



2013 ANNUAL REPORT ON THE STATUS OF THE IMPLEMENTATION OF PROP 400



September 2013



Maricopa Association of Governments

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ON THE STATUS OF THE IMPLEMENTATION OF
PROPOSITION 400**

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SUMMARY OF FINDINGS AND ISSUES

The *2013 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 2013 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.

- The MAG Metropolitan Planning Area was expanded to include new areas in Pinal County.

On May 9, 2013, the Governor of Arizona approved an expanded metropolitan planning area (MPA) boundary for MAG. The MAG MPA boundary now extends significantly into Pinal County. The new MPA boundary is in accordance with Federal regulations (§450.312 - Metropolitan Planning Area Boundaries), which require that metropolitan planning areas encompass at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast. The new MAG MPA boundary was determined using the 2010 Census and the latest long-range population forecasts for the Maricopa and Pinal County areas.

In addition to Maricopa County, the MPA now also includes the entire Gila River Indian Community, the Town of Florence, the City of Maricopa, all of the City of Apache Junction, and certain unincorporated areas of Pinal County. The new areas in the MAG MPA will not participate in the Life Cycle Programs.

- MAG, ADOT, RPTA, and METRO Rail continued to follow up on the recommendations of the *Performance Audit of the Maricopa County Regional Transportation Plan*, which was released on December 21, 2011 by the State Auditor General.

On June 21, 2013, the Maricopa Association of Governments (MAG), the Arizona Department of Transportation (ADOT), the Regional Public Transportation Authority (RPTA), and METRO Rail provided a combined, detailed written assessment of the efforts made to date in implementing the audit recommendations. In this transmittal, each agency reviewed accomplishments and described ongoing efforts to address issues identified in the audit. MAG in collaboration with its RTP partners has continued to implement Proposition 400 projects, assessing and monitoring performance metrics linked to RTP's goals and objectives.

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 2013 receipts from the Proposition 400 half-cent sales tax were 5.4 percent higher than receipts in FY 2012.

The receipts from the Proposition 400 half-cent sales tax in FY 2013 totaled approximately \$342 million, corresponding to a 5.4 percent increase over the total of \$324 million FY 2012. This represents the third consecutive year of higher revenues. However, the collections for FY 2013 remain 12.6 percent lower than those in FY 2007.

- Forecasts of Proposition 400 half-cent revenues are 0.7 percent lower for the period FY 2014 through FY 2026, compared to the 2012 Annual Report estimate.

Future half-cent revenues for the period FY 2014 through FY 2026 are currently forecasted to total \$6.1 billion. This amount is \$44 million, or 0.7 percent, lower than the forecast for the same period presented in the 2012 Annual Report. The Proposition 400 half-cent revenue forecasts will be updated again in the fall of 2013.

- Forecasts of total ADOT Funds dedicated to the MAG area for FY 2014 through FY 2026 are 23.3 percent lower than the 2012 Annual Report estimate.

The forecast for ADOT Funds for FY 2014 through FY 2026 totals \$3.3 billion, which is 23.3 percent lower than the 2012 Annual Report forecast of \$4.2 billion for the same period. This decrease reflects lower levels of Federal aid anticipated to be available for ADOT Discretionary Funds in the future. The

new Federal funds forecasts reflect the new Federal transportation legislation (MAP-21) signed into law by President Obama on July 6, 2012.

- Forecasts of total MAG Federal Transportation Funds for FY 2014 through FY 2026 are 13 percent lower than the 2012 Annual Report estimate.

Total Federal funding for the period FY 2014 through FY 2026 is forecasted to total \$2.8 billion. This is about a 13 percent decrease from the \$3.2 billion forecasted for the same period in the 2012 Annual Report. The new Federal funds forecasts reflect the new Federal transportation legislation (MAP-21) signed into law by President Obama on July 6, 2012. These forecasts are only for those sources that are utilized in the Life Cycle Programs. Additional Federal funds are received in the MAG region and applied to other transportation program areas, which are not covered by this report.

- Although new Federal transportation funding legislation has been approved, the long-term outlook for Federal funding remains uncertain.

On July 6, 2012, President Obama signed legislation known as the 'Moving Ahead for Progress in the 21st Century Act', or 'MAP-21'. This two-year transportation reauthorization bill provides federal funding of transportation programs through September 2014. Total annual funding provided by MAP-21 is generally comparable to that in the previous Federal legislation (SAFETEA-LU). However, since MAP-21 covers only a two-year period, future Federal funding levels will be subject to change within a relatively short time.

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program (FLCP) 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 2013.

Completed

- US 60 (Loop 101 to 71st Ave.): Roadway improvements.
- SR 85 (at B-8/Maricopa Rd.): Reconstruct intersection.

Advertised for Bids or Under Construction

- I-10/Perryville Rd.: Construct new interchange.

- SR 24 (Loop 101 to Ellsworth Rd.): Construct interim freeway.
 - US 60 (71st Ave. to Van Buren St.): Roadway improvements.
 - Loop 101/Maryland Ave.: Construct HOV ramps.
 - Loop 303/I-10: Construct new system interchange.
 - Loop 303 (Thomas Rd. to Camelback Rd.): Construct new freeway.
 - Loop 303 (Camelback Rd. to Glendale Ave.): Construct new freeway.
 - Loop 303 (Glendale Ave. to Peoria Ave.): Construct new freeway.
 - Loop 303 (Peoria Ave. to Mountain View Blvd.): Construct new freeway.
- Projects were advanced on Loop 202 (Red Mountain Freeway) and Loop 303 (Estrella Freeway).

On June 19, 2013, the MAG Regional Council approved an amendment to the MAG FY 2015–FY 2018 Transportation Improvement Program to advance projects on the Loop 202 and Loop 303. This action was approved to take full advantage of available Federal highway funding. Design-build projects were programmed in FY 2013 for HOV lanes on Loop 202 from Gilbert Road to Broadway Road and general purpose lanes from SR-101L to Gilbert Road. Also, a design-build project to widen Loop 303 to six lanes from Grand Avenue to Happy Valley Road was programmed in FY 2013.

- The Draft Environmental Impact Statement (EIS) for the South Mountain Freeway corridor was completed in April 2013.

The DCR/EIS is currently progressing for the South Mountain Freeway corridor. A Draft EIS was completed in April 2013. The public hearing for the project was held on May 21, 2013 at the Phoenix Convention Center, followed by several community meetings in Ahwatukee, Chandler, and Laveen, and on the Gila River Indian Community. Completion and approval of a final EIS and Design Concept Report, as well as a U.S. Department of Transportation “Record-of-Decision” on the recommended alternative for the corridor, are anticipated sometime during calendar year 2014.

- Environmental Impact Statement study processes being conducted on I-10 and I-17 were cancelled.

During September 2013, the Federal Highway Administration and the Arizona Department of Transportation made the decision to cancel EISs that were being conducted on I-10 and I-17. Changes in funding availability and potential conflicts with flight paths at Sky Harbor Airport called for a different approach to improvements in these corridors. The EISs will be replaced by the study of a single, continuous corridor extending from the “North Stack” (I-17/SR-101L) to the “Pecos Stack” (I-10/SR 202L).

- Cash flow analysis indicates that there is a deficit of approximately \$444 million for the Regional Freeway/Highway Life Cycle Program through FY 2026.

During FY 2013, cash flow modeling based on new revenue forecasts was conducted. The analysis indicated that program totals show positive ending balances for FY 2014 to FY 2018, but there is a deficit of approximately \$444 million for the Regional Freeway and Highway Program through FY 2026. This is due primarily to reduced forecasts for Federal aid. The deficit represents approximately eight percent of the future estimated costs for the program during for FY 2014 to FY 2026. MAG and ADOT will be working continuously together to review and update estimated costs and revenues to keep costs and revenue in balance.

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.

- During FY 2013, a total of \$52 million in ALCP project expenses were reimbursed to the implementing agencies.

During FY 2013, a total of \$52 million in ALCP project expenses were reimbursed to implementing agencies. This included reimbursements to eight individual agencies, as well as funding for projects in the MAG ITS program. Since the beginning of the program, \$374 million has been disbursed and 41 projects have been completed.

- Continuing progress on projects in the Arterial Street Life Cycle Program has been maintained.

During FY 2013, project overview reports were prepared by the lead agencies for 9 projects in the ALCP. Since the inception of the program, 75 project overviews have been submitted to MAG. A total of 12 project agreements were executed in FY 2013. In all, 67 project agreements have been executed to date. Lead agencies deferred approximately \$10.5 million in Federal and regional reimbursements from FY 2013 to later years due to project implementation and local funding issues.

- Projected Arterial Life Cycle Program (ALCP) reimbursements are slightly above (\$29 million or 2.4 percent) estimated future revenues for the period FY 2014 - FY 2026.

The Regional Area Road Fund (RARF) forecast, released by the Arizona Department of Transportation in the fall of 2012, indicated a decline of half-cent revenues. The projection of Federal funds into the ALCP also decreased under the new Federal surface transportation funding and authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21). As a result, projected Arterial Life Cycle Program reimbursements are slightly above (\$29 million or 2.4 percent) estimated future revenues. This difference is considered to be within the variance of revenue projections and specific remedial action is not anticipated at this time.

On June 19, 2013, the MAG Regional Council approved the FY 2014 Arterial Life Cycle Program (ALCP). In the ALCP, the temporary elimination of program bonding and project inflation remained in place. With the elimination of program bonding and project inflation, combined with adjustments to program assumptions, no involuntary funding deferrals were needed.

TRANSIT LIFE CYCLE PROGRAM

The Transit Life Cycle Program (TLCP) is maintained by the Regional Public Transportation Authority (RPTA) and implements Proposition 400 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.

- Four bus routes were implemented in FY 2013 and several additional routes will be funded during the next five years.

Routes Implemented During FY 2013:

- Grand Avenue Limited (T13).
- South Central Avenue Express (T26).
- Baseline Road (T45).
- McDowell/McKellips Roads (T61).

Routes Planned for Implementation During FY 2014 through FY 2018:

- Elliot Road (T53); Service start: FY 2014.
- Thomas Road (T68); Service start: FY 2014.
- Waddell/Thunderbird (T71); Service start: FY 2015.
- Scottsdale/Rural BRT (T25); Service start: FY 2015.
- Van Buren Street (T70); Service start: FY 2016.
- Alma School Road (T43); Service start: FY 2018.

- A locally preferred alternative for the Phoenix West Light Rail Transit Extension was accepted by the MAG Regional Council.

On July 25, 2012, the MAG Regional Council accepted the locally preferred alternative for the Phoenix West Light Rail Transit Extension. The alignment for this alternative is along I-10 from 79th Avenue to I-17; southbound along the I-17 southbound frontage road; east along Van Buren Street to 18th Avenue; southbound along 18th Avenue to Jefferson Street and the east to downtown Phoenix along Jefferson Street.

- A major amendment to the RTP was approved for the Light Rail Transit Extension (LRT) from Mesa Drive to Gilbert Road.

On January 30, 2013, the MAG Regional Council approved a major amendment to the MAG Regional Transportation Plan to add a 1.9-mile segment to the LRT system, extending from Mesa Drive to Gilbert Road on Main Street in Mesa. This action was taken after the required agency consultation was conducted. On March 27, 2013, after the completion of air quality conformity analysis, the Regional Council approved \$153 million in funding for the project through the transfer of Federal STP funds from sixteen arterial Life Cycle Program projects.

- Estimated future costs for the Transit Life Cycle Program are in balance with project future funds for the period of FY 2014 through FY 2026.

Estimated future costs for the period of FY 2014 through FY 2026 are in balance with project future funds available with a remainder of approximately \$60 million (2013 \$'s). In FY 2012, TLCP balance was achieved by delaying the implementation of numerous projects and reducing the scope of many other projects, particularly bus routing and frequencies adjustments. Additionally, operating efficiencies were achieved by consolidating contracts. The life cycle process continually requires a balance to be maintained through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as necessary.

- Federal discretionary funding for transit continues to be an important issue.

A large part of the funding for the LRT/HCT 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.

The recently approved Federal transportation legislation, Moving Ahead for Progress in the 21st Century (MAP-21), makes significant changes to the federal transit funding programs. MAP-21 eliminates many of the discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes. RPTA, METRO and MAG will need to monitor the implementation of MAP-21 and evaluate its impact on the RTP.

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.

- Freeway vehicle miles of travel (VMT) per capita has remained relatively steady the last several years.

Per Capita Freeway Vehicle-Miles of Travel (VMT) is defined as the average number of freeway miles a vehicle in the Phoenix-Mesa urbanized area travels per day per person. This measure tracks overall vehicle travel trends for the region. For the period 2009-2012, this rate has remained in the range of 8.8 to 8.6 VMT/capita.

- Two new web-based interactive products -- a Performance Measurement Dashboard and a set of Regional Transportation Program (RTP) Project Cards – have been made available.

A set of performance measures within a multi-modal framework a has been refined and enhanced with two new web-based interactive products – a Performance Measurement Dashboard and a set of Regional Transportation Program (RTP) Project Cards. The Dashboard product includes interactive maps linking instrumented freeway and major arterial corridors with charts, tables and graphs depicting multimodal performance results. The Project Cards document descriptions, status, schedules and expenditures of various completed projects. Both are being used to communicate with various audiences regarding regional transportation system performance.

CHAPTER ONE

INTRODUCTION

The *2013 Annual Report on the Status of the Implementation of Proposition 400* covers progress on transportation projects being implemented under Proposition 400, through the fiscal year ending June 30, 2013. The report also addresses the future outlook for the Proposition 400 program through June 30, 2026. 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.

1.1 REQUIREMENT FOR THE ANNUAL REPORT

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.

1.2 ANNUAL REPORT CONTENT

The Annual Report addresses project status and tabulates expenditures through the fiscal year (FY) 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.

1.3 CLARIFICATIONS REGARDING DATA AND TERMINOLOGY

- Data Consistency - In preparing the Annual Report, every effort is made to use data sources that are consistent with other documents that publish similar data, such as regional transportation plans, transportation improvement

programs, and life cycle programs. However, these reports are issued at different times and serve different purposes, which means that each report may not contain exactly the same set of data presented in the other reports. Therefore, minor differences in the data provided in the reports may continue to be present. Specific data sources used in the Annual Report are identified in Appendix E.

It should be noted that the Annual Report is intended to identify overall progress and future trends in the Proposition 400 program, as opposed to providing a detailed financial accounting record. Delaying its issue to achieve total uniformity with other reports would lessen the ability to provide a timely report to decision-makers and the public.

- Fourth Quarter Estimates - In some instances, expenditure data may include estimates for the fourth quarter of the most recent fiscal year included in the Annual Report. These estimates are updated later to reflect actual expenditures when that data is available and are provided in subsequent Annual Reports. This, in certain cases, may result in total costs reported for a given facility/service in one year being less than that reported in the previous year.

Postponing the issue of the Annual Report to await final fourth quarter data would require significant delays, greatly lessen the relevancy of the Annual Report in the decision-making process.

- Expenditure Data Adjustments - Close coordination is maintained with the agencies that supply expenditure data for the Annual Report, in an effort to ensure that cost items are treated consistently from year-to-year. However, due to the timing of billing receipts, collection of other financial information, and posting of necessary accounting adjustments, there may be anomalies in the expenditures reported by the agencies for a given project from one year to the next. This variation is minor and generally reflects the increasing accuracy of the figures being provided by the agencies. Expenditure tabulations in the Annual Report correspond to the data received from the reporting agencies, with specific sources identified at the end of the document.
- Project Schedules - In describing project status, both “open to traffic” and “programmed for final construction” are used. The term “open to traffic” is used if the specific date when a facility has been opened, or will be open with some certainty, is known. The term “programmed for final construction” is utilized to indicate the year in which funding has been identified to begin final construction of a facility. The latter term is employed due to the difficulty in specifying an “open to traffic” date for future projects that may not even be designed at this time, much less have specific bid and construction schedules

established. An “open to traffic” date for a future project may be identifiable if it is under construction or has scheduled bid dates.

- Bus Ridership Reporting - Beginning with the 2013 Annual Report, ridership data relates to all Public Transit Fund (PTF) supported routes or portions of routes. This includes existing routes receiving PTF funding that predate Prop 400 and may not have been reported on previously. This approach is being used to ensure that the broadest disclosure possible is being provided. As a result of this approach, total ridership on some routes may stay the same from year to year, because PTF funds no longer pay for the service. On the other hand, certain other routes may indicate a jump from no ridership to significant levels of ridership. This occurs in cases where a route is now being reported on but had not been reported on previously.

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. In 2010, the Auditor General contracted with an independent auditor to conduct a performance audit of the Regional Transportation Plan. The results of the audit were released in December 2011. (See Chapter Three.)

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) was formed in 1967, as the designated Metropolitan Planning Organization (MPO) for transportation planning in the Phoenix metropolitan area. On May 9, 2013, the Governor of Arizona approved an expanded metropolitan planning area (MPA) boundary for MAG, and the MAG MPA boundary now extends significantly into Pinal County. The new MPA boundary is in accordance with Federal regulations, which require that metropolitan planning areas encompass at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast. MAG members include the region's 27 incorporated cities and towns, Maricopa County, Pinal 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 of elected officials. Membership is open to all municipalities in Maricopa County and to the county government. In 1993, the RPTA Board adopted Valley Metro as the identity for the regional transit system. The (RPTA)/Valley Metro Board of Directors helps guide the agency by providing transportation leadership to best serve the region and their communities. Members are represented by an elected official who is appointed by their Mayor, Councilmembers or Board of Supervisors. Currently the Board includes Avondale, Buckeye, Chandler, El Mirage, Gilbert, Glendale, Goodyear, Maricopa County, Mesa, Peoria, Phoenix, Scottsdale, Surprise, Tempe, and Tolleson, and Wickenburg. The RPTA Board cannot approve projects and programs within the MAG area that are not consistent with the MAG RTP and the MAG TIP.

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. These monies are 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.

In March 2012, a decision was made to employ a single Chief Executive Officer (CEO) for both RPTA/Valley Metro (Bus) and Valley Metro Rail. Subsequently, the staffs of the two agencies were integrated into a single organization under the direction of the CEO. The combined staff organization addresses all administrative, planning and operational functions for both agencies, including: (1) communications and marketing, (2) planning and development, (3) design and construction, (4) operations and maintenance, (5) finance, (6) administrative and organizational development, (7) legal, and (8) intergovernmental relations. The legal structure and Boards of the two agencies will not be affected.

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 2013.

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 is developed and updated through a comprehensive, performance-based process, consistent with State legislation. This process takes into account household trip-making characteristics and regional travel patterns, as well as the effects of population growth, to identify future demand for transportation facilities. The transportation planning process establishes goals and objectives, estimates future travel demand, identifies and evaluates facility options, and defines a planned, multi-modal transportation network. As part of the process, funding for the implementation of the plan is identified and a facility phasing program is prepared.

The transportation planning process also includes broad-based public input, which is received as the result of an extensive public involvement process that includes an extensive public outreach effort. Public involvement meetings and events are held to receive input from citizens throughout the MAG Region. Additional comments are 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 includes 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 include: Loop 202 (South Mountain Freeway), Loop 303 (Estrella Freeway, State Route 30 (I-10 Reliever Freeway), and State Route 24 (Gateway Freeway).

Freeway/Highway Widening and Other Improvements: Freeway/highway widening improvements cover 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 takes into account the ADOT Freeway/Highway Life Cycle Program, which is a 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 identifies regional funding for widening existing streets, improving intersections, and constructing new arterial segments. This is in addition to extensive local government funding for arterial street improvements. 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 also includes 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 takes into account the MAG Arterial Life Cycle Program, which is a listing of street projects that have been identified in the RTP for regional funding (see Chapter Seven).

4.1.4 Transit Element

The RTP includes 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/high capacity transit 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/High Capacity Transit: The RTP includes a 60.2-mile Light Rail Transit (LRT)/High Capacity Transit (HCT) system, which incorporates the 20.0-mile, LRT minimum-operating segment (MOS); a 5.0-mile northwest extension; a 5.0-mile extension to downtown Glendale; an 11.0-mile extension along I-10 west to 79th Avenue; a 12.0-mile extension to Paradise Valley Mall; a 2.6-mile extension south of the MOS in Tempe; and a 4.6-mile extension from the east terminus of the MOS to Gilbert Road. Light rail transit has been selected as the technology on the northwest extension, the I-10 west extension, and the extension to Gilbert Road. A modern streetcar has been designated for the extension in Tempe. The technology for the remaining segments has not yet 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 takes into account the RPTA Transit Life Cycle Program, which is a 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:

- Generally, 30 percent for major street projects, bicycle and pedestrian projects. Under certain limited conditions, this requirement may be less depending on the type of Federal funds that may be utilized on a given project.

- For air quality and transit projects involving Federal funds, minimum Federal match requirements are 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.

In the Freeway/Highway Life Cycle Program, MAG recognizes that local jurisdictions may want to accelerate highway projects by providing the local jurisdiction's financial resources to the program. Acceleration of specific highway projects benefits not only the affected local jurisdiction, but also the entire region. To facilitate local financing that allows the acceleration of freeway/highway construction in the region, MAG has adopted a Highway Acceleration Policy. This policy includes a provision that 50 percent of the interest expense incurred by the local jurisdiction will be paid by regional program revenues.

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.

Consultation on Resource and Environmental Factors: As part of the planning process for the update of the Regional Transportation Plan (RTP), MAG reaches out to Federal, State, Tribal, regional, and local agencies to consult on environmental and resource issues and concerns. This effort includes consultation regarding conservation plans and maps, inventories of natural or historic resources, and potential environmental mitigation activities. Specific topics of interest include: land use management, wildlife, natural resources, environmental protection, conservation, historic preservation, and potential environmental mitigation activities. The primary goal of this consultation effort is to make transportation planning decisions and prepare planning products that are sensitive to environmental mitigation and resource conservation considerations.

4.2.3 Establishment of a Complete Transportation System for the Region

The RTP includes 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) are revised periodically to reflect factors such as changes in costs, project schedules, and the outlook for future revenues. Significant actions during FY 2013 affecting the RTP are discussed below.

Phoenix West Light Rail Transit Extension – Locally Preferred Alternative: On July 25, 2012, the MAG Regional Council accepted the locally preferred alternative for the Phoenix West Light Rail Transit Extension. The alignment for this alternative is along I-10 from 79th Avenue to I-17; southbound along the I-17 southbound frontage road; east along Van Buren Street to 18th Avenue;

southbound along 18th Avenue to Jefferson Street and the east to downtown Phoenix along Jefferson Street.

Interstates 10 and 17 Environmental Impact Statements (EIS): During September 2013, the Federal Highway Administration and the Arizona Department of Transportation made the decision to cancel EISs that were being conducted on I-10 and I-17. Changes in funding availability and potential conflicts with flight paths at Sky Harbor Airport called for a different approach to improvements in these corridors. The EISs will be replaced by the study of a single, continuous corridor extending from the “North Stack” (I-17/SR-101L) to the “Pecos Stack” (I-10/SR 202L).

Light Rail Transit Extension (LRT) - Mesa Drive to Gilbert Road: On January 30, 2013, the MAG Regional Council approved a major amendment to the MAG Regional Transportation Plan to add a 1.9-mile segment to the LRT system, extending from Mesa Drive to Gilbert Road on Main Street in Mesa. This action was taken after the required agency consultation was conducted. On March 27, 2013, after the completion of air quality conformity analysis, the Regional Council approved \$153 million in funding for the project through the transfer of Federal STP funds from sixteen arterial Life Cycle Program projects.

Expanded MAG Metropolitan Planning Area: On May 9, 2013, the Governor of Arizona approved an expanded metropolitan planning area (MPA) boundary for MAG. The MAG MPA boundary now extends significantly into Pinal County. The new MPA boundary is in accordance with Federal regulations (§450.312 - Metropolitan Planning Area Boundaries), which require that metropolitan planning areas encompass at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast. The new MAG MPA boundary was determined using the 2010 Census and the latest long-range population forecasts for the Maricopa and Pinal County areas.

Project Advancements on Loop 202 (Red Mountain Freeway) and Loop 303 (Estrella Freeway): On June 19, 2013, the MAG Regional Council approved an amendment to the MAG FY 2015–FY 2018 Transportation Improvement Program to advance projects on the Loop 202 and Loop 303. This action was approved to take full advantage of available Federal highway funding. Design-build projects were programmed in FY 2013 for HOV lanes on Loop 202 from Gilbert Road to Broadway Road and general purpose lanes from SR-101L to Gilbert Road. Also, a design-build project to widen Loop 303 to six lanes from Grand Avenue to Happy Valley Road was programmed in FY 2013.

FY 2014 Arterial Life Cycle Program: On June 19, 2013, the MAG Regional Council approved the FY 2014 ALCP. The Regional Area Road Fund (RARF) forecast, released by the Arizona Department of Transportation in the fall of 2012, indicated a slight decline of program revenues. The projection of Federal funds into the program also decreased under the new surface transportation

funding and authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21). As a result, the temporary elimination of program bonding and project inflation remained in place. With the elimination of program bonding and project inflation, combined with adjustments to program assumptions, no involuntary funding deferrals were needed.

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/High Capacity Transit Program; subsidize certain transit operating costs; and, in the form of transit farebox monies, contribute significant funding for transit operations.

A 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. Resources from another, non-recurring source were made available in early 2009 in the form of infrastructure funding from the American Recovery and Reinvestment Act (ARRA).

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 2012, but may not have been specifically factored, in every case, to a 2012 base year. In addition, both actual and forecasted revenues have been updated from previous reports.

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 \$2.5 billion through FY 2013. Beginning in FY 2008, annual receipts steadily declined, with the year-over-year decreases for the three years from the end of FY 2007 through the end of FY 2010 equaling, respectively, 3.1, 13.7 and 8.9 percent. Beginning in FY 2011, receipts began to recover, with year-over-year increases of 3.4, 5.1 and 5.5 percent, respectively, for FY 2011, FY 2012 and FY 2013. However, the collections for FY 2013 remain 12.6 percent lower than those in FY 2007. In addition, the current estimate of total 20-year revenues from the half-cent sales tax is over 42 percent lower than the estimate of \$15.0 billion prepared before the effects of the 2007-2009 recession.

Future half-cent revenues for the period FY 2014 through FY 2026 are forecasted to total \$6.1 billion. This amount is approximately \$44 million, or 0.7 percent, lower than the forecast for the same period presented in the 2012 Annual Report. Of the \$6.1 billion total included in the current forecast, \$3.4 billion will be allocated to freeway/highway projects; \$641 million to arterial street improvements; and \$2.0 billion to transit projects and programs. The actual receipts for FY 2013 (\$342 million) were nearly identical to the amount forecasted in FY 2012 (\$344 million). The Proposition 400 half-cent revenue forecasts will be updated again in the fall of 2013.

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 Federal Aid Highway Funds, and other miscellaneous sources.

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	219.7	41.1	130.2	391.0
2008	213.2	39.8	126.3	379.4
2009	184.0	34.4	109.0	327.4
2010	167.7	31.3	99.4	298.4
2011	173.3	32.4	102.7	308.4
2012	182.1	34.0	107.9	324.0
2013	192.0	35.9	113.8	341.7
Subtotal	1,418.4	265.0	840.5	2,523.9
Forecasted				
2014	202.9	37.9	120.2	361.1
2015	214.3	40.0	127.0	381.4
2016	225.8	42.2	133.8	401.8
2017	237.7	44.4	140.8	422.9
2018	249.0	46.5	147.5	443.0
2019	260.9	48.8	154.6	464.3
2020	274.2	51.2	162.5	487.9
2021	286.2	53.5	169.6	509.3
2022	299.2	55.9	177.3	532.4
2023	311.3	58.2	184.5	554.0
2024	324.8	60.7	192.5	578.0
2025	338.5	63.2	200.6	602.3
2026 (4)	206.8	38.6	122.5	367.9
Subtotal	3,431.6	641.2	2,033.4	6,106.3
Total				
Totals	4,850.1	906.2	2,873.9	8,630.2

(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) Estimated subject to change.

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

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. 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, maintenance and debt service on outstanding bonds. This includes funds for the Motor Vehicle Division, department administration, highway maintenance and additional funding for DPS.

ADOT also receives Federal transportation funds which are allocated to Arizona through various Federal programs and allocation formulas. The remaining HURF funds are combined with the 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 2012 totaled \$2.0 billion, and forecasted revenues for the period FY 2014 through FY 2026 total \$3.3 billion. This forecast is 23.3 percent lower than the 2012 Annual Report forecast for the same period. This decrease reflects

lower levels of Federal aid anticipated to be available for ADOT Discretionary Funds in the future.

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	110.8	183.6
2007	76.9	151.7	228.6
2008	76.9	248.0	324.9
2009	60.5	156.3	216.8
2010	59.1	122.4	181.5
2011	59.5	230.9	290.4
2012	45.7	223.7	269.4
2013	62.5	269.1	331.6
Subtotal	513.9	1,512.9	2,026.8
Forecasted			
2014	64.1	217.8	281.9
2015	66.3	159.9	226.2
2016	68.9	219.0	287.9
2017	71.6	185.0	256.6
2018	74.6	145.1	219.7
2019	77.7	148.4	226.1
2020	80.8	151.4	232.2
2021	83.9	154.4	238.3
2022	86.9	157.4	244.3
2023	90.0	160.3	250.3
2024	93.2	163.4	256.6
2025	96.5	166.5	263.0
2026	99.7	169.7	269.4
Subtotal	1,054.2	2,198.3	3,252.5
Total			
Totals	1,568.1	3,711.2	5,279.3

The MAG area receives annual funding through the Arizona Department of Transportation (ADOT) in the form of 15 Percent Funds, which are allocated from the State Highway Fund to the MAG area. These funds are spent exclusively for improvements on limited access facilities on the State Highway System in the MAG area through the ADOT Five-Year Construction Program.

In addition, 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. On July 6, 2012, President Obama signed legislation known as the 'Moving Ahead for Progress in the 21st Century Act', or 'MAP-21'. This two-year transportation reauthorization bill provides Federal funding of transportation programs through September 2014. The MAG area Federal transportation funding forecasts included in 2013 Annual Report correspond to the programs as structured in MAP-21. In the past, Federal funding for transportation was generally reauthorized every six years. The two-year authorization in MAP-21 makes long range forecasting of Federal aid to transportation considerably more uncertain.

MAG area Federal transportation funding sources are summarized in Table 5-3, which displays actual and forecasted revenues. *It is important to note that the Federal funds estimates are only for those sources that are utilized in the Life Cycle Programs. Additional Federal funds are received in the MAG region and applied to other transportation program areas, which are not covered by this report.* Total Federal funding for the period FY 2014 through FY 2026 is forecasted to total \$2.8 billion. This is about a 13 percent decrease from the \$3.2 billion forecasted for the same period in the 2012 Annual Report.

5.3.1 Federal Transit Funds

The Federal Transit Administration (FTA) is an agency within the U.S. Department of Transportation that provides financial and technical assistance to local public transit systems, including buses and light rail transit. The Federal government, through the FTA, provides financial assistance to develop new transit systems and improve, maintain, and operate existing systems. The FTA funding includes both formula and discretionary programs.

Formula Programs: Funding is apportioned to areas on the basis of legislative formulas. The formulas include factors such bus revenue vehicle miles, bus passenger miles, fixed guideway revenue vehicle miles, and fixed guideway route miles, as well as population and population density. The Federal share is not to exceed 80 percent of the net project cost. The Federal share may be 90 percent for the cost of vehicle-related equipment attributable to compliance with the Americans With Disabilities Act and the Clean Air Act. The Federal share

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

Fiscal Year	Transit			MAG STP			MAG CMAQ				Grand Total
	FTA Formula	FTA Discr.	Total	Fwy/Hwy	Arterial	Total	Fwy/Hwy	Arterial	Transit	Total	
Actual **											
2006	10.0	0.0	10.0	38.1	0.0	38.1	0.0	0.0	0.0	0.0	48.1
2007	23.6	0.0	23.6	42.3	0.0	42.3	0.0	0.0	0.0	0.0	65.8
2008	88.8	0.0	88.8	38.0	0.2	38.2	5.9	11.7	15.0	32.7	159.7
2009	35.1	0.0	35.1	34.4	17.5	51.9	0.0	16.3	17.0	33.3	120.4
2010	14.2	2.1	16.4	39.3	19.6	58.9	29.1	9.3	19.0	57.4	132.6
2011	31.3	1.2	32.5	33.9	39.4	73.2	4.3	3.5	16.7	24.5	130.2
2012	29.2	1.1	30.4	34.1	24.5	58.6	10.6	7.4	19.9	37.8	126.8
2013	119.0	15.2	134.3	34.1	24.1	58.2	8.2	15.7	16.4	40.3	232.8
Subtotal	351.3	19.7	371.0	294.1	125.3	419.4	58.1	63.9	104.0	226.0	1,016.5
Forecasted ***											
2014	74.7	23.9	98.7	34.1	28.7	62.8	8.7	6.1	16.4	31.3	192.7
2015	50.5	37.7	88.2	34.1	16.5	50.6	8.7	6.1	16.4	31.3	170.1
2016	38.4	26.3	64.6	12.7	33.3	46.0	8.7	4.6	16.4	29.8	140.4
2017	44.7	36.5	81.3	0.0	45.8	45.8	8.7	5.7	16.4	30.9	157.9
2018	29.5	45.4	74.9	0.0	45.7	45.7	8.7	4.1	16.4	29.3	149.8
2019	54.1	71.4	125.5	0.0	46.6	46.6	8.9	6.3	16.8	32.0	204.1
2020	60.8	126.1	186.9	0.0	47.6	47.6	9.1	6.4	17.1	32.6	267.1
2021	37.8	103.0	140.8	0.0	48.3	48.3	9.3	6.5	17.5	33.3	222.3
2022	45.2	131.7	177.0	0.0	49.3	49.3	9.5	6.6	17.8	33.9	260.2
2023	77.2	181.0	258.2	0.0	50.2	50.2	9.6	6.8	18.1	34.5	343.0
2024	59.1	96.1	155.2	0.0	51.1	51.1	9.8	6.9	18.5	35.2	241.5
2025	68.6	70.7	139.3	0.0	51.1	51.1	10.0	7.0	18.8	35.9	226.3
2026	15.7	72.7	88.4	0.0	53.1	53.1	10.2	7.2	19.2	36.5	178.1
Subtotal	656.4	1,022.7	1,679.1	80.9	567.3	648.2	120.1	80.4	225.8	426.3	2,753.5
Total											
Totals	1,007.7	1,042.4	2,050.1	375.0	692.5	1,067.6	178.2	144.3	329.7	652.3	3,770.0

* Values represent use of federal funds in life cycle programs.

