road. East terminus: State Route 51.	T68	<u>Thomas Road</u> West terminus: Estrella Mountain Community College. East terminus: Pima Road.
		T56	<u>Greenfield Road</u> South terminus: Val Vista Drive and Willis Road. North terminus: Thomas Road.	T69	<u>University Drive (to Ellsworth Road)</u> West terminus: South Mountain Community College. East terminus: Ellsworth Road.
		T57	<u>Hayden Road/McClintock Drive</u> North terminus: Hayden Road and Raintree Drive. South terminus: Chandler Fashion Mall Transit Center.	T70	<u>Van Buren Street</u> West terminus: Litchfield Road. East terminus: Phoenix Zoo.
		T58	<u>Indian School Rd</u> West terminus: Litchfield Road. East terminus: Granite Reef Road and Camelback Road.	T71	<u>Waddell Road/Thunderbird Road</u> West terminus: Litchfield Road. East terminus: Scottsdale Airport.
		T59	<u>Litchfield Road</u>		

8.1.3 Bus Operations: Other

In addition to the BRT/Express and Regional Grid services, other services account for a total of \$689 million (2009 and YOE \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026 (see Table 8-4). These services include rural/flexible routes, commuter vanpools, paratransit services, safety and security, operations and capital contingencies, supplementary funding for previously existing local and express service, and RPTA planning and administration costs. Table C-3 provides information on the costs associated with these services. The services are described briefly below:

Rural/flexible Routes - This service type addresses the need to provide connections between the urban and rural communities of the county. Rural routes provide connections between remote communities and urban transit nodes and address a range of trip needs including work, shopping, education, and access to various community services. These services account for a total of \$17 million (2009 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

Funding has been identified for two rural transit routes. One route operates between Gila Bend and West Phoenix and was initiated in FY 2006. The second route operates between Wickenburg and Glendale and was initiated in FY 2007

Commuter Vanpools – The Commuter Vanpool Program operates as a personalized express service for commuters, and is managed by Valley Metro/RPTA through its complementary rideshare program. Commuter vanpools allow groups of commuters throughout the region to self-organize and obtain a vehicle from Valley Metro/RPTA to operate a carpool service. Vanpools can be very effective at serving suburban employment centers such as office parks and office campuses. Vanpooling is one of the Transportation Demand Management strategies many employers have implemented as a Trip Reduction Program measure. Through sponsorship and funding of a vanpool program, Valley Metro/RPTA aspires to maintain rider fares at a level that is attractive to the commuter and available to all employers and commuter groups in Maricopa County. Operating costs are fully recovered through fare revenues and are not subsidized.

ADA Paratransit Services – ADA paratransit services address the needs of disabled riders who cannot utilize fixed route bus service due to physical or cognitive disability. Paratransit service is demand-response and provides curbside pick-ups and drop-offs. This service is required by the Americans with Disabilities Act (ADA) for all ADA-certified patrons for all areas within three-quarter miles of a fixed route. These services account for a total of \$210 million (2009 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). During the next five years (FY 2010 through FY 2014), it is

anticipated that \$44 million (2009 \$'s) will be expended to provide required ADA paratransit services.

Safety and Security – Funds are set aside to improve the safety and security of passengers and transit assets, including rolling stock and facilities. Specific expenditures will be programmed each year based on need and may include such items as closed circuit television at facilities, cameras on buses, and other needed infrastructure improvements.

Contingencies – Funds are set aside for operating and capital contingencies. This amount is equal to two and one half percent of the budget for operations and 3.75 percent of the budget for purchased capital (e.g. fleet) and 10 percent of constructed capital (e.g. park and rides). Any contingencies not spent revert back to the general fund to be re-programmed for other projects.

RPTA Planning and Administration – RPTA receives an allocation from the Regional Area Road Fund (RARF) for planning and administration. This pays for the overhead and administration costs and any regional or general planning costs that are not attributable to specific RTP projects.

Existing Local and Express Service – Supplementary funding is allocated to previously existing local and express services, which complement the planned BRT and Supergrid networks, primarily in the City of Phoenix. This accounts for a total of \$132 million (2009 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3), which is approximately 19 percent of the total for “Bus Operations: Other”.

8.1.4 Bus Capital: Facilities

Associated with the expansion of transit service will be the need for additional maintenance and passenger facilities. The identification of specific locations and timing of construction for these facilities will occur as the result of ongoing capital planning efforts. These efforts will include the identification and evaluation of potential sites for transit passenger and maintenance facilities. This process will guide the selection of sites, and will be done in cooperation with the host communities, which will include public outreach efforts to identify and address the concerns of affected neighborhoods, institutions, and commercial users.

The numerous capital projects affiliated with regional bus operations account for a total of \$371 million (2009 and YOE \$'s) during FY 2006 through 2026 (see Table 8-4). There is \$20 million (2009 and YOE \$'s) for contingency included in this amount. The Regional Transportation Plan calls for the completion of 13 park-and-ride lots; 6 transit centers (4 bus-bay); 4 transit centers (6 bus-bay); 3 transit centers (for major activity centers); 4 new bus maintenance facilities and 2 facility upgrades; two dial-a-ride/rural bus maintenance facilities; a vanpool maintenance facility; the purchase of BRT Right-of-way and associated

improvements and maintenance; 1,200 bus stop pullouts/improvements at various locations, and the implementation of ITS/VMS in 1684 vehicles. Not all of these facilities are currently funded through FY 2026. Unfunded facilities include 5 maintenance facilities, 5 park-and-ride facilities, 4 transit centers and 3 BRT corridors.

Beginning in 2006, pre-design, design, and planning was initiated on a number of park-and-ride facilities. Other maintenance and passenger facilities are to be implemented over the next several years. It is anticipated that a total of \$78 million (2009 \$'s) in regional funding will be expended during the next five years (FY 2010 through FY 2014) on bus capital facilities.

8.1.5 Bus Capital: Fleet

Over the planning horizon associated with Proposition 400, fleet purchases account for a total of \$1,139 million (2009 and YOE \$'s) during FY 2006 to FY 2026 (see Table 8-4). This includes the purchase of 1,859 buses for fixed route networks; 40 buses for rural routes; 1,256 Dial-a-Ride (DAR) vans for paratransit purposes; and 1,481 vanpool vans. There is \$39 million (2009 and YOE \$'s) contingency included. It is anticipated that a total of \$316 million (2009 \$'s) in regional funding will be expended during the period FY 2010 through FY 2014 on vehicle purchases. These purchases will include 502 fixed route buses, 19 express/BRT buses, 10 rural transit buses, 300 paratransit vehicles, and 335 commuter vans. These reflect both replacement and expansion vehicles.

8.2 STATUS OF LIGHT RAIL TRANSIT PROJECTS

The Transit Life Cycle Program includes an extensive High Capacity / Light Rail Transit (HCT/LRT) component for the MAG Region. This covers support infrastructure for the HCT/LRT system, as well as future extensions of HCT/LRT corridors that are planned throughout the region. The construction of the 20-mile light rail Central Phoenix / East Valley (CP/EV) that was developed through the CP/EV Major Investment Study (MIS) is not a part of the Transit Life Cycle Program, except for some funding for support infrastructure. Figure 8-3, as well as Tables C-6 and C-7, provide information on the locations and costs of HCT/LRT throughout the metropolitan area. HCT/LRT projects account for a total of \$2.7 billion (2009 and YOE \$'s) in the Transit Life Cycle Program (see Table 8-4), which is approximately 47 percent of the total regional funding dedicated to transit. Of this amount, approximately \$2.3 billion (2009 and YOE \$'s) applies toward construction, whereas the remaining \$416 million (2009 and YOE \$'s) applies to support infrastructure affiliated with the HCT/LRT system. None of the regional funding for HCT/LRT is allocated to operating costs.

8.2.1 Central Phoenix/East Valley (CP/EV)

Figure 8-3



MAG 2009 Annual Report
on Proposition 400

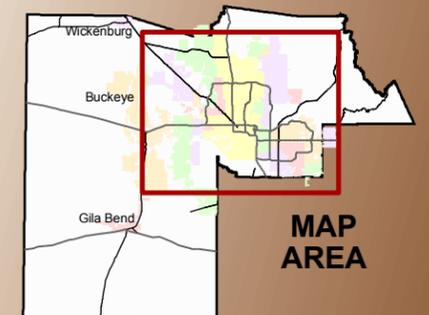
Light Rail Transit (LRT)/
High Capacity Transit

- Initial 20-mile Light Rail Segment
- Northwest Extension (Scheduled to open 2012)
- Eligible High Capacity Corridors
- Freeways
- Highways
- Other Roads
- County Boundary

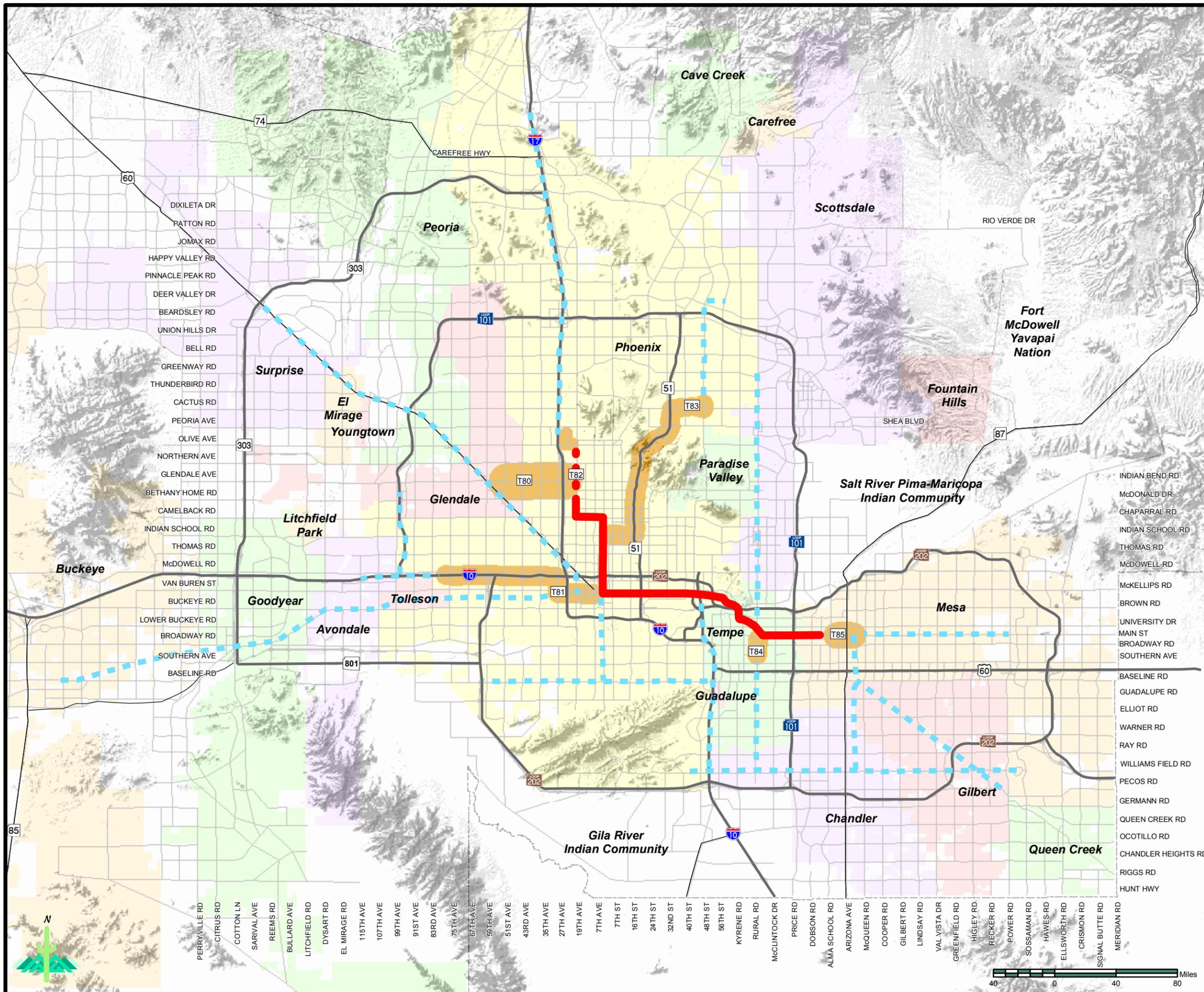
The Transit Life Cycle Program does not include funding for the Eligible High Capacity Corridors

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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Although the construction of the CP/EV light rail starter segment was not a part of the Transit Life Cycle Program, background information on this project is provided here to provide an overview of the entire HCT/LRT system planned for the region. The conceptualization of the light rail starter segment began with the completion of the CP/EV Major Investment Study (MIS) in 1998. The purpose of the CP/EV MIS was to identify transportation improvements designed to reduce existing and future traffic congestion, improve mobility options, and provide transportation alternatives in the corridor linking central Phoenix with the cities of Tempe and Mesa. The approved alignment for the CP/EV extends from Bethany Home Road and 19th Avenue into downtown Phoenix; from downtown Phoenix to downtown Tempe and Arizona State University; and continuing to the intersection of Main Street and Sycamore in Mesa.

The CP/EV operates primarily at-grade on city streets, with two tracks and light rail vehicles running in trains from one to three cars. The trains run in both directions approximately 18 hours per day on weekdays, and 22 hours per day on weekends. The trains operate every 10 minutes during peak hours, 15 minutes on weekends and 20 minutes during off-peak hours.

Important elements of the CP/EV include 28 stations, 8 park-and-ride lots, 50 light rail vehicles and traffic signal priority strategies to improve speed. The park-and-ride facilities have over 3,500 spaces. Light rail stations are generally located about 3/4-mile apart, but closer (1/3-mile) in urban centers. Shuttle buses and an improved fixed route network play an important role in the light rail system. Half-cent sales tax money from Proposition 400 was not utilized to pay for route construction of the CP/EV, but is rather allocated toward certain elements of the support infrastructure.

The CP/EV was completed in December 2008 and through the first six months of operation (January – June 2009) is averaging over 33,000 boardings per day, 30 percent higher than projected.

8.2.2 Light Rail Transit: Support Infrastructure

Completion of support infrastructure affiliated with the High Capacity/Light Rail Transit (HCT/LRT) system accounts for a total of \$416 (2009 and YOE \$'s) in the Transit Life Cycle Program. Of this amount, \$277 million (2009 and YOE \$'s) applies toward infrastructure along the CP/EV (to be expended by 2011); and \$139 million (2009 and YOE \$'s) applies to other HCT/LRT improvements throughout the system (to be expended by 2026).

8.2.3 High Capacity / Light Rail Transit: Future Corridors

The Transit Life Cycle Program includes regional funding for the completion of six additional LRT/HCT segments on the system. These include a five-mile Northwest Extension, which in FY 2007 was split into two phases; a two-mile

corridor south of the CP/EV on Rural Road to Southern Avenue; a 2.7-mile light rail extension from the east terminus of the CP/EV to Mesa Drive; a five-mile corridor to downtown Glendale; an 11-mile corridor along I-10 west to 79th Avenue; and a 12-mile corridor to Paradise Valley Mall; In total, the future corridors account for a total of 37.7 miles of the 57.7-mile system. Development of the route extensions account for a total of \$2.3 billion (2009 and YOE \$'s) during FY 2006 through FY 2026 (see Table 8-4).

It should be noted that local sources will provide a significant share of the funding for the extension to downtown Glendale and the Northwest Extension. For these segments, regional funding in the form of Federal 5309 funds will provide approximately half of the funding, with local sources providing the remaining half. Other than the funding for support infrastructure identified previously, it is not anticipated that half-cent funds will be applied to these segments. The status of development work on the route extensions is discussed below.

LRT System and Configuration Study

The purpose of this study is to provide system level planning support to METRO. Task orders are issued for specific work activities required by METRO. Three major task orders were recently completed in FY 2009 or are currently underway; High Capacity/Light Rail Transit System Configuration Study II, Travel Forecasting Network Development For Use in TRANSCAD and a Passenger Intercept Survey. Each of these tasks will be completed in FY 2010.

Future Corridors

In FY 2007 the Northwest Extension was split into two phases. For Phase 1, the design was completed in 2008-2009 and right-of-way acquisition occurring in 2008-2010. Construction of the extension is now on-hold, but construction of Phase 1 currently is scheduled to complete in FY 2012. Phase 2 is scheduled to be complete in FY 2018.

The Central Mesa LRT Extension locally preferred alternative was approved in FY 2009 and will enter the Small Starts Project Development (design) phase in FY 2010. The light rail transit extension will extend along Main Street from the end of line station for the CP/EV at Sycamore eastward to Mesa Drive.

The Tempe South corridor is currently in the Alternatives Analysis/Draft Environmental Impact Statement phase. A locally preferred alternative will be identified in FY 2010. This corridor's study area is bounded by the Tempe branch of the Union Pacific Railroad on the west, Loop 101 on the east, Loop 202 (Red Mountain) on the north and Loop 202 (Santan) on the south.

The I-10 West corridor is currently in the Alternatives Analysis/Draft Environmental Impact Statement phase. This corridor extends from Downtown

Phoenix westward to 83rd Avenue. A locally preferred alternative will be identified in FY 2010.

The Glendale corridor has compiled a notebook with three alignment options for the Glendale LRT extension identified in the RTP. The alignment options being evaluated include service from I-10 to the stadium complex north of Bethany Home Road, service to downtown Glendale, or service to the ASU west campus on Thunderbird Avenue. The affected cities are reviewing the technical information. The Alternatives Analysis/Draft Environmental Impact Statement phase will begin in FY 2010.