** Actual expenditures represent obligation authority utilized during fiscal year, except for FTA funds which is amount actually expended.

*** Forecast STP and CMAQ revenues are based on a 96.5% Obligation Authority.

also be 90 percent for projects or portions of projects related to bicycles. The Federal share may not exceed 50 percent of the net project cost of operating assistance.

A number of FTA funding programs that cover a range of uses fall into this category. Individual programs have specific restrictions regarding eligible expenditures. These programs include: (1) 5307/5340 Funds - capital and planning needs, as well as operating expenses in certain circumstances; (2)

5310 Funds - special needs of transit-dependent populations; (3) 5337 Funds - replacement and rehabilitation or capital projects required to maintain public transportation systems in a state of good repair; (4) 5339 Funds - capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities; and (5) STP-AZ Funds - STP Flexible Funds that ADOT makes available for transit purposes in urban and rural Arizona.

Discretionary Programs: 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 “New Starts” and expanded rail and bus rapid transit systems that reflect local priorities to improve transportation options in key corridors. The statutory match for New Starts funding is 80 percent Federal and 20 percent local. However, for projects under a Full Funding Grant Agreement, FTA continues to encourage project sponsors to request a Federal New Starts funding share that is as low as possible.

Table 5-3 indicates that it is anticipated that a total of \$656 million will be expended from the Formula Programs category and \$1.0 billion will be expended from the Discretionary Programs category during FY 2014 - FY 2026. The total of these estimates is approximately three percent lower than the amount forecasted for the same period in the 2012 Annual Report.

5.3.2 Federal Highway Funds

The Federal Highway Administration (FHWA) is an agency within the U.S. Department of Transportation that supports state and local governments in the design, construction, and maintenance of the nation’s highway system and various federally and tribal owned lands. Through financial and technical assistance to state and local governments, the Federal Highway Administration is responsible for ensuring that America’s roads and highways continue to be among the safest and most technologically sound in the world. Funding mostly comes from the federal gasoline tax. FHWA oversees projects using these funds to ensure that federal requirements for project eligibility, contract administration and construction standards are adhered to. The FHWA funding programs applicable to the MAG area are described below. Table 5-3 indicates the FHWA program funding levels forecasted for the period FY 2014 - FY 2026.

Surface Transportation Funds (STP): STP funds are the most flexible Federal transportation funds and may be used for highways, transit or streets. During the period from FY 2014 through FY 2026, it is estimated that \$648 million 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. This funding level is about 27 percent lower than the 2012 Annual Report estimate for the same period.

Congestion Mitigation and Air Quality (CMAQ): 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 \$426 million from FY 2014 through FY 2026 for the Life Cycle Programs. This funding level is about 31 percent lower than the 2012 Annual Report estimate for the same period.

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, any remaining STAN monies were used by the Legislature to help balance the FY 2009 State Budget. As a result, only \$121 million in STAN funding was applied to projects in the MAG area. Subsequently, in the spring of 2009, certain projects that would have been funded by STAN monies on I-10 and I-17 were re-accelerated, as a result of funding from the American Recovery and Reinvestment Act.

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 \$129 million of this amount would be spent on projects on the State Highway System in the MAG area. On February 25, 2009, the MAG Regional Council approved the projects to utilize these funds.

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 \$12.5 million from this allocation was utilized to provide funding for projects in the Arterial Life Cycle Program (ALCP), freeing up monies that can be applied later in the ALCP for other projects

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. Approximately \$39.9 million of this funding was utilized in the Transit Life Cycle Program.

5.6 REGIONAL REVENUES SUMMARY

Actual and forecasted regional revenue sources for the Life Cycle Programs between FY 2006 and FY 2026 are summarized in Table 5-4. Actual receipts from all regional revenue sources through FY 2013 total \$5.9 billion. Future regional revenues are projected to total \$12.1 billion for the period FY 2014 through FY 2026. This is about an eight percent decrease from the \$13.1 billion forecasted for the same period in the 2012 Annual Report and is due largely to lower Federal revenue forecasts.

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 - 2013 Actual	FY 2014 - 2026 Forecast	Total
Proposition 400: Half Cent Sales Tax Extension	2,523.9	6,106.3	8,630.2
ADOT Funds	2,026.8	3,252.5	5,279.3
American Recovery and Reinvestment Act (Freeways) *	129.0	0.0	129.0
American Recovery and Reinvestment Act (Arterials) **	12.5	0.0	12.5
American Recovery and Reinvestment Act (Transit) ***	39.9	0.0	39.9
Statewide Transportation Acceleration Needs (STAN)	121.0	0.0	121.0
Federal Highway	645.4	1,074.5	1,719.9
Federal Transit Funds	371.0	1,679.1	2,050.1
Total	5,869.5	12,112.4	17,981.9

* Represents amount applied to FLCP projects only.

** Represents amount applied to ALCP projects only.

*** Represents amount applied to TLCP projects only.

CHAPTER SIX

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program (FLCP) 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.

During FY 2013, cash flow modeling based on new revenue forecasts revealed an overall Freeway/Highway Life Cycle Program deficit that would require program adjustments. The ADOT Life Cycle Certification, July 2014 indicated that: "Overall, program totals do show positive ending balances for the FY 2014 to FY 2018. However, the cash flow analysis shows a deficit approaching \$440 million by the end of FY 2025. MAG and ADOT will continuously work together to monitor and update estimated costs and revenue to keep costs and revenue in balance."

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 Table A-1, provides 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 segment.

It should be noted that, beginning with the 2013 Annual Report, the freeway/highway facility segments listed in the appendix tables are revised somewhat compared to previous annual reports. The new segment definitions correspond more closely to those utilized by ADOT's cost reporting system, and are being used to facilitate more accurate compilation of expenditure data and facility cost estimates.

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):

- Overview - 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 in the East Valley with I-10 at 59th Ave. in the West Valley. It is planned for three general purpose lanes and one HOV lane in each direction.

DCR/EIS - A DCR/EIS is currently progressing for the South Mountain Freeway corridor. The Draft EIS was completed in April 2013. The public hearing for the project was held on May 21, 2013 at the Phoenix Convention Center, followed by several community meetings in Ahwatukee, Chandler, and Laveen, and on the Gila River Indian Community. Completion and approval of a final EIS and Design Concept Report, as well as a U.S. Department of Transportation "Record-of-Decision" on the recommended alternative for the corridor, are anticipated sometime during calendar year 2014. ADOT and MAG worked closely with the Gila River Indian Community (GRIC) regarding the possibility of locating a portion of the corridor on the GRIC. The concept was presented to the Community in the fall of 2010 and a community-wide referendum was held on February 7, 2012. Based on the result of the referendum, there is no longer consideration of placing the freeway within the GRIC boundary, and that option was not analyzed or presented in the Draft EIS.

- 51st Ave. to I-10 - The portion of the roadway alignment that was on 55th Ave. has been shifted to fall on 59th Ave. Within the vicinity of Dobbins Road, ADOT, MAG, and FHWA have made localized alignment shifts to avoid several historic properties in the area.

Loop 303 (Estrella Freeway):

- Overview - Loop 303 is planned as a six-lane 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 30. Right-of-way preservation south to Riggs Rd. is also part of the plan.
- I-17 to Happy Valley Rd. - Construction has been completed on an interim four-lane divided roadway, which was opened to traffic in May of 2011.

Upgrading this facility to a six-lane freeway, including construction of the full system interchange at I-17, has been shifted beyond FY 2026 but remains in the MAG Regional Transportation Plan.

- Happy Valley Rd. to Grand Ave. - An interim four-lane divided roadway was completed between Grand Ave. and Happy Valley Rd. by Maricopa County in 2004, and full freeway right-of-way was also acquired along most of this segment. A DCR/CE was completed in April 2010, covering construction of a full freeway facility in the corridor. Preliminary design was completed in 2012. Upgrading this facility to a six-lane freeway had been shifted beyond FY 2026 but remained in the MAG Regional Transportation Plan. At the end of FY 2013, the project was advanced to take full advantage of available Federal highway funding. A design-build project to complete the six-lane freeway was advanced in the MAG and ADOT programs and funding for construction has been identified for FY 2013. This project is anticipated to begin construction in FY 2014 and is under development at the time of this report. A separate project to construct a grade-separated interchange at El Mirage Road is under design, and funding for construction has been identified for FY 2014.
- Grand Ave. to I-10 - An interim two-lane roadway was constructed in the 1990's by ADOT. A DCR/EA on the segment for construction of a freeway facility has been completed, and a "Finding of No Significant Impact" issued.

Construction of crossroad improvements in anticipation of future T.I.s at Bell Road, Waddell Road, and Cactus Road was completed in May 2011. Construction on the system T.I. at I-10 started in 2011, along with the segment from Peoria Ave. to Mountain View Blvd. Segments from Thomas Rd. to Camelback Rd., Glendale Ave. to Peoria Ave., and Camelback Road to Glendale Ave. have been advertised and awarded and are under construction. All segments between I-10 and Grand Ave. are expected to be completed by the end of calendar year 2015. A project to complete the I-10 system interchange, to provide ramp connections to Cotton Lane, to and from I-10, and to complete the frontage road system at the interchange, was added to the program for delivery in FY 2016. Design for this project is programmed in FY 2013, and designer selection is underway.

- Grand Ave. Interchange - Preliminary design of an interim interchange at Loop 303 and Grand Ave. was completed in spring 2011. Final design, using the construction manager at risk (CMAR) method of project delivery, is underway. The CMAR was selected in early 2013, and construction of the interim TI is programmed in FY 2014.
- I-10 to SR 30 - A DCR/EA is scheduled for completion early in 2014, covering construction of a full freeway facility in the corridor. Construction of this segment was previously shifted beyond FY 2026 but has been brought forward, with funding for some construction programmed as early as FY 2023.

- SR 30 to Riggs Rd. - A location DCR and environmental overview are underway for a freeway concept. Right-of-way protection for this segment was shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

SR 30 (I-10 Reliever):

- Overview - The I-10 Reliever (SR 30) is planned as an east-west facility south of I-10 in the vicinity of Southern Ave. connecting the South Mountain Freeway (Loop 202) and SR 85. The route is identified as a six-lane 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.

Construction of SR 30 has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- DCR/EA – A DCR and EA are underway on the segment between Loop 202 and Loop 303, and are targeted for completion in 2014. A location study is underway for the segment between Loop 303 and SR 85.

SR 24 (Gateway Freeway):

- Overview - The Gateway Freeway (formerly Williams Gateway) is planned as a six-lane freeway extending from Loop 202 south to the Phoenix-Mesa Gateway Airport, and east to the Pinal County line at Meridian Rd.
- DCR/EA - A DCR and EA between Loop 202 and Ironwood Rd. (logical terminus one mile east of Meridian Rd.) have been completed and a Finding of “No Significant Impact” has been received.
- Loop 202 (Santan) to Ellsworth Rd. - Final design for an interim roadway was completed, the project has been awarded, and construction is underway. The City of Mesa advanced the construction funds for repayment in FY 2016. Final construction of this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.
- Ellsworth Rd. to Meridian Rd. - Final construction of this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

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

- SR 74 - Funding for right-of-way protection on SR 74 has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- Loop 303 (MC 85 to Riggs Rd.) - Funding for right-of-way protection has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

6.1.2 Widen Existing Facilities: General Purpose Lanes and HOV Lanes

I-10:

- Overview - 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.
- Verrado Way to Sarival Ave. - Construction of one general purpose lane in each direction between Sarival Ave. and Verrado Way was advertised for bids in March 2009 using ARRA funds. Construction was completed in summer 2011. This segment now has three general purpose lanes in each direction.
- Sarival Ave. to Loop 101 (Agua Fria) - Construction work to add one HOV lane and one general purpose lane in each direction in the median of I-10 was completed in June 2010. The addition of one general purpose lane in each direction along the outside of the facility between Sarival Ave. and Dysart Rd. was completed in summer 2011. This segment now has four general purpose lanes and one HOV lane in each direction.
- Loop 101 (Agua Fria) to I-17 - A DCR/EA is underway on this segment addressing future needs for increased capacity. The approach taken will be contingent on the design and timing of the South Mountain Freeway, as well as the recommendations of the MAG Central Phoenix Framework Study, and will also consider the possibility of a future light rail extension along I-10 in this segment. Construction funding is programmed in FY 2019.
- SR 51 to 32nd St. - Construction of local/express lanes along this segment has been shifted beyond FY 2026, and has been designated as an illustrative project falling beyond the FY 2035 planning horizon of the RTP.
- 32nd St. to Loop 202 (Santan) - A DCR/EIS for capacity improvements along this segment, including local/express lanes from 32nd St. to US 60, had been underway through FY 2012. In early FY 2013, the DCR/EIS was cancelled with the intent of considering other options for traffic flow enhancements. Funding for improvements along this segment has been programmed for FY 2019-2024. The nature of these improvements will be determined through additional studies.

- Loop 202 (Santan) to Riggs Rd. - A project to construct one general purpose lane and one HOV lane in each direction between Loop 202 (Santan Freeway) and Riggs Rd. is programmed for FY 2021. Upon completion, this segment will have a total of three general purpose lanes and one HOV lane in each direction.

I-17:

- Overview - Construction of additional general purpose lanes has been identified for I-17 between I-10 (Maricopa TI) 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 the entire stretch of I-17 from I-10 (Maricopa TI) to Anthem Way.
- New River Rd. to Anthem Way - Construction of one general purpose lane in each direction on this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP. Upon completion, this segment will have a total of three general purpose lanes in each direction. In 2006, ADOT completed a DCR to construct additional lanes from Loop 101 to Black Canyon City, as well as an EA for additional lanes between Loop 101 and New River Road. The New River Road to Anthem Way project and the following two projects were initiated as a result of that study.
- Anthem Way to Carefree Highway - The addition of one general purpose lane in each direction, using ARRA funding, was completed in May 2010 for a total of three general purpose lanes in each direction. A project to convert the pavement to PCCP and add one HOV lane in each direction has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.
- Carefree Highway to Loop 101 (Agua Fria) - Construction work was completed in May 2010 to add one general purpose lane and one HOV lane in each direction. With completion of this project, this segment has three general purpose lanes and one HOV lane in each direction. The interval between Pinnacle Peak Rd. and Loop 101 includes additional lanes for exiting/merging traffic to/from Loop 101.
- Loop 101 to I-10/Maricopa Fwy. - A DCR/EIS addressing capacity improvements along I-17 between Loop 101 and I-10/Maricopa Fwy. had been underway through FY 2012. In early FY 2013, the DCR/EIS was cancelled with the intent of considering other options for traffic flow enhancements. Funding for improvements along this segment has been programmed for FY 2022-2025. The nature of these improvements will be determined through additional studies.

SR 51 (Piestewa Freeway):

- Overview - Construction of additional general purpose lanes and HOV lanes has been identified for the stretch of SR 51 between Shea Boulevard and Loop 101.
- Loop 101 to Shea Blvd. - 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, resulting in a cross section of three general purpose lanes and one HOV lane in each direction. The project to construct one additional general purpose lane in each direction has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

US 60 (Grand Ave.):

- Overview - 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. With completion of the projects between Loop 303 and 83rd Ave., described below, Grand Avenue is now six lanes from Van Buren Street in Phoenix to Loop 303 in Surprise.
- Loop 303 to 99th Ave. - A project to widen Grand Ave. to six lanes between Loop 303 and 99th Ave. was completed in June 2011. A feasibility study on potential grade separation projects on Grand Ave. between Loop 303 and Loop 101 was completed in January 2009 and funding for construction is programmed in FY 2015.
- 99th Ave. to 83rd Ave. - A project to widen Grand Ave. to six lanes between 99th Ave. and 83rd Ave. was completed in June 2011.
- Loop 101 to McDowell Rd. - A DCR/CE for roadway improvement projects between Loop 101 and McDowell Rd. was finalized in October 2008, and design work was completed in 2012. The project was split for construction, and the Peoria segment, from Loop 101 to 71st Avenue, was completed in 2012. The Glendale/Phoenix segment, from 71st Avenue to Van Buren Street, advertised for construction in June 2012. Construction is underway, and completion is expected around mid-2014. Funding for additional roadway improvements along this segment has been programmed in FY 2014. Designer selection is underway for this project. Potential grade separation projects identified for this segment have been shifted beyond FY 2026 but remain within the FY 2035 planning horizon of the RTP.

US 60 (Superstition Freeway):

- Overview - 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.
- I-10 to Loop 101 - Construction of one additional general purpose lane in each direction was completed in May 2010, resulting in a cross-section of four general purpose lanes and one HOV lane in each direction along this segment.
- Gilbert Rd. to Power 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. As a result, the entire segment of the Superstition Freeway between Loop 101 and Loop 202 has five general purpose lanes and one HOV lane in each direction.
- Crismon Rd. to Meridian Rd. - A project to add one additional HOV lane and one additional GP has been programmed in FY 2020. Study work will begin in FY 2014.

SR 74:

- Passing Lanes - Projects for the construction of passing lanes along mile-post segment 20-22, and mile-post segment 13-15, were completed in fall 2010 and summer 2011, respectively.

SR 85:

- Overview - Plans call for the widening of SR 85 to a four-lane, divided roadway between I-10 and I-8. With the completion of the projects noted below, a four-lane divided roadway has been completed from 2 ½ miles north of Gila Bend to I-10.
- I-10 to Southern Ave. - Construction to provide four lanes between I-10 and Southern Ave. was completed in fall 2010.
- Southern Ave. to MC 85 - Construction of frontage roads between Southern Ave. and MC 85 was completed in May 2008.
- Mile-post 130 to Mile-post 137 - Construction of a four-lane divided roadway between Mile-post 130 and Mile-post 137 was completed in January 2010.
- SR 85/B-8/Maricopa Rd. Intersection - The project includes construction of a new, elevated intersection at State Route 85 (Pima St.) and Business Route 8 (B-8), a wider bridge over the Union Pacific Railroad, and realigning both

State Route 85 (Pima St.) and Maricopa Road. Construction began in February 2011 and was completed in late 2012.

SR 87:

- Overview - Since identification of the original concepts for corridors in the RTP, projects were added on SR 87 to refine roadway cross-section and provide for turning movements at a high volume recreational location.
- Forest Boundary to New Four Peaks - A project for improvements between Forest Boundary and New Four Peaks Rd., including an interchange at Bush Hwy., was completed in late 2008.
- New Four Peaks Rd. to Dos S Ranch Rd. – Reconstruction of the southbound lanes, construction of a climbing lane and shoulder widening between New Four Peaks Rd. and Dos S Ranch Rd. were completed in May 2011. This project included the erosion control and shoulder improvements between MP 211.8 and MP 213.0 and that were completed in summer 2011.

US 93 (Wickenburg Bypass):

- A bypass of downtown Wickenburg was completed September 2009.

Loop 101:

- Overview - 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.
- Van Buren St. to I-10 (99th Ave.) - A project to provide improvements along 99th Ave. between I-10 and Van Buren Rd. at the southern terminus of Loop 101/Agua Fria was completed in spring 2011.
- I-10 to Tatum Blvd. - A project to construct one HOV lane in each direction from I-10 (Papago) to Tatum Blvd. was advanced into FY 2010. This project combined three HOV segments originally identified for construction between FY 2013 to FY 2015 into a single design/build project. The construction of this 39-mile segment, which includes a general-purpose lane in each direction at the I-17 TI, started early in 2011 and was completed in fall 2011. This completes the installation of HOV lanes on Loop 101 from the Papago Freeway in west Phoenix to the Santan Freeway in Chandler. Installation of freeway management system equipment on the Pima Freeway between I-17 and SR 51 was completed in January 2010.

- I-17 to Princess Drive - A DCR/CE for GP lanes in this segment was started in FY 2013, with completion of the study expected in 2014. Design work is currently planned for FY 2020. Construction between SR-51 and Princess Drive, and between I-17 and SR-51, are planned in FY 2021 and FY 2024, respectively.
- Tatum Blvd. to Princess Dr. - Construction of HOV lanes from Tatum Boulevard to Princess Drive on the Pima Freeway was completed in August 2009.
- Princess Dr. to Loop 202 (Red Mountain Freeway) - The construction of HOV lanes on the Pima Freeway between Princess Dr. and Via De Ventura was completed in June 2009. HOV lanes between Via De Ventura and Loop 202/Red Mountain were completed in November 2008. In addition, a DCR/CE for general purpose lanes on the Pima Freeway between Princess Dr. and Loop 202 was completed in summer 2010. The Categorical Exclusion was granted by FHWA on the project in May 2010. Preliminary design of the GP lanes between Shea Blvd. and Red Mountain Freeway was completed in Spring 2012; final design is underway and expected to be complete, and the projects advertised for construction, in Spring 2014. Funding for construction of this segment is programmed in FY 2014.
- Loop 202 (Red Mountain Freeway) to Loop 202 (Santan Freeway) - On the Price Freeway, HOV lanes were completed between Loop 202/Red Mountain and Loop 202/Santan in October 2009.

Loop 202:

- Overview - 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 had HOV lanes prior to Proposition 400.
- SR 51 to Loop 101 -. Construction of a project to widen the Red Mountain Freeway between State Route 51 and Loop 101 was completed through a design/build contract in July 2010. This project added one general purpose lane eastbound between SR 51 and Loop 101, and one general purpose lane westbound between Loop 101 and Scottsdale Rd.
- Loop 101 to Gilbert Rd (on Red Mt. Fwy.) - Construction was completed on one HOV lane in each direction on the Red Mountain Freeway between 101 and Gilbert Rd. in July 2010. A DCR/CE to construct one additional general purpose lane in each direction in this segment was completed in October 2012. 30% design was completed in July 2013. A design-build project to construct the additional lane was advanced in the MAG and ADOT programs to FY 2013 to take full advantage of available Federal highway funding. The

project will also include the construction of HOV lanes between Gilbert Road and Broadway Road, and is anticipated to begin construction in FY 2014.

- Gilbert Rd. to I-10 (on Santan Fwy.) - A project to construct one HOV lane in each direction from Gilbert Rd. to I-10 on the Santan Freeway was advanced into FY 2010. This project combined two HOV segments originally identified for construction between FY 2013 to FY 2015 into a single design/build project. The project was completed in fall 2011, and included construction of direct HOV ramp connections at the freeway-to-freeway interchanges with Loop 101 and I-10.
- Gilbert Rd. (at Red Mt. Fwy.) to Gilbert Rd. (at Santan Fwy.) - A DCR/CE to construct HOV lanes on the remainder of Loop 202 between Gilbert Rd. (at Red Mt. Fwy.) and Gilbert Rd. (at Santan Fwy.) was completed in August 2010. A Categorical Exclusion was granted by FHWA on the project in April 2010. As discussed above, construction of the HOV lanes between Gilbert Rd. and Broadway Rd. (on the Red Mountain Freeway) is included in a design-build project that will be advertised in FY 2014.

6.1.3 New Interchanges and New HOV Ramps on Existing Facilities

New Interchanges at Arterial Streets:

- Overview - 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).
- Bullard Rd. - A new traffic interchange at I-10 was completed in FY 2008.
- Bethany Home Rd. - A new traffic interchange at Loop 101 (Agua Fria Freeway) was completed in FY 2008.
- Jomax Rd./Dixileta Dr. - New traffic interchanges at I-17 were opened to traffic in September 2008.
- SR 74/Carefree Hwy. - The reconstruction of the T.I. at I-17 was completed and opened to traffic in October 2008.
- 64th St. - The construction of a new traffic interchange at Loop 101(Pima Freeway) was completed in October 2008.
- Dove Valley Rd./Sonoran Blvd. - A new traffic interchange at I-17 was completed in January 2010, and will be opened to traffic in Fall 2013 to coincide with the completion of Dove Valley Road by the City of Phoenix.

- Beardsley/Union Hills T.I. - The widening of the Union Hills traffic interchange bridge at Loop 101 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. Construction was completed in May 2011.
- Perryville Rd. - A DCR/CE is underway for a new T.I. at I-10 and is expected to be complete in mid-2012. Funding for construction is programmed in FY 2013. This project will be constructed as a design-build project in CY 2014
- El Mirage Rd. (Fairway Dr.)/(I-10) - Funding for construction of a new T.I. at I-10 is programmed in FY 2023. A DCR and CE for the project are currently underway, with completion scheduled in early Summer 2014.
- Chandler Hts. Rd. - Funding for construction of a new T.I. at I-10 is programmed in FY 2022.
- Mesa Dr. - Funding for construction of ramps only at Loop 202 (Red Mountain Freeway) was moved beyond FY 2026 and is included in FY 2030 in the RTP.
- Lindsay Rd. - Funding for construction of ramps only (half interchange) at US 60 was moved beyond FY 2026 to FY 2027 in the RTP.
- Meridian Rd. (Meridian Road Half-Diamond TI) - This study was completed in FY 2013. A project to construct a half-diamond interchange to the west is under final design, with completion of design expected in Spring 2014. Construction is programmed in FY 2014.
- El Mirage Rd. (Loop 303) - A project to design a grade-separated interchange at El Mirage Road and Loop 303 has been funded for FY 2014. Final design is underway and expected to be complete in Spring 2014. Construction has been moved up in the program to FY 2014, and the project is expected to advertise in June of 2014.

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

- Overview - The RTP identifies a total of six locations at freeway-to-freeway interchanges on existing freeways where HOV ramps (DHOV 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.
- I-10/Loop 101 (Agua Fria Freeway) - DHOV ramps at this location were moved beyond the horizon year of the RTP and included in the Plan as illustrative projects.

- I-17/Loop 101 (Pima Freeway) - DHOV ramps at this location were moved beyond the horizon year of the RTP and included in the Plan as illustrative projects.
- SR 51/Loop 101 (Pima Freeway) - Construction of DHOV ramps (northbound to eastbound and westbound to southbound) at this location was programmed in FY 2007 as part of the addition of HOV lanes on SR 51 and completed in January 2009.
- US 60/Loop 202 (Red Mountain Freeway) - Construction of DHOV ramps at this location was moved beyond FY 2026 and is included in FY 2029 in the RTP.
- Loop 101 (Price Freeway)/Loop 202 (Santan Freeway) - Construction of DHOV ramps at this location was combined with the HOV project on Loop 202 between Gilbert Rd. and I-10, which was completed in fall 2011.
- I-10/Loop 202 (Santan Freeway) - Construction of DHOV ramps at this location was combined with the HOV project on Loop 202 between Gilbert Rd. and I-10, which was completed in fall 2011.

Other Interchange Improvements:

- SR 143 - A total of \$37 million was 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. Construction began in December 2010 and was completed in Summer 2012.
- I-10 (West side airport access) - Construction of a project for improved access to the west entrance to Sky Harbor Airport from I-10 has been programmed for FY 2025.
- Other Interchanges - The Freeway Life Cycle Program also funds improvements at certain other existing traffic interchanges. Work has been completed at:
 - Higley Rd./US 60 (FY 2006)
 - 43rd Ave./I-10 (FY 2008)
 - SR 347/I-10 (FY 2008)
 - Thunderbird Rd./Loop 101 (FY 2010)
 - Chaparral Rd./Loop 101 (FY2011)
 - Ray Rd./I-10 (FY 2008)
 - Cactus Rd./I-17 (FY 2008)
 - Avondale Blvd./I-10 (FY2011)
 - Olive Ave./Loop 101 (FY 2011)

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. It is estimated that future costs will total approximately \$119 million for FY 2014-2026, including development of new projects, preservation and maintenance of existing equipment, and the freeway service patrol.

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.
- The Proposition 400 program has allowed ADOT to provide a level of landscaping, litter pick up and sweeping maintenance on the freeway system that would not have been possible without this funding. Approximately \$186 million has been programmed for FY 2014-2026 for activities related to this program.

Noise Mitigation:

- A block of funding has been identified for noise mitigation projects on the freeway system in the MAG area. This funding has been used for mitigation projects such as rubberized asphalt overlays and noise walls.
- Approximately \$63 million of this funding has been expended for rubberized asphalt on freeway facilities and noise wall projects. A list of noise wall projects was developed for use of these funds and approved by the Regional Council in 2008. The MAG Supplemental Noise Wall project was advertised for bids in January 2011 and construction was completed in mid-2012.

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.

- It is estimated that future costs for these types of system-wide projects and programs will total approximately \$282 million for FY 2014-2026.

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 Program Cost Changes

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."

A detailed accounting of project component cost changes during FY 2013 may be obtained by reviewing actions to amend the FY 2011 - 2015 MAG Transportation Improvement Program. The overall Freeway/Highway Life Cycle Program cost for the period FY 2006 - FY 2026 as reported in the 2013 Annual Report is \$9.1 billion, which is two percent less than the total of \$9.3 billion indicated in the 2012 report.

6.2.2 Project Advancements

On June 19, 2013, the MAG Regional Council approved an amendment to the MAG FY 2011 - FY 2015 Transportation Improvement Program to advance projects on the Loop 202 and Loop 303. This action was approved to take full advantage of available Federal highway funding. Design-build projects were programmed in FY 2013 for HOV lanes on Loop 202 from Gilbert Road to Broadway Road and general purpose lanes from SR-101L to Gilbert Road. Also, a design-build project to widen Loop 303 to six lanes from Grand Avenue to Happy Valley Road was programmed in FY 2013. Also, a separate project to construction an interchange at Loop 303 and El Mirage Road was advanced into FY 2014 of the Five-Year Program.

6.2.3 Freeway/Highway Program Rebalancing

Arizona Revised Statutes (ARS) 28-6352 (A) requires a budget process that ensures the estimated cost of the freeways and other controlled access highways in the Regional Transportation Plan (RTP) does not exceed the total amount of revenues estimated to be available. Due to the “Great Recession” and a changing Federal government outlook for transportation funding, revenue collections and forecasts have declined, requiring action to rebalance the Freeway/Highway Life Cycle Program.

In October 2009, the MAG Regional Council approved a tentative scenario to balance the Freeway/Highway Life Cycle Program. This scenario was subsequently incorporated into the Regional Transportation Plan - 2010 Update and the FY 2011-2015 MAG Transportation Improvement Program. As part of this effort, project scopes were reevaluated and cost estimates reviewed, resulting in project cost reductions amounting to \$2.4 billion. Also, projects totaling approximately \$4.4 billion were shifted beyond FY 2026, which is the end of the life cycle program period.

On May 23, 2012, the MAG Regional Council approved a rebalancing scenario for the Regional Freeway/Highway Life Cycle Program. The rebalancing scenario addressed an overall life cycle program deficit of approximately \$390 million and eliminated any annual year end negative cash balances. A rebalancing scenario was approved that: (1) repositioned the SR-202L/South Mountain Freeway and Interstate 10/Maricopa Freeway projects to improve the Program’s cash flow, (2) transferred funding from the SR-303L segment between US-60 and Interstate 17 to the SR-303L segment between Interstate 10 and MC-85, and (3) removed \$300 million from the Program’s budget for the Interstate 17/Black Canyon Freeway corridor.

In FY 2013, a comparison forecasted revenues and estimated future costs for FY 2014 through FY 2026 of the Freeway/Highway Life Cycle Program indicated a negative ending balance in FY 2026 of \$444 million, which was largely due to significantly lower forecasts for Federal funding for transportation. This ending balance represents approximately eight percent of the estimated remaining program costs for the period FY 2014 - FY 2026. MAG and ADOT will continue to work together during the coming year to monitor costs and revenues to establish a balanced program in the future.

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

6.3.1 Program Expenditures and Estimated Future Costs

Table 6-1 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 Table A-1 in the Appendix. In the Life Cycle Program, future costs reflect currently available, real dollars estimates as of 2013, but may not have been specifically factored, in every case, to a 2013 dollars base year.

As indicated in Table 6-1, expenditures through FY 2013 equal \$3.3 billion (YOE \$'s) and estimated future costs covering the period FY 2014-2026 amount to \$5.8 billion (2013 \$'s). The total FY 2006-2026 cost for the program is currently estimated to be \$9.1 billion (YOE and 2013 \$'s). As indicated in Appendix A, the estimated cost for the Life Cycle Program through FY 2035 totals \$12.8 billion (YOE and 2013 \$'s).