While remaining in the Regional Transportation Plan, the Northeast Phoenix LRT corridor, which is planned to begin at Indian School Rd./Central Ave. and extend to Paradise Valley Mall, has been shifted beyond the TLCP horizon year of FY 2026. It was necessary to delay this project beyond FY 2026 to accommodate the decrease in actual and forecasted revenues, and it has been targeted for FY 2030.

8.3 TRANSIT PROGRAM CHANGES

The estimated total transit costs of \$5.7 billion for FY 2006-2026 represent a 16.2 percent decrease over the figure of \$6.8 billion provided in the 2008 Annual Report. This decrease is a result of delaying projects beyond FY 2026 to accommodate the decrease in actual and forecasted revenues. The resulting cost adjustments estimated for the Life Cycle Program components are summarized in Table 8-3. The net total of these cost changes amounts to approximately a \$1.2 billion decrease. The TLCP projects will continue to be reevaluated and changes in project implementation may be made based on actual revenues received.

As a result of the project delays, 12 of the original 31 BRT/Express routes are currently unfunded through FY 2026; 19 of the original Supergird routes are also unfunded through FY 2026; and the Northeast Phoenix LRT corridor has been shifted beyond the horizon year of FY 2026 for implementation. In addition, bus capital projects that are unfunded through FY 2026 include five maintenance facilities, five park-and-ride facilities, four transit centers and three BRT corridors.

The American Recovery and Reinvestment Act (ARRA) directed approximately \$66 million in funding to the MAG area for transit projects. On March 25, 2009, the MAG Regional Council approved allocation of these funds to transit projects such as park-and-ride lots, maintenance facilities, transit centers, and bus stop improvements. This funding helped mitigate the anticipated decline in regional revenue sources.

TABLE 8-3
TRANSIT LIFE CYCLE PROGRAM COST CHANGES
(2008, 2009 and Year of Expenditure Dollars in Millions)

Category	2008 Annual Report Total Costs: FY 2006 - 2026 (2008 and YOE Dollars)	2009 Annual Report Total Costs: FY 2006 - 2026 (2009 and YOE Dollars)	Change in Total Costs: 2008 vs. 2009
Bus Operations: BRT/Express	230.6	165.9	(64.7)
Bus Operations: Regional Grid	1,180.4	572.3	(608.1)
Bus Operations: Other	696.1	688.6	(7.5)
Bus Capital Projects: Facilities	542.1	370.9	(171.2)
Bus Capital Projects: Fleet	1,158.4	1,139.2	(19.2)
Light Rail Transit: Support Infrastructure	435.3	416.1	(19.2)
Light Rail Transit Capital: Route Extensions	2,597.9	2,317.2	(280.7)
Total	6,840.8	5,670.2	(1,170.6)

* Included in bus facilities and bus fleet categories in 2007 Annual Report.

8.4 TRANSIT PROGRAM COSTS, FUNDING AND FISCAL STATUS

8.4.1 Program Expenditures and Estimated Future Costs

Table 8-4 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Transit Life Cycle Program. Detailed data on costs at the project level is included in Tables C-1 through C-7 in the appendix. It is important to note that, as a part of the expenditures for light rail, A.R.S. 48-5107 requires that all costs for relocation of utility facilities incurred after July 1, 2003 as a direct result of the construction and operation of a light rail project be reimbursed to the utility by the light rail project.

As indicated in Table 8-4, the total estimated cost for the Transit Life Cycle Program for the period FY 2006 through FY 2026 is \$5.7 billion (2009 and YOE \$'s). Expenditures through FY 2009 total \$711 million (YOE \$'s), while estimated future costs total \$5.0 billion (2009 \$'s). The estimated future costs represent a 20.6 percent decrease over the figure of \$6.3 billion (2008 \$'s) provided in the 2008 Annual Report. This decrease is a result of delaying projects beyond FY 2026 to accommodate the decrease in actual and forecasted revenues.

TABLE 8-4
TRANSIT LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2009 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Costs: FY 2006 - 2026 (2009 and YOE Dollars)
	Operations	Capital Investments	Total		
Bus Operations: BRT/Express	8.5	--	8.5	157.5	166.0
Bus Operations: Regional Grid	35.9	--	35.9	536.4	572.3
Bus Operations: Other	109.9	--	109.9	578.6	688.5
Bus Capital Projects: Facilities	--	134.9	134.9	236.0	370.9
Bus Capital Projects: Fleet	--	167.5	167.5	971.7	1139.2
Light Rail Transit: Support Infrastructure	--	180.9	180.9	235.2	416.1
Light Rail Transit Capital: Route Extensions		73.0	73.0	2,244.2	2,317.2
Total	154.3	556.3	710.6	4,959.6	5,670.2

8.4.2 Future Fiscal Status

Table 8-5 summarizes the future funding sources and uses that apply to the Transit Life Cycle Program for the period FY 2010 through FY 2026. Funding sources available for this period are estimated to total \$5.1 billion (2009 \$'s). These sources include the Proposition 400 half-cent sales tax extension (\$3.4 billion); Regional Area Road Fund transfer (\$95 million); Federal Transit/5307 funds (\$1.0 billion); Federal Transit/5309 funds (\$1.1 billion); Federal Highway/CMAQ funds (\$374 million); other income from local sources (\$453 million); bond and loan proceeds (\$449 million); and bus farebox revenues (\$329 million). Expenses totaling \$749 million are deducted from these sources, covering estimated future debt service. In addition, an allowance for inflation of \$1.4 billion is deducted. Including a beginning balance of \$33 million, this yields a net total of \$5.1 billion (2009 \$'s) for use transit projects and programs through FY 2026.

Table 8-5 also lists the estimated future uses identified in the Life Cycle Program totaling \$5.0 billion for the period covering FY 2010 through FY 2026, expressed in 2009 \$'s. These costs cover bus operations (\$1.3 billion), bus capital projects (\$1.2 billion), and light rail transit capital projects (\$2.5 billion). Therefore, for the remainder of the Transit Life Cycle Program, projected revenues are in balance with future projects costs. However, as noted previously, the balance was achieved by the implementation of numerous projects beyond FY 2026.

**TABLE 8-5
TRANSIT LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2010-2026
(2009 and Year of Expenditure Dollars in Millions)**

SOURCES OF FUNDS	
Category	Projected Future Funding: FY 2010-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	3,421.3
Regional Area Road Fund	95.1
Federal Transit / 5307 Funds	1,016.9
Federal Transit / 5309 Funds	1,143.5
Federal Highway/ MAG CMAQ	374.1
Other Income	453.1
Bond and Loan Proceeds	449.0
Bus Farebox Revenues	328.6
Plus Beginning Balance	32.6
Less Debt Service	(749.3)
Less Inflation Allowance	(1,432.5)
Total (2009 \$'s)	5,132.4
USES OF FUNDS	
Category	Estimated Future Costs: FY 2010-2026 (2009 Dollars)
Bus Operations: BRT/Express	157.5
Bus Operations: Regional Grid	536.4
Bus Operations: Other	578.6
Bus Capital Projects: Facilities	236.0
Bus Capital Projects: Fleet	971.7
Light Rail Transit: Support Infrastructure	235.2
Light Rail Transit Capital: Route Extensions	2,244.2
Total (2009 \$'s)	4,959.6

8.5 TRANSIT PROGRAM OUTLOOK

In the 2008 Annual Report, concerns were raised regarding the potential for increasing costs and declining revenues to impact the ability to implement all future services included in the Transit Life Cycle Program (TLCP). At that time, projected revenues were in balance with future projects costs through FY 2026, but with very little left at the end of the program. In addition, costs were continuing to rise faster than anticipated, while revenues were not keeping pace.

It was indicated that if transportation excise tax revenue estimates declined, it was likely that service implementation will be affected.

As indicated in the 2009 Annual Report, these concerns were realized and a balanced TLCP was achieved in FY 2009 only by delaying the implementation of numerous projects due to the current economic downturn and the decrease in estimated future revenues that resulted. During FY 2010, RPTA will continue to evaluate individual project implementation issues, as well as the TLCP changes that were made to achieve a balanced program. Among a variety of factors, this effort will be considering costs and route utilization to ensure that productivity goals are met, while maintaining an equitable distribution of transit services. A continuing requirement of the life cycle process is to maintain a balance, through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as may be necessary.

Another consideration is that a large part of the funding for the LRT system is awarded by the US Department of Transportation through the discretionary "New Starts Program". The timing and amounts of light rail transit new start monies coming to the MAG region will be subject to a highly competitive process at the Federal level. Discretionary funding for the bus capital program is also highly competitive. The prospects for awards from Federal programs will require careful monitoring. The pending reauthorization of Federal Transportation funding legislation will also impact when and how Federal Transit Administration funding flows to the region.

CHAPTER NINE

TRANSPORTATION SYSTEM PERFORMANCE

Proposition 400 legislation set forth the factors to be considered during the development of the MAG Regional Transportation Plan (RTP), such as the impact of growth on transportation systems and the use of a performance-based planning approach. Consistent with State legislation, the development of the MAG Regional Transportation Plan (RTP) included a performance-based planning and programming process. This process established goals, objectives and performance measures for developing various options and evaluating potential scenarios to be included in the Plan. MAG, continuing to place emphasis on performance-based planning, has established an ongoing Transportation System Performance Monitoring and Assessment Program. The implementation of projects in the RTP started in 2005, therefore the material presented in this chapter reflects the performance of the system as the first Phase of projects became operational. The Performance Monitoring and Assessment Program, will continue to track future implementation phases and evolve as new operational improvements are implemented and new data sources become available.

9.1 PERFORMANCE MONITORING AND ASSESSMENT CONCEPTS

The transportation system performance monitoring and assessment process includes: (1) tracking of the performance of the transportation system on an ongoing basis, and (2) forecasting how the system is likely to perform in the future. The tracking element emphasizes collection of data and development of comparative statistics that reveal trends in system performance over time. The forecasting element focuses on the use of travel demand computer models to project travel conditions and draw conclusions regarding future performance of the transportation system.

9.1.1 Monitoring Current Conditions

The optimum combination of accuracy and detail for performance measurement is based on real time, observed data sources. This data provides the information to assess the principal operating characteristics of the current transportation system and to establish an historical record that tracks performance trends over time. The specific parameters observed vary by the transportation mode and must take into consideration the practicality and expense of collecting data on a continuing basis. The latter factor is particularly important if a historical record is to be established that allows effective analysis of performance trends. In the MAG Region, the ADOT FMS (Freeway Management System) provides a rich source of archived operations data for the freeway system, As of 2009, the FMS covers approximately 130 miles of the region's freeways, expressways, and

Interstates, with another 37 miles currently in design for near-term construction. FMS coverage is expected to grow to 225 miles by 2023. As the system continues to grow, this archive, will allow the use of these data for future reliability performance calculations.

For roadway systems, typical data collected to assess current performance includes: vehicle counts at a sample of locations; vehicle densities along various roadway segments; speeds and point-to-point travel times As well as number and types of accidents. For transit systems, common data items cover: boardings and farebox revenues by route; on-board passenger loadings at various points in the system; operating costs; and service reliability.

Per Capita Freeway Vehicle-Miles of Travel (VMT) is defined as the average number of freeway miles a person in the Phoenix-Mesa urbanized area travels by vehicle per day. This measure tracks overall personal vehicle use travel trends for the region. As seen in Table 9.1, the average person in the Phoenix-Mesa urbanized area traveled 8.36 freeway miles by vehicle per day in 2008, which is a decrease of 5.0 percent compared to 2006, and a decrease of 1.6 percent compared to 2007. Total freeway travel also decreased from 29,451,000 vehicle miles of travel in 2006 to 29,416,000 vehicle miles of travel in 2007, and significantly down to 29,130,000 in 2008.

Results in Table 9-1 are reflective of the changing national and regional economic conditions between FY 2006 and 2008. Economic indicators point at a reduction in automobile use due to higher fuel costs. This is confirmed by a reduction in HURF (Highway User Fund) revenues primarily due to a decrease in travel volume and registration of motor vehicles. Additionally, Arizona’s economy has reached recession levels partly related to job losses and a prolonged housing market slowdown. These changes have had an effect in VMT (vehicle miles traveled) and congestion measures, as well as an impact in transit ridership measures.

TABLE 9-1

PER CAPITAL VMT for the PHOENIX/MESA URBANIZED AREA

	2006	2007	2008
Total Freeway VMT	29,451,000	29,416,000	29,130,000
Population of Phoenix-Mesa Urbanized Area	3,350,000	3,459,000	3,481,000
Per Capita Freeway VMT	8.80	8.50	8.36

Source: ADOT Highway Performance Monitoring System (HPMS)

9.1.2 Forecasting Future Performance

The second key aspect of performance monitoring and assessment is the analysis of future conditions on the transportation system. An understanding of potential future performance status provides valuable input into the decision-making process for prioritizing expansions or other improvements to the system. Forecasts of travel on the roadway and transit system are developed through the use of computer simulations of the future transportation network. These simulations are based on assumptions regarding potential future improvements to the system, as well as projections of future population levels, and other critical factors such as land use densities and patterns. The use of computer simulations allows the testing of various network options to determine how future system performance is affected by alternative investment strategies. The models have the capability to produce simulated data for all the same factors that are collected as part of the monitoring process, as well as additional data that would be impractical or too costly to collect.

Transportation network simulation models are also used to assess the impact of improvements compared to “no-build” conditions. This capability is especially important in a high growth area such as the MAG region. Under high growth conditions, the performance of the transportation system may decline even though improvements are made, due to increased travel demand brought on by the growth in housing units and population. However, conditions may have been much worse, if improvements had not been made. Network simulation models provide the capability to analyze conditions with and without improvements, allowing an assessment of project performance relative to a “no-build” option.

9.2 ROADWAY SYSTEM PERFORMANCE

A broad range of monitoring data on the performance of the roadway system in the MAG area has been collected over the years. These data collection efforts have addressed a variety of performance factors and have enabled historical comparisons to be made. In addition, the MAG Travel Demand Model has been applied routinely to assess future performance of the roadway network.

9.2.1 Roadway Monitoring Data

Currently traffic data is available for the MAG Region from various recently completed studies and surveys. These include: the 2003 and 2007 Travel Time and Speed Study, the 2006 Weekday Traffic Volume Study and Database, the 2006 Regional Freeway Bottleneck Study, the 2006 Freeway Level of Service Study, the Phoenix External Travel Survey and the Freeway Travel Conditions and Trends Study. During the 2007-2008 Fiscal Year, a number of additional studies are being conducted, including: the ADOT Freeway Management System

(FMS) Detector Accuracy Evaluation, the 2007 Origin and Destination Survey, the GIS-T Phase II Study and the Internal Truck Travel Survey.

In the MAG region, ADOT's Freeway Monitoring System (FMS) is operational on the majority of the urbanized area freeway system, collecting volume and speed data per lane. Preferred maintenance status has been assigned to 58 loop detectors that collect five, fifteen, sixty minute and 24-hour interval data. In addition, MAG has been conducting Travel Time and Speed Studies since 1976; the most recent study, completed in 2007, collected valuable data for 1,800 miles of roadways including freeway and arterial facilities.

Travel Time is among the measures that are most meaningful to travelers and system managers alike because it relates to their experience of everyday travel. Point-to-point travel time is the average time required to traverse a fixed distance of freeway in a single direction. Point-to-point travel times were calculated for specific freeway origin-destination (O-D) pairs that are representative of common commutes in the MAG region.

The travel time changes shown in Table 9-2 are illustrative of many of the measured changes in freeway performance between 2006 and 2007. They show that freeway conditions in the MAG region are changing, but those changes are generally modest in size and scope and differ from facility to facility across the region.

TABLE 9-2
TRAVEL TIME RESULTS for TYPICAL COMMUTES

From	To	Time Period	Dir	Average Peak Period Travel Time (minutes)		
				2006	2007	Change from 2006
US 60 at Val Vista Drive - midway between Loop 101 and Loop 202	SR 143 at Sky Harbor Blvd - just east of Sky Harbor Airport	AM Peak	WB	22	22	0
Loop 101 at US 60 - south of Loop 202 (Red Mountain)	I-10 at 7th Street - north of downtown Phoenix	PM Peak	WB	19	19	0
Loop 101 at Guadalupe - south of US 60	I-17 and Dunlap - near MetroCenter Mall	AM Peak	NB	32	32	0
I-17 at 19th Avenue - east of the Durango Curve	I-10 at Elliot - midway between US 60 and Loop 202 (Santan)	PM Peak	WB	24	23	-1
I-10 at Warner Road - midway between US 60 and Loop 202 (Santan)	SR 143 at University - west end of Tempe, near Sky Harbor Airport	AM Peak	NB	12	12	0
I-10 at 83rd Avenue - east of Loop 101	SR 51 at Bell Road - south of Loop 101	PM Peak	EB/NB	26	25	-1
I-10 at 83rd Avenue - east of Loop 101	Loop 202 at Loop 101 - near Tempe Marketplace	Off-Peak	EB	22	22	0

As shown in Table 9-2, travel on two of the representative trips in the region became faster in 2007 than 2006. The other five trips remained essentially the same, experiencing changes in travel time of less than one minute. All of the changes from 2006 to 2007 are modest in size, with the largest representing a five percent change in travel time. The other changes are approximately 1 to 2 percent, and are small enough that they are unlikely to be noticeable to the public.

9.2.2 Roadway Performance Forecasts

In order to analyze future congestion, it is necessary to make use of simulations of the regional transportation network. The MAG travel demand model, which is a state-of-the-art computer travel demand model, was utilized for this purpose. For the analysis presented in this chapter, three network scenarios were modeled to assess potential future conditions on the transportation system in the region.

Modeling Scenarios

- 2008 Base Current Year Scenario - For this scenario the highway, arterial and transit network reflects the current year 2008. This network reflects conditions after implementing a number of projects identified in the RTP. The socioeconomic data that generates the travel demand for this scenario is based on the 2007 Update to the Socioeconomic Projections accepted by the MAG Regional Council in June of 2003.
- 2030 RTP Plan Scenario - The network used for this model run includes all the projects in the RTP Plan and utilizes MAG's 2007 Update to the Socioeconomic Projections for the year 2030.
- 2030 No-Build Scenario - The purpose of this scenario is to quantify the performance of the system without including the RTP major investments and assess the impact on levels of service. This scenario uses the same socioeconomic data for 2030 as that used for the RTP scenario, but does not include the regionally funded freeway system improvements identified in the RTP.

Roadway Performance Measures: To illustrate the relationship between the various indicators of future roadway system performance, data has been grouped into three categories: Supply Measures, Demand Measures and Level of Service Measures. These measures have been selected as representative indicators of the overall performance of the transportation system and are presented in a comparative fashion among three modeling scenarios: the 2008 Current Base Year, the 2030 RTP and the 2030 No-Build. All data is for the Maricopa County portion of the MAG transportation modeling area. Table 9-3 provides a

**TABLE 9-3
HIGHWAY PERFORMANCE MEASURES FROM MAG MODEL
(Maricopa County Portion of MAG Modeling Area)***

Measures	Scenario		
	2008 Base	2030 RTP	2030 No Build
Population **	4,236,285	6,381,425	6,381,425
Supply Measures			
Lane-Miles			
Freeways	1,920	2,865	1,914
Arterials	10,270	19,596	18,166
Capacity Miles			
Freeways	53,210,043	79,389,209	53,048,469
Arterials	79,486,623	157,610,234	146,796,437
Demand Measures			
Daily Vehicle-Miles (VMT)			
Freeways	33,721,948	58,423,300	43,355,601
Arterials	46,296,429	81,316,236	92,823,216
Level of Service Measures			
Congested Lane-Miles			
Freeways	433	825	966
Arterials	1,236	2,277	3,994
% Congested Lane-Miles			
Freeways	22.6	28.8	50.5
Arterials	12.0	11.6	22.0
Daily Congested VMT			
Freeways	11,777,622	22,588,646	27,677,484
Arterials	10,095,551	19,153,038	33,478,230
% Daily Congested VMT			
Freeways	34.9	38.7	63.8
Arterials	21.8	23.6	36.1
Total Vehicle Hours of Delay			
Hours of Delay	686,069	1,436,565	2,115,615
Hrs of. Delay per 1000 VMT	8.50	10.2	15.5

* Results are derived from Base Year 2008, 2030 RTP and 2030 No Build MAG model runs - August 2009; the No-build is based on the 2008 Base Year Freeway and the Planned Arterial networks.

** Equals resident pop. in households, plus resident pop. in group quarters (excluding institutional facilities, military and correctional facilities), plus transient pop., plus seasonal pop.

comparison of key system level parameters and performance measures for the three scenarios that were modeled.

- Supply Measures - Two measures of the supply of roadway capacity in the region are included in Table 9.3: freeway lanes miles and capacity miles. The value for freeway capacity miles is the result of multiplying the number of lane miles by the daily capacity factor (~28,000) per lane for freeways. As shown, there is an increase of approximately 49 percent in freeway capacity between

the 2008 Base Year and the 2030 RTP. Arterial capacity miles for the RTP nearly double, increasing by approximately 98 percent as compared to the Base 2008 Year network.

- Demand Measures - The demand measure identified in Table 9-3 is vehicle miles of travel (VMT) for arterials and freeways on an average weekday. These facility types were selected, since they carry the vast majority of travel in the roadway network. However, there is some additional VMT carried by local and collector streets, which is not reflected in the figures in Table 9-3. Comparing the 2008 Base Year and the 2030 RTP, a 73 percent VMT increase is observed on freeways and 76 percent on arterials. For the No Build scenario, the VMT increases are 28 percent and 100 percent, respectively, reflecting the increased burden of traffic that arterials must carry due to lack of freeway improvements.
- Level of Service (LOS) Measures - A number of LOS measures are included in Table 9-3 for the three modeled scenarios, including congestion on freeways, congested VMT, and vehicle hours of delay. As noted previously, congested freeway segments are those with LOS E-F, and delay represents amount of extra travel time due to congestion.

A review of Table 9-3 indicates that, while the number of lane miles of congested freeways nearly doubles between the 2008 Base Year and the 2030 RTP, the portion of total lane miles that are congested increases by only 27 percent. When compared to the No Build scenario, the percentage of congested freeway lane miles more than doubles. The total vehicle hours of delay experience an increase of 109 percent between the 2008 Base Year and the 2030 RTP, but dramatically increases by more than two hundred percent under the No Build scenario. Clearly, the freeway capacity added in the RTP helps significantly to mitigate the effects of a growing population.

9.3 TRANSIT SYSTEM PERFORMANCE

One of the key components of the transit performance monitoring effort is the Transit Performance Report (TPR). The TPR is prepared and updated annually by Valley Metro/Regional Public Transportation Authority (RPTA). This report is developed using input from, and is reviewed by, member agencies and the RPTA Board. The TPR serves as an important information source for the MAG regional transportation planning process.

9.3.1 Service Efficiency and Effectiveness Study

In 2006 RPTA hired a consultant to conduct a Service Efficiency and Effectiveness Study (SEES). One task of this study was to develop a series of performance measures. This SEES developed initial performance targets that will allow comparison between performance expectations and actual performance.

These performance measures and performance targets are being incorporated into the TPR. In future years these targets will be reviewed, refined and indexed to inflation as appropriate.

The SEES framework proposed performance targets, which establish a baseline of performance expectation for Fixed Route bus (system-wide); Fixed Route bus at the route level; Paratransit; and Light Rail Transit (LRT). One of the key goals of the performance targets is to ensure consistent service levels throughout the region.

9.3.2 Performance Targets and 2008 Results

The specific performance measures and targets developed during the Service Efficiency and Effectiveness Study are listed in Tables 9-4 through 9-6. It is important to note that SEES targets for LRT are preliminary, since there is a limited amount of data available on which to base the targets until the system has gone through the initial period of revenue service. Data on individual bus route performance is listed in Appendix Tables C-8 and C-9.

Tables 9-4 through 9-6 include actual operating results, where available, from the 2007-2008 Transit Performance Report. The 2008 TPR is the second full iteration of this reporting format significantly different from the previous Performance Management Analysis System format. The TPR is based on the findings from the SEES and the data available at the time of publication. The modes covered by the TPR will include fixed route, paratransit, and, light rail data for the first quarter of 2009. Bus service categories include local routes, super grid (major arterial routes), Express/Bus Rapid Transit, as well as Circulators, and rural connector routes and shuttles.

**TABLE 9-4
FIXED ROUTE BUS PERFORMANCE MEASURES (SYSTEM-WIDE)**

Measure	Target	2006 Results	2007 Results	2008 Results
Cost Efficiency/Effectiveness				
Farebox Recovery Ratio	25%	23.6%	24.2%	22.4%
Operating Cost per Boarding	\$2.49	\$2.29	\$2.62	\$3.05
Subsidy (Net Operating Cost per Boarding)	\$1.88	\$1.75	\$1.99	\$2.37
Operating Cost Per Revenue Mile	\$5.32	\$4.90	\$5.28	\$5.61
Average Fare	\$0.72	\$0.54	\$0.64	\$0.68
Service Effectiveness				
Annual Increase in Total Boardings	3.0%	3.4%	-1.14%	3.5%
Annual Increase in Average Boardings (Weekday/Sat., Sun.)	3.0%, 3.0%,3.0%	5.0%, 10.0%,6.0%	-1.9%, -2.7%,1.05%	3.3%, 3.8%,12.1%
Avg. Boardings per Revenue Mile	2.1	2.15	2.01	1.84

**TABLE 9-5
PARATRANSIT PERFORMANCE MEASURES**

Measure	Target	2006 Results	2007 Results	2008 Results
Cost Efficiency/Effectiveness				
Farebox Recovery Ratio	5.0%	4.9%	4.4%	4.0%
Operating Cost per Boarding	\$30.61	\$28.55	\$31.97	\$35.33
Subsidy (Net Operating Cost) per Boarding)	\$29.12	\$27.16	\$30.56	\$33.90
Operating Cost Per Revenue Hour	\$53.92	\$50.30	\$55.46	\$59.04
Service Effectiveness				
Annual Increase in Total Boardings	3.0%	3.1%	-1.7%	-2.1%
Boardings per Revenue Hour	1.76	1.76	1.73	1.67
ADA On-time Performance	90.0%	89.8%	95.4%	94.7%

**TABLE 9-6
LIGHT RAIL TRANSIT (LRT) PERFORMANCE TARGETS**

Measure	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio	25.0%
Operating Cost per Boarding	\$3.04
Subsidy (Net Operating Cost per Boarding)	\$2.23
Cost Per Revenue Mile	\$15.43
Average Fare	\$0.82
Service Effectiveness	
Annual Total Boardings	7,827,000
Boardings Average Weekday	26,090
Boardings Average Saturday	20800
Boardings Average Sunday/Holiday	11,267
Boardings per Vehicle Revenue Mile	3.94
Boardings per Revenue Mile	8.04
Safety Incidents per 100,000 Vehicle Miles	0.874
Security Incidents per "x" Boardings	2.00
On-time Performance	95%
Miles between Mechanical Failures	25,000
Customer Satisfaction	89%

9.4 PERFORMANCE MONITORING PROGRAM OUTLOOK

The MAG Transportation System Performance Monitoring and Assessment Program has been established to provide a framework for reporting performance at the system and project levels, and serve as a repository of historical, simulated and observed data for the transportation system in the MAG Region. As part of this effort, the program will consolidate the data collection efforts related to system performance and develop an archive of historic and current performance data sets that can be used for future evaluation and analysis. The overall goal of the program is to communicate measures related to mobility and accessibility in the MAG Region, and to provide the public with a better idea of how transportation systems perform. In order to establish a consistent framework, a group of measures will be consistently reported as the implementation of the RTP moves forward.

As mentioned, the Regional Public Transportation Authority has established a specific set of performance measures to monitor and evaluate bus and rail systems in the region, results are published in the 2007-08 RPTA Annual Transit Performance Report. For roadway systems in the region, a broad range data on potential performance measures has been collected and state-of-the-art modeling capabilities are in place. In order to enhance these initial efforts, in June 2008, MAG initiated the Performance Measurement Framework consultant study to further refine and focus the performance monitoring approach for the regional roadway network. This study has been completed and, combined with input from the Transit Performance Report, will provide the basis for an annual Transportation System Monitoring and Performance Report.

Appendix A

Freeway/Highway Life Cycle Program

TABLE A-1
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW CORRIDORS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost: FY 2006-2026 (2009 and YOE Dollars)	FY Prgm. for Final Construction	Project Length (Center-line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
SR 801 (I-10 Reliever)										
F1	SR 85 to Loop 303	0.0	0.0	0.0	0.0	211.0	211.0	2025	11.0	
F2	Loop 303 to Loop 202	0.0	14.9	0.0	14.9	1,637.6	1,652.5	2025	13.0	
	Subtotal	0.0	14.9	0.0	14.9	1,848.6	1,863.5		24.0	
Loop 202 (South Mountain Freeway)										
F3	I-10 (West) to 51st Avenue	0.3	0.0	0.0	0.3	1,490.5	1,490.8	2018	10.0	
F4	51st Avenue to Loop 202/I-10	0.1	0.0	0.0	0.1	986.3	986.4	2017	12.0	
	Subtotal	0.4	0.0	0.0	0.4	2,476.8	2,477.2		22.0	
Loop 303 (Estrella Freeway)										
F5	I-17 to US 60 (Grand Avenue)	26.9	3.6	32.4	62.9	628.2	691.1	2018	18.0	
F6	US 60 (Grand Avenue) to I-10	6.4	12.7	0.2	19.3	1,667.4	1,686.7	2014	15.0	
F7	I-10 to I-10R/MC 85	0.0	0.0	0.0	0.0	390.2	390.2	2019	5.0	
	Subtotal	33.3	16.3	32.6	82.2	2,685.8	2,768.0		38.0	
SR 802 (Williams Gateway Freeway)										
F8	Loop 202 to Ellsworth Road	0.0	0.2	0.0	0.2	281.1	281.3	2016	2.0	
F9	Ellsworth Road to Meridian Road	0.0	0.0	0.0	0.0	264.9	264.9	2020	3.0	
	Subtotal	0.0	0.2	0.0	0.2	546.0	546.2		5.0	
Right-of-Way										
F10	Right-of-Way Protection for Loop 303 (Extension south of MC 85 to Riggs Road)	0.0	0.0	0.0	0.0	50.0	50.0	2025	---	
F11	Right-of-Way Protection for SR 74 (US 60 to Loop 303)	0.0	0.0	0.0	0.0	49.0	49.0	2025	---	
	Subtotal	0.0	0.0	0.0	0.0	99.0	99.0			
Sky Harbor Expressway										
F12	Superior Ave. to University Dr.	0.0	0.0	0.0	0.0	0.0	0.0	--	--	Project deleted from program in FY 2008.
	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0			
	TOTAL	33.7	31.4	32.6	97.7	7,656.2	7,753.9	--	--	

TABLE A-2
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: GENERAL PURPOSE LANES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Prgm. for Final Construction	Project Length (Center-line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
I-10										
F20	SR 85 to Loop 303	2.5	0.0	0.0	2.5	81.1	83.6	2009/2022	12.0	Includes advancement of segment between Loop 303 and Verrado to FY 2009 as an ARRA project.
F21	Loop 303 to Loop 101	7.6	1.5	70.7	79.8	85.4	165.2	2009	9.0	Includes projects F22, F70 and F71.
F22	Dysart Road to Loop 101	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F21.
F23	Loop 101 to I-17	0.0	0.0	0.0	0.0	416.6	416.6	2015	7.0	
Segment Group F24, F25, F26 *										
F24	SR 51 to 40th Street	--	--	--	--	--	--	--	3.0	
F25	40th Street to Baseline Road	--	--	--	--	--	--	--	6.0	Includes auxiliary lane project from Southern Ave. to SR 143.
F26	Baseline Road to Loop 202/Santan	--	--	--	--	--	--	--	6.0	
Group Total		0.2	10.1	3.2	13.5	707.1	720.6	2014	15.0	
F27	Loop 202/Santan Freeway to Riggs Rd.	0.0	0.0	0.0	0.0	69.0	69.0	2015	6.0	Includes project F72.
Subtotal		10.3	11.6	73.9	95.8	1359.2	1455.0			
I-17										
F28	New River Road to Anthem Way	0.0	0.0	0.0	0.0	25.0	25.0	2024	3.0	
F29	Anthem Way to Carefree Highway	2.5	0.0	0.0	2.5	118.0	120.5	2009/2024	5.0	Includes project F73. Interim GP lane improvements are in FY 2009 as an ARRA project.
F30	Carefree Highway to Loop 101	12.1	114.2	118.2	244.5	29.5	274.0	2008	9.0	Includes project F74.
F31	Loop 101 to Arizona Canal	0.0	0.0	0.0	0.0	102.5	102.5	2015	6.0	
F32	Arizona Canal to McDowell Road	0.0	0.0	0.0	0.0	960.0	960.0	2020	7.0	
Subtotal		14.6	114.2	118.2	247.0	1,235.0	1,482.0			
Loop 101 (Aqua Fria Freeway)										
F33	US 60/Grand Avenue to I-17	0.0	0.0	0.0	0.0	161.8	161.8	2024	12.0	
F34	I-10 to US 60/Grand Avenue	0.0	0.0	0.0	0.0	136.0	136.0	2022	10.0	
Subtotal		0.0	0.0	0.0	0.0	297.8	297.8			
Loop 101 (Pima Freeway)										
F35	I-17 to SR 51	0.0	0.0	0.0	0.0	88.0	88.0	2024	7.0	