6.3.2 Future Fiscal Status

Table 6-2 summarizes the future funding sources and uses for the Freeway/Highway Life Cycle Program between FY 2014 and FY 2026. Sources for the Life Cycle Program between FY 2014 through FY 2026 include the Proposition 400 half-cent sales tax extension (\$3.4 billion); ADOT funds, (\$3.3 billion); Federal highway funds (\$201 million); bond and loan proceeds (\$1.0 billion); and other income (\$123 million). Expenses totaling \$2.9 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 \$884 million is deducted. Including a beginning balance of \$750 million, there is a net total of \$5.0 billion (2013 \$'s) for use on freeway and highway projects through FY 2026.

Table 6-2 also lists the estimated future uses identified in the Life Cycle Program for the period covering FY 2014 through FY 2026, which result in a cash flow requirement of \$5.4 billion (2013 \$'s). A comparison of these projects costs with

the expected revenues indicates a negative balance of approximately \$444 million through FY 2026.

**TABLE 6-1
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
 SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
 (2013 and Year of Expenditure Dollars in Millions)**

Category	Expenditures through FY 2013 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2014 -2026 (2013 Dollars)	Total Cost: FY 2006-2026 (2013 and YOE Dollars)
	Design	Right-of-Way	Construction	Total		
New Corridors	150.7	320.2	639.2	1,110.1	2,798.4	3,908.5
Widen Existing Facilities	128.7	265.8	1,256.7	1,651.2	2,073.7	3,724.9
New/Improved Interchanges	24.3	14.6	201.3	240.2	295.1	535.3
Maintenance	0.0	0.0	82.9	82.9	185.5	268.4
Freeway Management	10.5	0.0	42.8	53.3	119.0	172.3
Noise Mitigation	3.2	0.2	59.2	62.6	30.9	93.5
Minor/Other Projects	9.3	2.4	55.6	67.3	20.8	88.1
Pre-Engr., Adv. R/W, Admin.	37.4	5.5	0.1	43.0	282.0	325.0
Total	364.1	608.7	2,337.8	3,310.6	5,805.4	9,116.0

6.4 FREEWAY/HIGHWAY PROGRAM OUTLOOK

During FY 2013, cash flow modeling based on new revenue forecasts was conducted. The analysis indicated that program totals show positive ending balances for FY 2014 to FY 2018, but there is a deficit of approximately \$444 million for the Regional Freeway and Highway Program through FY 2026. This deficit represents approximately eight percent of the future estimated costs for the program during for FY 2014 to FY 2026.

As in the past, the Freeway/Highway Life Cycle Program will be subjected to continuing analysis, addressing future revenue forecasts and project cost trends. Revised long-range revenue forecasts will be prepared and updated cash flow assessments will be conducted. Based on this analysis, the need for additional program adjustments will be considered. Two, very important, factors in this review effort will be the results of the revenue forecasting process scheduled for the fall of 2013, and clarification of the cash flow requirements of the South Mountain Freeway project. Completion and approval of a final Environmental Impact Statement and Design Concept Report, as well as a U.S. Department of Transportation "Record-of-Decision" on the recommended alternative for the

South Mountain Freeway corridor, are anticipated sometime during calendar year 2014.

TABLE 6-2
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2014-2026
(2013 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	Projected Future Funding: FY 2014-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	3,431.6
ADOT Funds	3,252.5
MAG CMAQ and STP (Federal Highway)	201.0
Other Income	123.3
Bond and Loan Proceeds	1,040.0
Plus Beginning Balance	750.1
Less Debt Service and Other Expenses	(2,919.8)
Less Inflation Allowance	(884.2)
Total (2013 \$'s)	4,994.5
USES OF FUNDS	
Category	Estimated Future Costs: FY 2014-2026 (2013 Dollars)
New Corridors	2,798.4
Widen Existing Facilities	2,073.7
New/Improved Interchanges	295.1
Maintenance (Litter & Landscaping)	185.5
Freeway Management	119.0
Noise Mitigation	30.9
Minor/Other Projects	20.8
Pre-Engr., Adv. R/W, Admin.	282.0
Cash Flow Adjustment*	(366.9)
Total (2013 \$'s)	5,438.5

* Represents adjustment for cash flow requirements of project costs during program period of FY 2014 - FY 2026.

CHAPTER SEVEN

ARTERIAL LIFE CYCLE PROGRAM

The Arterial Life Cycle Program (ALCP) 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 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.

7.1 PROGRAM COMPONENTS

The ALCP provides regional funding to widen existing streets, improve intersections, and construct new arterial segments. The program also provides resources for MAG planning studies and implementation of arterial Intelligent Transportation System (ITS) projects. 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 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. Funding swaps among an individual jurisdiction's projects and the allocation of "close-out" funds may alter the reimbursement sequence for certain projects. In some cases, advanced projects will not be reimbursed unless sales tax or other program revenues in the future are higher than currently projected.

Figure 7-1, depicts the location of the projects in the ALCP. The projects shown in Figure 7-1 are cross-referenced with the data in the Appendix B by the code associated with each project.

Figure 7-1



MAG 2013 Annual Report on Proposition 400

New/Improved Arterials

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

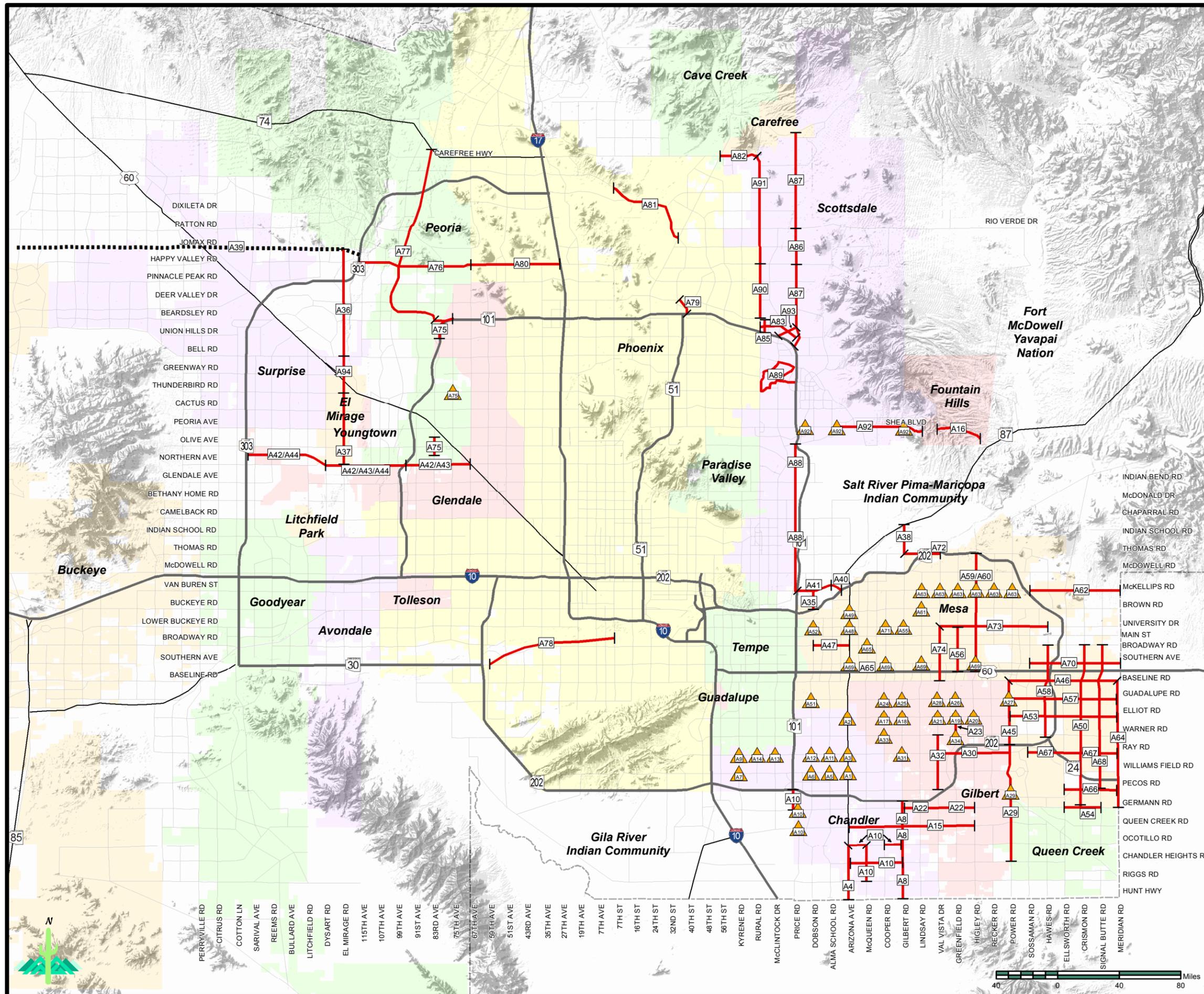
Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.

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MAP AREA

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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 has proceeded, specific types of improvements have been defined and project concepts prepared. After the detailing of the various project elements, the original 94 projects have been segmented into a total of 204 individually defined projects.

Through FY 2013, 41 ALCP projects have been completed. These projects included arterial street widenings, capacity improvement projects, and intersection improvements at the following locations.

- 75th Ave. at Thunderbird Rd.: Intersection Improvement
- 83rd Ave.: Butler Rd. to Mountain View Rd.
- Arizona Ave. at Chandler Blvd.: Intersection Improvements
- Arizona Ave. at Elliot Rd.: Intersection Improvements
- Arizona Ave. at Ray Rd.: Intersection Improvement
- Beardsley Rd.: Loop 101 to 83rd Ave/Lake Pleasant Parkway
- Chandler Blvd. at Dobson Rd.: Intersection Improvements
- Dobson Rd. at Guadalupe Rd.: Intersection Improvements
- El Mirage Rd.: Bell Rd to Deer Valley Dr.
- El Mirage Rd.: Bell Rd. to Picerne Dr.
- El Mirage Rd.: Deer Valley Drive to Loop 303
- El Mirage Rd.: Northern to Cactus (design only)
- Gilbert Rd. at University Dr.: Intersection Improvements
- Gilbert Rd.: SR202L/Germann Road to Queen Creek Rd.
- Greenfield Rd.: Baseline Rd. to Southern Ave.
- Happy Valley Rd.: Lake Pleasant Pkwy to 67th Ave.
- Happy Valley: I-17 to 35th Ave.
- Hawes Rd.: Santan Freeway to Ray Rd.
- Lake Pleasant Pkwy.: Union Hills to Dynamite Rd.
- Loop 101 at Beardsley Rd/Union Hills Dr.
- Loop 101 Frontage Rd.: Hayden Rd to Scottsdale Rd.
- Pima Rd.: SR101L to Thompson Peak Pkwy.
- Pima Rd./Happy Valley Rd.: Intersection Improvements
- Pima Rd.: Thompson Peak Parkway to Pinnacle Peak Rd.
- Pima Rd.: Via De Ventura to Krail St.
- Power Rd at Pecos: Intersection Improvements
- Power Rd.: Baseline Rd. to East Maricopa Floodway
- Price Rd.: Santan Freeway to Germann Rd.
- Queen Creek Rd.: Arizona Ave. to McQueen Rd.
- Queen Creek Rd.: Val Vista Dr. to Higley Rd.
- Ray Rd. at Alma School Rd.: Intersection Improvements
- Ray Rd.: Sossaman Rd. to Ellsworth Rd.

- Shea Blvd. at 90th/92nd/96th: Intersection Improvements
- Shea Blvd. at 120/124th St.: Intersection Improvements
- Shea Blvd. at Mayo/134th St.: Intersection Improvements
- Shea Blvd. at Via Linda (Phase1): Intersection Improvements
- Shea Blvd.: 96th Street to 144th Street
- Shea Blvd.: Palisades Blvd. to Fountain Hills Blvd.
- Sonoran Blvd.: 15th Ave. to Cave Creek Rd.
- Warner Rd. at Cooper Rd.: Intersection Improvements
- Val Vista Dr.: Warner Rd to Pecos Rd.

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. 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.

A total of nearly \$40 million in reimbursements has been provided to ITS projects through FY 2013. It is estimated that an additional \$26 million (2013 \$'s) in reimbursements will be provided for ITS projects between FY 2014 and FY 2020.

7.2 ARTERIAL PROGRAM REIMBURSEMENTS AND FISCAL STATUS

7.2.1 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.

During FY 2013, a total of nearly \$52 million in ALCP project expenses were reimbursed or obligated to implementing agencies. This included reimbursements to eight individual agencies, as well as funding for projects in the MAG ITS program. Since the beginning of the program in FY 2006, a total of

\$374 million in reimbursements or obligations has been provided to arterial street projects.

The ALCP Policies and Procedures detail the three required documents for each ALCP project - the Project Overview, the Project Agreement, and Project Reimbursement Request. The Project Overview describes the general design features of the project, the implementation schedule, estimated costs, and the relationships among participating agencies. The Project Agreement is developed jointly between the lead agency and MAG and determines the responsibilities of each party. 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 7-1 provides a summary of project reimbursements and obligations that have occurred through FY 2013. Table 7-1 also indicates the anticipated level of future reimbursements for the period FY 2014- FY 2026. As indicated, a total of over \$1.2 billion is anticipated to be reimbursed during this period for all ALCP categories. Appendix Tables B-1 and B-2 provide detailed information on reimbursements and obligations associated with individual ALCP projects. The appendix tables also compile total project expenditures, which include local funding on the projects. This local funding, to date, has represented approximately 45 percent of total project costs.

**TABLE 7-1
ARTERIAL STREET LIFE CYCLE PROGRAM
SUMMARY OF PAST AND ESTIMATED FUTURE
REIMBURSEMENTS: FY 2006-2026
(2013 and Year of Expenditure Dollars in Millions)**

Category	Reimbursements from Regional Funding		
	Reimbursements through FY 2013 (YOE Dollars)	Estimated Future Reimbursements: FY 2014-2026 (2013 Dollars)	Total Reimbursements: FY 2006-2026 (2013 and YOE Dollars)
Capacity / Intersection Improvements	373.8	1,175.7	1,549.5
Intelligent Transportation Systems	39.8	25.9	65.7
MAG Implementation Studies	6.1	22.8	28.9
Total	419.7	1,224.4	1,644.1

7.2.2 Gilbert Road Light Rail Extension

On October 24, 2012, the MAG Regional Council voted to approve the removal of Federal transportation funds totaling over \$153 million (2013\$) from 16 ALCP projects. These funds will be used to reimbursement costs associated with the design, right-of-way acquisition, and construction of a 1.9 mile light rail transit (LRT) extension in the City of Mesa on Main Street, from Mesa Drive to Gilbert Road. As part of the action, the Regional Council also voted to reprogram the Federal STP funds for the LRT extension, which triggered the Regional Transportation Plan (RTP) major amendment process, as outlined in ARS § 28-6301. The major amendment was ultimately approved by the MAG Regional Council on March 27, 2013.

It is anticipated that the Gilbert Road extension will significantly increase ridership on the LRT system. The extension provides better light rail access from Loop 202, US-60, and eastern portions of Mesa and the East Valley. The extension is scheduled for completion in late 2017.

Since the funding stream that is associated with the 16 street projects does not align with the timing needed for the light rail construction, Mesa plans to provide interim funding using Transportation Project Advancement Notes (T-PAN), which would be paid back with Federal funds. These repayments from the ALCP are contingent on Federal funding revenue streams and are subject to possible changes in the ALCP financial program.

It also should be noted that the funding stream that is associated with the 16 street projects is being accounted for in both the ALCP and the Transit Life Cycle Program. This will ensure that costs and revenues in both programs are thoroughly monitored.

7.2.3 Future Fiscal Status

Table 7-2 summarizes the future funding sources and uses applicable to the Arterial Life Cycle Program for FY 2014 through FY 2026. Sources for the Life Cycle Program include the Proposition 400 half-cent sales tax extension (\$641 million); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$80 million); and Federal Highway Surface Transportation Program (STP) funds (\$567 million). In addition, an allowance for inflation of \$110 million has been deducted. Including a beginning balance of approximately \$17 million, this yields a net total of \$1.2 billion (2013 \$'s) for use on arterial street projects through FY 2026.

Table 7-2 also lists the estimated future regional funding reimbursements totaling \$1.2 billion, identified in the Life Cycle Program for the period FY 2014 through

TABLE 7-2
ARTERIAL STREET LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2014-2026
(2013 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	Projected Future Regional Funding FY 2014-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	641.2
Federal Highway / MAG CMAQ	80.4
Federal Highway / MAG STP	567.3
Other Income	-
Bond and Loan Proceeds	0.0
Plus Beginning Balance	16.5
Less Debt Service	0.0
Less Inflation Allowance	(109.9)
Total (2013\$'s)	1,195.5
USES OF FUNDS	
Category	Estimated Future Regional Disbursements: FY 2014-2026 (2013 Dollars)
Capacity / Intersection Improvements	1,175.7
Intelligent Transportation Systems	25.9
MAG Implementation Studies	22.8
Total (2013 \$'s)	1,224.4

FY 2026. As shown, projected Arterial Life Cycle Program reimbursements are slightly above (\$29 million or 2.4 percent) estimated future revenues. This difference is considered to be within the variance of revenue projections and specific remedial action is not anticipated at this time.

7.3 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). Since the beginning of the program, \$374 million has been disbursed and 41 projects have been completed.

During FY 2013, project overview reports were prepared by the lead agencies for 9 projects in the ALCP. Since the inception of the program, 75 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 12 project agreements were executed in FY 2013. Eight jurisdictions received reimbursements or obligations for project work during FY 2013 totaling almost \$52 million. In all, 67 project agreements have been executed to date. Lead agencies deferred approximately \$10.5 million in Federal and regional reimbursements from FY 2013 to later years due to project implementation and local funding issues.

On June 19, 2013, the MAG Regional Council approved the FY 2014 ALCP. The Regional Area Road Fund (RARF) forecast, released by the Arizona Department of Transportation in the fall of 2012, indicated a decline of half-cent revenues. The projection of Federal funds into the program also decreased under the new surface transportation funding and authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21). As a result, the temporary elimination of program bonding and project inflation remained in place. With the elimination of program bonding and project inflation, combined with adjustments to program assumptions, no involuntary funding deferrals were needed.

CHAPTER EIGHT

TRANSIT LIFE CYCLE PROGRAM

The Regional Public Transportation Authority (RPTA) maintains the Transit Life Cycle Program (TLCP) and implements transit projects identified in the MAG Regional Transportation Plan. Per state legislation requirements, the RPTA conducts the budget process to ensure the estimated cost of the Regional Public Transportation System does not exceed the total amount of expected revenues available. Transit expenses include fleet purchases, operating costs, passenger and maintenance facilities, light rail construction, and other transit projects.

Major funding for the TLCP is from the Proposition 400 half-cent sales tax extension, federal transit funds, fare revenues, and local sources. The sales tax extension started on January 2, 2006 with revenues available beginning March 2006.

The RPTA is responsible for administering the half-cent sales tax revenues deposited into the Public Transportation Fund (PTF) for use on transit projects (ARS 48-5103). The RPTA maintains responsibility for the distribution of the PTF for use on transit 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 RPTA maintains responsibility for the distribution of PTF, Valley Metro Rail, Inc., (VMR) is a public nonprofit corporation created to implement the light rail system through a partnership among the cities of Phoenix, Tempe, Mesa, Glendale, and Chandler. VMR is responsible for overseeing the design, construction, and operation of the current light rail line as well as future extensions. RPTA frequently uses the name “*Valley Metro*” for the agency after adopting the term in 1993 as a marketing identify for the regional transit system. VMR uses the term “*METRO*” to refer to the light rail system similarly. In 2012, the RPTA and VMR Boards of Directors decided to integrate the staffs of the two agencies under a single Chief Executive Officer.

8.1 STATUS OF BUS PROJECTS

The Transit Life Cycle Program includes funding for Freeway Bus Rapid Transit (BRT)/Express, Arterial BRT (known as LINK), Supergrid, and other bus service. This includes operations, vehicle fleet and new capital facility improvements to the regional bus network. An overview of the status of the bus operations and capital projects in the Transit Life Cycle Program are included in the following sections. In these discussions, the emphasis is placed on reviewing ongoing activities and service additions anticipated during the next five years (FY 2014 through FY 2018).

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 bus only lanes, queue-jumpers, signal priority systems or other enhancements. The proposed Arterial BRT routes are intended to operate during peak and off-peak periods. In addition to Arterial BRT routes identified in the RTP, Freeway routes are also included. These routes vary by using existing and proposed high occupancy vehicle (HOV) facilities to connect park-and-ride lots with major activity centers such as downtown core areas. Freeway routes provide suburb-to-suburb and suburb to central city connections using the regional freeway system and limited stops. Location and cost information of BRT/Express Transit Services are provided in Figure 8-1 and Table C-1. The routes depicted in Figure 8-1 are cross-referenced with the data in Table C-1 by the code associated with each route.

Collectively, the Regional BRT/Express transit services account for a total of \$130.6 million (2013 and YOY \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026 (see Table 8-2). This total represents approximately 2.5 percent of the total regional funding budget allocated for transit. There are 16 BRT/Express routes identified for funding in the TLCP during the planning period from FY 2006 through 2026. Though included in the Regional Transportation Plan, an additional 15 routes have been shifted beyond FY 2026. Included in the TLCP as an illustrative project is the Chandler Blvd. Arterial BRT. Since funding became available, a total of 14 routes have been implemented. Two of the routes were implemented with two different patterns, one providing an express connection to downtown Phoenix and the other to light rail stations. Due to the continued decline in revenues and the loss of Local Transportation Assistance Funds (LTAF), four of the express routes were eliminated because of low productivity in July 2010. Those eliminated include routes 511 (East Loop 101 Connector), 536 (Part of Red Mountain Express), 572 (North Loop 101 Connector) and 576 (Part of West Loop 101 Connector).

During FY 2012, RPTA undertook a significant planning process to restructure and streamline many of the existing express routes. Prior to Proposition 400, significant local service was operated in addition to BRT/Express routes. With the construction of many new park-and-ride lots and the expansion of the region's HOV network, routes were streamlined to provide access to park-and-ride lots and faster service. In addition to these changes, the Grand Avenue Limited and South Central Avenue RAPID were implemented during FY 2013.

The Scottsdale/Rural LINK is planned for implementation in FY 2015. This is the only route planned for implementation during the next five years, FY 2014 through FY 2018. The BRT routes generally operate in synchronization with light rail operations. The Express routes generally operate in the peak direction at

Figure 8-1



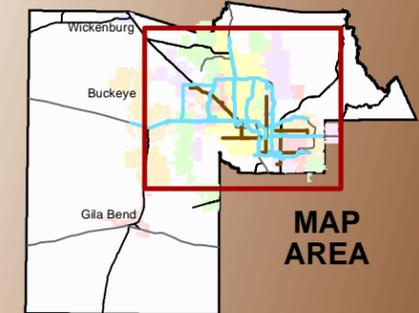
MAG 2013 Annual Report
on Proposition 400
**Bus Rapid Transit (BRT)/
Express Bus**

- Arterial BRT Routes
- Freeway BRT Routes
- Freeways
- Highways
- Other Roads
- County Boundary

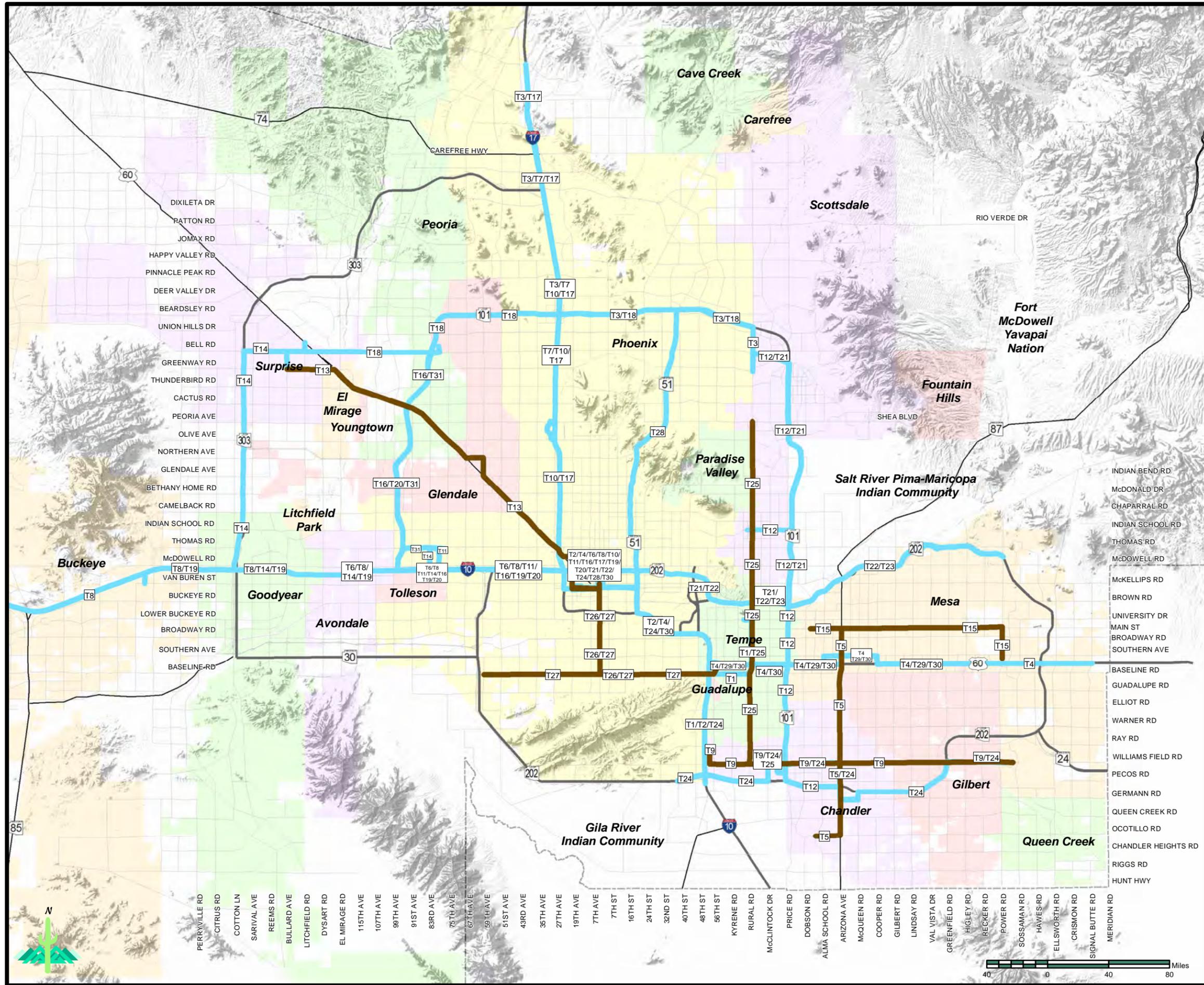
Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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30-minute intervals, during the three-hour morning and afternoon commute periods.

Routes Implemented During FY 2013

- Grand Avenue Limited (T13);
- South Central Avenue RAPID (T26);

Routes Planned for Implementation During FY 2014 through FY 2018

- Scottsdale/Rural BRT (T25); Service start: FY 2015

8.1.2 Bus Operations: Supergrid

Commonly referred to as “Supergrid Routes,” the Regional Grid routes are bus routes situated along major roads in the regional arterial grid network. The supergrid network allows a higher level of operational efficiency than the local bus network by regionally funding the key routes at a consistent level of service across all served jurisdictions. Other elements of the fixed route bus network are hindered by varying service levels across routes and jurisdictions, which is a direct result of the variability of local funding from jurisdiction to jurisdiction. Due to current funding limitations at the local level, consistent service operation across jurisdictions may not be possible. Regionally funding bus operations ensures a degree of consistency along the supergrid network.

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.

Regional Grid bus operations account for \$616.2 million (2013 and YOE \$'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-2). This represents approximately 11.8 percent of the total regional funding budget allocated for transit. There are 23 Regional Grid routes identified for funding in the TLCP during the planning period from FY 2006 through 2026. Many of the routes scheduled for funding will not be implemented with the full service levels originally programmed. Lower service levels have been programmed in order to implement more of the routes through FY 2026. An additional 10 routes have been shifted beyond FY 2026 but are in the Regional Transportation Plan. In total, nineteen routes have been implemented since funding became available.

Two routes were implemented during FY 2013. In general, these routes were originally planned to 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.

Figure 8-2



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on Proposition 400

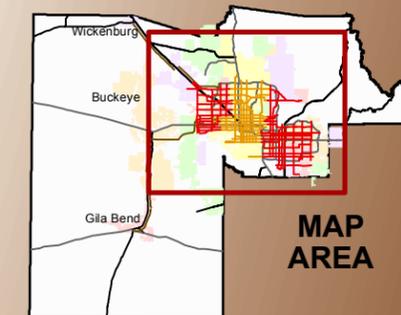
Super Grid Bus System

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

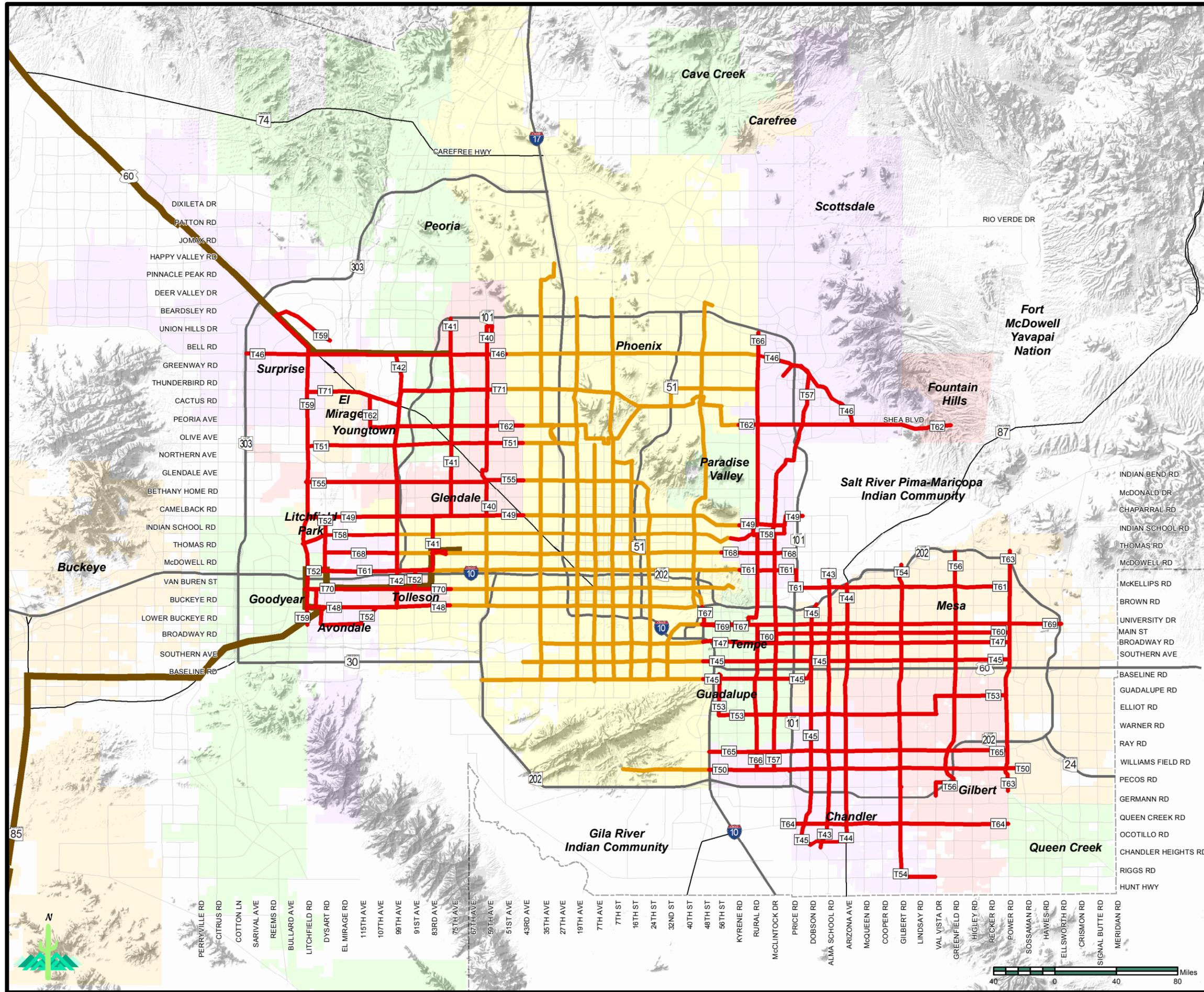
Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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In addition, weekend service is provided at 30-minute intervals. Due to the reduction in revenues, these routes are currently planned for lesser service levels. Funding is only adequate for existing service levels in some cases. Five routes are planned for FY 2014 through 2018. These are existing routes that will receive TLCP funding and may also receive improved service levels and/or route extensions.

Routes Implemented During FY 2013

- Baseline Road (T45);
- McDowell/McKellips Roads (T61);

Routes Planned for Implementation During FY 2014 through FY 2018

- Elliot Road (T53); Service start: FY 2014.
- Thomas Road (T68); Service start: FY 2014.
- Waddell/Thunderbird (T71); Service start: FY 2015.
- Van Buren Street (T70); Service start: FY 2016.
- Alma School Road (T43); Service start: FY 2018.