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs; FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOY Dollars)	FY Prgm. for Final Construction	Project Length (Centerline Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
F36	SR 51 to Shea Blvd.	0.0	0.0	0.0	0.0	136.0	136.0	2022	10.0	Includes project F37.
F37	Princess Drive to Shea Boulevard	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F36.
F38	Shea Boulevard to Loop 202 (Red Mt.)	3.5	0.0	0.0	3.5	103.2	106.7	2014	11.0	
	Subtotal	3.5	0.0	0.0	3.5	327.2	330.7			
Loop 101 (Price Freeway)										
F39	Baseline Road to Loop 202/Santan	0.0	0.0	0.0	0.0	51.0	51.0	2023	6.0	
	Subtotal	0.0	0.0	0.0	0.0	51.0	51.0			
Loop 202 (Red Mountain Freeway)										
F40	I-10/SR 51 to Loop 101 (Pima)	0.9	0.0	57.6	58.5	168.4	226.9	2009	9.0	Includes project F41; converted to design-build project in FY 2008.
F41	Rural Road to Loop 101 (EB & WB)	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F40.
F42	Loop 101 to Gilbert Road	0.0	0.0	0.0	0.0	69.8	69.8	2014	6.0	
F43	Gilbert Road to Higley Road	0.0	0.0	0.0	0.0	57.8	57.8	2024	5.0	
F44	Higley Road to US 60/Superstition	0.0	0.0	0.0	0.0	136.0	136.0	2025	10.0	
	Subtotal	0.9	0.0	57.6	58.5	432.0	490.5			
Loop 202 (Santan Freeway)										
F45	I-10 to Dobson Rd.	0.0	0.0	0.0	0.0	57.8	57.8	2023	5.0	
F46	Dobson Rd. to Val Vista Dr.	0.0	0.0	0.0	0.0	80.9	80.9	2024	7.0	
F47	Val Vista Road to US 60	0.0	0.0	0.0	0.0	128.9	128.9	2025	11.0	
	Subtotal	0.0	0.0	0.0	0.0	267.6	267.6			
SR 51 (Piestewa Freeway)										
F48	Loop 101/Pima to Shea Boulevard	0.0	0.0	0.0	0.0	81.7	81.7	2023	6.0	
	Subtotal	0.0	0.0	0.0	0.0	81.7	81.7			
SR 85										
F49	I-10 to I-8	1.5	0.0	43.7	45.2	200.6	245.8	2011	32.5	Includes project F50.
F50	Hazen Road to I-8	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F49.
	Subtotal	1.5	0.0	43.7	45.2	200.6	245.8		32.5	
US 60 (Grand Avenue)										
F51	Loop 303 to Loop 101	3.7	0.5	0.0	4.2	106.9	111.1	2015	10.0	Widening phase identified as an ARRA project for programming in FY 2009.
F52	Loop 101 to Van Buren Street	0.0	0.0	0.0	0.0	154.6	154.6	2025	11.0	
F53	99th Ave. to 83rd Ave.	0.7	0.0	0.2	0.9	10.6	11.5	2009	2.0	Designated as an ARRA project.
	83rd Ave. / Peoria Ave.	0.0	0.0	0.0	0.0	2.1	2.1	2006	2.0	Project completed in FY 2007.
F54	71st Ave. to Grand Canal Bridge	0.0	0.0	3.6	3.6	0.4	4.0	2006	6.5	Project completed in FY 2008.
	Subtotal	4.4	0.5	3.8	8.7	274.6	283.3			

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs; FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOY Dollars)	FY Prgm. for Final Construction	Project Length (Center-line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
US 60 (Superstition Freeway)										
F55	I-10 to Loop 101	0.0	0.0	11.8	11.8	13.2	25.0	2008	5.0	
F56	Gilbert Rd. to Power Road	0.0	0.0	87.4	87.4	0.0	87.4	2007	6.0	Includes project F91. Project completed in FY 2007.
F57	Crismon Road to Meridian Road	0.0	0.0	0.0	0.0	30.2	30.2	2017	2.0	Includes project F92.
	Subtotal	0.0	0.0	99.2	99.2	43.4	142.6			
US 93 (Wickenburg Bypass)										
F58	Wickenburg Bypass	0.0	15.1	26.9	42.0	0.0	42.0	2007	1.7	
	Subtotal	0.0	15.1	26.9	42.0	0.0	42.0			
SR 143 (Hohokam Expressway)										
	Sky Harbor Blvd. T.I.	1.5	0.0	0.0	1.5	37.2	38.7	2010	--	Project added to program in FY 2008.
	Subtotal	1.5	0.0	0.0	1.5	37.2	38.7			
	TOTAL	36.7	141.4	423.3	601.4	4,607.3	5,208.7	--	--	

* Due to the segmentation approach used by ADOT in the project development process, these original segments were required to be merged for reporting purposes.

TABLE A-3
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: HIGH OCCUPANCY VEHICLE LANES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Prgm. for Final Construction	Project Length (Center-line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
	I-10									
F70	Loop 303 to Dysart Road	0.0	0.0	0.0	0.0	--	--	--	Combined with project F21.	
F71	Dysart Road to Loop 101	0.0	0.0	0.0	0.0	--	--	--	Combined with project F21.	
F72	Loop 202/Santan to Riggs Road	0.0	0.0	0.0	0.0	--	--	--	Combined with project F27.	
	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	I-17									
F73	Anthem Way to Carefree Highway	0.0	0.0	0.0	0.0	--	--	--	Combined with project F29.	
F74	Carefree Highway to Loop 101	0.0	0.0	0.0	0.0	--	--	--	Combined with project F30.	
F75	I-10 (West) to I-10 (East)	0.0	0.0	0.0	0.0	77.0	77.0	2017	7.0	
	Subtotal	0.0	0.0	0.0	0.0	77.0	77.0		7.0	
	Loop 101 (Aqua Fria Freeway)									
F76	US 60/Grand Avenue to I-17	0.0	0.0	0.0	0.0	62.2	62.2	2022	12.0	
F77	I-10 to US 60/Grand Avenue	0.0	0.0	0.0	0.0	53.5	53.5	2017	10.0	
	Subtotal	0.0	0.0	0.0	0.0	115.7	115.7		22.0	
	Loop 101 (Pima Freeway)									
F78	I-17 to SR 51 (Tatum)	0.0	0.0	0.0	0.0	37.5	37.5	2013	7.0	
F79	SR 51 (Tatum) to Princess Drive	1.4	0.0	13.3	14.7	4.1	18.8	2008	6.0	
F80	Princess Drive to Loop 202 (Red Mt.)	5.7	0.0	54.1	59.8	1.5	61.3	2007	4.0	
F81	Shea Boulevard to Loop 202	0.0	0.0	0.0	0.0	--	--	--	Project completed in FY 2009.	
	Subtotal	7.1	0.0	67.4	74.5	43.1	117.6		17.0	
	Loop 101 (Price Freeway)									
F82	Loop 202/Red Mountain to Loop 202/Santan	3.1	0.0	24.2	27.3	15.2	42.5	2008	10.0	
F83	Baseline to Loop 202/Santan	0.0	0.0	0.0	0.0	--	--	--	Includes project F83	
	Subtotal	3.1	0.0	24.2	27.3	15.2	42.5		10.0	

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs, FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YDE Dollars)	FY Prgrm for Final Construction	Project Length (Center-line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
Loop 202 (Red Mountain Freeway)										
F84	Loop 101 to Gilbert Road	2.6	0.0	4.4	7.0	28.5	35.5	2009	6.0	
F85	Gilbert Road to Higley Road	0.0	0.0	0.0	0.0	27.0	27.0	2019	5.0	
F86	Higley Road to US 60/Superstition	0.0	0.0	0.0	0.0	53.5	53.5	2022	10.0	
	Subtotal	2.6	0.0	4.4	7.0	109.0	116.0		21.0	
Loop 202 (Santan Freeway)										
F87	I-10 to Dobson Road	0.0	0.0	0.0	0.0	49.5	49.5	2013	5.0	Includes project F128.
F88	Dobson Road to Val Vista Road	0.0	0.0	0.0	0.0	37.5	37.5	2015	7.0	
F89	Val Vista Road to US 60 (Superstition)	0.0	0.0	0.0	0.0	58.9	58.9	2022	11.0	
	Subtotal	0.0	0.0	0.0	0.0	145.9	145.9		23.0	
SR 51										
F90	Loop 101/Pima to Shea Boulevard	3.4	0.0	47.8	51.2	0.0	51.2	2007	6.0	Includes project F130. Project completed in FY 2009.
	Subtotal	3.4	0.0	47.8	51.2	0.0	51.2		6.0	
US 60 (Superstition Freeway)										
F91	Gilbert Road to Power Road	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F56.
F92	Crismon Road to Meridian Road	0.0	0.0	0.0	0.0	--	--	--	--	Combined with project F57.
	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
	TOTAL	16.2	0.0	143.8	160.0	505.9	665.9	--	--	

TABLE A-4
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW ARTERIAL INTERCHANGES ON EXISTING FACILITIES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Prgm. for Final Construc- tion	Other Project Information
		Design	Right-of-Way	Construction	Total				
I-10									
F100	Bullard Avenue	1.1	5.5	9.6	16.2	0.0	16.2	2007	Project completed in FY 2008.
F101	Chandler Heights	0.0	0.0	0.0	0.0	25.4	25.4	2022	
F102	El Mirage	0.0	0.0	0.0	0.0	22.5	22.5	2023	
F103	Perryville Road	0.0	0.0	0.0	0.0	23.4	23.4	2013	
	Subtotal	1.1	5.5	9.6	16.2	71.3	87.5		
I-17									
F104	Dixileta Drive/Jomax Road	2.8	2.7	40.2	45.7	0.0	45.7	2007	Includes project F106. Project completed in FY 2009.
F105	Dove Valley Road	2.2	0.0	11.2	13.4	11.6	25.0	2009	Local advancement.
F106	Jomax Road	0.0	0.0	0.0	0.0	--	--	--	Combined with project F104.
	Subtotal	5.0	2.7	51.4	59.1	11.6	70.7		
Loop 101 (Aqua Fria Freeway)									
F107	Beardsley Road/Union Hills Drive	0.0	0.0	0.0	0.0	28.8	28.8	2009	Local advancement. Identified as an ARRA project.
F108	Bethany Home Road	1.5	0.0	8.4	9.9	0.0	9.9	2006	Project completed in FY 2008.
	Subtotal	1.5	0.0	8.4	9.9	28.8	38.7		
Loop 101 (Pima Freeway)									
F109	64th Street	2.3	1.1	24.1	27.5	3.9	31.4	2007	Project completed in FY 2009.
	Subtotal	2.3	1.1	24.1	27.5	3.9	31.4		
Loop 202 (Red Mountain Freeway)									
F110	Mesa Drive (Ramps Only)	0.0	0.0	0.0	0.0	15.0	15.0	2025	
	Subtotal	0.0	0.0	0.0	0.0	15.0	15.0		

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Prgm. for Final Construc- tion	Other Project Information
		Design	Right-of-Way	Construction	Total				
US 60 (Superstition Freeway)									
F111	Lindsay Road (Half Interchange)	0.0	0.0	0.0	0.0	8.8	8.8	2012	
F112	Meridian Road (Half Interchange)	0.0	0.0	0.0	0.0	8.8	8.8	2013	
	Subtotal	0.0	0.0	0.0	0.0	17.6	17.6		
Other Arterial Interchange Improvements									
	Deer Valley Road at I-17	0.0	0.0	0.0	0.0	--	--	--	Deleted from program in FY 2006.
	Higley Road at US 60	0.3	0.0	5.0	5.3	0.0	5.3	2007	Project completed in FY 2008.
	Ray Road at I-10	0.0	0.0	9.4	9.4	0.0	9.4	2006	Project completed in FY 2008.
	Carefree Highway at I-17	1.4	0.0	22.4	23.8	1.2	25.0	2007	Project completed in FY 2009.
	43rd Avenue at I-10	0.3	0.0	2.5	2.8	0.0	2.8	2007	Project completed in FY 2008.
	51st Avenue at I-10	0.0	0.0	0.0	0.0	--	--	--	Combined with 43rd Avenue.
	Avondale Blvd. at I-10	0.0	0.0	0.0	0.0	2.0	2.0	2010	Included in program in FY 2009
	SR 347 at I-10	0.0	0.0	0.0	0.0	0.2	0.2	2008	Included in program in FY 2007
	Cactus Rd. at I-17	0.0	0.0	6.7	6.7	0.1	6.8	2006	Project completed in FY 2008.
	Thunderbird Rd at Loop 101	0.0	0.0	2.4	2.4	0.4	2.8	2008	Included in program in FY 2007.
	Olive Ave. at Loop 102	0.0	0.0	0.0	0.0	3.0	3.0	2009	Included in program in FY 2009.
	Chaparral Rd. at Loop 101	0.0	0.0	0.0	0.0	0.9	0.9	2010	Included in program in FY 2009.
	Subtotal	2.0	0.0	48.4	50.4	7.8	58.2		
	TOTAL	11.9	9.3	141.9	163.1	156.0	319.1	--	

TABLE A-5
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW HOV RAMPS AT FREEWAY-TO-FREEWAY INTERCHANGES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost: (2009 and YOE Dollars)	FY Prgm. Final Construction	Other Project Information
		Design	Right-of-Way	Construction	Total				
Loop 101									
F125	I-10	0.0	0.0	0.0	0.0	68.1	68.1	2025	
F126	I-17	0.0	0.0	0.0	0.0	81.1	81.1	2024	
	Subtotal	0.0	0.0	0.0	0.0	149.2	149.2		
Loop 202									
F127	Red Mountain and US 60 (Superstition)	0.0	0.0	0.0	0.0	22.7	22.7	2025	
F128	Santan and I-10	0.0	0.0	0.0	0.0	--	--	--	Combined with project F87.
F129	Santan and Loop 101 / Price	0.0	0.0	0.0	0.0	22.7	22.7	2017	
	Subtotal	0.0	0.0	0.0	0.0	45.4	45.4		
SR 51									
F130	Loop 101 / Pima	0.0	0.0	0.0	0.0	--	--	--	Combined with project F90.
	Subtotal	0.0	0.0	0.0	0.0	0.0	0.0		
	TOTAL	0.0	0.0	0.0	0.0	194.6	194.6	--	

TABLE A-6
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - OPERATIONS, MAINTENANCE AND SYSTEMWIDE PROGRAMS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Facilities	Expenditures through FY 2009: (Year of Expenditure Dollars)			Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Programmed for Implementation	Other Project Information
	Operating	Capital	Total				
Freeway Management System							
Freeway Management System	0.2	2.8	3.0	206.7	209.7	2010-2026	Includes all corridor-specific FMS projects, as well as systemwide FMS activities.
Subtotal	0.2	2.8	3.0	206.7	209.7		
Maintenance							
Maintenance (Landscaping, including restoration and litter pick-up)	26.5	0.0	26.5	255.2	281.7	2010-2026	
Subtotal	26.5	0.0	26.5	255.2	281.7		
Noise Mitigation							
Noise Mitigation	0.1	41.8	41.9	347.2	389.1	2010-2026	
Subtotal	0.1	41.8	41.9	347.2	389.1		
Systemwide							
Right-of-Way Plans and Titles, Property Management, Advanced R/W Acquisition	7.5	0.4	7.9	129.1	137.0	2010-2026	
Preliminary Engineering, Design Change Orders, Fwy. Serv. Patrol, and Risk Management	74.3	0.0	74.3	418.9	493.2	2010-2026	
Subtotal	81.8	0.4	82.2	548.0	630.2		
TOTAL	108.6	45.0	153.6	1,357.1	1,510.7	--	

TABLE A-7
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - OTHER PROJECTS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Facilities	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Programmed for Implementation	Other Project Information
	Design	Right-of-Way	Construction	Total				
I-17								
Greenway Rd./Thunderbird Rd. (Drainage Improvements)	0.0	0.0	0.0	0.0	--	--	--	Combined with Peoria Avenue.
Peoria Ave./Cactus Rd. (Drainage Improvements)	0.0	0.0	0.0	0.0	17.0	17.0	2015	Included Greenway/Thunderbird.
Bethany Home Rd. - Northern Ave., Alhambra District (Construction)	0.0	0.0	0.0	0.0	2.3	2.3	2010	
16th Street - Buckeye Rd.	0.0	0.0	4.6	4.6	0.0	4.6	2006	Project completed in FY 2008.
Buckeye Rd./Northbound On-Ramp (Construction)		0.0	0.0	0.0	--	--	--	Project deleted in FY 2006.
Subtotal	0.0	0.0	4.6	4.6	19.3	23.9		
US 60 (Superstition)								
Val Vista to Power (landscape)	0.0	0.0	4.9	4.9	0.9	5.8	2007	Included in program in FY 2006. Completed in FY 2009.
Subtotal	0.0	0.0	4.9	4.9	0.9	5.8		
SR 74								
Passing Lanes	0.0	0.0	0.0	0.0	6.1	6.1	2010	Included in program in FY 2006.
Subtotal	0.0	0.0	0.0	0.0	6.1	6.1		
SR 87								
Forest Boundary - New Four Peaks (Construction)	0.0	0.0	21.9	21.9	0.0	21.9	2007	Project completed in FY 2009.
MP 211.8 - MP 213.0	0.0	0.0	0.0	0.0	2.4	2.4	2010	Included in program in FY 2007.
New Four Peaks Road - Dos S South Ranch Road	1.2	0.0	0.0	1.2	24.1	25.3	2010	Included in program in FY 2007.
Subtotal	1.2	0.0	21.9	23.1	26.5	49.6		

Facilities	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Estimated Cost (2009 and YOE Dollars)	FY Programmed for Implementation	Other Project Information
	Design	Right-of-Way	Construction	Total				
SR 88								
Apache Trail (District Force Account)	0.0	0.0	0.2	0.2	0.0	0.2	2006	Project completed in FY 2007.
Fish Creek Hill	0.1	0.0	0.0	0.1	1.6	1.7	2010	
Subtotal	0.1	0.0	0.2	0.3	1.6	1.9		
Loop 101 (Agua Fria)								
I-10 - MC 85 (99th Avenue)	0.4	0.0	0.0	0.4	3.6	4.0	2010	
Northern Ave. to 31st Ave. (Landscape)	0.2	0.0	0.0	0.2	1.3	1.5	2007	Project completed in FY 2008.
Skunk Crk. To Union Hills	0.0	0.0	2.5	2.5	0.0	2.5	2007	Project completed in FY 2008.
I-10 to I-17 (Traffic Flow Imprv.)	0.0	0.0	9.7	9.7	0.0	9.7	2007	Project completed in FY 2008.
Subtotal	0.6	0.0	12.2	12.8	4.9	17.7		
Loop 101 (Pima)								
Pima Road Extension (JPA)	0.0	0.0	0.0	0.0	3.9	3.9	2011	Included in program in FY 2008.
Subtotal	0.0	0.0	0.0	0.0	3.9	3.9		
Loop 101 (Price)								
Balboa Dr., Multi-Use Path (Local)	0.0	0.0	0.0	0.0	2.0	2.0	2012	
Galveston St. (Drainage)	0.0	0.0	0.0	0.0	2.1	2.1	2009	Included in program in FY 2009.
Subtotal	0.0	0.0	0.0	0.0	4.1	4.1		
Loop 202 (Santan)								
Lindsey Rd. to Gilbert Rd., Multi-Use Path	0.0	0.0	0.0	0.0	0.5	0.5	2010	
Subtotal	0.0	0.0	0.0	0.0	0.5	0.5		
Systemwide								
Ramp Meters, T.I. Improvements, Park & Ride Lots, Utilities, Miscel. Const.	0.4	0.0	35.0	35.4	20.4	55.8	2010-2026	
Subtotal	0.4	0.0	35.0	35.4	20.4	55.8		
TOTAL	2.3	0.0	73.9	76.2	87.3	163.5	--	

SUMMARY TOTALS	201.9	190.0	860.1	1,252.0	14,564.4	15,816.4	--	
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Appendix B

Arterial Street Life Cycle Program

TABLE B-1
ARTERIAL STREET LIFE CYCLE PROGRAM
REGIONAL FUNDING REIMBURSEMENTS AND TOTAL EXPENDITURES: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

YOE Year of Expenditure CONST Construction All Arterial Intersection Improvements
FY Fiscal Year Expend Expenditures ACI Arterial Capacity Improvements
\$ Dollars Reimb Reimbursement(s) * Measured in centerline miles

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOE\$)	Estimated Future Reimb FY10-FY26 (2009\$)	Total Reimb FY06-FY26 (2009\$ YOE\$)	Expend through FY09 (YOE\$)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY06-FY26 (2009\$ YOE\$)			
CHANDLER											
A1	Arizona Ave/Chandler Blvd	All	3.582		3.582	7.209	0.000	7.209	2006	0.25	Project Completed
A2	Arizona Ave/Elliot Rd	All	0.000	3.694	3.694	5.370	0.000	5.370	2006	0.25	Project Completed
A3	Arizona Ave/Ray Rd	All	3.464		3.464	4.949	0.000	4.949	2007	0.25	Project Completed
A4	Arizona Ave: Ocotillo Rd to Hunt Highway	ACI	0.000	6.078	6.078		28.199	28.199	2015	3.0	
A5	Chandler Blvd/Alma School Rd	All	0.251	3.444	3.696	1.854	9.692	11.547	2015	0.25	
A6	Chandler Blvd/Dobson Rd	All	1.060	3.039	4.099	1.525	6.945	8.470	2010	0.25	
A7	Chandler Blvd/Kyrene Rd	All	0.000	3.694	3.694		16.760	16.760	2020	0.25	
A8	Gilbert Rd: SR-202L to Hunt Hwy	ACI	0.000	18.129	18.129	11.069	55.186	66.255	2013	5.3	
	Gilbert Rd: SR-202L/ Germann to Queen Creek Rd	ACI	0.000	6.737	6.737	6.909	5.382	12.290	2010	1.3	
	Gilbert Rd: Queen Creek Rd to Chandler Heights Rd	ACI	0.000	7.897	7.897	2.080	19.692	21.772	2012	2.0	
	Gilbert Rd: Chandler Heights to Hunt Highway	ACI	0.000	3.495	3.495	2.080	30.112	32.192	2013	2.0	A portion of the programmed reimbursement was deferred to FY2007
A9	Kyrene Rd/Ray Rd	All	0.000	3.694	3.694		17.147	17.147	2024	0.25	
A10	Price Rd: SR-202L to I-10	All	0.000	54.819	54.819	0.000	78.312	78.312	2020	6.0	
A11	Ray Rd/Alma School Rd	All	2.217	1.484	3.701	3.519	6.704	10.223	2011	0.25	
A12	Ray Rd/Dobson Rd	All	0.000	3.694	3.694	0.000	15.023	15.023	2026	0.25	

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOE\$)	Estimated Future Reimb FY10-FY26 (2008\$)	Total Reimb FY06-FY26 (2009\$ YOES)	Expend through FY09 (YOE\$)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY06-FY26 (2009\$ YOES)			
A13	Ray Rd/McClintock Dr	All	0.000	3.694	3.694	0.000	15.356	15.356	2017	0.25	
A14	Ray Rd/Rural Rd	All	0.000	3.694	3.694	0.000	15.575	15.575	2025	0.2	
CHANDLER/GILBERT			10.574	109.159	119.733	35.495	264.899	300.394			
A15	Queen Creek Rd: Arizona Ave to Higley Rd	ACI	5.672	31.019	36.691	8.103	47.735	55.838	2013	7.0	
	CHANDLER Queen Creek Rd: Arizona Ave to McQueen Rd	ACI	5.672	0.000	5.672	8.103	0.000	8.103	2009	1.0	
	CHANDLER Queen Creek Rd: McQueen Rd to Lindsay Rd	ACI	0.000	10.153	10.153	0.000	14.504	14.504	2014	3.0	
	GILBERT Queen Creek Rd: Lindsay Rd to Val Vista Dr	ACI	0.000	4.927	4.927	0.000	7.040	7.040	2013	1.0	
	GILBERT Queen Creek Rd: Val Vista Dr to Greenfield Rd	ACI	0.000	6.376	6.376	0.000	9.967	9.967	2013	1.0	
	GILBERT Queen Creek Rd: Greenfield Rd to Higley Rd	ACI	0.000	9.562	9.562		16.224	16.224	2013	1.0	
FOUNTAIN HILLS			5.672	31.019	36.691	8.103	47.735	55.838			
A16	Shea Blvd: Palisades Blvd to Cereus Wash	ACI	0.312	5.648	5.960	0.091	17.822	17.914	2024	4.0	
	Shea Blvd: Palisades Blvd to Fountain Hills Blvd	ACI	0.248	0.040	0.288		0.412	0.412	2010	1.0	
	Shea Blvd: Technology Dr to Cereus Wash	ACI	0.064	5.608	5.672	0.091	8.012	8.103	2010	0.8	
	Shea Blvd: Fountain Hills Blvd to Technology Dr	ACI	0.000	0.000	0.000		9.399	0.451	2024	2.2	
GILBERT			0.312	5.648	5.960	0.091	17.822	17.914			
A17	Elliot Rd/Cooper Rd	All	0.000	4.052	4.052	0.000	6.867	6.867	2020	1.0	
A18	Elliot Rd/Gilbert Rd	All	0.000	3.694	3.694	0.000	10.311	10.311	2021	1.0	
A19	Elliot Rd/Greenfield Rd	All	0.000	3.694	3.694	0.000	5.280	5.280	2015	0.8	
A20	Elliot Rd/Higley Rd	All	0.000	3.694	3.694	0.000	6.867	6.867	2020	1.0	
A21	Elliot Rd/Val Vista Dr	All	0.000	3.694	3.694	0.000	6.867	6.867	2021	0.8	
A22	Germann Rd: Gilbert Rd to Power Rd	ACI	0.000	21.689	21.689	0.000	30.987	30.987	2014	4.0	

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOES)	Estimated Future Reimb FY10-FY26 (2008\$)	Total Reimb FY06-FY26 (2009\$ YOES)	Expend through FY09 (YOES)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY06-FY26 (2009\$ YOES)			
	Germann Rd: Gilbert Rd to Val Vista Dr	ACI	0.000	6.506	6.506	0.000	9.296	9.296	2014	2.0	
	Germann Rd: Val Vista Dr to Higley Rd	ACI	0.000	15.183	15.183	0.000	21.690	21.690	2014	2.0	
A23	Greenfield Rd: Elliot Rd to Ray Rd	ACI	0.000	3.694	3.694	0.000	5.439	5.439	2013	2.0	
A24	Guadalupe Rd/Cooper Rd	All	0.000	3.694	3.694	0.000	6.830	6.830	2011	0.8	
A25	Guadalupe Rd/Gilbert Rd	All	0.000	3.694	3.694	0.000	5.278	5.278	2013	1.0	
A26	Guadalupe Rd/Greenfield Rd	All	0.000	3.694	3.694	0.000	6.867	6.867	2023	1.0	
A27	Guadalupe Rd/Power Rd	All	0.000	3.694	3.694	0.000	8.779	8.779	2018	0.8	
A28	Guadalupe Rd/Val Vista Dr	All	0.000	3.694	3.694	0.000	5.570	5.570	2018	0.8	
A30	Ray Rd: Val Vista Dr to Power Rd	ACI	0.000	14.396	14.396	0.000	23.057	23.057	2013	4.4	A portion of the programmed reimbursement was deferred to FY2027
A31	Ray Rd/Gilbert Rd	All	0.000	3.694	3.694	0.000	5.278	5.278	2018	0.8	
A32	Val Vista Dr: Warner Rd to Pecos	ACI	10.398	0.000	10.398	15.768	0.000	15.768	2006	2.9	FY08 RARF Closeout Project
A33	Warner Rd/Cooper Rd	All	1.305	2.396	3.701	1.864	3.715	5.579	2010	0.4	
A34	Warner Rd/Greenfield Rd	All	0.000	3.694	3.694	0.000	5.278	5.278	2014	0.8	
GILBERT/MESA/MARICOPA COUNTY			11.703	86.865	98.568	17.632	143.268	160.900			
A29	Power Rd: Santan Fwy to Chandler Heights	ACI	0.000	20.259	20.259	18.944	50.512	69.456	2024	6.8	
	GILBERT Power Rd/Pecos	All	0.000	9.939	9.939	14.453	0.000	14.453	2009	0.5	Project Completed
	GILBERT Power Rd: Santan Fwy to Pecos Rd	ACI	0.000	10.320	10.320	2.492	23.119	25.610	2011	1.5	
	GILBERT Power Rd: Pecos to Chandler Heights	ACI	0.000	0.000	0.000	2.000	27.393	29.393	2024	4.8	
A45	Power Rd: Baseline Rd to Santan Fwy	ACI	7.760	10.038	17.798	24.436	13.668	38.104	2009	4.5	
	MESA Power Rd: East Maricopa Floodway to Santan Fwy/Loop 202	ACI	0.000	10.038	10.038	2.396	13.668	16.064	2013	3.5	
	M.C. Power Rd: Baseline Rd to East Maricopa Floodway	ACI	7.760	0.000	7.760	22.040	0.000	22.040	2009	1.0	

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOE\$)	Estimated Future Reimb FY10-FY26 (2009\$)	Total Reimb FY09-FY26 (2009\$ YOE\$)	Expend through FY09 (YOE\$)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY09-FY26 (2009\$ YOE\$)			
MARICOPA COUNTY			7.760	30.297	38.057	43.381	64.180	107.561			
A35	Dobson Rd: Bridge over Salt River	ACI	0.000	18.233	18.233	0.692	41.998	42.690	2014	1.6	
A36	El Mirage Rd: Bell Rd to Jomax Rd	ACI	0.000	19.187	19.187	18.012	37.392	55.404	2016	6.3	
	El Mirage Rd: Bell Rd to Deer Valley Dr	ACI	0.000	9.517	9.517	4.198	19.887	24.084	2010	3.0	Two segments combined.
	El Mirage Rd: L303 to Jomax	ACI	0.000	0.000	0.000	0.000	17.505	17.505	2026	2.0	
	El Mirage Rd: Deer Valley Dr to L303	ACI	0.000	9.670	9.670	13.814	0.000	13.814	2009	1.3	
A94	El Mirage Rd: Thunderbird Rd to Bell Rd	ACI	1.105	19.875	20.980	3.388	43.659	47.048	2016	2.0	
A37	El Mirage Rd: Thunderbird Rd to Northern Ave	ACI	0.000	16.446	16.446	0.427	25.453	25.880	2018	4.0	
A38	Gilbert Rd: Bridge over Salt River	ACI	0.000	13.705	13.705	1.285	39.005	40.291	2015	1.6	
A39	Jomax Rd: SR-303L to Sun Valley Parkway	ACI	0.000	20.259	20.259	0.000	28.942	28.942	2018	18.5	
A40	McKellips Rd: Bridge over Salt River	ACI	0.000	13.705	13.705	1.769	25.932	27.700	2014	0.3	
A41	McKellips Rd: SR-101L to SRP-MIC/Alma School Rd	ACI	0.000	38.611	38.611	0.619	46.636	47.255	2015	2.0	
A42	Northern Pkwy: Sarival to Grand (Phase I)	ACI	0.000	59.586	59.586	2.572	82.550	85.122	2011	12.5	
	Northern Pkwy: Sarival to Dysart	ACI	0.000	54.465	54.465	0.000	77.807	77.807	2011	4.0	
	Northern Pkwy: ROW Protection	ACI	0.000	5.121	5.121	2.572	4.744	7.316	2011	12.5	
A43	Northern Pkwy: Sarival to Grand (Phase II)	ACI	0.000	83.420	83.420	0.000	119.423	119.423	2019	12.5	
	Northern Pkwy: Sarival to Dysart	ACI	0.000	7.790	7.790	0.000	11.128	11.128	2011	4.0	
	Northern Pkwy: Dysart to 111th	ACI	0.000	18.624	18.624	0.000	26.605	26.605	2015	2.5	
	Northern Pkwy: Sarival Overpass	ACI	0.000	9.601	9.601	0.000	13.715	13.715	2012	0.2	
	Northern Pkwy: Reems Overpass	ACI	0.000	8.229	8.229	0.000	11.756	11.756	2013	0.2	
	Northern Pkwy: Litchfield Overpass	ACI	0.000	7.724	7.724	0.000	11.286	11.286	2014	0.2	
	Northern Pkwy: Agua Fria Bridge	ACI	0.000	4.836	4.836	0.000	6.909	6.909	2014	0.5	

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOES)	Estimated Future Reimb FY10-FY26 (2009\$)	Total Reimb FY06-FY26 (2009\$ YOES)	Expend through FY09 (YOES)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY06-FY26 (2009\$ YOES)			
	Northern Parkway: Northern Ave at L101	ACI	0.000	5.847	5.847	0.000	8.353	8.353	2015	0.5	
	Northern Pkwy: Dysart Overpass	ACI	0.000	16.511	16.511	0.000	23.587	23.587	2018	0.2	
	Northern Pkwy: ROW Protection	ACI	0.000	4.259	4.259	0.000	6.084	6.084	2019	12.5	
A44	Northern Pkwy: Sarival to Grand (Phase III)	ACI	0.000	84.969	84.969	0.000	127.966	127.966	2025	12.5	
	Northern Pkwy: Dysart Overpass	ACI	0.000	3.484	3.484	0.000	5.021	5.021	2018	0.2	
	Northern Pkwy: El Mirage Alternative Access	ACI	0.000	4.115	4.115	0.000	5.878	5.878	2021	2.0	
	Northern Pkwy: El Mirage Overpass	ACI	0.000	21.655	21.655	0.000	30.936	30.936	2020	0.2	
	Northern Pkwy: Agua Fria to 111th	ACI	0.000	2.671	2.671	0.000	3.815	3.815	2022	1.0	
	Northern Pkwy: 111th to 107th	ACI	0.000	14.509	14.509	0.000	20.727	20.727	2023	0.5	
	Northern Pkwy: 107th to 99th	ACI	0.000	20.789	20.789	0.000	36.010	36.010	2024	1.0	
	Northern Pkwy: Loop 101 to 91st	ACI	0.000	3.393	3.393	0.000	4.847	4.847	2025	0.5	
	Northern Pkwy: 91st to Grand	All	0.000	5.775	5.775	0.000	8.250	8.250	2025	4.0	
	Northern Pkwy: ROW Protection	ACI	0.000	2.526	2.526	0.000	3.609	3.609	2025	12.5	
	Northern Pkwy: Ultimate Construction	ACI	0.000	6.051	6.051	0.000	8.873	8.873	2025	12.5	
MESA			1.105	387.994	389.100	28.764	618.958	647.722			
A46	Baseline Rd: Power Rd to Meridian Rd	ACI	0.000	17.518	17.518	0.000	25.103	25.103	2019	6.0	
	Baseline Rd: Power Rd to Ellsworth Rd	ACI	0.000	8.571	8.571	0.000	12.317	12.317	2016	3.0	
	Baseline Rd: Ellsworth Rd to Meridian Rd	ACI	0.000	8.947	8.947	0.000	12.786	12.786	2019	3.0	
A47	Broadway Rd: Dobson Rd to Country Club	ACI	0.080	7.187	7.267	0.284	18.748	19.031	2013	2.0	
A48	Country Club/University Dr	All	0.000	2.741	2.741	0.095	8.653	8.748	2013	1.0	
A49	Country Club/Brown Rd	All	0.000	2.741	2.741	0.000	4.954	4.954	2014	1.0	