8.1.3 Bus Operations: Other

Other bus services operating costs account for a total of \$735.2 million (2013 and YOE \$'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-2). Other bus operations costs include paratransit services, rural/flexible routes, commuter vanpools, safety and security, operating contingencies and RPTA planning and administration costs. Table C-3 provides information on the costs associated with these services. The services are described briefly below:

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 provides curbside pick-ups and drop-offs by demand-response services. As required by the Americans with Disabilities Act (ADA) this service is provided for all ADA-certified patrons for all areas within three-quarter miles of fixed bus route service. These services account for a total of \$414.7 million (2013 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). During the next five years (FY 2014 through FY 2018), it is anticipated that \$125.3 million (2013 \$'s) will be expended providing paratransit services.

Rural/flexible Routes - This service type addresses the need to provide connections to urban areas from rural communities of the county. Rural routes provide connections between remote communities and urban transit nodes to address a range of trip needs such as work, shopping, education, and access to various community services. These services account for a total of \$7.1 million

(2013 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. A route operating between Gila Bend and West Phoenix was initiated in FY 2006. The second route was initiated in FY 2007 with service between Wickenburg and Glendale. Valley Metro looked at ways to enhance ridership on the Wickenburg route due to low productivity. However, as the productivity continued to be very low, the route was eliminated in FY 2012.

Commuter Vanpools – The Commuter Vanpool Program is a customized express service for commuters managed by Valley Metro through its complementary rideshare program. Commuter vanpools allow groups of commuters throughout the region to self-organize and utilize a vehicle from Valley Metro to operate a carpool service. Vanpools can be 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 aspires to maintain rider fares at a level that is attractive to the commuter. This service is available to all employers and commuter groups in Maricopa County. Operating costs are fully recovered through fare revenues and are not subsidized.

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

RPTA Planning and Administration – Valley Metro/RPTA receives an allocation from the Regional Area Road Fund (RARF) for planning and administration. This pays for the overhead, 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 regional grid networks. This accounts for a total of \$75.4 million (2013 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

8.1.4 Bus Capital: Facilities

With the expansion of transit service, there is additional need for passenger facilities and associated maintenance. Ongoing capital planning efforts will identify specific locations and the timing of construction for these facilities. Efforts including the identification and evaluation of potential transit passenger and

maintenance facilities sites are included in the capital planning process. In cooperation with the host communities, this process will guide the selection of sites including public outreach efforts to identify and address the concerns of affected neighborhoods, institutions, and commercial users.

Capital projects affiliated with regional bus operations account for a total of \$260.6 million (2013 and YOE \$'s) during FY 2006 through 2026 (see Table C-4). Capital projects included in the RTP are 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 2,154 vehicles.

Due to the decline in revenues, not all of these facilities are currently funded through FY 2026 in the Regional Transportation Plan. These facilities include a dial-a-ride/rural bus maintenance facility, 2 park-and-ride facilities, 6 transit centers and 2 BRT corridor facilities. The vanpool vehicle maintenance facility has been postponed indefinitely.

As of 2011, construction is underway on a number of facilities including park-and-ride, transit center, and dial-a-ride facilities. Other maintenance and passenger facilities are to be implemented over the next several years. It is anticipated that a total of \$51.9 million (2013 \$'s) in regional funding will be expended during the next five years (FY 2014 through FY 2018) 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 \$849.4 million (2013 and YOE \$'s) during FY 2006 to FY 2026 (see Table C-5). In this amount there is \$1.5 million (2013 and YOE \$'s) contingency included. Planned fleet purchases include 1,487 buses for fixed route networks; 26 buses for rural routes; 546 Dial-a-Ride (DAR) vans for paratransit purposes; and 1,305 vanpool vans. It is anticipated that a total of \$174.5 million (2013 \$'s) in regional funding will be expended during the period FY 2014 through FY 2018 on vehicle purchases. These purchases will include 260 fixed route buses, 6 express/BRT buses, 5 rural transit buses, 171 paratransit vehicles, and 350 commuter vans. Both replacement and expansion vehicles are reflected in these amounts.

8.2 STATUS OF HIGH CAPACITY/ LIGHT RAIL TRANSIT PROJECTS

An extensive High Capacity / Light Rail Transit (HCT/LRT) component is included in the Transit Life Cycle Program for the MAG Region. This includes future

extensions of HCT/LRT corridors planned throughout the region as well as support infrastructure for the system. A portion of this amount will support the existing 20-mile Central Phoenix / East Valley (CP/EV) light rail. However the construction of the CP/EV as developed through the CP/EV Major Investment Study (MIS) is not a part of the Transit Life Cycle Program

Figure 8-3, Tables C-6, and C-7, provide information on the locations and costs of HCT/LRT support infrastructure and route extensions throughout the metropolitan area. The Transit Life Cycle Program accounts a total of \$2.7 billion (2013 and YOE \$'s) for HCT/LRT projects (see Table 8-2). This amount represents approximately 50.7 percent of the total regional funding dedicated to transit. Approximately \$2.0 billion (2013 and YOE \$'s) of this amount applies toward construction of route extensions. The remaining \$663.5 million (2013 and YOE \$'s) applies to support infrastructure affiliated with the HCT/LRT system. Operating costs do not account for any of the regional funding for HCT/LRT system.

8.2.1 Central Phoenix/East Valley (CP/EV) LRT

The CP/EV light rail starter segment was an outcome from the 1998 CP/EV Major Investment Study (MIS). 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, Tempe and Mesa. The approved alignment for the CP/EV LRT 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 LRT starter segment was completed in December 2008. In FY 2013 ridership was over 50 percent higher than projected with more than 43,000 average boardings per day.

The CP/EV LRT system includes 28 stations, 9 park-and-ride lots, and 50 light rail vehicles. Additionally the CP/EV LRT utilizes traffic signal priority strategies to improve the system's speed. Light rail stations are generally located about 3/4-mile apart, but closer (1/3-mile) in urban centers. The park-and-ride facilities have over 3,600 spaces.

The CP/EV LRT 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 12 minutes during peak hours, 15 minutes on weekends and 20 minutes during off-peak hours.

Figure 8-3



MAG 2013 Annual Report
on Proposition 400

Light Rail Transit (LRT)/
High Capacity Transit

- Initial 20-mile Light Rail Segment
- Future High Capacity Transit Corridor
- Freeways
- Highways
- Other Roads
- County Boundary

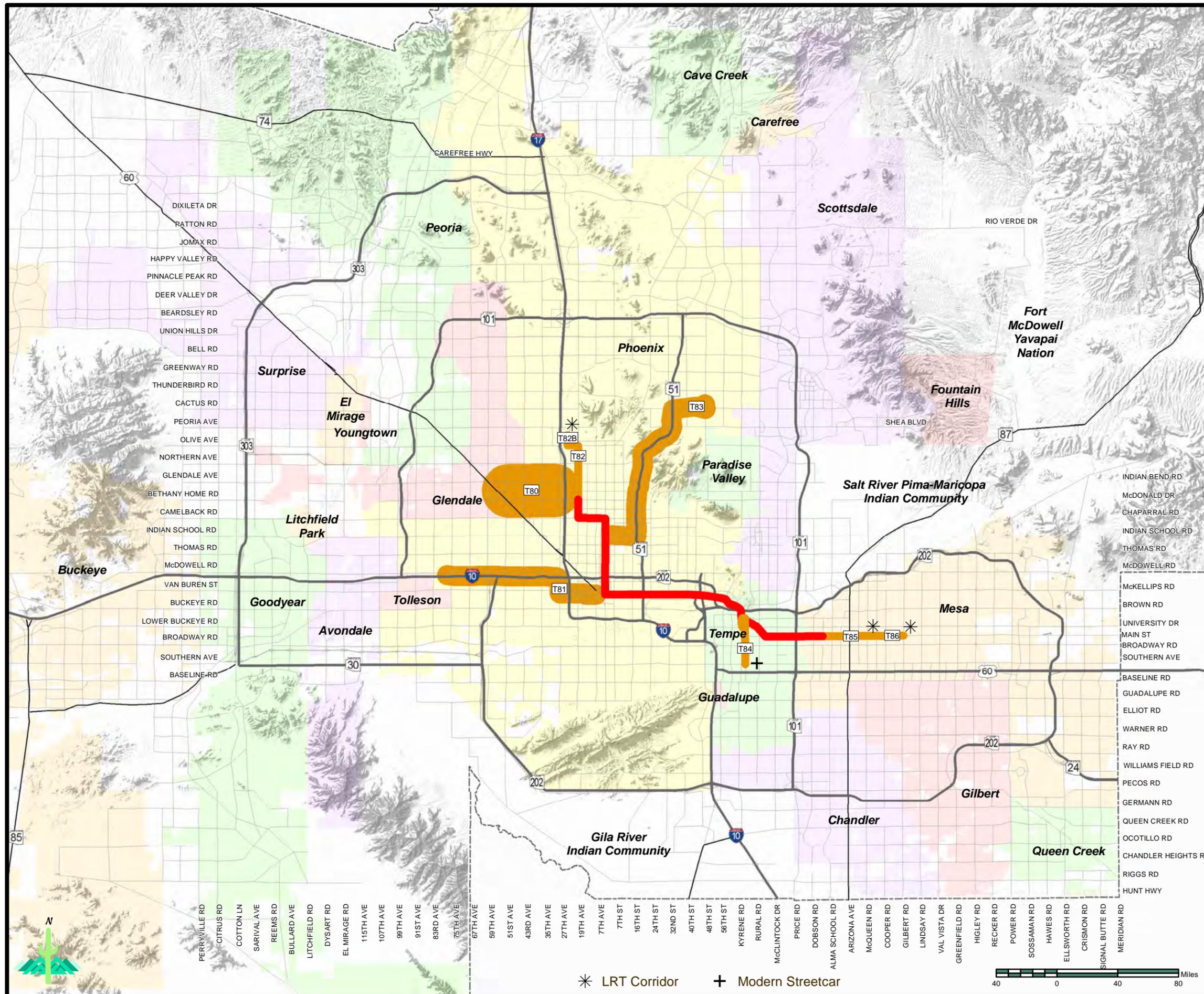
The Transit Life Cycle Program does not include funding for the Eligible High Capacity Corridors

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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The CP/EV system is complimented by shuttle buses and a fixed route bus service network. Half-cent sales tax money from Proposition 400 is allocated toward certain elements of the support infrastructure of the system. Regional funding for the HCT/LRT system is not utilized to pay for operating costs or route construction.

8.2.2 High Capacity / Light Rail Transit: Support Infrastructure

In the Transit Life Cycle Program for the period FY 2006 through FY 2026, support infrastructure affiliated with the HCT/LRT system accounts for a total of \$663.5 million (2013 and YOE \$'s, see Table C-6). Of this amount, \$199 million applies toward infrastructure along the CP/EV (expended by 2010); \$86.8 million applies toward corridor preliminary planning, project development and system integration planning (to be expended by 2026); \$187.4 million for utility relocation reimbursements; and \$195.9 million 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 completions of seven additional LRT/HCT segments on the system are included in the Transit Life Cycle Program using regional funding. These include a five-mile Northwest Extension, which in FY 2007 was split into two phases; a 2.6-mile Tempe Streetcar; a 3.1-mile light rail extension from the east terminus of the CP/EV to Mesa Drive; a new 1.9-mile extension from Mesa Dr. to Gilbert Rd., which was amended into the Regional Transportation Plan in 2013; a five-mile corridor to downtown Glendale; an 11-mile corridor along I-10 into west Phoenix; and a 12-mile corridor to northeast Phoenix. The development of the route extensions account for a total of \$2.0 billion (2013 and YOE \$'s) during FY 2006 through FY 2026 (see Table C-7).

Local sources will provide approximately half of funding for the Northwest Extension and Glendale corridor. For some of these segments, Federal 5309 funds will provide the remaining half as a regional funding source. It is not anticipated that half-cent funds will be applied to these segments apart from funding for support infrastructure (including vehicles, bridges and regional park-and-ride lots) and preliminary planning efforts. The status of development work on the route extensions is described below.

The extension to Gilbert Rd., which was amended into the RTP in 2013, will be funded with local and federal sources provided by the City of Mesa. None of the costs for this extension, including vehicles and utility relocations, will be borne by the half-cent regional funds. The federal funds are Congestion Mitigation/Air Quality (CMAQ) and Surface Transportation Program (STP) funds from Federal Highway Administration which are being flexed to transit.

Future Corridors

The Northwest Extension was split into two phases in FY 2007. For Phase 1 (to Dunlap Rd.), design and right-of-way acquisition were completed in 2008-2009 and 2008-2010 respectively. Construction for the Phase 1 extension is scheduled to be complete in FY 2016. Utility relocations and street improvements have been completed and construction activities were initiated in January 2013 in the Phase 1 corridor. Northwest Extension Phase 2 is scheduled to be complete in FY 2026.

The Central Mesa LRT Extension will extend along Main Street from the end of line station for the CP/EV at Sycamore eastward to Mesa Drive. Most land acquisition has been completed along the corridor. Construction activities were initiated in May 2012 and after the approval of the Project Construction Grant Agreement (PCGA) in October 2012. Construction is scheduled to be complete in FY 2015. The extension from Mesa Drive to Gilbert Rd., which was amended into the RTP in 2013, is anticipated to be completed in 2018.

The Tempe Streetcar Locally Preferred Alternative (LPA) was approved in FY 2011. In April 2013, the project was approved into the Project Development phase by the Federal Transit Administration. To fit new federal funding criteria better, Valley Metro and the City of Tempe will make modifications to the streetcar route. The modified project would include the one-mile downtown Tempe loop on Ash and Mill Avenues then travel south to Apache Boulevard. The Environmental Assessment phase is expected to be complete in early 2014. Construction is estimated to be complete in 2017.

The Phoenix West LPA recommendation for alignment and technology were formally adopted by MAG regional council in July 2012. The 11-mile high capacity transit alignment would extend from downtown Phoenix through the State Capitol area to approximately 79th Avenue and the I-10 West freeway. The Environmental Assessment began in spring 2013. Construction is scheduled to be complete in FY 2023.

The West Phoenix/Central Glendale project will travel westbound from the existing CP/EV line through Phoenix to the city of Glendale. As an initial step, an early Alternatives Analysis was completed in FY 2012 with the purpose of identifying potential project alternatives for the corridor that would be eligible for FTA 5309 New Starts funding and further evaluated through AA/NEPA. In spring 2013, the initiation of the full Alternatives Analysis/Draft Environmental Impact Statement phase began. Construction is anticipated to complete in FY 2026.

The Northeast Phoenix LRT corridor is planned to connect to the current 20-mile CP/EV LRT and extend to Paradise Valley Mall. While remaining in the Regional Transportation Plan, the project has been shifted beyond the TLCP horizon year

of FY 2026 to accommodate the decrease in actual and forecasted revenues. Construction is now anticipated to be complete in FY 2035.

8.3 TRANSIT PROGRAM CHANGES

The \$5.3 billion for FY 2006-2026 estimated total transit costs represent a 6.0 percent increase over the figure of \$5.0 billion provided in the 2012 Annual Report. The main reasons for the increase were the addition of the light rail extension to Gilbert Rd. and normal inflationary increases. In FY 2013, cost adjustments are minimal and estimates for the Transit Life Cycle Programs components are summarized in Table 8-1. The FY 2013 changes amount in a net total increase of approximately \$295.8 million as a result. The TLCP is dynamic program updated based on changing economic conditions, development patterns, local priorities and availability of funding. Included projects are continually reevaluated to reflect the fluidity of the program.

As noted in the transit appendix tables, the “service start date” for a number of bus routes was shifted beyond FY 2026, Due to TLCP adjustments made in FY 2009 and FY 2010. Additionally, in FY 2011 four BRT/Express routes were eliminated and the City of Phoenix assumed funding for four other BRT/Express routes already in service.

**TABLE 8-1
TRANSIT LIFE CYCLE PROGRAM COST CHANGES
(2012, 2013 and Year of Expenditure Dollars in Millions)**

Category	2012 Annual Report Total Costs: FY 2006 - 2026 (2012 and YOE Dollars)	2013 Annual Report Total Costs: FY 2006 - 2026 (2013 and YOE Dollars)	Change in Total Costs: 2012 vs. 2013
Bus Operations: BRT/Express	128.5	130.6	2.1
Bus Operations: Regional Grid	603.9	616.2	12.3
Bus Operations: Other	706.1	735.2	29.1
Bus Capital Projects: Facilities	270.5	260.6	(9.9)
Bus Capital Projects: Fleet	850.0	849.4	(0.6)
Light Rail Transit: Support Infrastructure	595.6	663.5	67.9
Light Rail Transit Capital: Route Extensions	1,812.2	2,007.0	194.8
Total	4,966.7	5,262.6	295.8

8.4 TRANSIT PROGRAM EXPENDITURES, ESTIMATED FUTURE COSTS AND FISCAL STATUS

8.4.1 Transit Life Cycle Program Update

Valley Metro RPTA and METRO Boards of Directors unanimously approved the 2013 Transit Life Cycle Program (TLCP) update on June 20, 2013. The bus and rail program financial models are balanced both annually and through the sunset of the half-cent tax. The bus financial model provides guidance for the continuing effort to fully rebalance the bus component of the TLCP. With the exception of construction of the Northeast Phoenix corridor, the high capacity / light rail transit (HCT/LRT) component of the TLCP has a fund balance of \$39 million in FY 2026 after the completion of all other HCT/LRT projects in the RTP.

In FY 2013, TLCP balance was achieved by finding operational efficiencies, including consolidation of two separate operating contracts to one master contract. During FY 2013, significant efforts were made to identify further cost savings or to enhance operating revenues.

8.4.2 Program Expenditures and Estimated Future Costs

Table 8-2 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Transit Life Cycle Program. In the appendix, Tables C-1 through C-7 provide detailed data on costs at the project level.

As part of light rail expenditures, 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 are reimbursed to the utility by the light rail project as required by A.R.S. 48-5107. Additionally, as light rail operating expenses were excluded at inception from the Proposition 400 program, for light rail projects only capital expenditures and costs are reported. These expenditures and costs are reported to reflect total capital costs and include all funding sources to offset those costs.

For bus services, the Proposition 400 program covers both capital and operating expenses. Accordingly, both capital and operating expenditures and costs are reported. These expenditures and costs reflect total costs and include all funding sources to offset those costs, including local funds and farebox revenues.

For the period FY 2006 through FY 2026 the total estimated cost for the Transit Life Cycle Program is \$5.3 billion (2013 and YOE \$'s) as indicated in Table 8-2. Expenditures through FY 2013 total \$1.5 billion (YOE \$'s), while estimated future costs total \$3.8 billion (2013 \$'s).

8.4.3 Future Fiscal Status

Future funding sources and uses that apply to the Transit Life Cycle Program are summarized in Table 8-3 for the period FY 2014 through FY 2026. Available

TABLE 8-2
TRANSIT LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2013 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2013 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2014-2026 (2013 Dollars)	Total Costs: FY 2006 - 2026 (2013 and YOE Dollars)
	Operations	Capital Investments	Total		
Bus Operations: BRT/Express	39.5	--	39.5	91.1	130.6
Bus Operations: Regional Grid	143.1	--	143.1	473.1	616.2
Bus Operations: Other	207.3	--	207.3	527.9	735.2
Bus Capital Projects: Facilities	--	190.4	190.4	70.2	260.6
Bus Capital Projects: Fleet	--	337.5	337.5	511.9	849.4
Light Rail Transit: Support Infrastructure	--	376.6	376.6	286.9	663.5
Light Rail Transit Capital: Route Extensions	--	178.2	178.2	1,828.8	2,007.0
Total	390.0	1,082.8	1,472.8	3,789.7	5,262.6

funding sources include the Proposition 400 half-cent sales tax extension (\$2.0 billion); Regional Area Road Fund transfer (\$61million); Federal Transit/Formula Program funds (\$656 million); Federal Transit/Discretionary Program funds (\$1.0 billion); Federal Highway/CMAQ funds (\$257 million); Federal Highway/STP funds (\$153 million); other income from local sources (\$380 million); and bond and loan proceeds (\$352 million). Additional revenue from future bus farebox receipts are estimated as a total of \$219 million. To cover estimated future debt service a total of \$564 million is deducted from these sources. Additionally deducted is an allowance for inflation in the amount of \$807 million. With a beginning balance of \$87 million, a net total of \$3.9 billion (2013 \$'s) is available for use on transit projects and programs through FY 2026. It should be noted that the Federal Highway funding amounts incorporate funds "flexed" from the Arterial Life Cycle Program.

Estimated future uses totaling \$3.8 billion (2013 \$'s) are also listed in Table 8-3 for the period covering FY 2014 through FY 2026, as identified in the Transit Life Cycle Program. Expressed in 2013 \$'s these costs are estimated at \$1.1 billion for bus operations, \$598 million for bus capital projects, and \$2.1 billion for light rail transit capital project. Projected revenues are sufficient to meet future projects costs with a small surplus of approximately \$61 million (2013 \$'s) remaining in the Transit Life Cycle Program. Achieving a balanced program can be attributed to significant efforts over the past several years by RPTA and METRO in conjunction with their members and MAG.

**TABLE 8-3
TRANSIT LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2014-2026
(2013 and Year of Expenditure Dollars in Millions)**

SOURCES OF FUNDS	
Category	Projected Future Funding: FY 2014-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	2,033.4
Regional Area Road Fund	61.3
Federal Transit / Formula Program Funds	656.4
Federal Transit / Discretionary Program Funds	1,022.7
Federal Highway/ MAG CMAQ	256.5
STP-AZ	153.2
Other Income	379.5
Bond and Loan Proceeds	351.9
Bus Farebox Revenues	219.1
Plus Beginning Balance	86.8
Less Debt Service	(563.8)
Less Inflation Allowance	(806.5)
Total (2013 \$'s)	3,850.6
USES OF FUNDS	
Category	Estimated Future Costs: FY 2014-2026 (2013 Dollars)
Bus Operations: BRT/Express	91.1
Bus Operations: Regional Grid	473.1
Bus Operations: Other	527.9
Bus Capital Projects: Facilities	70.2
Bus Capital Projects: Fleet	511.9
Light Rail Transit: Support Infrastructure	286.9
Light Rail Transit Capital: Route Extensions	1,828.8
Total (2013 \$'s)	3,789.7

8.5 TRANSIT PROGRAM OUTLOOK

The Transit Life Cycle Program began on July 1, 2005 with a primary goal of the development and implementation of transit projects identified in the MAG RTP covering FY 2006 through FY 2026. Estimated future costs for the period of FY 2014 through FY 2026 are in balance with project future funds available with a remainder of approximately \$60 million (2013 \$'s). In FY 2012, TLCP balance was achieved by delaying the implementation of numerous projects and reducing

the scope of many other projects, particularly bus routing and frequencies adjustments. Additionally, operating efficiencies were achieved by consolidating contracts.

The life cycle process continually requires a balance to be maintained through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as necessary.

Through the discretionary “New Starts Program” a significant portion of the funding for the LRT/HCT system is awarded by the US Department of Transportation. At the Federal level, the MAG region is subject to a highly competitive process resulting in indeterminate timing and amounts of New Starts monies. Therefore, the prospective New Starts awards require careful monitoring. Beyond the “New Starts Program” for the LRT/HCT system revenues from the Federal Transit Administration are a key source of funding for the bus capital program. At the federal level, continued pressure to reduce spending could result in decreased federal revenues for the TLCP. In the future, this could put additional projects in jeopardy as a result.

Moreover, the latest Federal transportation legislation, Moving Ahead for Progress in the 21st Century (MAP-21), makes significant changes to the federal transit funding programs. MAP-21 eliminates many of the discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes. Throughout the implementation of MAP-21, Valley Metro and MAG will continue to monitor revenues and evaluate the legislation’s impact on the RTP.

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. A number of the goals and objectives adopted relate to the performance of the system as a whole as well as the individual components of the systems across all modes, such as freeway, arterial and transit corridors.

MAG, continuing to place emphasis on performance-based planning, has established an ongoing Transportation System Performance Monitoring and Assessment Program. Over the last four years, this program has developed various reporting methodologies and web-based components, allowing policymakers, technical users and the public in general easy access to performance data and visualization. The material presented in this chapter documents performance of the system as a result of the on-going monitoring and assessment program, as well as forecasted performance of the system based on simulations for 2025.

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 a historical record that tracks performance trends over time. The specific parameters observed vary by 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. A large amount of data is collected annually in the MAG region related to the movement of people, goods, and services.

- Data Items - 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; intersection queue lengths and delays; and 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.
- Data Sources - Data from the Arizona Department of Transportation's (ADOT) Freeway Management System (FMS), which now includes 122 centerline miles of the regional freeway system is collected continuously in five minute increments from loop and acoustic sensors that detect and record the movement of vehicles across a large portion of the MAG region. As the FMS system continues to grow, it will allow the use of these data for future reliability performance calculations.

For the past three years, MAG has also acquired speed traffic data for freeways and arterials in the region from commercial sources; this acquisition has enhanced the baseline traffic data archive serving planning, programming and performance measurement activities. Two private data providers are under contract with MAG to supply GPS-based speed data for all regional freeways and all major arterials, thus supplementing the existing arterial database and ADOT FMS freeway database. It is anticipated that this acquisition will be renewed on a yearly basis allowing the current data archive to be more geographically complete and enable MAG to perform analysis on system and corridor performance from comprehensive data sources.

In addition, traffic data is collected on arterial roadways through both permanent and temporary counting stations deployed by a variety of MAG member agencies. Moreover, periodic studies are conducted to collect information on topics such as the average number of people in cars, the proportion of trucks on the roadways, and levels of congestion on the freeways and arterials.

- Recent Monitoring Results - Per Capita Freeway Vehicle-Miles of Travel (VMT) is defined as the average number of freeway miles a vehicle in the Phoenix-Mesa urbanized area travels per day per person. This measure tracks overall vehicle travel trends for the region. As seen in Table 9-1, the total number of freeway vehicle miles traveled in 2012 (29,073,331) is 0.4 percent greater than that in 2009. The results in Table 9-1 are reflective of a slight upward trend in the national and regional economy.

Latest economic indicators point at some increase in economic activity, as Arizona slowly recovers from the Great Recession. For example, HURF (Highway User Revenue Funds) revenues have shown an increase of 0.5% when comparing 2011 and 2012.

**TABLE 9-1
PER CAPITA FREEWAY VMT for the PHOENIX/MESA URBANIZED AREA**

	2009	2010	2011	2012
Total Freeway VMT*	28,950,000	29,087,000	29,495,000	29,073,331
Population of Phoenix-Mesa Urbanized Area**	3,308,396	3,348,298	3,370,250	3,392,348
Per Capita Freeway VMT	8.75	8.67	8.75	8.57

Source:

*ADOT Highway Performance Monitoring System (HPMS) 2012 Draft

** ACS and Census 2010 (2012 Draft Estimate)

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.

- Travel Demand Forecasting - 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 transportation system, 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.

An important observation regarding the current MAG four-step Travel Demand Model is that it is inherently a static model. Statistics on performance results have been tabulated for the Maricopa County portion of the MAG modeling area, while performance maps have been prepared covering the fully expanded MAG metropolitan planning area (including Pinal County areas). Modeling was based on the MAG 2013 Socio-economic Projections, which reflect recent changes in regional

demographics and market. Conditions such as fuel costs and other road user costs are not factored into the simulation runs.

- Build vs. No-Build Scenarios - Transportation network simulation models are also used to assess the impact of improvements (Build Scenarios) compared to conditions without improvements (No-Build Scenarios). This capability is especially important when an area experiences significant changes in growth patterns. Under high growth conditions, the performance of the transportation system may decline even though improvements are made, due to additional travel demand brought on by the increase in housing units and population. The reverse occurs when a decrease in demand results in a reduction in congestion levels. However, in the case of an increased demand scenario such as the one depicted in the “2025 No-Build” column of Table 9-3, conditions easily reach critical levels, if improvements are not implemented. 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 studies and surveys underway and completed within the last 5 years. Besides the yearly ADOT FMS and private sector speed data mentioned previously, data sources include two current studies: the 2011/12 Traffic Data Collection Management Study, and the 2013 Bottleneck Data collection and Model Validation Study. Among other completed studies are the 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 last two years, the following studies have also been completed: the ADOT Freeway Management System (FMS) Detector Accuracy Evaluation, the 2008 Regional Household Survey, the 2007 Regional On-Board Transit Survey conducted by RPTA and the Internal Truck Travel Survey. During the 2010-2011 Fiscal Year, four additional studies that have enhanced existing transportation databases have been initiated - the Southwest Corridor Major Investment Study, the update to the Mode Choice Model, the Central Phoenix Framework Study and the Sustainable Transportation-Land Use Study.

- Volume Data - The ADOT Freeway Management System (FMS) provides count data on the mainline general purpose lanes and HOV lanes 24/7/365, and on ramps on the majority of the urbanized freeway system. Traffic counts are collected through in-pavement loop detectors and passive acoustic detectors (PADs). This data feeds directly to the Arizona AZ511 system, providing real-time traveler information. Data is also aggregated in periods from five minutes to 24 hours for weekdays and weekends.

For the arterial system, MAG collects traffic data at over 770 stations using machine counts. Data is collected on weekdays every three to four years, over a 48-hour time period, and aggregated by 15 minute, hour, peak period, and 24 hours. Counts are conducted by direction at mid-block locations throughout the region. Data from the MAG count program undergoes a variety of data quality control checks; count data collected from other jurisdictions/member agencies is usually subject to the same kind of quality control checks. Since 2010 MAG has developed a web-based Traffic Data Management System which is a repository of all available traffic counts, turning movement counts and travel time databases.

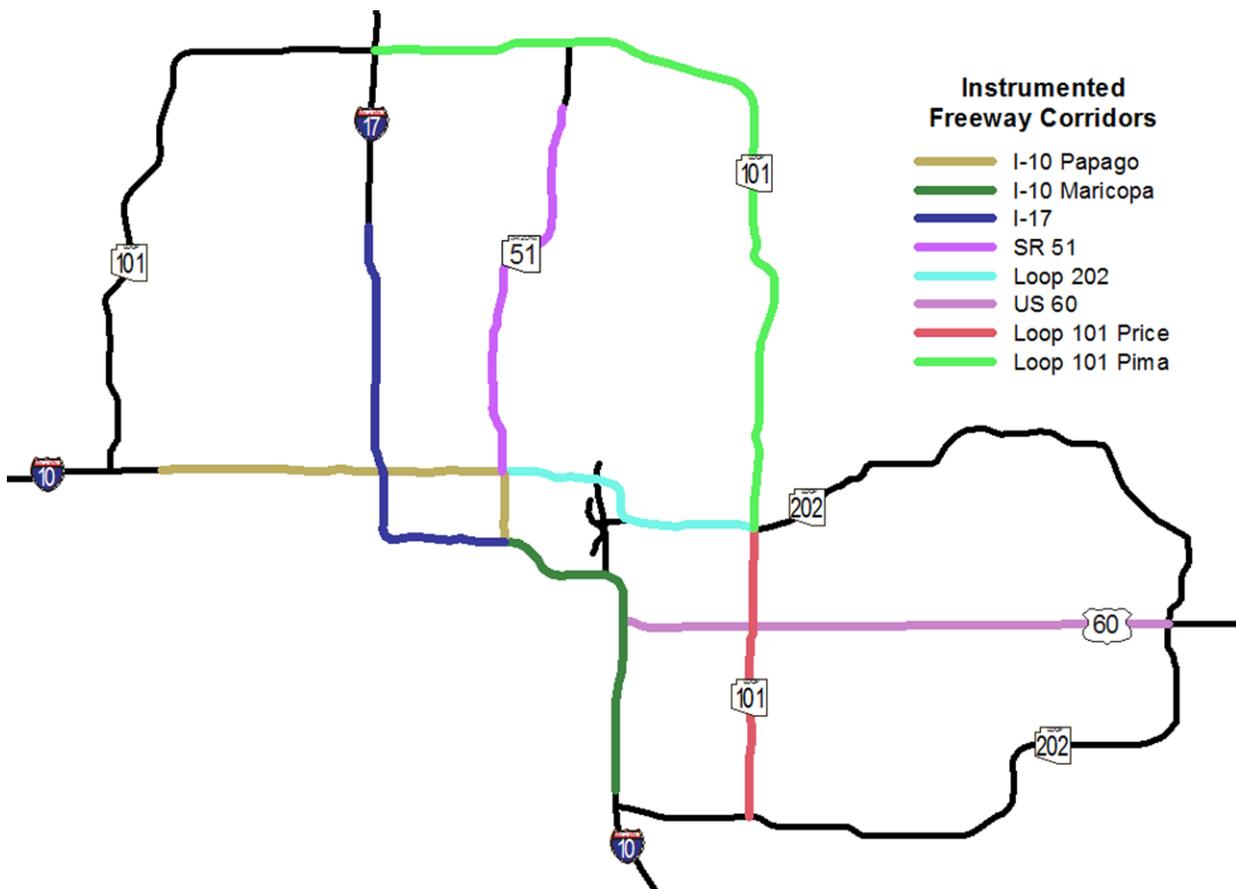
- Travel Time Data - Travel Time is among the measures that are most meaningful to travelers and system managers alike, since it relates to their experience of everyday travel. The Travel Time Index (TTI) is a measure of average conditions that tells one how much longer, on average, travel times are during congestion compared to during light traffic. For example, a value of 1.30 TTI means that a 20 minute trip at free flow speeds takes 30 percent longer, or 26 minutes in the peak hours.