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A50	Crismon Rd: Broadway Rd to Germann Rd	ACI	0.000	35.990	35.990	0.000	51.472	51.472	2025	9.0	
	Crismon Rd: Broadway Rd to Guadalupe Rd	ACI	0.000	12.261	12.261	0.000	17.531	17.531	2016	3.0	
	Crismon Rd: Guadalupe Rd to Ray Rd	ACI	0.000	11.901	11.901	0.000	17.002	17.002	2025	3.0	
	Crismon Rd: Ray Rd to Germann Rd	ACI	0.000	11.828	11.828	0.000	16.940	16.940	2020	3.0	
A51	Dobson Rd/Guadalupe Rd	All	0.196	2.542	2.738	0.280	5.423	5.703	2010	1.0	
A52	Dobson Rd/University Dr	All	0.000	2.741	2.741	0.639	6.240	6.879	2011	1.0	
A53	Elliot Rd: Power Rd to Meridian Rd	ACI	0.000	17.756	17.756	0.000	25.367	25.367	2025	6.0	
	Elliot Rd: Power Rd to Ellsworth Rd	ACI	0.000	8.810	8.810	0.000	12.585	12.585	2023	3.0	
	Elliot Rd: Ellsworth Rd to Meridian Rd	ACI	0.000	8.947	8.947	0.000	12.782	12.782	2025	3.0	
A54	Germann Rd: Ellsworth Rd to Signal Butte Rd	ACI	0.000	12.275	12.275	0.000	17.543	17.543	2021	2.0	
A55	Gilbert Rd/University Dr	All	0.000	2.741	2.741	11.765	0.000	11.765	2009	1.0	
A56	Greenfield Rd: University Rd to Baseline Rd	ACI	0.471	10.121	10.592	1.562	17.463	19.025	2016	3.0	
	Greenfield Rd: Baseline Rd to Southern Ave	ACI	0.471	4.661	5.133	1.562	6.614	8.176	2010	1.0	
	Greenfield Rd: Southern Ave to University Rd	ACI	0.000	5.460	5.460	0.000	10.849	10.849	2016	2.0	
A57	Guadalupe Rd: Power Rd to Meridian Rd	ACI	0.000	22.643	22.643	0.000	38.011	38.011	2018	6.0	
	Guadalupe Rd: Power Rd to Hawes Rd	ACI	0.000	7.707	7.707	0.000	14.802	14.802	2015	2.0	
	Guadalupe Rd: Hawes Rd to Crimson Rd	ACI	0.000	7.707	7.707	0.000	12.883	12.814	2017	2.0	
	Guadalupe Rd: Crimson Rd to Meridian Rd	ACI	0.000	7.228	7.228	0.000	10.326	10.326	2018	2.0	
A58	Hawes Rd: Broadway Rd to Ray Rd	ACI	0.000	20.378	20.378	0.398	29.849	30.246	2024	6.0	

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	Hawes Rd: Broadway Rd to US60	ACI	0.000	7.019	7.019	0.000	10.028	10.028	2022	2.0	
	Hawes Rd: Baseline Rd to Elliot Rd	ACI	0.000	6.814	6.814	0.000	9.734	9.734	2024	2.0	
	Hawes Rd: Elliot Rd to Santan Freeway	ACI	0.000	4.229	4.229	0.000	6.042	6.042	2024	1.3	
	Hawes Rd: Santan Freeway to Ray Rd	ACI	0.000	2.316	2.316	0.398	4.045	4.443	2010	0.8	
A59	Higley Rd Parkway: S 60 to SR-202L	ACI	0.000	16.446	16.446	0.000	23.494	23.494	2020	6.5	
	Higley Rd Parkway: SR-202L to Brown Rd	ACI	0.000	8.223	8.223	0.000	11.747	11.747	2019	3.0	
	Higley Rd Parkway: Brown Rd to US-60	ACI	0.000	8.223	8.223	0.000	11.747	11.747	2020	3.5	
A60	Higley Rd Parkway: US 60 to SR 202L (RM) Grade Separations	ACI	0.000	27.290	27.290	0.000	38.986	38.986	2017	1.0	
A61	Lindsay Rd/Brown Rd	All	0.000	2.741	2.741	0.000	3.985	3.985	2012	0.5	
A62	McKellips Rd: East of Sossaman to Meridian	ACI	0.000	11.782	11.782	0.000	27.920	27.920	2018	5.0	
	McKellips Rd: East of Sossaman to Crismon Rd	ACI	0.000	11.782	11.782	0.000	16.832	16.832	2018	3.0	
	McKellips Rd: Crismon Rd to Meridian Rd	ACI	0.000	0.000	0.000	0.000	11.088	11.088	2018	2.0	A portion of the programmed reimbursement was deferred to FY2027
A63	McKellips Rd: Gilbert Rd to Power Rd	All	0.162	21.165	21.327	0.234	33.399	33.633	2016	3.0	
	McKellips Rd/Lindsay Rd	All	0.043	6.200	6.243	0.061	10.239	10.300	2013	0.5	
	McKellips Rd/Greenfield Rd	All	0.040	2.824	2.864	0.057	4.922	4.979	2016	0.5	
	McKellips Rd/Higley Rd	All	0.040	2.824	2.864	0.058	4.929	4.986	2013	0.5	
	McKellips Rd/Power Rd	All	0.000	3.246	3.246	0.000	4.638	4.638	2016	0.5	
	McKellips Rd/Recker Rd	All	0.000	3.245	3.245	0.000	4.636	4.636	2016	0.5	
	McKellips Rd/Val Vista Dr	All	0.040	2.824	2.864	0.058	4.035	4.093	2014	0.5	
A64	Meridian Rd: Baseline Rd to Germann Rd	ACI	0.000	28.720	28.720	0.000	41.031	41.031	2019	7.0	

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	Meridian Rd: Baseline Rd to Ray Rd	ACI	0.000	16.517	16.517	0.000	23.598	23.598	2017	4.0	
	Meridian Rd: Ray Rd to Germann Rd	ACI	0.000	12.203	12.203	0.000	17.433	17.433	2019	3.0	
A65	Mesa Dr: Southern Ave to US60 and Mesa Dr to Broadway Rd	ACI	0.060	9.114	9.175	0.086	44.818	44.905	2014	1.0	
	Mesa Dr: US60 to Southern Ave	ACI	0.060	8.267	8.328	0.086	19.800	19.887	2012	1.0	
	Mesa Dr/Broadway Rd	All	0.000	0.847	0.847	0.000	25.018	25.018	2014	1.0	
A66	Pecos Rd: Ellsworth Rd to Meridian Rd	ACI	0.000	12.394	12.394	0.000	18.945	18.945	2014	3.0	
A67	Ray Rd: Sossaman Rd to Meridian Rd	ACI	0.000	24.668	24.668	1.194	35.263	36.457	2025	5.0	
	Ray Rd: Sossaman Rd to Ellsworth Rd	ACI	0.000	3.739	3.739	1.194	8.147	9.341	2010	2.0	
	Ray Rd: Ellsworth Rd to Meridian Rd	ACI	0.000	20.929	20.929	0.000	27.116	27.116	2025	3.0	
A68	Signal Butte Rd: Broadway to Pecos Rd	ACI	0.000	32.414	32.414	0.000	46.309	46.309	2024	8.0	
	Signal Butte Rd: Broadway Rd to Elliot Rd	ACI	0.000	16.517	16.517	0.000	23.598	23.598	2022	4.0	
	Signal Butte Rd: Elliot Rd to Pecos Rd	ACI	0.000	15.897	15.897	0.000	22.711	22.711	2024	4.0	
A69	Southern Ave: Country Club Dr to Recker Rd	All	0.168	29.978	30.147	0.243	49.324	49.567	2014	2.0	
	Southern/Country Club Dr	All	0.000	4.785	4.785	0.000	8.249	8.249	2013	0.5	
	Southern Ave/Stapley Dr	All	0.168	12.363	12.532	0.243	21.334	21.578	2013	0.5	
	Southern Ave/Lindsay Rd	All	0.000	4.704	4.704	0.000	8.129	8.129	2014	0.5	
	Southern Ave/Higley Rd	All	0.000	8.126	8.126	0.000	11.612	11.612	2013	0.5	
A70	Southern Ave: Sossaman Rd to Meridian Rd	ACI	0.000	17.756	17.756	0.000	25.367	25.367	2024	5.0	
	Southern Ave: Sossaman Rd to Crismon Rd	ACI	0.000	10.738	10.738	0.000	15.341	15.341	2022	3.0	

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	Southern Ave: Crismon Rd to Meridian Rd	ACI	0.000	7.019	7.019	0.000	10.027	10.027	2024	2.0	
A71	Stapley Dr/University Dr	All	0.000	2.741	2.741	0.000	7.222	7.222	2013	0.5	
A72	Thomas Rd: Gilbert Rd to Val Vista Dr	ACI	0.000	5.482	5.482	0.000	7.909	7.909	2026	2.0	
A73	University Dr: Val Vista Dr to Hawes Rd	ACI	0.000	21.332	21.332	0.000	30.478	30.478	2023	6.0	
	University Dr: Val Vista Dr to Higley Rd	ACI	0.000	10.736	10.736	0.000	15.341	15.341	2021	2.0	
	University Dr: Higley Rd to Hawes Rd	ACI	0.000	10.596	10.596	0.000	15.137	15.137	2023	4.0	
A74	Val Vista Dr: University Dr to Baseline Rd	ACI	0.000	10.845	10.845	0.000	16.603	16.603	2014	3.0	
	Val Vista Dr: Baseline Rd to Southern Ave	ACI	0.000	5.476	5.476	0.000	8.933	8.933	2013	1.0	
	Val Vista Dr: Southern Ave to University Dr	ACI	0.000	5.368	5.368	0.000	7.671	7.671	2014	2.0	
PEORIA			1.138	432.242	433.380	16.779	699.882	716.661			
A75	Beardsley Connection: SR-101L to Beardsley Rd at 83rd Ave/Lake Pleasant Pkwy	ACI	22.885	0.000	22.885	40.927	0.000	40.927	2009	2.0	Project segmented to correspond with lead agency for construction. Reimbursement advanced to FFY 2009.
	Beardsley Rd: Loop 101 to 83rd Ave/Lake Pleasant Parkway	ACI	5.992	0.000	5.992	14.816	0.000	14.816	2009	2.0	
	Loop 101 at Beardsley Rd/Union Hills Dr	ACI	16.893	0.000	16.893	26.110	0.000	26.110	2009	2.0	
A76	Happy Valley Rd: L303 to 67th Avenue	ACI	0.000	17.588	17.588	28.970	18.147	47.117	2018	4.2	
	Happy Valley Rd: Loop 303 to Lake Pleasant Parkway	ACI	0.000	0.000	0.000	0.000	0.000	0.000	2018	3.0	
	Happy Valley Rd: Lake Pleasant Pkwy to 67th Ave	ACI	0.000	17.588	17.588	28.970	18.147	47.117	2010	2.1	A portion of the programmed reimbursement was deferred to FY2027
A77	Lake Pleasant Pkwy: Union Hills to SR74	ACI	27.127	26.265	53.392	40.184	37.456	77.640	2020	12.5	Project segments revised to include Loop 303 to Dynamite Rd, Union Hills to Dynamite, and L303 to SR74.

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	Lake Pleasant Pkwy: Dynamite Blvd to L303	ACI	0.000	26.265	26.265	1.431	33.311	34.742	2014	2.3	
	Lake Pleasant Pkwy: Union Hills to Dynamite Rd	ACI	27.127	0.000	27.127	38.753	0.000	38.753	2008	8.0	FY2008 RARF Closeout Project
	Lake Pleasant Pkwy: L303 to SR74/Carefree Hwy	ACI	0.000	0.000	0.000	0.000	4.145	4.145	2021	2.3	
PHOENIX			50.012	43.852	93.864	110.080	55.603	165.683			
A78	Avenida Rio Salado: 7th St to SR-202L	ACI	0.000	43.736	43.736	0.000	101.900	101.900	2014	7.0	
A79	Black Mountain Blvd: SR-51and Loop 101/ Pima Fwy to Deer Valley Rd	ACI	0.000	22.047	22.047	0.000	33.079	33.079	2013	1.3	
A80	Happy Valley Rd: 67th Ave to I-17	ACI	0.000	13.871	13.871	7.338	29.596	36.934	2018	4.0	
	Happy Valley: I-17 to 35th Ave	ACI	0.000	5.136	5.136	7.338	0.000	7.338	2005	1.0	Project Completed
	Happy Valley: 35th Ave to 43rd Ave	ACI	0.000	4.171	4.171	0.000	11.450	11.450	2018	1.0	
	Happy Valley: 43rd Ave to 55th Ave	ACI	0.000	4.116	4.116	0.000	9.325	9.325	2018	1.5	
	Happy Valley: 55th Ave to 67th Ave	ACI	0.000	0.448	0.448	0.000	8.822	8.822	2018	1.0	A portion of the programmed reimbursement was deferred to FY2027
A81	Sonoran Blvd: 15th Ave to Cave Creek	ACI	0.000	31.938	31.938	17.104	58.560	75.664	2013	5.8	Project rescoped and segmented. Project limits extended from Central to 15th Avenue.
	Sonoran Blvd: 15th Ave to 10th St	ACI	0.000	8.751	8.751	1.299	18.747	20.046	2013	1.8	
	Sonoran Blvd: 10th St to 26th St	ACI	0.000	12.712	12.712	7.793	22.483	30.276	2014	2.0	
	Sonoran Blvd: 26th St to Cave Creek	ACI	0.000	10.476	10.476	8.012	17.330	25.342	2015	2.0	
SCOTTSDALE/CAREFREE			0.000	111.591	111.591	24.442	223.135	247.577			
A87	Pima Rd: SR101L to Happy Valley Rd and Dynamite Rd to Cave Creek	ACI	14.088	81.086	95.174	24.215	113.850	138.066	2014	10.2	
	SCOTTSDALE Pima Rd: Thompson Peak Parkway to Pinnacle Peak	ACI	0.449	23.025	23.474	2.690	30.906	33.596	2011	1.0	
	SCOTTSDALE Pima Rd/Happy Valley	All	0.000	0.000	0.000	1.599	0.000	1.599	2008	0.4	

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	SCOTTSDALE Pima Rd: Pinnacle Peak to Happy Valley Rd	ACI	0.000	15.648	15.648	0.000	22.354	22.354	2013	1.0	
	SCOTTSDALE Pima Rd: Dynamite Blvd to Stagecoach Rd	ACI	0.000	37.080	37.080	0.000	52.972	52.972	2014	5.0	
	CAREFREE Pima Rd: Stagecoach Rd to Cave Creek	ACI	0.000	5.332	5.332	0.000	7.618	7.618	2014	0.3	
	SCOTTSDALE Pima Rd: SR101L to Thompson Peak Pkwy	ACI	13.639	0.000	13.639	19.926	0.000	19.926	2008	2.5	
SCOTTSDALE			14.088	81.086	95.174	24.215	113.850	138.066			
A82	Carefree Hwy: Cave Creek Rd to Scottsdale Rd	ACI	0.000	9.176	9.176	0.000	14.037	14.037	2016	2.0	
A83	SR-101L North Frontage Roads: Pima/Princess Dr to Scottsdale Rd	ACI	3.745	15.845	19.590	5.350	22.637	27.987	2015	2.0	
	SR-101L Frontage Rd: Hayden Rd to Scottsdale Rd	ACI	3.745	0.000	3.745	5.350	0.000	5.350	2009	1.0	
	SR-101L Frontage Rd: Pima Rd/Princess Dr to Hayden Rd	ACI	0.000	15.845	15.845	0.000	22.637	22.637	2015	1.0	
A84	SR-101L South Frontage Rd: Hayden Rd to Pima	ACI	0.000	0.000	0.000		0.000	0.000	0	1.0	This project was deleted in FY2009.
A85	Miller Rd/SR-101L Underpass	ACI	0.000	13.705	13.705	0.000	19.578	19.578	2020	0.3	
A86	Pima Rd: Happy Valley Rd to Dynamite Blvd	ACI	0.000	23.238	23.238	0.000	33.198	33.198	2018	2.0	
A88	Pima Rd: McKellips Rd to Via Linda	ACI	0.000	30.031	30.031	3.200	42.902	46.102	2011	8.0	
A89	Scottsdale Airport: Runway Tunnel	ACI	0.000	71.842	71.842	0.000	102.631	102.631	2026	7.3	
	Frank Lloyd Wright -Loop 101 Traffic Interchange	ACI	0.000	3.892	3.892	0.000	5.560	5.560	2017	0.8	
	Raintree -Loop 101 Traffic Interchange	ACI	0.000	1.149	1.149	0.000	1.642	1.642	2014	0.5	
	Northsight Blvd: Hayden to Frank Lloyd Wright	ACI	0.000	6.848	6.848	0.000	9.783	9.783	2015	0.4	
	Frank Lloyd Wright Frontage Rd: Northsight to Greenway-Hayden Loop	ACI	0.000	0.962	0.962	0.000	1.375	1.375	2015	0.8	
	Redfield Rd: Scottsdale Rd to Hayden	ACI	0.000	2.418	2.418	0.000	3.454	3.454	2015	1.2	
	Thunderbird-Raintree Loop	ACI	0.000	20.274	20.274	0.000	28.962	28.962	2020	1.0	