Figure 9-1 and Table 9-2, respectively, depict the location of the regional freeway segments and the calculated commuting TTI for the a.m. and p.m. commuting peak periods on the instrumented freeway corridors based on 2010 and 2011 ADOT FMS data. It can be observed that the 2010 TTI peak period values have generally maintained their values in 2011 for most freeway corridors in the Phoenix region. However, certain corridors have experienced significant changes.

Significant declines (a lower TTI indicates improved conditions) in the TTI for selected corridors include:

- I-10 Maricopa Fwy. (Chandler Blvd. to SR-51/202L): Westbound/AM/peak, TTI decreased by 7.7%.
- I-10 Papago Fwy. (SR-51 to 83rd Ave.): Westbound/PM/peak, TTI decreased by 5.9%.

**FIGURE 9-1
SELECTED FREEWAY CORRIDORS**



- I-17 (Peoria Ave. to I-10): Southbound/PM/peak, TTI decreased by 7.3%.
- SR-51 (Bell Rd. to the I-10): Southbound/AM/peak, TTI decreased by 5.4%.
- SR-51 (I-10 to Bell Rd.): Northbound/PM/peak TTI, decreased by 5.7%.

Significant increases (a higher TTI indicates worse conditions) in the TTI for selected corridors include:

- I-10 Papago Fwy. (83rd Ave. to SR-51): Eastbound/AM/peak, TTI increased by 9.2%.
- Loop 101 Pima Fwy. (Princess Dr. to 202L): Southbound/PM/peak, TTI increased by 12.4%.
- Loop 101 Pima Fwy. (202L to Princess Dr.): Northbound/AM/peak, TTI increased by 8.7%.

**TABLE 9-2
TRAVEL TIME INDEX FOR SELECTED FREEWAY CORRIDORS (GEN. PURPOSE LANES)**

Freeway	Direction	From	To	AM Peak Period TTI			PM Peak Period TTI		
				2010	2011	% change	2010	2011	% change
I-10 Papago	EB	83rd Ave	SR 51/Loop 202	1.31	1.43	9.2%	1.02	1.02	0.0%
	WB	SR 51/Loop 202	83rd Ave	1.02	1.00	-2.0%	1.18	1.11	-5.9%
I-10 Maricopa	EB	SR 51/Loop 202	Chandler Blvd	1.00	1.00	0.0%	1.71	1.65	-3.5%
	WB	Chandler Blvd	SR 51/Loop 202	1.17	1.08	-7.7%	1.00	1.00	0.0%
I-17	NB	I-10 Maricopa	Peoria Ave	1.03	1.00	-2.9%	1.26	1.27	0.8%
	SB	Peoria Ave	I-10 Maricopa	1.17	1.20	2.6%	1.09	1.01	-7.3%
SR 51	NB	I-10 Papago	Bell Rd	1.00	1.00	0.0%	1.06	1.00	-5.7%
	SB	Bell Rd	I-10 Papago	1.11	1.05	-5.4%	1.00	1.00	0.0%
Loop 202	EB	SR 51/I-10	Loop 101	1.00	1.00	0.0%	1.00	1.00	0.0%
	WB	Loop 101	SR 51/I-10	1.19	1.25	5.0%	1.34	1.55	15.7%
US 60	EB	I-10 Maricopa	Loop 202	1.00	1.00	0.0%	1.10	1.06	-3.6%
	WB	Loop 202	I-10 Maricopa	1.05	1.09	3.8%	1.00	1.00	0.0%
SR 143	NB	I-10 Maricopa	Loop 202 Red Mountain	1.09	1.10	0.9%	1.09	1.13	3.7%
	SB	Loop 202 Red Mountain	I-10 Maricopa	1.06	missing data	missing data	1.19	missing data	missing data
Loop 101 Price	NB	Loop 202 Santan	Loop 202 Red Mountain	missing data	1.02	missing data	missing data	1.02	missing data
	SB	Loop 202 Red Mountain	Loop 202 Santan	missing data	1.02	missing data	missing data	1.02	missing data
Loop 101 Pima E	NB	Loop 202 Red Mountain	Princess Dr	1.15	1.25	8.7%	1.02	1.03	1.0%
	SB	Princess Dr	Loop 202 Red Mountain	1.00	1.00	0.0%	1.21	1.36	12.4%

Source: ADOT FMS

- Loop 202 Red Mtn. Fwy. (101L to SR-51/I-10): Westbound/PM/peak, TTI increased by 15.7%.

In general, improvements in TTIs can be traced to the completion new general purpose, HOV lanes, and direct HOV ramps, which have helped to encourage carpooling along major regional commuter routes. In addition, enhanced ADOT Traffic Operations Center monitoring capabilities and the Dynamic Messaging System (DMS) on urban freeways have provided additional operational benefits to the travelling public, helping to mitigation recurring congestion levels. On the other hand, some corridors are experiencing the return of increased congestion levels, likely due to the early effects of an economic recovery across our region.

- Speed Data - Currently, the two principal, most comprehensive sources of speed data for the MAG region are: the private sector data bases, which have been acquired by MAG starting in 2010, and the ADOT freeway management system (FMS) permanent count detector database. The source for private sector traffic data is mainly GPS-equipped vehicles and other mobile consumer devices. The significant benefit to these products is their consistency in reporting, as well as the full coverage of the MAG freeway and major arterial network. Speed data for the instrumented portions of the freeway system is also available through the ADOT FMS, and the ADOT Transportation Planning Division traffic detector stations.

Appendix Tables D-1 and D-2 depict changes in average speed for all freeway corridors monitored by ADOT'S FMS System between 2011 and 2012. For these two years, it can be observed that major facilities have generally maintained their average speeds, with afternoon peak period changes fluctuating between one and four miles per hour. A notable exception is eastbound 101L between I-17 and SR-51, which experienced an increase of 7.4 mph in PM peak speeds and 6.8 mph in the AM peak speeds between 2011 and 2012. (This segment is part of an extensive 30 mile project, completed in 2012, consisting of the addition of one HOV lane in each direction between I-10 and SR-51).

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.

- Forecast Modeling Scenarios - For the analysis presented in this chapter, three network scenarios were modeled to assess potential future conditions on the transportation system in the region.

- 2011 Base Year Scenario: For this scenario the highway, arterial and transit networks reflect the base year 2011. This network reflects “up-to date” conditions after implementing a number of projects identified in the RTP, as well as 2011 travel demand. The socio-economic data that generated the travel demand for this scenario is based on the 2013 Socioeconomic Projections.
- 2025 RTP Plan Scenario: The network used for this model run includes all the projects in the RTP Plan and utilizes MAG’s 2013 Socioeconomic Projections for the year 2025.
- 2025 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 2025 as that used for the RTP scenario, but does not include the regionally funded freeway system improvements identified in the RTP.
- Forecast 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 2011 Current Base Year, the 2025 RTP and the 2025 No-Build. All data is for the Maricopa County portion of the MAG transportation modeling area. Table 9-3 provides a 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: lanes miles and capacity miles. As shown, there is an increase of 15.3 percent in freeway capacity between the 2011 Base Year and the 2025 RTP. Arterial capacity miles for the RTP increase also significantly, by approximately 40 percent as compared to the Base 2011 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 2011 Base Year and the 2025 RTP, a 30.4 percent VMT increase is observed on freeways and approximately 28.3 percent on arterials.

For the No-Build scenario, the VMT increases are 19.5 percent and 29.4 percent, respectively, reflecting the lack of facility 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 and arterials, congested VMT, and vehicle hours of delay. As noted previously, congested segments are those with LOS E-F, and delay represents amount of extra travel time due to congestion.

Build vs. No-Build: A review of Table 9-3 indicates that, while the number of lane miles of congested freeways increases by 30.75 percent between the 2011 Base Year and the 2025 RTP, the percentage of total lane miles that are congested increases by only 13 percent. When comparing the 2011 Base Year to the 2025 No-Build scenario, the percentage of congested freeway lane miles increases by 59 percent.

For arterials, the percentage of lane miles that are congested in the RTP scenario shows significant increases compared to the 2011 Base Year, increasing from 1.6 percent to 2.1 percent. However, for the 2025 No-Build scenario, the percentage of lane miles that is congested increases to nearly 4 times the value of 2011, increasing from 1.6 percent to 6.2 percent. A similar pattern occurs for the percentage of daily VMT on arterials that is congested, with the percent of VMT on the No-Build scenario increasing to over 3 times the value of 2011, increasing from 3.9 percent to 12.3 percent.

The total vehicle hours of delay experiences an increase of 46 percent between the 2011 Base Year and the 2025 RTP, but dramatically increases by 97.3 percent under the No-Build scenario. The vehicle hours of delay per 1,000 VMT increases by 13.4 percent between the 2011 Base Year and the 2025 RTP; nevertheless, it increases at a much higher rate, by 57.73 percent under the No-Build scenario.

- Clearly, the enhanced freeway network and additional arterial mileage provided in the RTP, but not included in the No-Build scenario, result in significant congestion relief on the both the freeway and arterial systems. These system improvements also help significantly to mitigate the effects of a growing population.

**TABLE 9-3
ROADWAY PERFORMANCE MEASURES FROM MAG MODEL**

Measures	Scenario		
	2011	2025	2025 No Build
Population	4,104,542	5,307,945	5,307,945
Supply Measures			
Lane-Miles			
Freeways	2,241	2,599	2,241
Arterials	10,572	14,892	10,572
Capacity Miles			
Freeways	59,711,711	68,872,058	59,054,350
Arterials	108,173,839	152,175,972	105,681,439
Demand Measures			
Daily Vehicle-Miles (VMT)			
Freeways	33,769,220	44,054,925	40,336,564
Arterials	41,912,871	53,767,324	54,246,214
Level of Service Measures			
Congested Lane-Miles			
Freeways	504	659	800
Arterials	169	297	649
% Congested Lane-Miles			
Freeways	22.5	25.4	35.7
Arterials	1.6	2.1	6.2
Daily Congested VMT			
Freeways	13,411,429	17,625,521	22,119,807
Arterials	1,647,195	3,001,104	6,684,377
% Daily Congested VMT			
Freeways	39.7	40.0	54.8
Arterials	3.9	5.6	12.3
Total Vehicle Hours of Delay			
Hours of Delay	735,398	1,073,996	1,450,973
Hrs of. Delay per 1000 VMT	9.7	11.0	15.3

Source: Preliminary Draft MAG Transportation Model; Maricopa County portion of modeling area.

- Level of Service Maps: Appendix Figures D-1 through D-6 show the geographic distribution of P.M. peak period congestion patterns for the three modeled scenarios, depicting facility Levels of Service for the Maricopa County portion of the MAG freeway system and Levels of Service at arterial intersections. Figures D-1 through D-3 show levels of service on the freeway system for the 2011 Base Year, 2025 RTP, and the 2025 No-Build scenarios. Figures D-4 through D-6 indicate locations and distribution of congested intersections for the P.M. peak period at arterial intersections for these same

scenarios. A complete Freeway and Arterial Performance Dashboard Report can be accessed interactively from the MAG performance website (www.performance.azmag.gov).

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. This Report also updates the Valley Metro Short Range Transit Plan. Valley Metro also publishes an annual report of transit passenger ridership for all the operating agencies in the region. The report includes annual weekday, Saturday and Sunday ridership figures by select transit modes (bus, circulator, rural and light rail). Principal performance measures include total boardings and boardings per mile across the system as well as total number of riders and revenue miles by route and by City.

The full Transit Performance Report and The Valley Metro Ridership report can be accessed from the Valley Metro Website (www.valleymetro.org).

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 also developed initial performance targets that allow comparison between performance expectations and actual performance. These performance measures and performance targets are being incorporated into the TPR. As plan implementation continues, targets are reviewed, refined and indexed to inflation as appropriate.

The SEES framework established 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.

A Technical Advisory Group (TAG) made up of Valley Metro member agencies and MAG, was formed in November 2012 and has been tasked with the development of Regional Transit Standards and Performance Measures. The focus of the first Phase of this effort has been to prepare service delivery goals, develop transit operational standards, initiate a performance measures review, and develop a process for transit service changes. Phase II will address additional standards and focus on development of performance measures to compliment agency goals.

9.3.2 Performance Targets and Operating Results

The specific performance measures and targets developed during the Service Efficiency and Effectiveness Study are listed in Tables 9-4 through 9-6. Tables 9-4 through 9-6 also include actual operating results, from the 2010, 2011 and 2012 Transit Performance Reports (TPR). The data presented is based on the findings from the SEES and data available at this time. The modes covered by the TPR include Fixed Route Bus, Paratransit, and Light Rail. Fixed Route bus service includes Local Routes, Super Grid (major arterial routes) and Shuttles. Fixed route bus service includes local routes, super grid (major arterial routes), Express/Bus Rapid Transit, Circulators, and rural connector routes and shuttles.

9.4 PERFORMANCE MONITORING AND ASSESSMENT 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 corridor 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 consolidates the data collection efforts related to system performance and develops 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 continuously provide the public with timely and relevant information on the performance of the multi-modal transportation system. 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 RPTA Annual Transit Performance Report. MAGnitude, the web-based Dashboard is the primary source for roadway system and corridor performance in the region, providing a broad range of data to support analysis for planning and programming activities at MAG.

The Performance Measurement Framework, developed with the participation of MAG's member agencies will continue to be used as the reference for periodic enhancements as the implementation of the RTP moves forward. Additionally, recognizing the close relationship between congestion and performance, and in an effort to align key performance measurement indicators with the congestion management process, MAG developed an update to the Congestion Management Process in 2010 to coordinate results and implementation of strategies. Based on the multitude of observed and archived data sources, as well as input from the Transit Performance Report, MAG will continue to publish semi-annual performance reports in various formats including hard-copy, web-based, map and interactive dashboards.

TABLE 9-4

FIXED ROUTE BUS PERFORMANCE MEASURES (SYSTEM-WIDE)

Measure	2010 Results	2011 Results	2012 Results	
Cost Efficiency/Effectiveness				
Farebox Recovery Ratio	24.1%	22.0%	22.2%	
Operating Cost per Boarding	\$3.50	\$3.77	\$3.73	
Subsidy (Net Operating Cost per Boarding)	\$2.66	\$2.94	\$2.90	
Operating Cost per Revenue Mile	\$5.90	\$7.08	\$7.47	
Average Fare	\$0.84	\$0.83	\$0.83	
Service Effectiveness				
Annual Increase in Total Boardings	-15.22%	-1.37%	4.90%	
Annual Increase in Average Boardings	Weekday	-14.08%	1.24-	4.44%
	Sat.	-14.08%	1.77%	8.9%
	Sun.	-16.58%	3.82%	5.69%
Average Boardings per Revenue Mile	1.69	1.88	2.00	

Sources: Valley Metro Transit Report and Valley Metro Fact Sheet

TABLE 9-5

LIGHT RAIL TRANSIT (LRT) PERFORMANCE MEASURES

Measure	2010 Results	2011 Results	2012 Results
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	28.0%	33.0%	41.0%
Operating Cost per Boarding	\$2.72	\$2.42	\$2.13
Subsidy (Net Operating Cost per Boarding)	\$1.96	\$1.62	\$1.26
Operating Cost per Revenue Hour	\$12.43	\$12.90	\$11.87
Service Effectiveness			
Annual Total Boardings	12,100,000	12,800,000	13,600,000
Boardings per Revenue Mile	4.57	5.32	5.56
ADA On-time Performance	95.80%	97.50%	97.20%

Sources: Valley Metro Transit Report and Valley Metro Fact Sheet

TABLE 9-6**PARATRANSIT PERFORMANCE MEASURES**

Measure	2010 Results	2011 Results	2012 Results
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	6.3%	6.8%	5.9%
Operating Cost per Boarding	\$36.99	\$37.72	\$38.54
Subsidy (Net Operating Cost per Boarding)	\$34.69	\$35.17	\$36.25
Operating Cost per Revenue Hour	\$60.15	\$68.26	\$62.93
Service Effectiveness			
ADA On-time Performance	97.35%	97.39%	96.76%

Sources: Valley Metro Transit Report and Valley Metro Fact Sheet

CHAPTER TEN
PERFORMANCE AUDIT
OF THE REGIONAL TRANSPORTATION PLAN

Arizona Revised Statutes (ARS 28-6313) specifies that, 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. In 2010, the Auditor General contracted with an independent auditor to conduct the performance audit, and the results of the audit were released in report form in the *Performance Audit of the Maricopa County Regional Transportation Plan, December 21, 2011.*

10.1 KEY AUDIT REQUIREMENTS AND FINDINGS

One key requirement of the performance audit of the regional transportation plan as stated in Arizona legislation is that:

“...the audit shall review past expenditures of the regional transportation plan and examine the performance of the system in relieving congestion and improving mobility.”

Relative to this audit requirement, the Detailed Executive Summary of the 2011 audit report states that:

“...Our review also evaluated the impact of project changes against budgets and schedules to actual expenditures and completion dates and found significant variances. Although we did not reevaluate the appropriateness of transportation engineer experts’ technical design and scope estimates, we found explanations for changes were reasonably supported and documented in project files”.

“While success in meeting performance targets for freeway and arterial projects or corridors could not be measured, we found that transit performance is strong under the current plan - for instance, the light rail element of the plan has far surpassed performance expectations.”

(Pages 5 & 6 – Detailed Executive Summary, Performance Audit of the Maricopa County Regional Transportation Plan, December 21, 2010.)

A second key requirement of the performance audit of the regional transportation plan as stated in Arizona legislation is that:

“...the audit shall make recommendations regarding whether further implementation of a project or transportation system is warranted, warranted with modification, or not warranted.”

Relative to this audit requirement, the Detailed Executive Summary of the 2011 audit report states that:

“Based on that review of performance data and other available documentation, we found no substantial evidence to warrant drastic modifications to the transportation system or specific projects.”

“As a result, we believe the RTP Partners should continue to implement the current transportation system and strive to continually reassess system performance to make modifications as needed.”

(Pages 5 & 6 – Detailed Executive Summary, Performance Audit of the Maricopa County Regional Transportation Plan, December 21, 2010.)

10.2 AUDIT RECOMMENDATIONS

In addition to the key findings cited above, the audit provided 27 recommendations aimed at more efficient and effective implementation of the RTP, as well as stronger accountability for the performance of the plan. Several of the more significant recommendations* are listed below:

- Establish and quantify what the MAG Regional Council, in collaboration with its partners, expects to achieve through implementation of the RTP—this includes setting targets, building baselines for performance, and formally analyzing and measuring all available performance data against the set baselines at the system, corridor, and project levels to insert more accountability into the process.
- Communicate project and system performance results in meeting goals and targets of the RTP to committees and the public on a quarterly basis, at a minimum.
- Continue to implement the current transportation system and strive to continually reassess system performance to make modifications as necessary.
- Create a “report card” feature to provide quick, 1-page project snapshots summarizing project budget and schedule project performance measures

and progress toward targets, and highlights of project changes to scope, schedule, or cost.

- Memorialize rationale for recommendations and impact on congestion, mobility, and safety behind project reprioritization decisions and program changes to ensure documentation exists, linking projects changes suggested with an assessment or ranking against the formal priority criteria established.
- Develop and use a performance based model as part of project change and reprioritization processes on a go forward basis to enhance both transparency of the process and accountability to legislative mandates and the public.
- Summarize and communicate data to MAG oversight committees on options available and alternatives considered, risk and opportunities for each alternative, impacts of each alternative related to congestion or performance such as mobility and safety, and rationale behind final recommendations.
- Continue efforts to develop a user-friendly guide book providing a public “road map” clarifying how the public can influence transportation projects, at what points input can be provided in the RTP development and update process, and where citizens can go to get information.
- Strengthen oversight by fully utilizing the MAG Transportation Policy Committee in a stronger and more proactive leadership role in setting the expectations for RTP-related activities. Additionally, reaffirm the role of the Citizens’ Transportation Oversight Committee and increase its effectiveness through several suggested changes.
- Continue to investigate cost efficiencies that could result from combining RPTA and METRO operations, and implement measures as soon as practical to realize maximum value from such initiatives. Also, work towards realizing more benefits from regionalizing bus transit activities by strengthening the regional entity role and implementing regional activities that have potential for cost savings or better outcomes for riders such as route scheduling, fleet planning and purchasing, fare inspection and collection, coordinated automated tools, and regional service hearings.

*(Pages 7 & 8 – Detailed Executive Summary, Performance Audit of the Maricopa County Regional Transportation Plan, December 21, 2010.)

10.3 AGENCY RESPONSES TO RECOMMENDATIONS

Arizona Revised Statutes (ARS 28-6313) states that within forty-five days after the release of the audit, the Regional Public Transportation Authority, the Citizens Transportation Oversight Committee, the State Transportation Board, and the County Board of Supervisors shall submit recommendations to the

Transportation Policy Committee regarding the implementation of the audit findings. These agencies responded to the Transportation Policy Committee that they agree, or agree with modifications, with the audit recommendations. The one exception was that the County Board of Supervisors did not agree with the recommendation to adjust the MAG Transportation Policy Committee membership requirements to include RPTA and METRO transit representatives, since that is at the discretion of the state legislature. While not required to respond formally to the audit recommendations, MAG staff prepared an implementation plan to address recommendations directed at the agency.

Statutes also require MAG to hold a public hearing on the audit findings and recommendations within forty-five days after the audit's release. This hearing was held by MAG on January 18, 2012 at the MAG offices.

On June 25, 2012, the Maricopa Association of Governments (MAG), the Arizona Department of Transportation (ADOT), the Regional Public Transportation Authority (RPTA)/METRO Rail submitted a combined update regarding progress on implementing recommendations from the Performance Audit. This included supporting material covering ongoing efforts in all implementation areas. The combined response illustrated the continuing effort among the agencies to collaborate on a sound implementation plan to continue improving the successful delivery of the programs that comprise the RTP. In addition, a presentation to the Transportation Committee of the Arizona Legislature was given in December of 2012.

On June 21, 2013, the Maricopa Association of Governments (MAG), the Arizona Department of Transportation (ADOT), the Regional Public Transportation Authority (RPTA), and METRO Rail provided a combined, detailed written assessment of the efforts made to date in implementing the audit recommendations. In this transmittal, each agency reviewed accomplishments and described ongoing efforts to address issues identified in the audit. MAG in collaboration with its RTP partners has continued to implement Proposition 400 projects, assessing and monitoring performance metrics linked to RTP's goals and objectives.

By August of 2013 twenty recommendations derived from the audit were completed. The implementation of one recommendation would require changes in state law (ARS 28-6308) and a remaining four are in the final stages of development. Life Cycle Program rebalancing efforts and alternative scenarios continue to be informed by performance data and analysis. Performance measurement for freeway, arterial and transit facilities is now abundantly documented, quantified and communicated via dashboard visualization, web archives and project descriptions that are located on web-based project cards.

Appendix A

Freeway/Highway Life Cycle Program

**TABLE A-1
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
 (2013 and Year of Expenditure Dollars in Millions)**

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY13) YOY \$'s	R/W (FY06-FY26) YOY \$'s	CONST. (FY06-FY13) YOY \$'s	TOTAL (FY06-FY13) YOY \$'s	COSTS (FY14-FY26) '13 \$'s	COSTS (FY06-FY26) YOY & '13 \$'s	COSTS (FY27-FY35) '13 \$'s	COSTS (FY06-FY35) YOY & '13 \$'s	Progr. Group for Final Construct.	Date Open to Traffic
	I-10													
F1	<u>SR-85 to SR-303</u>													
	395th Avenue TI (Belmont Road)	96.2	0.5	NEW TI				0.0	20.0	20.0	0.0	20.0		
	Desert Creek TI	105.3	0.5	NEW TI				0.0	20.4	20.4	0.0	20.4		
	County Line - 303L (MC Oversight)	112.0	42.0	DESIGN	0.2		0.0	0.2	0.1	0.3	0.0	0.3		
	SR 85 - 303L (RW & DCR)	112.0	11.0	GPL	1.5	0.5	0.0	2.0	0.0	2.0	0.0	2.0		
	SR85 - Verrado Way (GPL)	112.0	8.2	GPL				0.0	2.8	2.8	40.0	42.8	3	
	Verrado Way - Sarival Rd (GPL)	120.2	6.1	GPL	2.6	0.0	28.2	30.8	0.0	30.8	0.0	30.8		8/16/11
	Perryville Road TI (Design Build)	122.7	0.0	NEW TI	0.9	2.7	0.2	3.9	28.2	32.0	0.0	32.0	U	
	Subtotal				5.2	3.2	28.4	36.8	71.5	108.3	40.0	148.3		
F2	<u>SR-303 to SR-101</u>													
	303L - I-17 Blk Canyon (MC Oversight)	124.0	18.0	DESIGN	0.2		0.0	0.2	0.0	0.3	0.0	0.3		
	303L - I-17 Blk Canyon (RW & DCR)	124.0	18.0	GPL HOV	2.9	1.9	0.0	4.8	0.6	5.4	0.0	5.4		
	303L - 101L Agua Fria Median (RW & DCR)	124.0	9.0	GPL HOV	2.7	0.2	0.0	3.0	0.0	3.0	0.0	3.0		
	Sarival Ave - Dysart Rd (GPL Outside)	126.0	4.0	GPL	2.9	0.0	35.8	38.7	2.4	41.1	0.0	41.1		1/15/11
	Sarival Rd - 101L Agua Fria (GPL HOV Med)	126.0	8.0	GPL HOV	4.3	0.0	88.6	93.0	0.0	93.0	0.0	93.0		7/30/10
	Sarival Avenue - 107th Avenue (Landscape)	126.0	4.0	LS	0.5	0.0	4.3	4.8	0.1	4.9	0.0	4.9		
	Bullard Road TI (New TI)	127.7	0.0	NEW TI	1.2	5.6	9.7	16.6	0.0	16.6	0.0	16.6		4/11/08
	Dysart Road - 83rd Ave (FMS)	130.0	6.0	FMS	0.0		0.0	0.0	5.6	5.6	0.0	5.6		
	Dysart Road - 101L Agua Fria (Landscape)	130.0	4.0	LS	0.5		0.0	0.5	3.6	4.1	0.0	4.1		
	Fairway Drive TI (El Mirage Rd)	130.7	0.0	NEW TI	0.2	0.0	0.0	0.2	20.8	21.0	0.0	21.0	2	
	Avondale Blvd @ I-10 (TI Impr)	131.7	0.0	IMP TI	0.1	0.0	2.8	2.8	0.0	2.8	0.0	2.8		FY 2011
	Subtotal				15.6	7.7	141.3	164.5	33.2	197.7	0.0	197.7		
F3	<u>SR-101 to I-17</u>													
	101L Agua Fria - I-17 Black Canyon, Ph 1	133.0	9.0	GPL	2.9	0.6	0.2	3.8	14.5	18.3	0.0	18.3	1	
	43Rrd Avenue / 51ST Avenue TIs	139.7	0.0	IMP TI	0.4	0.0	2.6	3.0	0.0	3.0	0.0	3.0		8/8/07
	51st Avenue TIs	140.7	0.0	IMP TI	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1		See above
	Subtotal				3.3	0.7	2.9	6.8	14.5	21.4	0.0	21.4		
F4	<u>I-17 (Stack) to I-17 (Split)</u>													
	SR51 - 202L Santan (DCR & RW)	147.0	11.0	GPL HOV	9.3	15.0	0.2	24.6	1.5	26.0	0.0	26.0		
	Sky Harbor West Airport Access	148.0	1.0	NEW TI				0.0	50.6	50.6	0.0	50.6	2	
	Subtotal				9.3	15.0	0.2	24.6	52.1	76.6	0.0	76.6		
F5	<u>24th St. to SR-202</u>													
	Salt River - Baseline Rd (RW)	150.7	3.5	GPL HOV	0.0	107.6	5.7	113.3	29.3	142.6	0.0	142.6		

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY13) YOY \$'s	R/W (FY06-FY26) YOY \$'s	CONST. (FY06-FY13) YOY \$'s	TOTAL (FY06-FY13) YOY \$'s	COSTS (FY14-FY26) '13 \$'s	COSTS (FY06-FY26) YOY & '13 \$'s	COSTS (FY27-FY35) '13 \$'s	COSTS (FY06-FY35) YOY & '13 \$'s	Progr. Group for Final Construct.	Date Open to Traffic
	32nd St - 202L Santan, Ph 1	151.5	3.5	GPL HOV				0.0	179.1	179.1	0.0	179.1	2	
	32nd St - 202L Santan, Ph 2	151.5	3.5	GPL HOV				0.0	122.0	122.0	0.0	122.0	2	
	32nd St - 202L Santan, Ph 3	151.5	4.0	GPL HOV				0.0	191.2	191.2	0.0	191.2	2	
	Southern Ave - SR143 Hohokam (GPL)	153.0	2.0	GPL	0.3	0.0	3.3	3.6	0.0	3.6	0.0	3.6		10/3/08
	Ray Rd TI (TI Impr)	160.0	0.5	IMP TI	0.6	0.0	9.6	10.2	0.0	10.2	0.0	10.2		7/13/07
	Subtotal				0.9	107.6	18.7	127.2	521.6	648.8	0.0	648.8		
F6	SR-202 to Riggs Rd.													
	Chandler Blvd - Queen Creek (FMS)	160.0	3.8	FMS				0.0	4.1	4.1	0.0	4.1		
	202L Santan - Riggs Rd (GPL)	162.0	6.0	GPL	0.2			0.2	73.7	73.9	0.0	73.9	2	
	Chandler Heights Rd TI	166.2	0.0	NEW TI				0.0	22.9	22.9	0.0	22.9	2	
	Subtotal				0.2	0.0	0.0	0.2	100.7	100.9	0.0	100.9		
	TOTAL I-10				34.6	134.2	191.4	360.2	793.6	1,153.7	40.0	1,193.7		
	I-17													
F7	I-10/Maricopa - I-10/Papago													
	I-10 Maricopa - 101L Agua Fria (RW & DCR)	194.0	19.0	GPL HOV	6.8	0.1	0.3	7.2	1.0	8.2	0.0	8.2		
	I-10 Maricopa - I-10 Papago (MC Oversight)	194.0	6.0	HOV	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
	I-10 Maricopa - I-10 Papago	194.0	6.0	HOV				0.0	400.0	400.0	0.0	400.0	2	
	Subtotal				6.8	0.1	0.3	7.2	401.0	408.2	0.0	408.2		
F8	I-10/Papago to SR-101													
	McDowell Rd - Arizona Canal	200.0	7.0	GPL				0.0	385.0	385.0	0.0	385.0	2	
	Arizona Canal - 101L Agua Fria (DCR)	208.0	6.8	GPL	1.8		0.0	1.8	1.3	3.1	0.0	3.1		
	Arizona Canal - 101L Agua Fria (FMS)	208.0	6.8	FMS	0.5	0.0	4.2	4.7	0.8	5.5	0.0	5.5		
	Arizona Canal - 101L Agua Fria	208.0	6.8	GPL				0.0	6.0	6.0	86.4	92.4	3	
	Peoria Ave - Greenway Rd (Drainage)	208.9	3.0	MINOR	1.0		0.0	1.0	16.5	17.5	0.0	17.5	2	
	Cactus Rd TI	209.0	0.0	IMP TI	0.1	0.2	6.7	7.1	0.0	7.1	0.0	7.1		12/3/06
	Subtotal				3.4	0.2	11.0	14.6	409.6	424.2	86.4	510.6		
F9	SR-101 to SR-74													
	101L Agua Fria - Anthem Way (FMS)	215.0	14.0	FMS	0.7	0.0	0.1	0.7	8.0	8.8	0.0	8.8		
	101L Agua Fria - Black Canyon TI (RW & DCR)	215.0	17.0	GPL HOV	0.0	77.0	0.1	77.2	1.1	78.3	0.0	78.3		
	101L Agua Fria - SR74 (Design)	215.0	9.0	GPL HOV	3.8		0.0	3.8	0.0	3.8	0.0	3.8		
	101L Agua Fria - SR74 (Landscape)	215.0	9.0	LS	0.8	0.0	6.5	7.3	0.3	7.6	0.0	7.6		
	101L Agua Fria - Jomax Rd (GPL HOV)	215.0	4.0	GPL HOV	4.9	0.0	76.7	81.6	0.0	81.6	0.0	81.6		11/8/09
	Jomax Rd - SR74 Carefree Hwy (GPL HOV)	219.0	5.0	GPL HOV	4.6	0.0	93.0	97.6	0.0	97.6	0.0	97.6		7/30/10
	Jomax Rd TI / Dixletta Rd TI	219.0	0.0	NEW TI	3.4	2.7	40.8	46.9	0.0	46.9	0.0	46.9		10/1/08
	Dove Valley Rd TI	222.5	0.0	NEW TI	2.2	0.0	20.4	22.7	0.0	22.7	0.0	22.7		4/21/10
	Subtotal				20.4	79.8	237.5	337.7	9.5	347.2	0.0	347.2		
F10	SR-74 to New River Rd.													
	SR74 Carefree Hwy TI	223.5	0.0	NEW TI	1.6	0.0	22.7	24.3	0.0	24.3	0.0	24.3		10/10/08
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.3		
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.4	0.0	0.4	0.0	0.5	0.0	0.5		
	SR74 Carefree - Anthem Way (GPL)	224.0	5.0	GPL	2.9	0.0	14.3	17.2	0.0	17.2	0.0	17.2		5/15/10

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY13) YOY \$'s	R/W (FY06-FY26) YOY \$'s	CONST. (FY06-FY13) YOY \$'s	TOTAL (FY06-FY13) YOY \$'s	COSTS (FY14-FY26) '13 \$'s	COSTS (FY06-FY26) YOY & '13 \$'s	COSTS (FY27-FY35) '13 \$'s	COSTS (FY06-FY35) YOY & '13 \$'s	Progr. Group for Final Construct.	Date Open to Traffic
	SR74 Carefree - Anthem Way (HOV)	224.0	5.0	HOV				0.0	5.9	5.9	83.6	89.5	3	
	Anthem Way - New River (GPL)	229.0	3.0	GPL				0.0	0.0	0.0	57.4	57.4	3	
	Subtotal				4.4	0.7	37.1	42.2	5.9	48.1	141.0	189.1		
	TOTAL I-17				35.0	80.8	285.8	401.7	826.0	1,227.7	227.4	1,455.1		
	SR-24													
F11	202L Santan -Meridian Rd.													
	202L Santan - Ellsworth Rd, Ph 1 (New)	0.0	1.0	NEW	14.7	18.8	58.3	91.9	52.2	144.0	0.0	144.0	U	
	202L Santan - Ellsworth Rd, Ph 2 (New)	0.0	1.0	NEW				0.0	3.1	3.1	43.8	46.9	3	
	Ellsworth Rd - Meridian Rd (New)	1.0	5.0	NEW				0.0	54.8	54.8	157.8	212.6	3	
	Subtotal				14.7	18.8	58.3	91.9	110.1	201.9	201.6	403.5		
	TOTAL SR-24				14.7	18.8	58.3	91.9	110.1	201.9	201.6	403.5		
	SR-30													
F12	SR-85 to SR-303													
	SR85 - 303L Bob Stump (DCR)	100.0	12.0	NEW	3.1		0.1	3.2	0.6	3.9	192.7	196.6		
	Subtotal				3.1	0.0	0.1	3.2	0.6	3.9	192.7	196.6		
F13	SR-303 to SR-202													
	303L Bob Stump - 202L South Mountain (DCR & RW)	112.0	16.5	NEW	14.0	15.0	0.3	29.4	8.0	37.4	51.2	88.6		
	303L Bob Stump - Estrella Pkwy	112.0	4.2	NEW				0.0	0.0	0.0	279.4	279.4	3	
	Estrella Pkwy - Dysart Rd	116.2	3.3	NEW				0.0	0.0	0.0	243.4	243.4	3	
	Dysart Rd - Avondale Blvd	119.5	2.0	NEW				0.0	0.0	0.0	116.6	116.6	3	
	Avondale Blvd - 97th Ave	121.5	2.5	NEW				0.0	0.0	0.0	148.9	148.9	3	
	97th Ave - 67th Ave	124.0	3.8	NEW				0.0	0.0	0.0	223.2	223.2	3	
	67th Ave - 202L South Mountain	127.8	0.7	NEW				0.0	18.3	18.3	278.5	296.8	3	
	Subtotal				14.0	15.0	0.3	29.4	26.3	55.7	1,341.2	1,396.9		
	TOTAL SR-30				17.2	15.0	0.4	32.6	26.9	59.5	1,533.9	1,593.4		
	SR-51													
F14	Shea Blvd to SR-101													
	Glendale Ave - 101L Pima (FMS)	5.7	13.0	FMS	0.3	0.0	2.0	2.3	0.6	2.9	0.0	2.9		
	Shea Blvd - 101L Pima (GPL)	9.5	5.2	GPL				0.0	4.0	4.0	56.2	60.2	3	
	Shea Blvd - 101L Pima (HOV/ HOV Ramp)	9.5	7.3	HOV	4.0	0.0	48.7	52.7	0.0	52.7	0.0	52.7		2/13/09
	Subtotal				4.3	0.0	50.8	55.1	4.6	59.7	56.2	115.9		
	TOTAL SR-51				4.3	0.0	50.8	55.1	4.6	59.7	56.2	115.9		
	US-60 (GRAND AVE.)													
F15	SR-303 to SR-101													
	303L Bob Stump - 99th Ave (Ph 1)	138.0	10.0	GPL	7.0	1.2	24.9	33.2	1.6	34.8	0.0	34.8		6/14/11
	303L Bob Stump - 101L Agua Fria (Ph 2)	138.0	9.0	IMP	0.1		0.0	0.1	0.0	0.1	0.0	0.1		
	Bell Road TI	142.5	0.0	IMP TI	0.8		0.1	0.9	45.7	46.6	0.0	46.6	1	

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY13) YOY \$'s	R/W (FY06-FY26) YOY \$'s	CONST. (FY06-FY13) YOY \$'s	TOTAL (FY06-FY13) YOY \$'s	COSTS (FY14-FY26) '13 \$'s	COSTS (FY06-FY26) YOY & '13 \$'s	COSTS (FY27-FY35) '13 \$'s	COSTS (FY06-FY35) YOY & '13 \$'s	Progr. Group for Final Construct.	Date Open to Traffic
	Thompson Ranch Rd TI (Thunderbird)	145.5	0.0	IMP TI	0.6		0.0	0.6	13.2	13.8	0.0	13.8	1	
	99th Ave – 83rd Ave, Incl New River Bridge	148.0	3.0	GPL	1.3	1.2	9.5	12.0	0.3	12.3	0.0	12.3		4/30/11
	83rd Ave & Peoria Ave (Intersection Impr)	148.5	1.8	MINOR	0.1		2.0	2.2	0.0	2.2	0.0	2.2		10/4/06
	Subtotal				9.9	2.5	36.6	48.9	60.9	109.8	0.0	109.8		
F16	SR-101 to Van Buren													
	101L Agua Fria - 71st Ave	149.0	3.5	IMP			5.9	5.9	0.2	6.1	0.0	6.1		8/7/13
	101L Agua Fria - Van Buren (DCR)	149.0	14.0	IMP	1.2		0.0	1.2	0.2	1.3	0.0	1.3		
	101L Agua Fria - McDowell Rd (RW & D)	149.0	13.0	IMP	1.0	7.8	0.5	9.3	1.8	11.2	0.0	11.2		
	101L Agua Fria - Van Buren Ph 2	149.0	14.0	IMP	0.0		0.0	0.0	22.0	22.0	0.0	22.0	1	
	101L Agua Fria - Van Buren Ph 3	149.0	14.0	GPL/IMP				0.0	18.7	18.7	67.5	86.2	3	
	71st Ave - McDowell Rd (101L - McDowell Rd)	152.5	6.0	IMP	5.3	2.5	9.4	17.2	14.8	32.0	0.0	32.0	U	
	71st Ave - Grand Canal Bridge (Impr)	152.5	5.0	MINOR	0.1		3.6	3.7	0.0	3.7	0.0	3.7		5/16/07
	Subtotal				7.5	10.4	19.4	37.2	57.7	95.0	67.5	162.5		
	TOTAL US-60 (GRAND)				17.4	12.8	55.9	86.2	118.7	204.8	67.5	272.3		
	US-60 (SUPERSTITION FWY.)													
F17	I-10 to SR-101													
	I-10 Maricopa – 101L Price (GPL)	172.0	4.5	GPL	2.7	0.0	27.3	30.0	0.0	30.0	0.0	30.0		3/29/10
	Subtotal				2.7	0.0	27.3	30.0	0.0	30.0	0.0	30.0		
F18	SR-101 to SR-202													
	Gilbert Rd - Power Rd (GPL HOV)	182.5	6.0	GPL HOV	1.1	0.0	88.2	89.3	0.0	89.3	0.0	89.3		3/15/07
	Lindsay Rd TI (Half TI)	182.9	0.5	NEW TI				0.0	0.6	0.6	7.6	8.2	3	
	Val Vista Dr – Power Rd (Landscaping)	183.0	6.0	LS	0.0	0.0	5.0	5.0	0.0	5.0	0.0	5.0		
	Higley Rd TI	186.4	1.0	IMP TI	0.4	0.2	5.0	5.6	0.0	5.6	0.0	5.6		7/24/07
	Subtotal				1.5	0.2	98.2	99.9	0.6	100.5	7.6	108.1		
F19	SR-202 to Meridian Rd.													
	Chrismon Rd - Meridian Rd (FMS)	192.4	2.0	FMS				0.0	2.2	2.2	0.0	2.2		
	Chrismon Rd - Meridian Rd (GPL HOV)	192.4	2.0	GPL HOV				0.0	28.4	28.4	0.0	28.4	2	
	Meridian TI (West Half)	194.0	1.0	NEW TI	0.7	0.1	0.0	0.8	12.8	13.6	0.0	13.6	1	
	Subtotal				0.7	0.1	0.0	0.8	43.4	44.2	0.0	44.2		
	TOTAL US-60 (SUPERSTITION)				4.9	0.3	125.5	130.7	44.0	174.7	7.6	182.3		
	SR-74													
F20	US-60 to SR-303													
	US60 Grand - 303L Bob Stump (RW Protection)	0.0	26.0	R/W				0.0	0.9	0.9	0.9	1.9		
	US60 Grand - I-17 Black Canyon (RW)	0.0	31.0	R/W				0.0	14.9	14.9	25.2	40.1		
	US60 Grand – 303L Bob Stump (Pass Ln MP 13-15)	13.0	2.0	MINOR	0.5	0.1	3.5	4.1	0.1	4.2	0.0	4.2		4/1/11
	US60 Grand – 303L Bob Stump (Pass Ln MP 20-22)	20.0	2.0	MINOR	0.5	1.1	2.9	4.5	1.1	5.6	0.0	5.6		10/20/10
	Subtotal				1.0	1.2	6.4	8.6	17.1	25.7	26.1	51.8		
	TOTAL SR-74				1.0	1.2	6.4	8.6	17.1	25.7	26.1	51.8		

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	SR-85													
F21	<u>I-8 to MC-85</u>													
	SR85 Corridor (MC Oversight)	120.0	35.0	DESIGN	0.3	0.2	0.0	0.5	0.1	0.6	0.0	0.6		
	I-8 - I-10 (RW) FY2006-2013)	120.0	35.0	GPL	0.1	32.7	2.1	35.0	0.0	35.0	0.0	35.0		
	SR85 at Gila Bend, Phase 1 (New)	120.5	2.5	GPL	3.0	3.4	17.7	24.1	0.2	24.3	0.0	24.3		1/8/13
	MP 130.7 – MP 137.0 (New)	130.7	6.3	GPL	0.3		24.9	25.2	0.1	25.3	0.0	25.3		1/29/10
	MP 139.01 – MP 141.71 (New)	139.0	2.7	GPL	0.3		22.9	23.2	0.0	23.2	0.0	23.2		11/26/08
	Subtotal				4.0	36.3	67.6	107.9	0.4	108.3	0.0	108.3		
F22	<u>MC-85 to I-10</u>													
	MC85 - Southern Ave (New)	150.0	3.0	GPL	0.5		9.2	9.6	0.0	9.6	0.0	9.6		5/29/08
	Southern Ave – I-10 Papago (New)	152.0	3.0	GPL	1.6		11.1	12.6	0.0	12.6	0.0	12.6		7/27/11
	Broadway Rd - Lower Buckeye (Connecting Rd)	153.0	3.0	GPL	0.0		4.7	4.7	0.0	4.7	0.0	4.7		FY 2009
	Warner Street Bridge	153.4	0.2	GPL	0.0		0.0	0.0	5.3	5.3	0.0	5.3	1	
	Subtotal				2.0	0.0	24.9	26.9	5.3	32.2	0.0	32.2		
	TOTAL SR-85				6.0	36.3	92.5	134.9	5.7	140.6	0.0	140.6		
	SR-87													
F23	<u>Forest Boundry to Mile Post 213.0</u>													
	Forest Boundary – New Four Peaks (Widening)	194.0	8.0	MINOR	2.4	0.1	22.6	25.2	0.7	25.9	0.0	25.9		9/30/08
	New Four Pks Rd - Dos S Ranch (Widening)	202.0	5.4	MINOR	2.7	0.2	13.6	16.5	0.4	16.9	0.0	16.9		5/9/11
	MP 211.8 - MP 213.0 (Drainage)	211.8	1.2	MINOR	0.3	0.1	1.0	1.4	0.2	1.6	0.0	1.6		5/9/11
	Subtotal				5.5	0.4	37.3	43.1	1.4	44.4	0.0	44.4		
	TOTAL SR-87				5.5	0.4	37.3	43.1	1.4	44.4	0.0	44.4		
	SR-88													
F24	<u>Fish Creek Hill</u>													
	Fish Creek Hill (Ret Walls)	223.0	2.0	MINOR	0.6	0.0	0.0	0.6	0.0	0.6	0.0	0.6		2/2012
	Subtotal				0.6	0.0	0.0	0.6	0.0	0.6	0.0	0.6		
	TOTAL SR-88				0.6	0.0	0.0	0.6	0.0	0.6	0.0	0.6		
	US-93													
F25	<u>Wickenburg By-Pass</u>													
	Wickenburg By-Pass	196.0	1.7	GPL	1.2	12.9	35.7	49.8	2.6	52.4	0.0	52.4		2/26/10
	Subtotal				1.2	12.9	35.7	49.8	2.6	52.4	0.0	52.4		
	TOTAL US-93				1.2	12.9	35.7	49.8	2.6	52.4	0.0	52.4		
	SR-101													
F26	<u>I-10 to US-60</u>													
	I-10 Papago - VanBuren (99th Ave) (Widening)	1.7	1.7	MINOR	0.9	0.8	4.0	5.7	0.9	6.5	0.0	6.5		12/19/10
	I-10 Papago - I-17 Black Canyon, Ph 1 (FMS)	1.7	21.7	FMS	0.9		9.8	10.7	0.0	10.7	0.0	10.7		

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
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	I-10 Papago - I-17 Black Canyon, Ph 2 (FMS)	1.7	21.7	FMS	0.2	0.0	0.0	0.2	9.8	9.9	0.0	9.9		
	I-10 Papago - Grand Ave (GPL)	1.7	9.0	GPL				0.0	7.6	7.6	108.8	116.4	3	
	I-10 Papago - Tatum Blvd (HOV)	1.7	31.0	HOV	2.2	0.3	106.8	109.2	0.7	110.0	0.0	110.0		10/29/11
	Bethany Home Rd TI, North Half	6.0	0.5	NEW TI	1.2	0.0	8.4	9.6	0.0	9.6	0.0	9.6		9/14/07
	Maryland Ave HOV Ramps	6.5	0.8	HOV TI	0.3	0.0	0.0	0.3	15.2	15.5	0.0	15.5	U	
	Northern Ave - 31st Ave (Med LS)	8.0	14.0	MINOR	0.2		0.7	0.9	0.0	0.9	0.0	0.9		
	Olive Ave TI (Impr)	9.0	1.0	IMP TI	0.4		3.4	3.9	0.0	3.9	0.0	3.9		7/22/11
	Subtotal				6.2	1.0	133.2	140.5	34.1	174.6	108.8	283.4		
F27	<u>US-60 to I-17</u>													
	Grand Ave - I-17 Black Canyon (GPL)	11.2	12.4	GPL				0.0	0.0	0.0	150.4	150.4	3	
	Thunderbird Rd TI (Impr)	12.0	1.0	IMP TI	0.4		3.6	4.0	0.0	4.0	0.0	4.0		7/28/09
	Beardsley Rd / Union Hills Dr (TI Impr)	15.8	1.0	NEW TI	0.8	0.3	19.0	20.1	0.0	20.1	0.0	20.1		5/6/11
	Subtotal				1.2	0.3	22.6	24.0	0.0	24.0	150.4	174.4		
F28	<u>I-17 to Princess Dr.</u>													
	I-17 Black Canyon - SR51 Piestewa (FMS)	23.0	6.6	FMS	1.4		5.2	6.6	0.0	6.6	0.0	6.6		
	I-17 Black Cyn - 202L Red Mtn (MC Oversight)	23.0	28.0	DESIGN	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
	I-17 Black Cyn - Princess Dr (GPL) (D & RW)	23.0	12.6	GPL	2.3	0.0	0.1	2.3	1.0	3.4	0.0	3.4		
	I-17 Black Cyn - SR51 Piestewa (GPL)	23.0	6.6	GPL				0.0	73.5	73.5	0.0	73.5	2	
	SR51 Piestewa - Princess Dr (FMS) Des Constr	30.0	6.0	FMS	0.0		3.1	3.1	0.0	3.1	0.0	3.1		
	SR51 Piestewa - Princess Dr (GPL)	30.0	6.0	GPL				0.0	77.9	77.9	0.0	77.9	2	
	Tatum Blvd - Princess Dr (HOV)	31.0	5.0	HOV	1.4	0.0	16.3	17.7	0.0	17.7	0.0	17.7		7/19/09
	64th St TI	33.0	1.0	NEW TI	2.9	2.3	24.4	29.5	1.7	31.3	0.0	31.3		10/24/08
	Hayden Rd - Princess Drive (Drainage)	35.5	1.0	MINOR	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
	Subtotal				7.9	2.3	49.0	59.3	154.2	213.5	0.0	213.5		
F29	<u>Princess Dr. to SR-202</u>													
	Princess Dr - Shea Blvd (GPL)	36.0	5.0	GPL				0.0	56.4	56.4	0.0	56.4	2	
	Princess Dr - 202L Red Mountain (HOV)	36.0	15.4	HOV	4.4		57.4	61.9	0.0	61.9	0.0	61.9		11/8/08
	Shea Blvd - 202L Red Mtn (GPL) Constr	41.0	15.4	GPL	5.6		0.1	5.7	91.0	96.7	0.0	96.7	1	
	Shea Blvd - Chaparral Rd (GPL) Design	41.0	5.5	GPL	1.9	0.0	0.2	2.1	3.1	5.1	0.0	5.1		
	Chaparral Rd - 202L Red Mtn (GPL) Design	46.0	5.0	GPL	1.9	0.0	0.0	1.9	2.3	4.2	0.0	4.2		
	Pima Rd Extension, JPA	49.5	1.5	GPL				0.0	3.9	3.9	0.0	3.9		
	Subtotal				13.8	0.0	57.8	71.6	156.7	228.3	0.0	228.3		
F30	<u>SR-202/Red Mt. to SR-202/Santan</u>													
	202L Red Mountain - Baseline (HOV)	51.0	4.2	HOV	1.3		0.0	1.3	0.0	1.3	0.0	1.3		See below
	202L Red Mountain - 202L Santan (HOV)	51.0	7.0	HOV	2.0		35.8	37.8	0.0	37.8	0.0	37.8		2/2/10
	Balboa Drive Multi Use Path, Local	54.0	0.0	GPL				0.0	2.0	2.0	0.0	2.0		
	Baseline Rd - 202L Santan (FMS) Ramp Meters	55.6	4.8	FMS	0.1		0.4	0.5	0.0	0.5	0.0	0.5		
	Baseline Rd - 202L Santan (GPL)	55.6	6.4	GPL				0.0	53.4	53.4	0.0	53.4	2	
	Guadalupe Rd - Chandler Blvd (FMS)	56.6	4.6	FMS	0.2		3.1	3.3	0.1	3.4	0.0	3.4		
	Galveston Street (Drainage Imprv.)	59.0	1.0	MINOR	0.0		1.4	1.5	0.8	2.2	0.0	2.2		
	Subtotal				3.6	0.0	40.7	44.4	56.3	100.7	0.0	100.7		

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	TOTAL SR-101				32.8	3.6	303.3	339.7	401.3	741.0	259.2	1,000.2		
	SR-143													
F31	SR-143 at SR-202													
	SR143 / SR202L TI	0.8	1.5	NEW TI	5.2	0.4	21.6	27.2	0.9	28.1	0.0	28.1		7/9/12
	Subtotal				5.2	0.4	21.6	27.2	0.9	28.1	0.0	28.1		
	TOTAL SR-143				5.2	0.4	21.6	27.2	0.9	28.1	0.0	28.1		
	SR-202													
F32	I-10 to SR-101/Pima													
	I 10 / SR51 TI - 101L Pima (Design Build) (GPL)	0.0	10.0	GPL	10.5		205.8	216.3	0.0	216.3	0.0	216.3		8/11/10
	I 10 / SR51 TI - US60 (MC Oversight)	0.0	10.0	DESIGN	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
	Mill Ave & Washington St (GPL)	4.5	2.5	GPL	1.2		5.7	6.8	0.0	6.8	0.0	6.8		4/11/09
	Subtotal				11.6	0.0	211.5	223.1	0.0	223.1	0.0	223.1		
F33	SR-101/Pima to Gilbert Rd.													
	101L Pima – Gilbert Rd (FMS)	10.0	6.5	FMS	0.3		3.3	3.6	0.4	4.0	0.0	4.0		
	101L Pima – Gilbert Rd (GPL) Design Build	10.0	6.5	GPL	1.9	0.0	0.1	2.0	76.5	78.4	0.0	78.4	1	
	101L Pima – Gilbert Rd (HOV)	10.0	6.5	HOV	3.3		24.3	27.6	0.0	27.6	0.0	27.6		8/27/10
	Mesa Drive TI (Ramps Only)	14.0	0.5	NEW TI				0.0	0.0	0.0	13.5	13.5	3	
	Subtotal				5.5	0.0	27.7	33.2	76.8	110.0	13.5	123.5		
F34	Gilbert Rd. to US-60													
	Gilbert Rd - Broadway Rd (HOV) Design Build	16.3	12.5	HOV				0.0	43.1	43.1	0.0	43.1	1	
	Gilbert Rd - Higley Rd (GPL)	16.5	4.5	GPL				0.0	0.0	0.0	51.9	51.9	3	
	Higley Rd - US60 Superstition (GPL)	21.0	9.0	GPL				0.0	0.0	0.0	108.3	108.3	3	
	Broadway Rd Higley Rd - US60 Superstition (HOV)	28.8	2.2	HOV				0.0	5.7	5.7	0.0	5.7	2	
	US60 Superstition System TI HOV Ramps	29.5	1.0	HOV				0.0	0.0	0.0	42.1	42.1	3	
	Subtotal				0.0	0.0	0.0	0.0	48.8	48.8	202.3	251.1		
F35	US-60 to Val Vista Dr. - Gilbert Rd.													
	US60 Superstition - Val Vista Dr (GPL)	30.3	12.0	GPL				0.0	0.0	0.0	104.0	104.0	3	
	US60 Superstition - Gilbert Rd (HOV)	31.0	11.0	HOV				0.0	50.2	50.2	0.0	50.2	2	
	Subtotal				0.0	0.0	0.0	0.0	50.2	50.2	104.0	154.2		
F36	Val Vista Dr. - Gilbert Rd. to I-10/Maricopa													
	Val Vista Dr - Dobson Rd (FMS)	42.3	8.0	FMS				0.0	7.0	7.0	0.0	7.0		
	Val Vista Dr - Dobson Rd (GPL)	42.3	7.0	GPL				0.0	0.0	0.0	83.5	83.5	3	
	Gilbert Rd - I-10 Maricopa (HOV & 2 HOV Ramps)	44.5	13.0	HOV	2.1		99.2	101.3	0.3	101.7	0.0	101.7		10/9/11
	Dobson Rd - I-10 Maricopa (FMS)	49.3	6.0	FMS	0.0	0.0	0.0	0.0	6.0	6.0	0.0	6.0		
	Dobson Rd - I-10 Maricopa (GPL)	49.3	5.7	GPL				0.0	3.3	3.3	47.0	50.3	3	
	Subtotal				2.1	0.0	99.2	101.3	16.6	118.0	130.5	248.5		
F37	I-10/Maricopa to 51st Ave.													
	I-10 Maricopa - I-10 Papago (RW)	56.0	21.5	NEW	0.0	62.8	1.1	64.0	67.9	131.8	0.0	131.8		
	I-10 Maricopa - I-10 Papago (DCR)	56.0	21.5	NEW	19.1		0.6	19.7	3.1	22.8	0.0	22.8		
	I-10 Maricopa - 24th St (Seg 1)	56.3	3.0	NEW				0.0	178.3	178.3	0.0	178.3	1	
	24th St - 17th Ave (Seg 2)	59.3	3.8	NEW				0.0	138.8	138.8	0.0	138.8	1	

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	17th Ave - 51st Ave (Seg 3)	63.1	5.5	NEW				0.0	387.2	387.2	0.0	387.2	1	
	Subtotal				19.1	62.8	1.7	83.6	775.3	858.9	0.0	858.9		
F38	<u>51st Ave. to I-10/Papago</u>													
	51st Ave - Elliot Rd (Seg 4)	68.6	1.7	NEW				0.0	69.4	69.4	0.0	69.4	2	
	Elliot Rd - Baseline Rd (Seg 5)	70.3	2.0	NEW				0.0	96.8	96.8	0.0	96.8	2	
	Baseline Rd - Salt River (Seg 6)	72.3	1.2	NEW				0.0	53.2	53.2	0.0	53.2	2	
	Salt River Bridge (Seg 7)	73.3	1.0	NEW				0.0	92.9	92.9	0.0	92.9	11	
	Salt River - Buckeye Rd (Seg 8)	75.3	2.0	NEW				0.0	181.0	181.0	0.0	181.0	1	
	I-10 Papago / 202L System TI (Seg 9)	77.3	2.0	NEW				0.0	594.1	594.1	0.0	594.1	1	
	Subtotal				0.0	0.0	0.0	0.0	1,087.4	1,087.4	0.0	1,087.4		
	TOTAL SR-202				38.3	62.9	340.2	441.3	2,055.1	2,496.4	450.3	2,946.7		
	SR-303													
F39	<u>Riggs Rd. to I-10</u>													
	Riggs Rd - SR30 / MC85 (R/W Protection)	86.0	14.0	NEW	1.4	0.0	0.1	1.5	0.8	2.3	46.6	48.9		
	MC85 - Van Buren St, Ph1 (I-10)	100.0	3.0	NEW	3.3		0.1	3.4	82.8	86.3	0.0	86.3	2	
	MC85 - Van Buren St, Ph 2 (I-10)	100.0	3.0	NEW				0.0	81.0	81.0	85.8	166.8	3	
	MC85 - I-17 Black Canyon (RW)	100.0	3.0	NEW		7.1	0.0	7.1	0.2	7.2	0.0	7.2		
	Subtotal				4.8	7.1	0.1	12.0	164.8	176.8	132.4	309.2		
F40	<u>I-10 to US-60</u>													
	SR303L / FCDMC Study (JPA)			NEW	0.4		0.0	0.4	0.0	0.4	0.0	0.4		
	I-10 / 303L System TI, Ph 2	103.0	1.0	NEW	0.0		0.0	0.0	68.5	68.5	0.0	68.5	1	
	I-10 / 303L TI, Ph 1 (Landscape)	103.9	1.7	LS	0.0	0.0	0.0	0.0	7.1	7.1	0.0	7.1		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.0		0.1	1.0	0.2	1.2	0.0	1.2		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.6		0.0	1.6	0.0	1.6	0.0	1.6		
	I-10 / 303L System TI, Ph 1, I-10 Realignment	103.9	1.7	NEW	19.5	89.0	114.2	222.8	77.6	300.3	0.0	300.3		
	Thomas Rd - Camelback Rd (Landscape)	105.6	2.0	LS	0.0	0.0	0.0	0.0	2.7	2.7	0.0	2.7	U	
	Thomas Rd - Peoria Ave (30% Design & RW)	105.6	7.0	NEW	2.4	48.3	2.5	53.2	43.3	96.6	0.0	96.6		
	Thomas Rd - Camelback Rd (Seg C) (New)	105.6	2.0	NEW	4.6		25.9	30.5	16.6	47.1	0.0	47.1	U	
	Camelback Rd - Glendale Ave (Landscape)	107.6	2.0	LS	0.0	0.0	0.0	0.0	2.9	2.9	0.0	2.9		
	Camelback Rd - Glendale Ave (Seg E) (New)	107.6	2.0	NEW	4.4		5.8	10.2	49.3	59.5	0.0	59.5	U	
	Glendale Ave - Peoria Ave (Landscape)	109.6	3.0	LS	0.0	0.0	0.0	0.0	4.1	4.1	0.0	4.1		
	Glendale Ave - Peoria Ave (Seg B) (New)	109.6	3.0	NEW	8.0		63.0	70.9	34.1	105.0	0.0	105.0	U	
	Northern Ave Parkway	111.0	1.0	NEW TI				0.0	5.6	5.6	80.0	85.6	3	
	Peoria Ave - Waddell Rd (Landscape)	112.6	2.0	LS	0.3	0.0	0.0	0.3	2.4	2.7	0.0	2.7		
	Peoria Ave -Bell Rd (30% Design & RW)	112.6	3.4	NEW	1.7	27.2	1.2	30.1	14.8	44.9	0.0	44.9		
	Peoria Ave - Mtn View Rd (Seg D & F) (New)	112.6	5.9	NEW	4.3		131.7	136.1	27.0	163.1	0.0	163.1	U	
	Cactus Rd, Waddell Rd & Bell Rd (New)	113.6	0.2	NEW	3.9		33.4	37.4	0.7	38.1	0.0	38.1		3/8/11
	Waddell Rd - Mtn View Blvd (Landscape)	114.6	3.9	LS	0.4	0.0	0.0	0.4	4.6	5.0	0.0	5.0		
	Waddell Rd - Mtn View Rd (F) (New)	114.6	3.0	NEW	7.2		3.7	10.9	3.1	14.0	0.0	14.0	U	
	Bell Rd - US60 Grand (30% Design & RW)	116.6	3.0	NEW	1.4	10.4	0.3	12.1	22.6	34.6	0.0	34.6		
	US60 / 303L TI (Interim) (Landscaping)	118.1	1.1	LS				0.0	3.2	3.2	0.0	3.2		

PROJECTS					EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY13) YOY \$'s	R/W (FY06-FY26) YOY \$'s	CONST. (FY06-FY13) YOY \$'s	TOTAL (FY06-FY13) YOY \$'s	COSTS (FY14-FY26) '13 \$'s	COSTS (FY06-FY26) YOY & '13 \$'s	COSTS (FY27-FY35) '13 \$'s	COSTS (FY06-FY35) YOY & '13 \$'s	Progr. Group for Final Construct.	Date Open to Traffic
	US60 Grand / 303L TI (Interim)	118.1	1.1	NEW	1.6	0.0	0.1	1.6	52.3	53.9	0.0	53.9	1	
	US60 Grand / 303L TI (Final)	118.1	1.1	NEW				0.0	124.9	124.9	0.0	124.9	2	
	Subtotal				62.4	175.0	382.0	619.4	567.6	1,187.0	80.0	1,267.0		
F41	<u>US-60 to I-17</u>													
	US60 Grand Ave - I-17 Black Canyon (Final)	119.6	20.0	NEW				0.0	0.0	0.0	227.4	227.4	3	
	US60 Grand - Happy Valley Rd (DESIGN BUILD)	119.6	7.0	NEW	3.5	0.1	0.1	3.8	54.3	58.0	0.0	58.0	1	
	El Mirage Rd TI	123.2	1.0	NEW TI	0.0		0.0	0.0	36.4	36.4	0.0	36.4	1	
	Happy Valley Rd – Lake Pleasant Rd (Interim)	125.2	5.3	NEW	14.1		114.2	128.4	10.0	138.4	0.0	138.4		5/13/11
	Happy Valley Rd - I-17 Blk Cyn (RW & 30% Design)	125.2	13.0	NEW	4.4	41.4	0.0	45.8	1.1	46.9	0.0	46.9		
	Lake Pleasant Rd – I-17 Black Canyon (Interim)	130.5	7.2	NEW	10.5		81.9	92.4	6.5	98.9	0.0	98.9		5/13/11
	Lake Pleasant Rd – I-17 Black Canyon (Landscape)	130.5	7.2	LS	0.0		0.3	0.3	0.0	0.4	0.0	0.4		
	Subtotal				32.5	41.5	196.6	270.7	108.3	379.0	227.4	606.4		
	TOTAL SR-303				99.8	223.6	578.7	902.1	840.7	1,742.7	439.8	2,182.5		
	SYSTEMWIDE PROGRAMS													
	Maintenance (Landscape, Litter & Sweep)				0.0	0.0	82.9	82.9	185.5	268.4	148.5	416.9		
	Freeway Management (FMS, Frwy. Service Patrol)				5.8	0.0	11.6	17.5	74.5	92.0	19.6	111.6		
	Noise Mitigation (Quiet Pavement, Noise Walls)				3.2	0.2	59.2	62.7	30.9	93.6	120.0	213.6		
	Engineering (Pre. Engr., R/W Mgmt, Risk Mgmt.)				36.8	5.2	0.1	42.1	266.0	308.1	81.8	389.9		
	Subtotal				45.8	5.5	153.8	205.1	557.0	762.1	369.9	1,132.0		
	TOTAL SYSTEMWIDE PROGRAMS				45.8	5.5	153.8	205.1	557.0	762.1	369.9	1,132.0		
	GRAND TOTALS				364.0	608.7	2,337.9	3,310.6	5,805.5	9,116.1	3,679.5	12,795.6		

<u>ABREV.</u>	<u>PROGRAM GROUPS</u>
1	GROUP 1 (FY 2014 - FY 2018)
2	GROUP 2 (FY 2019 - FY 2026)
3	GROUP (FY 2027 - FY 2025)
U	UNDERWAY