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	Raintree Drive: Loop 101 to Hayden	ACI	0.000	17.438	17.438	0.000	24.911	24.911	2023	1.0	
	Hayden Rd: Redfield to Raintree	ACI	0.000	4.743	4.743	0.000	6.776	6.776	2024	0.5	
	CAP Canal South Frontage Rd: Loop 101 to Frank Lloyd Wright	ACI	0.000	2.710	2.710	0.000	3.871	3.871	2024	0.5	
	Hayden Rd - Loop 101 Interchange Improvements	ACI	0.000	11.407	11.407	0.000	16.296	16.296	2026	0.8	
A90	Scottsdale Rd: Thompson Peak Pkwy to Jomax Rd	ACI	0.000	13.109	13.109	0.080	53.207	53.287	2015	3.0	
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy	ACI	0.000	11.347	11.347	0.080	15.989	16.069	2012	2.0	
	Scottsdale Rd: Pinnacle Peak Pkwy to Jomax Rd	ACI	0.000	1.761	1.761	0.000	37.218	37.218	2015	1.0	
A91	Scottsdale Rd: Jomax Rd to Carefree Hwy	ACI	0.000	27.886	27.886	0.000	50.229	50.229	2019	5.0	
	Scottsdale Rd: Jomax Rd to Dixileta Dr	ACI	0.000	9.295	9.295	0.000	17.694	17.694	2019	2.0	
	Scottsdale Rd: Dixileta Dr to Ashler Hills Dr	ACI	0.000	9.295	9.295	0.000	16.268	16.268	2019	1.5	
	Scottsdale Rd: Ashler Hills Dr to Carefree Highway	ACI	0.000	9.295	9.295	0.000	16.268	16.268	2019	1.5	
A92	Shea Blvd: SR-101L to SR-87	All	2.610	15.177	17.787	11.021	21.601	32.622	2017	13.2	
	Shea Blvd at 90th/92nd/96th	All	1.827	2.276	4.103	5.862	0.000	5.862	2007	0.8	
	Shea Auxiliary Lane from 90th St to Loop 101	All	0.000	2.259	2.259	0.000	8.933	8.933	2017	1.0	A portion of the programmed reimbursement was deferred to FY2027
	Shea Blvd at Via Linda (Phase1)	All	0.621	0.000	0.621	0.888	0.000	0.888	2006	0.2	
	Shea Blvd at Via Linda (Phase 2)	All	0.000	2.041	2.041	2.916	1.504	4.420	2017	0.2	
	Shea Blvd at 120/124th St	All	0.000	0.375	0.375	0.175	0.361	0.536	2010	0.4	A portion of the programmed reimbursement was deferred to
	Shea Blvd at Mayo/134th St	All	0.162	0.000	0.162	0.231	0.000	0.231	2006	0.2	
	Shea Blvd: SR-101L to 96th St, ITS Improvements	All	0.000	0.375	0.375	0.536	0.000	0.536	2009	1.0	
	Shea Blvd: 96th St to 144th St, ITS Improvements	All	0.000	2.310	2.310	0.000	3.300	3.300	2012	7.0	

MAP CODE	FACILITY/LOCATION	PROJECT TYPE	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
			Reimb through FY09 (YOES)	Estimated Future Reimb FY10-FY26 (2009\$)	Total Reimb FY06-FY26 (2009\$ YOES)	Expend through FY09 (YOES)	Estimated Future Expend FY10-FY26 (2009\$)	Total Expend FY06-FY26 (2009\$ YOES)			
	Shea Blvd at Loop 101	All	0.000	3.609	3.609	0.000	5.156	5.156	2016	1.0	
	Shea Blvd at 110th St	All	0.000	0.260	0.260	0.000	0.371	0.371	2016	0.2	
	Shea Blvd at 114th St	All	0.000	0.260	0.260	0.000	0.371	0.371	2010	0.2	
	Shea Blvd at Frank Lloyd Wright Blvd	All	0.000	0.650	0.650	0.412	0.516	0.928	2010	0.2	
	Shea Blvd at 115th St	All	0.000	0.108	0.108	0.000	0.155	0.155	2010	0.2	
	Shea Blvd at 125th St	All	0.000	0.371	0.371	0.000	0.531	0.531	2012	0.2	
	Shea Blvd at 135th St	All	0.000	0.108	0.108	0.000	0.155	0.155	2012	0.2	
	Shea Blvd at 136th St	All	0.000	0.173	0.173	0.000	0.247	0.247	2011	0.2	
A93	Legacy Dr: Hayden Rd to 88th Street	ACI	0.000	13.347	13.347	1.953	19.067	21.021	2021	1.2	Project limits extended by 0.2 miles and segment renamed from Union Hills Dr to Legacy Dr.
TOTALS			108.720	1553.109	1661.829	330.586	2628.421	2959.007			

TABLE B-2
ARTERIAL STREET LIFE CYCLE PROGRAM - INTELLIGENT TRANSPORTATION SYSTEMS
REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026
(2009 and Year of Expenditure Dollars in Millions)

FACILITY	REGIONAL FUNDING			TOTAL EXPENDITURES			FINAL FY for CONST	OTHER PROJECT INFORMATION
	Disbursed through FY09 (YOEs Dollars)	Estimated Future Disbursements FY10-2026 (2009\$)	Total Disbursement FY06-26 (2009\$ YOES)	Expend through FY09 (YOES)	Estimated Future Expend FY10-FY26 (2008\$)	Total Expend FY06-FY26 (2009\$ YOES)		
Systemwide ITS	11.200	48.444	59.645	16.000	69.206	85.207	2009-2019	
TOTAL	11.200	48.444	59.645	16.000	69.206	85.207		

**TABLE B-3
ARTERIAL STREET LIFE CYCLE PROGRAM CHANGES: FY 2010-2026**

Add/Change Work Phase	
Projects	Description
Queen Creek Rd: McQueen Rd to Lindsay Rd	Added an additional ROW work phase for 2013
Guadalupe Rd/Cooper Rd: Intersection Improvements	Added CONST work phase for 2010; Reimbursements reallocated accordingly
McKellips Rd at Power Rd: Intersection Improvements	Deleted Pre-design work phase. Consolidated pre-design with design
McKellips Rd at Recker Rd: Intersection Improvements	Deleted Pre-design work phase. Consolidated pre-design with design
Mesa Dr at Broadway Rd	Deleted Pre-design work phase. Consolidated pre-design with design
Advancements	
Projects	Description
Frank Lloyd Wright -Loop 101 Traffic	Advanced from Phase III to Phase II
Raintree -Loop 101 Traffic Interchange	Advanced from Phase III to Phase II
Northsight Blvd: Hayden to Frank Lloyd Wright	Advanced from Phase III to Phase II
Frank Lloyd Wright Frontage Rd: Northsight to Greenway-Hayden Loop	Advanced from Phase III to Phase II
Redfield Rd: Scottsdale Rd to Hayden	Advanced from Phase III to Phase II
Change in Project Scope/Segment Limits	
Projects	Description
Shea Blvd: Fountain Hills to Technology Dr	Project segment limits extended to include Fountain Hills to Palisades. The new segment will be name Shea Blvd: Palisades Blvd to Technology Drive
Sonoran Blvd: Central to 32nd Street	Extended segment limits. Original project on Sonoran Blvd from Central to 32nd St. Rescoped project extends from 15th Ave to Cave Creek
Union Hills Dr: Hayden Rd to Pima Rd	Union Hills Dr: Hayden Rd to Pima Rd renamed Legacy Dr: Hayden Rd to 88th Street (Old Pima Rd); Segment renamed from Union Hills Dr. to Legacy Dr.
Deferments	
Projects	Description
Gilbert Rd: Chandler Heights Rd to Hunt Hwy	Deferred ROW from Phase I to Phase II
Queen Creek Rd: McQueen Rd to Lindsay Rd	Deferred DES and ROW from Phase I to Phase II
Chandler at Kyrene	Deferred DES, ROW, and CONST from Phase II to Phase III
Ray Rd at Dobson Rd	Deferred DES from Phase I to Phase IV. Deferred ROW and CONST from Phase II to Phase IV
Ray Rd at McClintock Dr	Deferred DES from Phase I to Phase II. Deferred ROW from Phase I to Phase II. Deferred CONST from Phase II to Phase III.
Ray Rd at Rural Rd	Deferred DES, ROW, and CONST from Phase II to Phase IV
Kyrene Rd at Ray Rd	Deferred DES, ROW, and CONST from Phase II to Phase IV
Ray Rd at Alma School Rd: Intersection Improvements	Deferred CONST from Phase I to Phase II
Chandler Blvd/Alma School: Intersection Improvements	Deferred CONST from Phase I to Phase II
GILBERT Power Rd: Santan Fwy to Pecos Rd	Deferred ROW and CONST from Phase I to Phase II
Elliot Rd at Cooper Rd: Intersection Improvements	Deferred DES from Phase II to Phase III
Elliot Rd at Val Vista Dr: Intersection Improvements	Deferred DES and ROW from Phase II to Phase III. Deferred CONST from Phase II to Phase IV.
Elliot Rd at Gilbert Rd: Intersection	Deferred CONST from Phase III to Phase IV

El Mirage Rd: L303 to Jomax	Deferred DES, ROW, and CONST from Phase II to Phase IV
Northern Parkway: Sarival to Dysart	CONST deferred from FY2010 to FY2011
Power Rd: EMF to Santan/Loop 202	Deferred DES, ROW, and CONST deferred from Phase I to Phase II
Broadway Rd: Dobson to Country Club	Deferred DES from 2009 to 2011, ROW from 2009 to 2012, and CONST from 2010 to 2013
Country Club/University: Intersection Improvements	Deferred DES, ROW, and CONST deferred from Phase I to Phase II
Country Club/Brown: Intersection	Deferred DES from Phase I to Phase II
Guadalupe Rd: Hawes Rd to Crimson Rd	Deferred DES, ROW, and CONST from Phase II to Phase III
Guadalupe Rd: Crimson Rd to Meridian Rd	Deferred DES, ROW, and CONST from Phase II to Phase III
McKellips Rd at Lindsay Rd: Intersection Improvements	Deferred DES, ROW, and CONST from Phase I to Phase II
Mesa Dr: US60 to Southern Ave	Deferred CONST from Phase I to Phase II
Mesa Dr at Broadway Rd: Intersection Improvements	Deferred DES from Phase I to Phase II
Southern/Country Club Dr: Intersection Improvements	Deferred DES and ROW from Phase I to Phase II
Southern Ave/Stapley Dr: Intersection Improvements	Deferred DES and ROW from Phase I to Phase II
Southern Ave/Lindsay Rd: Intersection Improvements	Deferred DES and ROW from Phase I to Phase II
Val Vista Dr: Baseline Rd to Southern Ave	Deferred DES from Phase I to Phase II
McKellips Rd at Power Rd: Intersection Improvements	Deferred CONST from Phase II to Phase III
Thomas Rd: Gilbert Rd to Val Vista Dr	Deferred DES, ROW, and CONST from Phase I to Phase IV
Raintree Drive: Loop 101 to Hayden	Deferred from Phase III to Phase IV
Hayden Rd: Redfield to Raintree	Deferred from Phase III to Phase IV
CAP Canal South Frontage Rd: Loop 101 to Frank Lloyd Wright	Deferred from Phase III to Phase IV
Hayden Rd - Loop 101 Interchange	Deferred from Phase III to Phase IV
Pima Rd: McKellips Rd to Via Linda	CONST deferred to FY 2010/2011
Delete/Substitute Projects	
Projects	Description
Scottsdale Airport Runway Tunnel	Project deleted from ALCP and substituted with a series of arterial capacity improvements called Scottsdale Airpark Area Capacity Improvements.
Exchange	
Projects	Description
Arizona Ave: Ocotillo Rd to Hunt Hwy	Exchanged with Gilbert Rd: Germann to Queen Creek. Arizona Ave moved from Phase II to Phase IV.
Gilbert Rd: Chandler Heights Rd to Hunt Hwy	Part of three way exchange. Ray/Rural exchanged with Gilbert Rd: Chandler Heights to Hunt Hwy.
Ray Rd at Dobson Rd	Exchanged with Arizona/Elliot. Ray at Dobson moved from Phase II to Phase IV.
Ray Rd at Rural Rd	Exchanged with Gilbert Rd: Queen Creek to Chandler Heights. Ray Rd/Rural Rd moved from Phase II to Phase IV.
Arizona Ave/Elliot Rd: Intersection Improvements	Exchanged Arizona Ave/Elliot Rd in Phase IV with Ray Rd/Dobson Rd in Phase II
Gilbert Rd: SR-202L/Germann to Queen Creek Rd	Exchanged with Arizona Ave: Ocotillo Rd to Hunt Hwy. Gilbert Rd moved from Phase IV to Phase II.
Gilbert Rd: Queen Creek Rd to Chandler Heights Rd	Three way exchange - Gilbert Rd: Queen Creek to Chandler Heights with Ray/Rural. Gilbert Rd. moved from Phase IV to Phase III.
Elliot Rd at Higley Rd: Intersection	Exchanged with Ray Rd: Val Vista Dr to Power Rd

Ray Rd: Val Vista Dr to Power Rd	Exchanged with Elliot at Cooper, Elliot at Higley, Elliot at Val Vista, plus difference with Germann in FY2026. Ray Rd moved from FY 2027 to Phase IV
Elliot Rd at Cooper Rd: Intersection Improvements	Exchanged with Ray Rd: Val Vista Dr to Power Rd. Moved Elliot at Cooper into FY 2027 before reprogramming with CMAQ
Elliot Rd at Val Vista Dr: Intersection Improvements	Exchanged with Ray Rd: Val Vista Dr to Power Rd. Moved Elliot at Cooper into FY 2027 before reprogramming with CMAQ
Elliot Rd at Gilbert Rd: Intersection Improvements	Exchanged with Germann Rd: Val Vista Dr to Higley Rd; Elliot/Gilbert moved from Phase III to Phase IV.
Lindsay Rd/Brown Rd: Intersection Improvements	Exchanged with Thomas Rd. Lindsay/Brown moved from Phase IV to Phase II
Ray Rd/Gilbert Rd: Intersection Improvements	Exchanged with Germann Rd: Val Vista Dr to Higley Rd. Ray/Gilbert moved from Phase III to Phase IV
Germann Rd: Val Vista Dr to Higley Rd	Exchanged Germann Rd with Elliot/Gilbert and Ray/Gilbert. Germann moved from Phase IV to Phase III. Difference remained in Phase IV
Stapley Dr/University Dr: Intersection Improvements	Exchanged Stapley at University with Thomas Rd from Gilbert Rd to Val Vista. Stapley at University moved from Phase IV to Phase III
Thomas Rd: Gilbert Rd to Val Vista Dr	Exchanged Thomas Rd from Gilbert Rd to Val Vista with Stapley at University. Thomas Rd moved from Phase I to Phase IV
Reallocation of Project Savings	
Projects	Description
Raintree Drive: Loop 101 to Hayden	Reallocated 3.097 m in Project Savings from Shea Blvd to CONST in FY 2024
Shea at 90th/92nd/96th Streets	Reallocated project savings to CONST
Shea at 120/124th Streets	Reallocated project savings to CONST
Shea Blvd: SR 101 to SR-87	Project Savings allocated to Shea Blvd Auxiliary Lanes from 90th St to Loop 101, Shea Blvd at Via Linda, and Shea Blvd at Mayo
Pima Rd: SR101 to Happy Valley Rd and Dynamite Rd to Cave Creek Rd	Project Savings allocated to Pima Rd: Thompson Peak Parkway to Pinnacle Peak, Pima Rd: Pinnacle Peak to Happy Valley Rd, and Pima Rd: Dynamite to Stagecoach
Queen Creek Rd: Arizona Ave to McQueen	Project savings allocated to Chandler at Dobson Intersection Improvement
Reimbursement Deferred	
Projects	Description
GILBERT Power Rd/Pecos: Intersection Improvements	A portion of the reimbursement for CONST was deferred from Phase I to Phase II
Pima Rd: Stagecoach Rd to Cave Creek	CONST reimbursement was deferred to Phase III
Carefree Hwy: Cave Creek Rd to Scottsdale Rd	ROW reimbursement deferred to Phase III
Ray Rd: Val Vista Dr to Power Rd	A portion of the project was deferred to 2027 due to the program deficit
McKellips Road Bridge over the Salt River	Reimbursement for CONST moved from Phase II to Phase III
McKellips Rd: Loop 101 (Pima Fwy) to SRP-MIC/Alma School Rd	Reimbursement for Project Savings moved from Phase II to Phase III
McKellips Rd: Crismon Rd to Meridian Rd	Reimbursement deferred to FY 2027
Pecos Rd: Ellsworth Rd to Meridian Rd	Reimbursement for CONST moved from Phase II to Phase III
Val Vista Dr: Baseline Rd to Southern Ave	Reimbursement deferred from Phase III to Phase IV
Val Vista Dr: Southern Ave to University Dr	Reimbursement deferred from Phase III to Phase IV
Happy Valley Rd: 55th Ave to 67th Ave	A portion of the CONST reimbursement was deferred to FY 2027

Pima Rd: Thompson Peak Pkwy to Pinnacle Peak Rd	A portion of the CONST reimbursement was deferred to Phase II	
Pima Rd: Dynamite Blvd to Stagecoach Pass	A portion of the CONST reimbursement was deferred to Phase III	
Loop 101 (Pima Fwy) North Frontage Rd: Pima Rd/Princess Dr to Hayden Rd	Reimbursement deferred from Phase II to Phase III	
Shea at 90th/92nd/96th Streets	Reimbursement for Project Savings deferred to FY 2027	
Shea at 120/124th Streets	Reimbursement for Project Savings deferred to FY 2027	
Segment		
Projects	Description	
Sonoran Blvd: Central to 32nd Street	After the completion of a corridor-wide study, the project was divided into 3 smaller segments. The new segments include: - Sonoran Central: 10th St - 26th St - Sonoran East: 26th St - Cave Creek - Sonoran West: 15th Ave - 10th St	
El Mirage Rd: South of Beardsley Rd to Deer Valley Rd	Combined El Mirage Rd from Bell Rd to South of Beardsley (ACI-ELM-10-03-A) with El Mirage Rd from South of Beardsley to Deer Valley (ACI-ELM-10-03-B). Renamed segment El Mirage Rd from Bell Rd to Deer Valley Dr (ACI-ELM-10-03-A) and removed ACI-ELM-10-03	
Beardsley Connector	Project moved from Phase II to Phase I during FY2009. Fund type changed from RARF to STP-MAG. Project was segmented into Beardsley Rd: Loop 101 to 83rd Ave/Lake Pleasant Parkway and Loop 101 at Beardsley Rd/Union Hills Dr to coincide with construction	
Frank Lloyd Wright -Loop 101 Traffic Interchange	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Raintree -Loop 101 Traffic Interchange	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Northsight Blvd: Hayden to Frank Lloyd Wright	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Frank Lloyd Wright Frontage Rd: Northsight to Greenway-Hayden Loop	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Redfield Rd: Scottsdale Rd to Hayden	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Thunderbird-Raintree Loop	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Raintree Drive: Loop 101 to Hayden	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Hayden Rd: Redfield to Raintree	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
CAP Canal South Frontage Rd: Loop 101 to Frank Lloyd Wright	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Hayden Rd - Loop 101 Interchange Improvements	Segment added as part of the Scottsdale Airpark Area Capacity Improvements substitute projects	
Project Completions		
Projects	Fiscal Year Completed	Fiscal Year Reimbursed
Queen Creek Rd: Arizona Ave to McQueen Rd	2009	2009
Arizona Ave at Elliot Rd	2006	TBD
Arizona Ave/Ray Rd: Intersection Improvement	2007	2007
Arizona Ave at Chandler Blvd	2006	2008
El Mirage Rd: Deer Valley Drive to L303	2009	TBD
Val Vista Dr: Warner Rd to Pecos Rd	2006	2008
Happy Valley: I-17 to 35th Ave	2005	TBD
Pima Rd: SR101L to Thompson Peak Pkwy	2008	2008

Lake Pleasant Pkwy: Union Hills to Dynamite Rd	2008	2006-2009
Shea Blvd at 90th/92nd/96th: Intersection Improvements	2007	2009
Shea Blvd at Via Linda (Phase1): Intersection Improvements	2006	2009
Shea Blvd at Mayo/134th St: Intersection Improvements	2006	2009

TBD - To be determined. Please refer to the currently approved version of the ALCP for the estimated fiscal year for reimbursement.