<u>PROJECT CATEGORIES</u>	
NEW	New Freeway or Highway
GPL	Addition of General Purpose Lanes
HOV	Addition of HOV Lanes
GPL HOV	Addition of General Purpose Lane Widening & HOV Lane Widening
NEW TI	New TI or Reconstruct TI
IMP TI	Existing TI Improvement
HOV TI	HOV Ramps
LS	Landscaping
IMP	Improvements to Existing Roadway
MINOR	Minor Improvements to Existing Roadway
WIDENING	Minor lane widening improvement, shoulder widening, turn lanes
FMS	Freeway Management
FSP	Freeway Service Patrol
NOISE	Noise Mitigation Project (Quiet Pavement)
RW	Right of Way Administration
RW PROT	Right of Way Protection
MAINT	Maintenance
P R LOTS	Park and Ride Lots
DESIGN	Design Administration
ADMIN	Administrative Tasks or Functions

Appendix B

Arterial Street Life Cycle Program

TABLE B-1
ARTERIAL STREET LIFE CYCLE PROGRAM
REGIONAL FUNDING REIMBURSEMENTS AND TOTAL EXPENDITURES: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

YOE Year of Expenditure CONST Construction
FY Fiscal Year Expend Expenditures
\$ Dollars Reimb Reimbursement(s)

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
CHANDLER												
A1	Arizona Ave/Chandler Blvd	3.582	0.000	0.000	3.582	7.375	0.000	0.000	7.375	2006	0.25	Project Completed
A2	Arizona Ave/Elliot Rd	3.211	0.000	0.000	3.211	4.587	0.000	0.000	4.587	2007	0.25	Project Completed
A3	Arizona Ave/Ray Rd	3.464	0.000	0.000	3.464	4.949	0.000	0.000	4.949	2007	0.25	Project Completed
A4	Arizona Ave: Ocotillo Rd to Hunt Highway	0.000	4.433	3.018	7.451	0.000	10.359	0.000	10.359	2023	3.00	
A5	Chandler Blvd/Alma School Rd	0.481	2.866	0.942	4.289	0.687	11.204	0.000	11.891	2015	0.25	HSIP Recipient
A6	Chandler Blvd/Dobson Rd	2.500	0.000	0.000	2.500	10.667	0.000	0.000	10.667	2012	0.25	Project Completed
A7	Chandler Blvd/Kyrene Rd	0.000	0.000	3.776	3.776	0.000	5.606	2.879	8.485	2027	0.25	
A8	Gilbert Rd: SR-202L to Hunt Hwy	14.868	12.354	1.770	28.991	24.287	21.206	0.000	45.493	2019		
	Gilbert Rd: SR-202L/Germann to Queen Creek Rd	6.752	0.000	0.000	6.752	10.316	0.000	0.000	10.316	2010	1.25	Project Completed
	Gilbert Rd: Queen Creek Rd to Hunt Hwy	2.467	0.777	0.000	3.244	3.729	0.905	0.000	4.634	N/A	N/A	Design and ROW project only.
	Gilbert Rd: Queen Creek Rd to Ocotillo Rd	5.649	1.889	0.000	7.537	8.069	2.698	0.000	10.767	2014	1.00	
	Gilbert Rd: Ocotillo Rd to Chandler Heights	0.000	6.160	0.000	6.160	0.000	9.706	0.000	9.706	2014	1.00	
	Gilbert Rd: Chandler Heights Rd to Riggs Rd	0.000	1.764	0.885	2.649	0.000	5.035	0.000	5.035	2014	1.00	Project combined with ACIGIL1003F
	Gilbert Rd: Riggs Rd to Hunt Hwy	0.000	1.764	0.885	2.649	2.172	2.863	0.000	5.035	2014	1.00	Project combined with ACIGIL1003E
A9	Kyrene Rd/Ray Rd	0.000	3.775	0.000	3.775	0.000	8.753	0.000	8.753	2025	0.25	
A10	Price Rd Substitute Projects	3.053	40.536	1.408	44.997	13.624	76.979	0.000	90.603	2024	6.00	
	Chandler Heights Rd: Arizona Avenue to McQueen Road	0.000	7.325	0.000	7.325	0.000	11.157	0.000	11.157	2020	1.00	
	Chandler Heights Road: McQueen Road to Gilbert Road	0.000	6.535	0.000	6.535	0.000	17.903	0.000	17.903	2022	3.00	
	McQueen Road: Ocotillo Road to Riggs Road	0.000	6.482	0.000	6.482	6.128	6.635	0.000	12.763	2018	2.00	
	Ocotillo Road: Arizona Avenue to McQueen Road	0.000	5.295	1.408	6.703	3.135	15.546	0.000	18.680	2014	1.00	HSIP Recipient
	Ocotillo Road: Cooper Road to Gilbert Road	0.000	6.499	0.000	6.499	0.000	13.637	0.000	13.637	2024	2.50	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
	Price Rd at Germann Rd: Intersection Improvements	0.000	3.178	0.000	3.178	0.000	5.415	0.000	5.415	2021	0.25	
	Price Rd at Queen Creek Rd: Intersection Improvements	0.000	5.222	0.000	5.222	0.000	6.687	0.000	6.687	2021	0.25	
	Price Rd: Santan to Germann	3.053	0.000	0.000	3.053	4.361	0.000	0.000	4.361	2008	1.25	Project Completed
A11	Ray Rd/Alma School Rd	2.217	0.000	0.000	2.217	3.323	0.000	0.000	3.323	2012	0.25	HSIP Recipient
A12	Ray Rd/Dobson Rd	0.000	6.718	0.000	6.718	0.000	10.515	0.000	10.515	2020	0.25	
A13	Ray Rd/McClintock Dr	0.000	5.646	0.000	5.646	0.000	7.615	0.000	7.615	2018	0.25	
A14	Ray Rd/Rural Rd	0.000	3.775	0.000	3.775	0.000	7.907	0.000	7.907	2025	0.25	
CHANDLER/GILBERT												
A15	Queen Creek Rd: Arizona Ave to Higley Rd	16.565	7.448	5.112	29.125	25.828	15.982	0.000	41.810	2021	4.00	
	CHANDLER Queen Creek Rd: Arizona Ave to McQueen Rd	5.672	0.000	0.000	5.672	8.103	0.000	0.000	8.103	2009	1.00	Project Completed
	CHANDLER Queen Creek Rd: McQueen Rd to Gilbert Rd	0.000	7.448	5.112	12.560	2.164	15.982	0.000	18.146	2021	2.00	
	GILBERT Queen Creek Rd: Greenfield Rd to Higley	10.893	0.000	0.000	10.893	15.562	0.000	0.000	15.562	2012	1.00	Project Completed. Savings reallocated to AIIGUD3003 and ACIGER2003B
EL MIRAGE/MARICOPA COUNTY												
A94	El Mirage Rd: Northern Ave to Bell Rd (Phase I)	2.117	22.544	0.000	24.661	12.857	30.695	0.000	43.553	2015	4.25	
	El Mirage Road Design Concept Report	1.448	0.000	0.000	1.448	2.334	0.000	0.000	2.334	-----	-----	Project completed.
	El Mirage Rd: Bell Rd to Picerne Dr (MC)	0.000	0.000	0.000	0.000	7.013	0.000	0.000	7.013	2013	0.50	Project completed.
	El Mirage Rd: Northern Ave to Cactus (MC)	0.669	0.000	0.000	0.669	0.956	0.000	0.000	0.956	-----	-----	Project completed. Design only. Savings reallocated to ACIELM2003D.
	El Mirage Rd: Cactus to Grand & Thunderbird Rd: El Mirage to Grand (ELM)	0.000	1.788	0.000	1.788	2.554	1.044	0.000	3.598	-----	-----	Design only
	El Mirage Rd: Northern Ave to Peoria Ave (MC)	0.000	10.327	0.000	10.327	0.000	14.753	0.000	14.753	2015	2.00	
	Thunderbird Rd: El Mirage Rd to Grand Avenue (ELM)	0.000	2.817	0.000	2.817	0.000	4.024	0.000	4.024	2016	0.95	
	El Mirage Rd: Peoria Ave to Cactus Rd (ELM)	0.000	7.612	0.000	7.612	0.000	10.875	0.000	10.875	2016	1.00	
A37	El Mirage Rd: Northern Ave to Bell Rd (Phase II)	0.000	13.553	0.000	13.553	0.000	19.361	0.100	19.461	2031	3.60	
	El Mirage Rd: Cactus to Grand Avenue (ELM)	0.000	13.553	0.000	13.553	0.000	19.361	0.000	19.361	2019	1.60	
	El Mirage Rd: Grand Avenue to Picerne Drive (MC)	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	2031	2.00	
FOUNTAIN HILLS												
A16	Shea Blvd: Palisades Blvd to Cereus Wash	0.496	5.008	0.692	6.196					2021	3.00	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
	Shea Blvd: Palisades Blvd to Fountain Hills Blvd	0.248	0.000	0.000	0.248	0.355	0.000	0.000	0.355	----	----	Project is for design only. Project Completed.
	Shea Blvd: Technology Dr to Cereus Wash	0.248	2.877	0.000	3.125	0.354	4.576	0.000	4.930	2014	0.80	
	Shea Blvd: Fountain Hills Blvd to Technology Dr	0.000	2.131	0.692	2.823	0.000	4.826	0.000	4.826	2021	2.20	
GILBERT												
A17	Elliot Rd/Cooper Rd	0.000	4.140	0.000	4.140	0.000	7.615	0.000	7.615	2017	0.50	
A18	Elliot Rd/Gilbert Rd	0.000	3.775	3.600	7.375	0.000	9.382	0.000	9.382	2020	0.50	
A19	Elliot Rd/Greenfield Rd	0.000	3.774	0.000	3.774	0.000	7.895	0.000	7.895	2021	0.50	
A20	Elliot Rd/Higley Rd	0.000	3.775	1.137	4.912	0.000	7.615	0.000	7.615	2021	0.50	
A21	Elliot Rd/Val Vista Dr	0.000	3.775	0.699	4.474	0.000	7.615	0.000	7.615	2020	0.50	
A22	Germann Rd: Gilbert Rd to Power Rd	0.000	23.101	1.458	24.559	3.137	32.643	0.000	35.780	2020	4.00	
	Germann Rd: Gilbert Rd to Val Vista Dr	0.000	5.285	1.458	6.743	0.000	12.386	0.000	12.386	2022	2.00	
	Germann Rd: Val Vista Dr to Higley Rd	0.000	17.816	0.000	17.816	3.137	20.257	0.000	23.394	2015	2.00	Received project savings from ACIQNC1003C
A23	Greenfield Rd: Elliot Rd to Ray Rd	0.000	3.775	0.000	3.775	0.000	0.000	5.254	5.254	2027	2.00	
A24	Guadalupe Rd/Cooper Rd	0.576	4.611	0.000	5.187	0.823	4.113	0.000	4.936	2014	0.50	Received project savings from ACIQNC1003C.
A25	Guadalupe Rd/Gilbert Rd	0.092	3.683	0.000	3.775	0.131	7.064	0.000	7.196	2015	0.50	
A26	Guadalupe Rd/Greenfield Rd	0.000	2.992	1.919	4.912	0.000	9.534	0.000	9.534	2024	0.50	
A27	Guadalupe Rd/Power Rd	0.000	2.379	3.901	6.280	0.000	9.704	0.000	9.704	2025	0.50	
A28	Guadalupe Rd/Val Vista Dr	0.000	3.775	0.000	3.775	0.000	7.615	0.000	7.615	2022	0.50	
A30	Ray Rd: Val Vista Dr to Power Rd	0.000	16.683	0.000	16.683	0.000	21.239	0.000	21.239	2025	4.00	Project segments combined
A31	Ray Rd/Gilbert Rd	0.000	0.000	3.775	3.775	0.000	7.615	0.000	7.615	2026	0.50	
A32	Val Vista Dr: Warner Rd to Pecos	10.398	0.000	0.000	10.398	15.271	0.000	0.000	15.271	2006	2.90	FY08 RARF Closeout Project. Project Completed.
A33	Warner Rd/Cooper Rd	3.701	0.000	0.000	3.701	6.268	0.000	0.000	6.268	2010	0.50	Project Completed
A34	Warner Rd/Greenfield Rd	0.000	3.775	0.000	3.775	0.000	7.615	0.000	7.615	2022	0.50	
GILBERT/MESA/MARICOPA COUNTY												
A29	Power Rd: Santan Fwy to Chandler Heights	8.634	11.957	0.000	20.591	24.562	57.242	0.000	81.804	2024	5.00	
	Power Rd/Pecos (GIL)	5.143	0.000	0.000	5.143	7.347	0.000	0.000	7.347	2008	0.50	Project Completed
	Power Rd: Santan Fwy to Pecos Rd (MES)	3.491	11.957	0.000	15.448	17.215	29.249	0.000	46.464	2014	1.50	Lead Agency changed from Gilbert to Mesa in July 2012
	Power Rd: Pecos to Chandler Heights (GIL)	0.000	0.000	0.000	0.000	0.000	27.993	0.000	27.993	2025	3.00	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
A45	Power Rd: Baseline Rd to Santan Fwy	7.760	8.193	0.000	15.953	17.664	11.785	0.000	29.449	2018	4.50	
	Power Rd: East Maricopa Floodway to Santan Fwy/Loop 202 (MES)	0.000	8.193	0.000	8.193	0.575	11.785	0.000	12.360	2023	3.50	
	Power Rd: Baseline Rd to East Maricopa Floodway (MC)	7.760	0.000	0.000	7.760	17.089	0.000	0.000	17.089	2009	1.00	Project Completed
MARICOPA COUNTY												
A35	Dobson Rd: Bridge over Salt River	0.000	18.632	0.000	18.632	0.000	47.802	0.000	47.802	2019	1.60	
A36	El Mirage Rd: Bell Rd to Jomax Rd	9.735	9.725	0.000	19.461	20.340	12.298	5.590	38.228	2027	6.20	
	El Mirage Rd: Bell Rd to Deer Valley Dr	4.201	9.725	0.000	13.926	12.433	0.000	0.000	12.433	2011	3.00	Project Completed
	El Mirage Rd: L303 to Jomax	0.000	0.000	0.000	0.000	0.000	12.298	5.590	17.889	2027	2.00	
	El Mirage Rd: Deer Valley Dr to L303	5.535	0.000	0.000	5.535	7.906	0.000	0.000	7.906	2009	1.20	FY10 RARF Closeout Project. Project Completed.
A38	Gilbert Rd: Bridge over Salt River	0.000	14.005	0.000	14.005	0.000	42.485	0.000	42.485	2020	1.62	
A39	Jomax Rd: SR-303L to Sun Valley Parkway	0.000	6.830	17.761	24.591	0.000	35.130	0.000	35.130	----	18.50	ROW project only
A40	McKellips Rd: Bridge over Salt River	0.000	0.000	14.005	14.005	0.925	2.832	28.343	32.101	2028	0.80	
A41	McKellips Rd: SR-101L to SRP-MIC/Alma School Rd	0.000	22.885	14.567	37.452	1.459	57.680	0.000	59.138	2019	1.96	
A42	Northern Pkwy: Sarival to Grand (Phase I)	60.219	0.000	0.000	60.219	81.993	0.000	0.000	81.993	2013	12.50	Total corridor length is 12.5 miles
	Northern Parkway: Sarival to Dysart	57.618	0.000	0.000	57.618	74.861	0.000	0.000	74.861	2013	4.10	
	Northern Parkway: ROW Protection	2.601	0.000	0.000	2.601	7.132	0.000	0.000	7.132	2012	12.50	
A43	Northern Pkwy: Sarival to Grand (Phase II)	15.213	72.728	0.000	87.941	26.409	99.185	0.000	125.594	2021	12.50	
	Northern Parkway: Sarival to Dysart	2.896	0.000	0.000	2.906	3.069	0.000	0.000	3.069	2014	4.10	Landscape and construction project.
	Northern Pkwy: Dysart to 111th	5.103	21.643	0.000	26.747	10.244	28.190	0.000	38.434	2015	2.50	Project scope includes Agua Fria Bridge and Sarival Overpass
	Northern Parkway: Reems and Litchfield Overpasses	7.214	0.000	0.000	7.214	13.096	0.000	0.000	13.096	2014	0.20	Combined two segments
	Northern Pkwy: Northern Ave at L101	0.000	8.448	0.000	8.448	0.000	12.299	0.000	12.299	2016	0.50	
	Northern Pkwy: Dysart Overpass	0.000	23.357	0.000	23.357	0.000	33.066	0.000	33.066	2017	0.10	
	Northern Pkwy: ROW Protection	0.000	1.400	0.000	1.400	0.000	2.000	0.000	2.000	2016	12.50	
	Northern Parkway: Interim Construction	0.000	17.880	0.000	17.880	0.000	23.630	0.000	23.630	2021	12.50	
A44	Northern Pkwy: Sarival to Grand (Phase III)	0.000	72.726	0.000	88.566	0.000	125.624	0.000	125.624	2025	12.50	
	Northern Pkwy: El Mirage Alternative Access	0.000	2.915	0.000	2.915	0.000	4.014	0.000	4.014	2019	1.00	

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			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
	Northern Pkwy: El Mirage Overpass	0.000	21.515	0.000	21.515	0.000	30.587	0.000	30.587	2021	0.10	
	Northern Pkwy: Agua Fria to 111th	0.000	2.817	0.000	2.817	0.000	3.874	0.000	3.874	2021	1.00	
	Northern Pkwy: 111th to 107th	0.000	15.424	0.000	15.424	0.000	21.883	0.000	21.883	2024	0.50	
	Northern Pkwy: 107th to 99th	0.000	20.572	0.000	20.572	0.000	29.239	0.000	29.239	2025	1.00	
	Northern Pkwy: Loop 101 to 91st	0.000	3.575	0.000	3.575	0.000	4.957	0.000	4.957	2026	0.50	
	Northern Pkwy: 91st to Grand Intersection Improvements	0.000	5.907	0.000	5.907	0.000	8.229	0.000	8.229	2025	3.00	
	Northern Pkwy: ROW Protection	0.000	0.000	0.000	0.000	0.000	4.250	0.000	4.250	2026	12.50	
	Northern Pkwy: Ultimate Construction	0.000	15.840	0.000	15.840	0.000	18.591	0.000	18.591	2026	12.50	
MESA												
A46	Baseline Rd: Power Rd to Meridian Rd	0.000	18.297	0.000	18.297	0.000	19.403	0.000	19.403	2017	6.00	
	Baseline Rd: Power Rd to Ellsworth Rd	0.000	8.936	0.000	8.936	0.000	9.476	0.000	9.476	2016	3.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Baseline Rd: Ellsworth Rd to Meridian Rd	0.000	9.361	0.000	9.361	0.000	9.927	0.000	9.927	2017	3.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A47	Broadway Rd: Dobson Rd to Country Club	0.082	3.751	4.741	8.574	0.117	20.002	0.000	20.119	2023	2.00	
A48	Country Club/University Dr	0.000	8.325	0.000	8.325	0.000	21.138	0.000	21.138	2022	1.00	
A49	Country Club/Brown Rd	0.000	4.030	0.000	4.030	0.000	4.273	0.000	4.273	2019	0.50	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A50	Crismon Rd: Broadway Rd to Germann Rd	0.000	24.732	9.919	34.651	0.000	49.130	0.000	49.130	2026	9.00	
	Crismon Rd: Broadway Rd to Guadalupe Rd	0.000	0.000	9.919	9.919	0.000	17.965	0.000	17.965	2026	3.00	
	Crismon Rd: Guadalupe Rd to Ray Rd	0.000	12.406	0.000	12.406	0.000	18.094	0.000	18.094	2025	3.00	
	Crismon Rd: Ray Rd to Germann Rd	0.000	12.327	0.000	12.327	0.000	13.072	0.000	13.072	2017	3.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A51	Dobson Rd/Guadalupe Rd	2.170	0.000	0.000	2.170	4.915	0.000	0.000	4.915	2011	0.50	Project Completed
A52	Dobson Rd/University Dr	0.000	0.000	4.921	4.921	0.000	3.170	5.054	8.224	2027	0.50	
A53	Elliot Rd: Power Rd to Meridian Rd	0.000	9.330	8.646	17.976	0.000	27.003	0.000	27.003	2026	6.00	
	Elliot Rd: Power Rd to Ellsworth Rd	0.000	0.000	8.646	8.646	0.000	13.396	0.000	13.396	2026	3.00	
	Elliot Rd: Ellsworth Rd to Meridian Rd	0.000	9.330	0.000	9.330	0.000	13.607	0.000	13.607	2025	3.00	
A54	Germann Rd: Ellsworth Rd to Signal Butte Rd	0.000	12.795	0.000	12.795	0.000	13.569	0.000	13.569	2018	2.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.

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A55	Gilbert Rd/University Dr	2.741	0.000	0.000	2.741	10.566	0.000	0.000	10.566	2010	0.50	Project Completed
A56	Greenfield Rd: University Rd to Baseline Rd	5.777	0.000	6.585	12.361	8.688	11.756	0.000	20.444	2021	3.00	
	Greenfield Rd: Baseline Rd to Southern Ave	5.777	0.000	0.000	5.777	8.688	0.000	0.000	8.688	2010	1.00	Project Completed
	Greenfield Rd: Southern Ave to University Rd	0.000	0.000	6.585	6.585	0.000	11.756	0.000	11.756	2021	2.00	
A57	Guadalupe Rd: Power Rd to Meridian Rd	0.000	25.269	0.000	25.269	0.000	26.797	0.000	26.797	2019	6.00	
	Guadalupe Rd: Power Rd to Hawes Rd	0.000	8.790	0.000	8.790	0.000	9.321	0.000	9.321	2018	2.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Hawes Rd to Crimson Rd	0.000	8.921	0.000	8.921	0.000	9.461	0.000	9.461	2018	2.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Crimson Rd to Meridian Rd	0.000	7.558	0.000	7.558	0.000	8.015	0.000	8.015	2019	2.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A58	Hawes Rd: Broadway Rd to Ray Rd	0.416	11.523	0.000	11.939	0.708	26.646	0.000	27.354	2026	6.00	
	Hawes Rd: Broadway Rd to US60	0.000	0.000	0.000	0.000	0.000	10.697	0.000	10.697	2022	2.00	
	Hawes Rd: Baseline Rd to Elliot Rd	0.000	7.108	0.000	7.108	0.000	10.368	0.000	10.368	2026	2.00	
	Hawes Rd: Elliot Rd to Santan Freeway	0.000	4.415	0.000	4.415	0.000	5.581	0.000	5.581	2026	1.25	
	Hawes Rd: Santan Freeway to Ray Rd	0.416	0.000	0.000	0.416	0.708	0.000	0.000	0.708	2011	0.75	Project Completed
A59	Higley Rd Parkway: S 60 to SR-202L	0.000	17.163	0.000	17.163	0.000	18.201	0.000	18.201	2020	6.50	
	Higley Rd Parkway: SR-202L to Brown Rd	0.000	8.582	0.000	8.582	0.000	9.100	0.000	9.100	2019	3.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Higley Rd Parkway: Brown Rd to US-60	0.000	8.582	0.000	8.582	0.000	9.100	0.000	9.100	2020	3.50	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A60	Higley Rd Parkway: US 60 to SR 202L (RM) Grade Separations	0.000	22.490	0.000	22.490	0.000	23.850	0.000	23.850	2020	1.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A61	Lindsay Rd/Brown Rd	0.000	3.919	0.000	3.919	0.000	5.565	0.000	5.565	2026	0.50	
A62	McKellips Rd: East of Sossaman to Meridian	0.000	12.283	0.000	12.283	0.000	28.989	0.000	28.989	2026	5.00	
	McKellips Rd: East of Sossaman to Crismon Rd	0.000	12.283	0.000	12.283	0.000	17.444	0.000	17.444	2026	3.00	
	McKellips Rd: Crismon Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	11.545	0.000	11.545	2026	2.00	
A63	McKellips Rd: Gilbert Rd to Power Rd	1.105	23.832	0.000	21.663	0.735	32.579	0.000	33.314	2026	3.00	

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	McKellips Rd/Lindsay Rd	0.043	6.137	0.000	6.180	0.123	9.628	0.000	9.751	2026	0.50	
	McKellips Rd/Greenfield Rd	0.040	2.630	0.000	2.670	0.573	2.881	0.000	3.453	2021	0.50	
	McKellips Rd/Higley Rd	0.040	6.310	0.000	6.350	0.040	9.175	0.000	9.215	2022	0.50	
	McKellips Rd/Power Rd	0.000	3.393	0.000	3.393	0.000	3.598	0.000	3.598	2019	0.50	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Recker Rd	0.000	3.393	0.000	3.393	0.000	5.210	0.000	5.210	2026	0.50	
	McKellips Rd/Val Vista Dr	0.983	1.968	0.000	2.950	0.000	2.087	0.000	2.087	2018	0.50	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A64	Meridian Rd: Baseline Rd to Germann Rd	0.000	29.945	0.000	29.945	0.000	31.755	0.000	31.755	2020	7.00	
	Meridian Rd: Baseline Rd to Ray Rd	0.000	17.224	0.000	17.224	0.000	18.265	0.000	18.265	2018	4.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Meridian Rd: Ray Rd to Germann Rd	0.000	12.721	0.000	12.721	0.000	13.490	0.000	13.490	2020	3.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A65	Mesa Dr: Southern Ave to US60 and Mesa Dr to Broadway Rd	7.715	15.521	0.000	9.316	11.487	30.425	0.000	41.912	2016	2.00	
	Mesa Dr: US 60 to Southern Ave	7.659	7.304	0.000	14.963	10.941	10.435	0.000	21.376	2013	1.00	
	Mesa Dr/Broadway Rd	0.056	8.217	0.000	8.272	0.546	19.990	0.000	20.536	2016	1.00	
A66	Pecos Rd: Ellsworth Rd to Meridian Rd	0.000	15.381	0.000	15.381	0.000	22.158	0.000	22.158	2021	3.00	
A67	Ray Rd: Sossaman Rd to Meridian Rd	3.023	21.848	0.000	24.871	4.406	31.865	0.000	36.271	2026	5.00	
	Ray Rd: Sossaman Rd to Ellsworth Rd	3.023	0.000	0.000	3.023	4.406	0.000	0.000	4.406	2011	2.00	Project Completed
	Ray Rd: Ellsworth Rd to Meridian Rd	0.000	21.848	0.000	21.848	0.000	31.865	0.000	31.865	2025	3.00	
A68	Signal Butte Rd: Broadway to Pecos Rd	0.000	33.793	0.000	33.793	0.000	49.226	0.000	49.226	2026	8.00	
	Signal Butte Rd: Broadway Rd to Elliot Rd	0.000	17.217	0.000	17.217	0.000	25.051	0.000	25.051	2022	4.00	
	Signal Butte Rd: Elliot Rd to Pecos Rd	0.000	16.576	0.000	16.576	0.000	24.175	0.000	24.175	2026	4.00	
A69	Southern Ave: Country Club Dr to Recker Rd	0.936	27.625	0.000	28.561	1.337	52.824	0.000	54.161	2019	2.00	
	Southern/Country Club Dr	0.342	5.559	0.000	5.901	0.489	8.766	0.000	9.254	2015	0.50	
	Southern Ave/Stapley Dr	0.594	11.528	0.000	12.122	0.849	28.699	0.000	29.548	2017	0.50	HSIP Recipient
	Southern Ave/Lindsay Rd	0.000	4.251	0.000	4.251	0.000	6.189	0.000	6.189	2019	0.50	
	Southern Ave/Higley Rd	0.000	6.287	0.000	6.287	0.000	9.170	0.000	9.170	2021	0.50	
A70	Southern Ave: Sossaman Rd to Meridian Rd	0.000	0.000	13.310	18.038	0.000	26.524	0.000	26.524	2025	5.00	

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	Southern Ave: Sossaman Rd to Crismon Rd	0.000	0.000	8.014	8.014	0.000	15.735	0.000	15.735	2023	3.00	
	Southern Ave: Crismon Rd to Meridian Rd	0.000	0.000	5.296	5.296	0.000	10.788	0.000	10.788	2025	2.00	
A71	Stapley Dr/University Dr	0.000	7.785	0.000	2.785	0.000	21.532	0.000	21.532	2019	0.50	
A72	Thomas Rd: Gilbert Rd to Val Vista Dr	0.000	4.746	0.000	4.746	0.000	5.033	0.000	5.033	2020	2.00	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A73	University Dr: Val Vista Dr to Hawes Rd	0.000	22.033	0.000	22.033	0.000	32.467	0.000	32.467	2024	6.00	
	University Dr: Val Vista Dr to Higley Rd	0.000	11.204	0.000	11.204	0.000	16.340	0.000	16.340	2022	2.00	
	University Dr: Higley Rd to Hawes Rd	0.000	10.829	0.000	10.829	0.000	16.127	0.000	16.127	2023	4.00	
A74	Val Vista Dr: University Dr to Baseline Rd	0.000	8.320	4.722	13.042	0.000	27.614	0.000	27.614	2026	3.00	
	Val Vista Dr: Baseline Rd to Southern Ave	0.000	8.320	0.000	8.320	0.000	15.104	0.000	15.104	2019	1.00	
	Val Vista Dr: Southern Ave to University Dr	0.000	0.000	4.722	4.722	0.000	12.510	0.000	12.510	2026	2.00	
PEORIA												
A75	Beardsley Connection: SR-101L to Beardsley Rd at 83rd Ave/Lake Pleasant Pkwy	20.430	2.593	0.000	23.023	30.740	0.000	0.000	30.740	2012	3.95	
	Beardsley Connection: Loop 101 to 83rd Ave/Lake Pleasant Pkwy	6.125	0.000	0.000	6.125	8.473	0.000	0.000	8.473	2010	0.75	Project Completed.
	Loop 101 (Agua Fria Fwy) at Beardsley Rd/Union Hills Dr	10.851	0.000	0.000	10.851	13.484	0.000	0.000	13.484	2010	2.00	Project Completed
	83rd Avenue: Butler Rd to Mountain View	1.561	2.593	0.000	4.154	3.310	0.000	0.000	3.310	2013	1.00	
	75th Ave at Thunderbird Rd: Intersection Improvement	1.893	0.000	0.000	1.893	5.474	0.000	0.000	5.474	2013	0.20	
A76	Happy Valley Rd: L303 to 67th Avenue	20.634	0.000	0.000	20.634	51.972	0.000	25.000	76.972	2029	8.000	
	Happy Valley Rd: Loop 303 to Lake Pleasant Parkway	0.000	0.000	0.000	0.000	0.000	0.000	25.000	25.000	2029	3.00	
	Happy Valley Rd: Lake Pleasant Pkwy to 67th Ave	20.634	0.000	0.000	20.634	51.972	0.000	0.000	51.972	2010	5.00	Project Completed
A77	Lake Pleasant Pkwy: Union Hills to SR74	29.772	13.867	0.000	43.639	44.575	17.200	47.500	109.275	2020	14.06	
	Lake Pleasant Pkwy: Dynamite Blvd to CAP	2.645	13.867	11.114	27.626	5.822	17.200	0.000	23.022	2014	2.50	
	Lake Pleasant Pkwy: Union Hills to Dynamite Rd	27.127	0.000	0.000	27.127	38.753	0.000	0.000	38.753	2008	9.76	Project Completed
	Lake Pleasant Pkwy: CAP to SR-74/Carefree Hwy	0.000	0.000	0.000	0.000	0.000	0.000	47.500	47.500	2029	1.80	

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			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
PHOENIX												
A78	Avenida Rio Salado: 51st Ave. to 7th St.	30.357	14.336	0.000	44.693	43.664	22.797	0.000	66.461	2015	6.00	Project length and scope changed.
A79	Black Mountain Blvd: SR-51 and Loop 101/ Pima Fwy to Deer Valley Rd	1.879	20.651	0.000	22.530	3.271	29.502	0.000	32.772	2015	2.00	
A80	Happy Valley Rd: 67th Ave to I-17	0.000	5.343	13.292	18.634	8.220	25.623	7.917	41.760	2030	4.50	
	Happy Valley: I-17 to 35th Ave	0.000	5.343	0.078	5.421	7.744	0.000	0.000	7.744	2005	1.00	Project Completed
	Happy Valley: 35th Ave to 43rd Ave	0.000	0.000	5.232	5.232	0.440	11.700	0.000	12.141	2023	1.00	
	Happy Valley: 43rd Ave to 55th Ave	0.000	0.000	4.671	4.671	0.035	11.195	0.000	11.230	2030	1.50	
	Happy Valley: 55th Ave to 67th Ave	0.000	0.000	3.310	3.310	0.000	2.728	7.917	10.645	2030	1.00	
A81	Sonoran Blvd: 15th Avenue to Cave Creek	23.378	9.194	0.000	32.572	46.638	0.000	0.000	46.638	2013	7.00	Project completed.
SCOTTSDALE/CAREFREE												
A87	Pima Rd: SR101L to Happy Valley Rd and Dynamite Rd to Cave Creek	31.487	58.816	0.625	90.303	46.580	86.054	0.000	132.634	2020	10.65	
	Pima Rd: Thompson Peak Parkway to Pinnacle Peak (SCT)	17.847	0.000	0.000	17.847	25.496	0.000	0.000	25.496	2012	1.50	Project completed. Savings reallocated to ACISCT1003A
	Pima Rd/Happy Valley (SCT)	0.000	0.000	0.000	0.000	1.599	0.000	0.000	1.599	2008	0.40	Project Completed
	Pima Rd: Pinnacle Peak to Happy Valley Rd (SCT)	0.000	15.991	0.000	15.991	0.000	22.844	0.000	22.844	2018	1.00	
	Pima Rd: Dynamite Blvd to Stagecoach Rd (SCT)	0.000	37.892	0.000	37.892	0.000	55.270	0.000	55.270	2020	5.00	
	Pima Rd: Stagecoach Rd to Cave Creek (CFR)	0.000	4.933	0.625	5.558	0.000	7.940	0.000	7.940	2020	0.25	
	Pima Rd: SR101L to Thompson Peak Pkwy (SCT)	13.639	0.000	0.000	13.639	19.485	0.000	0.000	19.485	2008	2.50	Project Completed
SCOTTSDALE												
A82	Carefree Hwy: Cave Creek Rd to Scottsdale Rd	0.000	8.012	0.000	8.012	14.344	0.000	0.000	14.344	2026	2.00	
A83	SR-101L North Frontage Roads: Pima/Princess Dr to Scottsdale Rd	3.745	0.000	29.014	32.759	5.350	0.000	41.449	46.799	2028	2.00	
	SR-101L Frontage Rd: Hayden Rd to Scottsdale Rd	3.745	0.000	0.000	3.745	5.350	0.000	0.000	5.350	2009	1.00	Project Completed
	SR-101L Frontage Rd: Pima Rd/Princess Dr to Hayden Rd	0.000	0.000	29.014	29.014	0.000	0.000	41.449	41.449	2028	1.00	
A84	SR-101L South Frontage Rd: Hayden Rd to Pima	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	1.00	This project was deleted in FY2009.
A85	Miller Rd/SR-101L Underpass	0.000	14.005	0.000	14.005	0.000	20.007	0.000	20.007	2020	1.30	
A86	Pima Rd: Happy Valley Rd to Dynamite Blvd	0.000	23.747	0.000	23.747	0.000	33.925	0.000	33.925	2018	2.00	
A88	Pima Rd: McKellips Rd to Via Linda	7.463	23.256	0.000	30.718	10.661	38.706	0.000	49.367	2011	7.40	