Appendix C

Transit Life Cycle Program

TABLE C-1
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: BUS RAPID TRANSIT/EXPRESS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026: (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
T1	Ahwatukee Connector	0.00	0.00	0.00	2029	
T2	Ahwatukee Express	1.16	14.54	15.71	2008	I-10 East RAPID
T3	Anthem Express	0.00	0.00	0.00	2034	
T4	Apache Junction Express	0.00	3.43	3.43	2016	
T5	Arizona Avenue Arterial BRT	0.00	10.13	10.13	2011	
T6	Avondale Express	0.00	0.00	0.00	2038	
T7	Black Canyon Freeway Corridor	0.00	0.00	0.00	2029	
T8	Buckeye Express	0.00	0.00	0.00	2020	
T9	Chandler Boulevard Arterial BRT	0.00	0.00	0.00	2040	
T10	Deer Valley Express	1.37	22.30	23.68	2008	I-17 RAPID
T11	Desert Sky Express	0.60	6.16	6.76	2008	I-10 West RAPID
T12	East Loop 101 Connector	0.33	6.19	6.52	2009	Route 511 - Chandler/Scottsdale Airpark Express
T13	Grand Avenue Limited	0.00	6.52	6.52	2020	
T14	Loop 303 Express	0.00	0.00	0.00	2039	
T15	Main Street Arterial BRT	0.75	27.29	28.03	2009	
T16	North Glendale Express	1.22	10.75	11.97	2008	Route 573 - Northwest Valley
T17	North I-17 Express	0.00	0.00	0.00	2039	
T18	North Loop 101 Connector	1.31	11.57	12.88	2008	Route 572 - Surprise/Scottsdale Express
T19	Papago Fwy Connector	0.13	6.20	6.32	2009	Routes 562 - Goodyear Express
T20	Peoria Express	0.00	0.27	0.27	2026	
T21	Pima Express	0.00	2.29	2.29	2020	
T22	Red Mountain Express	0.22	5.11	5.33	2009	Routes 535 & 536 - Northeast Mesa Express
T23	Red Mountain Fwy Connector	0.00	0.00	0.00	2037	
T24	Santan Express	0.00	0.00	0.00	2034	
T25	Scottsdale/Rural Arterial BRT	0.00	0.73	0.73	2026	
T26	South Central Avenue	0.00	0.00	0.00	2029	
T27	South Central Avenue Arterial BRT	0.00	0.00	0.00	2029	

Map Code	Route	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026: (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
T28	SR 51 Express	0.93	12.31	13.24	2008	SR-51 RAPID
T29	Superstition Fwy Connector	0.00	1.20	1.20	2016	
T30	Superstition Springs Express	0.00	0.00	0.00	2037	
T31	West Loop 101 Connector	0.45	10.46	10.91	2009	Routes 575 & 576 - Northwest Valley Express
	TOTAL	8.46	157.46	165.92		

TABLE C-2
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
T40	59th Avenue	0.00	0.00	0.00	2038	
T41	83rd Avenue/75th Avenue	0.00	0.00	0.00	2039	
T42	99th Avenue	0.00	0.00	0.00	2038	
T43	Alma School Rd.	0.00	0.92	0.92	2026	
T44	Arizona Avenue/Country Club	0.00	14.25	14.25	2016	
T45	Baseline Rd	0.00	27.11	27.11	2016	
	Dobson Rd	1.79	32.25	34.03	2009	Route 96 - Dobson Road
	Southern Ave	3.67	66.37	70.05	2009	Route 61 - Southern Avenue
T46	Bell Road	0.00	0.00	0.00	2037	
T47	Broadway	0.00	16.00	16.00	2020	
T48	Buckeye Road	0.00	0.00	0.00	2038	
T49	Camelback Road	0.00	25.94	25.94	2020	
T50	Chandler Blvd.	5.85	63.13	68.98	2008	Route 156 - Chandler Boulevard
T51	Dunlap/Olive Avenue	0.00	0.00	0.00	2038	
T52	Dysart Road	0.00	0.00	0.00	2029	
T53	Elliot Road	0.00	12.49	12.49	2020	
T54	Gilbert Road	0.00	29.79	29.79	2010	
T55	Glendale Avenue	10.50	93.25	103.75	2008	Route 70 - Glendale Avenue
T56	Greenfield Road	0.00	0.00	0.00	2039	
T57	Hayden/McClintock	0.00	0.00	0.00	2029	
T58	Indian School Road	0.00	0.00	0.00	2038	
T59	Litchfield Road	0.00	0.00	0.00	2040	
T60	Main Street	0.77	27.88	28.65	2009	Route 40 - Apache/Main Street
T61	McDowell/McKellips	0.00	3.40	3.40	2026	
T62	Peoria Ave./Shea	0.00	0.00	0.00	2029	
T63	Power Road	0.00	15.34	15.34	2014	
T64	Queen Creek Road	0.00	0.00	0.00	2037	
T65	Ray Road	0.00	0.00	0.00	2029	
T66	Scottsdale/Rural	13.30	80.82	94.12	2007	Route 72 - Scottsdale/Rural Road

Map Code	Route	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
T67	Tatum / 44th Street	0.00	0.00	0.00	2038	
T68	Thomas Road	0.00	0.00	0.00	2038	
T69	University Drive	0.00	27.46	27.46	2016	
T70	Van Buren	0.00	0.00	0.00	2038	
T71	Waddell/Thunderbird	0.00	0.00	0.00	2038	
	TOTAL	35.88	536.41	572.29		

TABLE C-3
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: OTHERS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 : 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
ADA Paratransit	26.08	183.59	209.67	2006	
Regional Passenger Support Services	26.97	133.27	160.24	2006	
Existing Local Service	14.73	53.25	67.98	2006	
Existing Express Service	12.79	51.64	64.43	2006	
Rural/Non-Fixed Route Service	1.94	15.36	17.29	2006	
Vanpool Service	0.00	0.00	0.00	2006	Vanpool operations are funded entirely through fares
Safety and Security Costs	2.12	27.79	29.91	2006	
Operating Contingency	1.55	23.16	24.71	2006	
RPTA Planning and Administration	23.73	90.59	114.32	2006	Primarily funded through RPTA's allocation from Regional Area Road Fund
TOTAL	109.91	578.65	688.56		

TABLE C-4
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FACILITIES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Total Number of Units to be Constructed/Installed through FY 2026	Number of Units Constructed/Installed through FY 2009	Other Project Information
Arterial BRT Right-of-Way and Improvements	15.18	63.73	78.91	60	0	
Bus Stop Pullouts/Improvements	5.80	5.01	10.81	1200	0	
Dial-a-Ride and Rural Bus Maintenance Facilities	0.00	11.51	11.51	1	0	One DAR facility and rural facility were postponed
Intelligent Transportation Systems (ITS) / Vehicle Management Systems (VMS)	6.70	10.45	17.16	1684	0	
Park & Ride Lots	9.99	35.74	45.73	13	1	
Standard Bus Maintenance Facilities	97.18	57.98	155.16	4	2	
Transit Centers (4 Bay)	0.00	9.28	9.28	4	0	
Transit Centers (6 Bay)	0.00	6.67	6.67	2	0	
Transit Centers (Major Activity Centers)	0.00	15.62	15.62	2	0	
Vanpool Vehicle Maintenance Facilities	0.00	0.00	0.00	0	0	Project was postponed indefinitely
Contingency	0.00	20.05	20.05			
TOTAL	134.86	236.05	370.90			

TABLE C-5
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FLEET
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026
(2009 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2009: (YOE Dollars)	Estimated Future Costs: FY2010 - 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Total Number of Units to be Acquired through FY 2026	Number of Units Acquired through FY 2009	Other Project Information
Paratransit	14.83	88.63	103.46	1256	185	
Fixed Route	140.30	807.85	948.15	1859	346	
Rural Route	0.47	2.73	3.20	40	7	
Vanpool	8.33	37.40	45.73	1481	306	
Contingency	3.59	35.12	38.71			
TOTAL	167.53	971.72	1,139.25			

TABLE C-6
TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT: SUPPORT INFRASTRUCTURE
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010- 2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction	Total					
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	0.00	0.00	0.00	0.00	0.00	0.00	2017	5	
Northwest Link Phase 1: 19th Ave./Bethany Home to 19th Ave./Dunlop	0.00	0.00	0.00	0.00	0.00	0.00	2012	3.2	
Northwest Link Phase 2: 19th Ave./Dunlop to Rose Mofford Sports Complex	0.00	0.00	0.00	0.00	0.00	0.00	2017	1.8	
CP/EV: 19th Ave./Bethany Home to Main St./Sycamore	0.00	0.00	177.20	177.20	99.86	277.06	2011	20	Segment will open in FY 2009, but reimbursements will continue through FY 2011
Systemwide - Infrastructure Improvements	3.70	0.00	0.00	3.70	135.34	139.04	2026	57.5	
TOTAL	3.70	0.00	177.20	180.90	235.20	416.10			

TABLE C-7
TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT: ROUTE EXTENSIONS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2009 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures through FY 2009 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2010-2026 (2009 Dollars)	Total Costs: (2009 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Center-Line Miles)	Other Project Information
		Design	Right-of-Way	Construction	Total					
T80	Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	0.48	0.00	0.00	0.48	386.47	386.95	2019	5.0	
T81	I-10 West Link: Washington Ave./Central Ave. to 79th Ave.	2.90	0.00	0.00	2.90	847.94	850.84	2021	11.0	
T82	Northwest Link Phase 1: 19th Ave/Bethany Home to 19th Ave/Dunlop	19.99	31.42	12.80	64.22	240.52	304.74	2012	3.2	
	Northwest Link Phase 2: 19th Ave./Dunlop to Rose Mofford Sports Complex	0.00	0.00	0.00	0.00	108.35	108.35	2018	1.8	
T83	Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.00	0.00	0.00	0.00	302.60	302.60	2030	12.0	
T84	Tempe South Link: Main St./ Rural Rd. to Southern Ave.	2.50	0.00	0.00	2.50	152.28	154.78	2016	2.0	
T85	West Mesa Link: Main St./Sycamore to Main St./Mesa Dr. *	2.90	0.00	0.00	2.90	206.05	208.95	2016	2.7	
	TOTAL	28.77	31.42	12.80	73.00	2,244.21	2,317.21			

* Technology to be determined.

**TABLE C-8
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2009 (Thousands)	Farebox Revenues through FY 2009 (YOE Dollars)	Annual Average Boardings through FY 2009 (Thousands)	Annual Average Farebox Revenues through FY 2009 (YOE Dollars)	Other Project Information
T1	Ahwatukee Connector	2029	14.7	30,010					
T2	Ahwatukee Express	2008	20.8	160,264	456.5	421,500	228.3	210,800	
T3	Anthem Express	2034	30.4	77,390					
T4	Apache Junction Express	2016	37.4	76,350					
T5	Arizona Avenue Arterial BRT	2011	15.0	152,870					
T6	Avondale Express	2038	19.0	77,570					
T7	Black Canyon Freeway Corridor	2029	16.6	67,700					
T8	Buckeye Express	2020	43.7	66,910					
T9	Chandler Boulevard Arterial BRT	2040	18.5	226,620					
T10	Deer Valley Express	2008	13.6	188,195	614.3	567,500	307.1	283,800	
T11	Desert Sky Express	2008	22.6	89,096	355.7	328,400	177.8	164,200	
T12	East Loop 101 Connector	2009	44.6	73,247	10.5	10,000	10.5	10,000	
T13	Grand Avenue Limited	2020	25.9	158,430					
T14	Loop 303 Express	2039	38.1	77,780					
T15	Main Street Arterial BRT	2009	10.7	181,622	123.0	86,100	123.0	86,100	Operated for half year
T16	North Glendale Express	2008	29.6	94,583	86.7	80,600	43.3	40,300	
T17	North I-17 Express	2039	34.4	87,620					
T18	North Loop 101 Connector (Surprise to Scottsdale)	2008	31.6	105,311	39.2	36,600	19.6	18,300	
T19	Papago Fwy Connector	2009	30.0	26,426	29.8	28,300	29.8	28,300	
T20	Peoria Express	2026	24.1	73,640					
T21	Pima Express	2020	35.4	72,190					
T22	Red Mountain Express	2009	32.8	54,391	32.4	30,800	32.4	30,800	
T23	Red Mountain Fwy Connector	2037	19.2	78,510					

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2009 (Thousands)	Farebox Revenues through FY 2009 (YOE Dollars)	Annual Average Boardings through FY 2009 (Thousands)	Annual Average Farebox Revenues through FY 2009 (YOE Dollars)	Other Project Information
T24	Santan Express	2034	44.9	228,910					
T25	Scottsdale/Rural Arterial BRT	2026	23.1	282,770					
T26	South Central Avenue	2029	9.4	114,800					
T27	South Central Avenue Arterial BRT	2029	23.7	120,900					
T28	SR 51 Express	2008	22.3	128,325	376.7	348,000	188.3	174,000	
T29	Superstition Fwy Connector	2016	17.5	26,830					
T30	Superstition Springs Express	2037	31.9	162,540					
T31	West Loop 101 Connector	2009	31.4	64,444	38.1	36,200	38.1	36,200	
	TOTAL		812.8	3,426,244	2,162.8	1,974,000	1,198.2	1,082,800	

**TABLE C-9
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2009 (Thousands)	Farebox Revenues through FY 2009 (YOE Dollars)	Annual Average Boardings through FY 2009 (Thousands)	Annual Average Farebox Revenues through FY 2009 (YOE Dollars)	Other Project Information
T40	59th Avenue	2038	16.2	394,240					
T41	83rd Avenue/75th Avenue	2039	21.4	542,440					
T42	99th Avenue	2038	16.5	401,300					
T43	Alma School Rd.	2026	19.1	523,450					
T44	Arizona Avenue/Country Club	2016	16.3	462,380					
T45	Baseline Road	2016	19.6	586,090					
	Dobson Road	2009	15.7	481,686	541.3	378,900	541.3	378,900	
	Southern Avenue	2009	28.1	961,823	1,913.4	1,339,400	1,913.4	1,339,400	
T46	Bell Road (via 303)	2037	38.1	1,138,460					
T47	Broadway	2020	27.8	776,250					
T48	Buckeye Road (Litchfield Road to Central Ave.)	2038	22.7	586,460					
T49	Camelback Road	2020	28.5	851,220					
T50	Chandler Blvd.	2008	32.7	768,500	753.4	523,800	376.7	261,900	
T51	Dunlap/Olive Avenue	2038	14.3	411,720					
T52	Dysart Road	2029	21.0	311,900					
T53	Elliot Road	2020	21.9	600,020					
T54	Gilbert Road	2010	20.9	519,070					
T55	Glendale Avenue	2008	32.7	965,214	4,520.7	3,141,200	2,260.3	1,570,600	
T56	Greenfield Road	2039	15.2	369,300					
T57	Hayden/McClintock	2029	29.7	826,990					
T58	Indian School Road	2038	30.4	879,050					
T59	Litchfield Road	2040	21.5	523,780					
T60	Main Street	2009	17.3	316,393	269.2	258,400	269.2	258,400	Only operated half year
T61	McDowell/McKellips	2026	41.8	1,250,210					
T62	Peoria Ave./Shea	2029	43.0	1,506,060					
T63	Power Road	2014	14.2	345,160					

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2009 (Thousands)	Farebox Revenues through FY 2009 (YOE Dollars)	Annual Average Boardings through FY 2009 (Thousands)	Annual Average Farebox Revenues through FY 2009 (YOE Dollars)	Other Project Information
T64	Queen Creek Road (Pecos P&R to Power Road)	2037	12.0	293,410					
T65	Ray Road	2029	18.4	447,870					
T66	Scottsdale/Rural	2007	28.9	1,192,971	4,878.6	3,244,500	1,626.2	1,081,500	
T67	Tatum / 44th Street	2038	22.8	682,180					
T68	Thomas Road	2038	26.7	770,530					
T69	University Drive (to Ellsworth Road)	2016	27.8	802,220					
T70	Van Buren	2038	23.4	711,460					
T71	Waddell/Thunderbird	2038	27.9	692,370					
	TOTAL		814.0	22,892,177	12,876.6	8,886,200	6,987.1	4,890,700	