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		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
	Pima Rd: Via Linda to Via De Ventura	0.000	1.339	0.000	1.339	0.000	2.354	0.000	2.354	2015	1.30	
	Pima Rd: Via De Ventura to Krail	7.463	0.000	0.000	7.463	10.661	0.000	0.000	10.661	2012	1.30	Project Completed
	Pima Rd: Thomas Rd to McDowell Rd	0.000	6.128	0.000	6.128	0.000	8.761	0.000	8.761	2015	1.00	
	Pima Rd: Krail to Chaparral	0.000	9.463	0.000	9.463	0.000	16.551	0.000	16.551	2016	1.80	
	Pima Rd: Chaparral Rd to Thomas Rd	0.000	6.326	0.000	6.326	0.000	11.041	0.000	11.041	2018	2.00	
A89	Scottsdale Airport: Runway Tunnel	1.968	68.160	0.001	70.128	4.221	96.619	0.000	100.840	2026	6.85	
	Frank Lloyd Wright -Loop 101 Traffic Interchange	0.000	5.633	0.000	5.633	0.000	8.047	0.000	8.047	2019	0.40	
	Raintree -Loop 101 Traffic Interchange	0.000	2.817	0.000	2.817	0.000	4.024	0.000	4.024	2017	0.40	
	Northsight Blvd: Hayden to Frank Lloyd Wright	1.746	7.497	0.000	9.243	2.696	10.508	0.000	13.204	2013	0.35	Received project savings from ACISHA2003H.
	Frank Lloyd Wright Frontage Rd: Northsight to Greenway-Hayden Loop	0.000	7.746	0.000	7.746	0.000	11.065	0.000	11.065	2015	0.75	
	Redfield Rd: Scottsdale Rd to Hayden	0.000	3.873	0.000	3.873	0.000	5.533	0.000	5.533	2014	1.20	
	Raintree Extension: Hayden to Redfield	0.000	13.523	0.000	13.523	0.000	19.318	0.000	19.318	2015	1.00	Renamed in FY2012
	Raintree Drive: Loop 101 to Hayden	0.000	11.266	0.000	11.266	0.000	16.423	0.000	16.423	2016	1.00	
	Frank Lloyd Wright at 76th/78th/82nd Street: Intersection Improvements	0.000	0.844	0.000	0.844	1.207	0.000	0.000	1.207	2014	0.50	
	Southbound Loop 101 Frontage Road Connections	0.000	3.052	0.000	3.052	0.000	4.360	0.000	4.360	2014	0.50	Project Scope changed in FY2012
	Hayden Rd - Loop 101 Interchange Improvements	0.000	11.427	0.001	11.428	0.000	16.652	0.000	16.652	2026	0.75	
	Airpark DCR	0.222	0.482	0.000	0.704	0.317	0.689	0.000	1.006	-----	-----	Received \$704,000 in project savings from ACISHA2003E
A90	Scottsdale Rd: Thompson Peak Pkwy to Jomax Rd	4.503	15.011	0.000	19.514	6.827	57.966	0.000	64.793	2015	4.00	
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy	4.503	13.211	0.000	17.714	6.827	19.934	0.000	26.761	2014	2.00	Received \$6.1m in project savings from ACIPMA1003A and \$16,756 in project savings from ACISHA2003E
	Scottsdale Rd: Pinnacle Peak Pkwy to Jomax Rd	0.000	1.800	0.000	1.800	0.000	38.032	0.000	38.032	2019	2.00	
A91	Scottsdale Rd: Jomax Rd to Carefree Hwy	0.000	28.497	0.000	28.497	0.000	51.329	0.000	51.329	2022	5.00	
	Scottsdale Rd: Jomax Rd to Dixileta Dr	0.000	9.499	0.000	9.499	0.000	18.081	0.000	18.081	2019	2.00	
	Scottsdale Rd: Dixileta Dr to Ashler Hills Dr	0.000	9.499	0.000	9.499	0.000	16.624	0.000	16.624	2021	1.50	
	Scottsdale Rd: Ashler Hills Dr to Carefree Highway	0.000	9.499	0.000	9.499	0.000	16.624	0.000	16.624	2022	1.50	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)		Total Reimb. (2013\$, YOES)	Expend through FY13 (YOES)	Estimated Future Expend (2013 \$'s)		Total Expend. (2013\$, YOES)			
			FY14-FY26	FY27-FY35			FY14-FY26	FY27-FY35				
A92	Shea Blvd: SR-101L to SR-87	5.366	17.198	0.000	22.564	7.666	24.569	0.000	32.235	2019	12.80	
	Shea Blvd at 90th/92nd/96th	4.056	0.000	0.000	4.056	5.794	0.000	0.000	5.794	2007	0.75	Project Completed
	Shea Auxiliary Lane from 90th St to Loop 101	0.000	6.390	0.000	6.390	0.000	9.129	0.000	9.129	2021	1.00	
	Shea Blvd at Via Linda (Phase 1)	0.621	0.000	0.000	0.621	0.888	0.000	0.000	0.888	2006	0.20	Project Completed
	Shea Blvd at Via Linda (Phase 2)	0.000	2.086	0.000	2.086	0.000	2.980	0.000	2.980	2017	0.25	
	Shea Blvd at 120/124th St	0.183	0.000	0.000	0.183	0.261	0.000	0.000	0.261	2012	0.40	Project Completed
	Shea Blvd at Mayo/134th St	0.162	0.000	0.000	0.162	0.231	0.000	0.000	0.231	2006	0.20	Project Completed
	Shea Blvd: SR-101L to 96th St, ITS Improvements	0.344	0.000	0.000	0.344	0.491	0.000	0.000	0.491	2010	1.00	Project Completed. Project savings transferred to ACISAT1003C.
	Shea Blvd: 96th St to 144th St, ITS Improvements	0.000	2.360	0.000	2.360	0.000	3.372	0.000	3.372	2014	6.25	
	Shea Blvd at Loop 101	0.000	3.688	0.000	3.688	0.000	5.269	0.000	5.269	2018	1.00	
	Shea Blvd at 110th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2017	0.25	
	Shea Blvd at 114th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2019	0.25	
	Shea Blvd at Frank Lloyd Wright Blvd	0.000	0.664	0.000	0.664	0.000	0.948	0.000	0.948	2017	0.25	
	Shea Blvd at 115th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2019	0.25	
	Shea Blvd at 125th St	0.000	0.880	0.000	0.880	0.000	1.257	0.000	1.257	2015	0.25	
	Shea Blvd at 135th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2019	0.25	
	Shea Blvd at 136th St	0.000	0.376	0.000	0.376	0.000	0.537	0.000	0.537	2014	0.25	
A93	Legacy Dr: Hayden Rd to 88th Street	0.000	2.073	10.021	12.094	0.000	21.910	0.000	21.910	2025	1.20	
	TOTALS	373.8	1,175.7	196.5	1,741.0	675.6	2,064.6	169.1	2,909.3			

TABLE B-2
ARTERIAL STREET LIFE CYCLE PROGRAM - INTELLIGENT TRANSPORTATION SYSTEMS
REGIONAL FUNDING REIMBURSEMENTS: FY 2006-2026
(2013 and Year of Expenditure Dollars in Millions)

Year of Expenditure CONST Construction
Fiscal Year Expend Expenditures
Dollars Reimb Reimbursement(s)

FACILITY/LOCATION	REGIONAL FUNDING			Total Reimb. (2013\$, YOES)	FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
	Reimb. through FY13 (YOES)	Estimated Future Reimb (2013 \$'s)					
		FY14-FY26	FY27-FY35				
REGION-WIDE							
Intelligent Transportation System Projects	39.754	25.935	0.000	65.689	2014-19	N/A	

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 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures through FY 2013: (YOE Dollars)	Est. Future Costs: FY 2014 - 2026: (2013 Dollars)	Total Est. Costs: FY 2006-2026: (2013 and YOE Dollars)	Est. Future Costs: FY 2027 - 2035: (2013 Dollars)	Total Est. Costs: FY 2006-2035: (2013 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T1	Ahwatukee Connector	0.00	0.00	0.00	1.09	1.09	2030	
T2	Ahwatukee Express	3.76	0.00	3.76	0.00	3.76	2006	I-10 East RAPID (Phoenix assumed funding in FY 2011)
T3	Anthem Express	0.00	0.00	0.00	2.63	2.63	2031	
T4	Apache Junction Express	0.00	0.00	0.00	3.88	3.88	2027	
T5	Arizona Avenue LINK	3.33	17.80	21.13	12.13	33.27	2011	
T6	Avondale Express	0.00	1.65	1.65	2.18	3.83	2020	
T7	Black Canyon Freeway Corridor	0.00	0.00	0.00	1.78	1.78	2030	
T8	Buckeye Express	0.00	0.00	0.00	3.40	3.40	2029	
T9	Chandler Boulevard LINK	0.00	0.00	0.00	7.00	7.00	2034	Designated as illustrative project in FY 2010.
T10	Deer Valley Express	4.08	0.00	4.08	0.00	4.08	2006	I-17 RAPID (Phoenix assumed funding in FY 2011)
T11	Desert Sky Express	1.43	0.00	1.43	0.00	1.43	2006	I-10 West RAPID (Phoenix assumed funding in FY 2011)
T12	East Loop 101 Connector	1.60	3.79	5.40	2.58	7.98	2009	Route 511 - Chandler/Scottsdale Airpark Express (route modified in FY 2012)
T13	Grand Avenue Limited	1.56	1.80	3.36	1.21	4.57	2006	
T14	Loop 303 Express	0.00	0.00	0.00	3.15	3.15	2031	
T15	Main Street LINK	7.77	20.99	28.76	13.66	42.43	2009	
T16	North Glendale Express	3.96	6.87	10.84	4.60	15.44	2008	Route 573 - Northwest Valley
T17	North I-17 Express	0.00	0.00	0.00	2.84	2.84	2031	
T18	North Loop 101 Connector	2.66	0.00	2.66	0.00	2.66	2008	Route 572 - Surprise/Scottsdale Express (route eliminated in FY 2011)
T19	Papago Fwy Connector	1.36	4.58	5.94	3.07	9.00	2009	Routes 562 - Goodyear Express and Route 563 - Buckeye Express
T20	Peoria Express	0.00	0.00	0.00	2.97	2.97	2030	
T21	Pima Express	0.00	0.00	0.00	2.83	2.83	2029	
T22	Red Mountain Express	1.72	5.80	7.51	3.94	11.45	2009	Routes 535 & 536 - Northeast Mesa Express (route 536 eliminated in FY 2011)
T23	Red Mountain Fwy Connector	0.00	0.00	0.00	2.42	2.42	2031	
T24	Santan Express	0.00	0.00	0.00	6.90	6.90	2031	
T25	Scottsdale/Rural LINK	0.00	12.30	12.30	9.09	21.39	2015	Limited implementation (Rural/Apache LRT station to Scottsdale/Thunderbird park and ride)

Map Code	Route	Expenditures through FY 2013: (YOE Dollars)	Est. Future Costs: FY 2014-2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T26	South Central Avenue	0.86	11.04	11.90	7.67	19.57	2013	Advanced 2 years
T27	South Central Avenue LINK	0.00	0.00	0.00	4.67	4.67	2030	
T28	SR 51 Express	3.14	0.00	3.14	0.00	3.14	2006	SR-51 RAPID (Phoenix assumed funding in FY 2011)
T29	Superstition Fwy Connector	0.00	0.00	0.00	1.15	1.15	2028	
T30	Superstition Springs Express	0.00	0.00	0.00	3.68	3.68	2031	
T31	West Loop 101 Connector	2.30	4.44	6.74	2.97	9.71	2009	Routes 575 & 576 - Northwest Valley Express (route 576 eliminated in FY 2011)
	TOTAL	39.54	91.07	130.61	113.50	244.11		

TABLE C-2
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures through FY 2013 (YOE Dollars)	Est. Future Costs: FY2014-2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY2027-2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T40	59th Avenue	5.02	13.83	18.85	9.33	28.18	2006		Route 59 - 59th Avenue
T41	83rd Avenue/75th Avenue	0.00	0.00	0.00	18.61	18.61	2028		
T42	99th Avenue	0.00	0.00	0.00	9.04	9.04	2031		
T43	Alma School Rd.	2.28	14.32	16.60	12.45	29.05	2006	2018	Route 104 - Alma School Road
T44	Arizona Avenue/Country Club	4.99	16.46	21.45	14.27	35.72	2006	2012	Route 112 - Country Club Drive/Arizona Avenue
T45	Baseline Rd	1.06	14.64	15.70	11.01	26.71	2013		Route 77 - Baseline Road
	Dobson Rd	9.99	23.80	33.79	16.22	50.01	2009		Route 96 - Dobson Road
	Southern Ave	12.58	45.76	58.34	31.19	89.53	2006	2009	Route 61 - Southern Avenue
T46	Bell Road	0.00	3.59	3.59	12.16	15.75	2022		Route 170 - Bell Road
T47	Broadway	1.59	7.53	9.12	5.12	14.24	2011		Route 45 - Broadway Road
T48	Buckeye Road	0.00	0.00	0.00	4.18	4.18	2031		
T49	Camelback Road	0.82	4.26	5.08	4.04	9.12	2006	2019	Route 50 - Camelback Road
T50	Chandler Blvd.	17.69	37.91	55.60	25.86	81.46	2008		Route 156 - Chandler Boulevard
T51	Dunlap/Olive Avenue	0.00	0.00	0.00	7.49	7.49	2031		
T52	Dysart Road	0.00	0.00	0.00	2.96	2.96	2030		
T53	Elliot Road	1.27	22.63	23.91	15.42	39.33	2011	2014	Route 108 - Elliot Road
T54	Gilbert Road	5.09	18.73	23.82	12.76	36.58	2010		Route 136 - Gilbert Road
T55	Glendale Avenue	13.57	24.95	38.52	16.85	55.37	2006	2008	Route 70 - Glendale Avenue
T56	Greenfield Road	0.00	0.00	0.00	12.89	12.89	2029		
T57	Hayden/McClintock	5.32	29.01	34.33	30.54	64.86	2006	2021	Route 81 - Hayden Road/McClintock Drive
T58	Indian School Road	0.00	0.00	0.00	6.53	6.53	2031		
T59	Litchfield Road	0.00	0.00	0.00	14.35	14.35	2032		Designated as illustrative project in FY 2010.
T60	Main Street	9.28	27.61	36.89	18.83	55.72	2009		Route 40 - Apache/Main Street
T61	McDowell/McKellips	1.23	14.34	15.57	9.69	25.26	2013		Route 17 - McDowell Road
T62	Peoria Ave./Shea	8.47	21.97	30.44	14.83	45.27	2006		Route 106 - Peoria Road/Shea Boulevard
T63	Power Road	4.23	22.19	26.42	15.11	41.53	2011		Route 184 - Power Road
T64	Queen Creek Road	0.00	0.00	0.00	3.54	3.54	2031		
T65	Ray Road	0.00	0.00	0.00	20.31	20.31	2027		
T66	Scottsdale/Rural	37.28	73.65	110.92	50.20	161.13	2006	2007	Route 72 - Scottsdale/Rural Road
T67	Tatum / 44th Street	0.00	0.00	0.00	0.94	0.94	2027		

Map Code	Route	Expenditures through FY 2013: (YOE: Dollars)	Est. Future Costs: FY 2014-2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE: Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE: Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T68	Thomas Road	0.00	6.14	6.14	5.91	12.06	2014	2031	Route 29 - Thomas Road
T69	University Drive	0.79	10.31	11.10	16.20	27.30	2021		Route 30 - University Drive
T70	Van Buren	0.59	10.53	11.12	7.54	18.66	2013	2016	Route 3 - Van Buren Street
T71	Waddell/Thunderbird	0.00	8.90	8.90	9.88	18.78	2015	2015	Route 138 - Thunderbird Road
	TOTAL	143.14	473.06	616.20	466.25	1,082.45			

TABLE C-3
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: OTHERS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Route	Expenditures: through FY 2013: (YOE Dollars)	Est. Future Costs: FY2014- 2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY2027- 2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
ADA Paratransit	89.39	325.29	414.68	253.55	668.23	2006	
Regional Passenger Support Services	52.73	77.77	130.49	57.03	187.52	2006	
Existing Local Service	4.97	8.63	13.60	0.00	13.60	2006	
Existing Express Service	24.84	36.94	61.78	0.00	61.78	2006	
Rural/Non-Fixed Route Service	2.79	4.26	7.05	2.90	9.96	2006	
Vanpool Service	0.00	0.00	0.00	0.00	0.00	2006	Vanpool operations are funded entirely through fares
Safety and Security Costs	2.87	9.58	12.45	7.37	19.81	2006	
Operating Contingency	0.00	0.00	0.00	0.00	0.00	2006	Most contingencies were eliminated to help balance the program
RPTA Planning and Administration	29.72	65.39	95.12	49.23	144.34	2006	Primarily funded through RPTA's allocation from Regional Area Road Fund
TOTAL	207.32	527.85	735.17	370.08	1,105.25		

TABLE C-4
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FACILITIES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2013: (YOE Dollars)	Est. Future Costs: FY 2014-2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE Dollars)	No. of Units Constructed/Installed through FY 2013	Tot. No. of Units to be Constructed/Installed through FY 2026	Tot. No. of Units to be Constructed/Installed through FY 2035	Other Project Information
Arterial BRT Right-of-Way and Improvements	24.04	14.09	38.13	50.59	88.72	25	39	51	
Bus Stop Pullouts/Improvements	5.49	0.00	5.49	0.00	5.49	230	230	230	Major reduction in planned bus stop improvements beginning in FY 2011 due to funding shortfall.
Dial-a-Ride and Rural Bus Maintenance Facilities	0.00	0.00	0.00	11.86	11.86	0	0	1	Rural facility was postponed beyond 2031 and 1 DAR facilities is started
Intelligent Transportation Systems (ITS) / Vehicle Management Systems (VMS)	4.29	18.26	22.54	0.00	22.54				Funding designated for system wide radio communications. Also see note below.
Park & Ride Lots	46.47	33.37	79.84	5.74	85.59	5	11	11	
Standard Bus Maintenance Facilities	103.78	0.00	103.78	84.06	187.84	2	2	2	
Transit Centers (4 Bay)	0.00	2.32	2.32	11.95	14.26	0	1	5	
Transit Centers (6 Bay)	1.53	2.13	3.66	6.87	10.52	0	1	2	
Transit Centers (Major Activity Centers)	4.86	0.00	4.86	8.21	13.07	1	1	2	
Vanpool Vehicle Maintenance Facilities	0.00	0.00	0.00	0.00	0.00	0	0	0	Project was postponed indefinitely
Contingency	0.00	0.00	0.00	0.00	0.00				
TOTAL	190.44	70.16	260.61	179.29	439.90				

Note: Expenditures through FY 2012 are lower than those reported for FY 2011, due to deferral of IGA with City of Phoenix.

TABLE C-5
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FLEET
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2013 (YOE Dollars)	Est. Future Costs: FY 2014-2026 (2013 Dollars)	Total Est. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Total Est. Costs: FY 2006-2035 (2013 and YOE Dollars)	No. of Units Acquired through FY 2013	Tot. No. of Units to be Acquired through FY 2026	Tot. No. of Units to be Acquired through FY 2035	Other Project Information
Paratransit	13.14	28.30	41.44	25.34	66.79	178	546	714	See note below.
Fixed Route	307.60	454.52	762.12	254.50	1,016.63	492	1487	1678	
Rural Route	1.56	0.95	2.52	0.66	3.17	13	26	31	
Vanpool	15.23	28.13	43.36	5.52	48.88	350	1305	1445	
Contingency	0.00	0.00	0.00	0.00	0.00				
TOTAL	337.53	511.91	849.45	286.02	1,135.47				

Note: Expenditures through FY 2012 are lower than those reported for FY 2011, due to local purchase of vehicles that were not reimbursed by the TLCP as originally planned.

TABLE C-6
TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT/HIGH CAPACITY TRANSIT: SUPPORT INFRASTRUCTURE
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Facility	Expenditures: through FY 2013 (Year of Expenditure Dollars)				Est. Future Costs: FY 2014-2026 (2013 Dollars)	Tot. Costs: FY 2006- 2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Tot. Costs: FY 2006- 2035 (2013 and YOE Dollars)	Target Opening Date	Project Length (Center- line Miles)	Other Project Information
	Design	RAW	Construc.	Total							
CPEV Regional Reimbursements	0.00	0.00	198.75	198.75	0.00	198.75	0.00	198.75	12 / 2008	20	Includes final disbursement request
Central Mesa Link: Main St./Sycamore to Main St./Mesa Dr. *	4.25	0.00	0.00	4.25	0.00	4.25	0.00	4.25	03/2016	3.1	AA Costs
Northwest Link Phase 1: 19th Ave./Bethany Home to 19th Ave./Dunlop	3.19	0.00	0.00	3.19	0.00	3.19	0.00	3.19	03/2016	3.2	
Tempe South Link: Main St./ Rural Rd. to Southern Ave.	5.01	0.00	0.00	5.01	0.93	5.94	0.00	5.94	06/2017	2.6	Project added in FY 2012 to cover AA costs as part of infrastructure support.
Gilbert Road: Main St./Mesa Dr. to Main St./Gilbert Rd.	0.50	0.00	0.00	0.50	0.44	0.94	0.00	0.94	07/2018	1.9	AA Costs - Project funded by City of Mesa
Phoenix West Link: Washington Ave./Central Ave. to 79th Ave.	9.73	0.00	0.00	9.73	1.63	11.37	0.00	11.37	12/2023	11	AA Costs
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	1.80	0.00	0.00	1.80	3.51	5.31	0.00	5.31	10/2026	5	AA Costs
Northwest Link Phase 2: 19th Ave./Dunlop to Rose Mofford Sports Complex	0.00	0.00	0.00	0.00	2.02	2.02	0.00	2.02	12/2026	1.8	AA & Draft EA

Facility	Expenditures: through FY 2013 (Year of Expenditure: Dollars)				Est. Future Costs: FY 2014-2026 (2013 Dollars)	Tot. Costs: FY 2006- 2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Tot. Costs: FY 2006- 2035 (2013 and YOE Dollars)	Target Opening Date	Project Length (Center- line Miles)	Other Project Information
	Design	R/W	Construc.	Total							
Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.00	0.00	0.00	0.00	8.00	8.00	0.00	8.00	12/2035	12	AA & Draft EA
Systemwide Support Infrastructure	0.71	0.00	45.28	45.99	149.96	195.95	0.00	195.95	N/A		
Design Standards and System Planning	10.93	0.00	0.00	10.93	2.94	13.87	0.00	13.87	N/A		
Capital Project Development Admin.	5.71	0.00	0.00	5.71	20.77	26.48	15.53	42.01	N/A		
Utility Reimbursements	2.00	0.00	88.74	90.74	96.69	187.43	48.26	235.70	N/A		
TOTAL	43.84	0.00	332.77	376.61	286.89	663.50	63.79	727.30			

TABLE C-7
TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT/HIGH CAPACITY TRANSIT: ROUTE EXTENSIONS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2013 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures: through FY 2013 (Year of Expenditure Dollars)				Est. Future Costs: FY 2014-2026 (2013 Dollars)	Tot. Costs: FY 2006-2026 (2013 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2013 Dollars)	Tot. Costs: FY 2006-2035 (2013 and YOE Dollars)	Target Opening Date	Project Length (Center-line Miles)	Other Project Information
		Design	R/W	Construc.	Total							
T85	Central Mesa Link: Main St./Sycamore to Main St./Mesa Dr. *	8.55	8.30	34.74	51.60	125.04	176.64	0.00	176.64	03/2016	3.1	Permission to enter PE in 8/2010
T82	Northwest Link Phase 1: 19th Ave./Bethany Home to 19th Ave./Dunlap	24.69	78.17	23.78	126.64	168.24	294.88	0.00	294.88	03/2016	3.2	
T84	Tempe South Link: Main St./ Rural Rd. to Southern Ave.	0.00	0.00	0.00	0.00	111.33	111.33	0.00	111.33	06/2017	2.6	Permission to enter Project Development in 2013
T86	Gilbert Road: Main St./Mesa Dr. to Main St./Gilbert Rd.	0.00	0.00	0.00	0.00	122.59	122.59	0.00	122.59	07/2018	1.9	Project is funded by City of Mesa
T81	Phoenix West Link: Washington Ave./Central Ave. to 79th Ave.	0.00	0.00	0.00	0.00	854.51	854.51	0.00	854.51	12/2023	11.0	
T80	Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	0.00	0.00	0.00	0.00	343.69	343.69	44.58	388.28	10/2026	5.0	
T82B	Northwest Link Phase 2: 19th Ave./Dunlap to Rose Mofford Sports Complex	0.00	0.00	0.00	0.00	88.15	88.15	22.05	110.20	12/2026	1.4	
T83	Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.00	0.00	0.00	0.00	15.22	15.22	912.54	927.76	12/2035	12.0	Project begins in FY 33
	TOTAL	33.24	86.48	58.52	178.24	1,828.78	2,007.02	979.18	2,986.19			

TABLE C-8
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2013

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2013 (Thousands)	Farebox Revenues through FY 2013 (YOE Dollars)	Annual Average Boardings through FY 2013 (Thousands)	Annual Average Farebox Revenues through FY 2013 (YOE Dollars)	Other Project Information
T1	Ahwatukee Connector	2031	14.7	30.0					
T2	Ahwatukee Express	2006	20.8	160.3	654.0	1,401,377	130.8	280,300	
T3	Anthem Express	2031	30.4	77.4					
T4	Apache Junction Express	2027	37.4	76.4					
T5	Arizona Avenue Arterial BRT	2011	12.0	221.2	717.2	545,987	239.1	182,000	
T6	Avondale Express	2020	19.0	77.6					
T7	Black Canyon Freeway Corridor	2031	16.6	67.7					
T8	Buckeye Express	2028	43.7	66.9					
T9	Chandler Boulevard Arterial BRT	2034	18.5	226.6					
T10	Deer Valley Express	2008	13.6	188.2	900.2	1,429,493	300.1	476,500	
T11	Desert Sky Express	2008	22.6	89.1	520.4	724,549	173.5	241,500	
T12	East Loop 101 Connector	2009	44.6	45.9	33.3	49,772	6.7	10,000	
T13	Grand Avenue Limited	2006	25.9	17.5	82.9	154,604	10.4	19,300	
T14	Loop 303 Express	2031	38.1	77.8					
T15	Main Street Arterial BRT	2009	13.0	295.2	1,523.5	1,212,762	304.7	242,600	
T16	North Glendale Express	2008	29.6	61.1	278.9	571,291	46.5	95,200	
T17	North I-17 Express	2031	34.4	87.6					
T18	North Loop 101 Connector (Surprise to Scottsdale)	2008	31.6	105.3	57.5	77,989	19.2	26,000	
T19	Papago Fwy Connector	2009	30.0	53.4	238.3	291,796	47.7	58,400	
T20	Peoria Express	2028	24.1	73.6					
T21	Pima Express	2028	35.4	72.2					
T22	Red Mountain Express	2009	32.8	69.0	233.8	314,000	46.8	62,800	
T23	Red Mountain Fwy Connector	2031	19.2	78.5					

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2013 (Thousands)	Farebox Revenues through FY 2013 (YOE Dollars)	Annual Average Boardings through FY 2013 (Thousands)	Annual Average Farebox Revenues through FY 2013 (YOE Dollars)	Other Project Information
T24	Santan Express	2031	44.9	228.9					
T25	Scottsdale/Rural Arterial BRT	2016	13.2	282.8					
T26	South Central Avenue	2013	9.4	29.2	36.3	35,698	36.3	35,700	
T27	South Central Avenue Arterial BRT	2031	11.4	120.9					
T28	SR 51 Express	2008	22.3	128.3	541.6	1,047,606	180.5	349,200	
T29	Superstition Fwy Connector	2027	17.5	26.8					
T30	Superstition Springs Express	2031	31.9	162.5					
T31	West Loop 101 Connector	2009	31.4	39.5	215.6	219,409	43.1	43,900	
	TOTAL				6,033.7	8,076,333	1,585.2	2,123,400	

**TABLE C-9
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2013**

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2013 (Thousands)	Farebox Revenues through FY 2013 (YOE Dollars)	Annual Average Boardings through FY 2013 (Thousands)	Annual Average Farebox Revenues through FY 2013 (YOE Dollars)	Other Project Information
T40	59th Avenue	2006	16.2	161.0	2,498.5	1,870,207	312.3	233,800	
T41	83rd Avenue/75th Avenue	2023	21.4	542.4					
T42	99th Avenue	2031	16.5	401.3					
T43	Alma School Rd.	2006	19.1	75.0	555.8	423,574	69.5	52,900	
T44	Arizona Avenue/Country Club	2012	16.3	191.4	977.8	2,051,844	488.9	1,025,900	
T45	Baseline Road	2013	19.6	162.4	451.9	408,715	451.9	408,700	
T45	Dobson Road	2009	15.7	295.7	3,318.8	2,711,716	663.8	542,300	
T45	Southern Avenue	2006	28.1	568.8	7,046.3	4,789,514	880.8	598,700	
T46	Bell Road (via 303)	2024	38.1	1,138.5					
T47	Broadway	2011	27.8	93.3	530.8	423,038	176.9	141,000	
T48	Buckeye Road (Litchfield Road to Central Ave.)	2031	22.7	586.5					
T49	Camelback Road	2006	28.5	17.1	229.0	216,845	28.6	27,100	
T50	Chandler Blvd.	2008	32.7	471.5	2,143.6	1,746,738	357.3	291,100	
T51	Dunlap/Olive Avenue	2031	14.3	411.7					
T52	Dysart Road	2030	21.0	311.9					
T53	Elliot Road	2011	21.9	109.1	59.5	112,490	19.8	37,500	
T54	Gilbert Road	2010	20.9	232.6	939.3	799,391	234.8	199,800	
T55	Glendale Avenue	2008	32.7	240.3	7,919.0	2,880,117	1,319.8	480,000	
T56	Greenfield Road	2022	15.2	369.3					
T57	Hayden/McClintock	2006	29.7	235.9	1,461.4	1,059,967	182.7	132,500	
T58	Indian School Road	2031	30.4	879.1					
T59	Litchfield Road	2032	21.5	523.8					
T60	Main Street	2009	17.3	343.5	3,028.4	2,298,938	605.7	459,800	
T61	McDowell/McKellips	2013	41.8	114.7	178.6	182,804	178.6	182,800	
T62	Peoria Ave./Shea	2006	43.0	249.4	2,030.3	1,956,886	253.8	244,600	
T63	Power Road	2011	14.2	275.6	306.5	209,164	102.2	69,700	

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus Miles of Service (Thousands)	Total Boardings through FY 2013 (Thousands)	Farebox Revenues through FY 2013 (YOE Dollars)	Annual Average Boardings through FY 2013 (Thousands)	Annual Average Farebox Revenues through FY 2013 (YOE Dollars)	Other Project Information
T64	Queen Creek Road (Pecos P&R to Power Road)	2031	12.0	293.4					
T65	Ray Road	2023	18.4	447.9					
T66	Scottsdale/Rural	2007	28.9	915.4	10,458.9	8,426,551	1,494.1	1,203,800	
T67	Tatum / 44th Street	2031	22.8	682.2					
T68	Thomas Road	2031	26.7	770.5					
T69	University Drive (to Ellsworth Road)	2016	27.8	802.2					
T70	Van Buren	2013	23.4	76.9	95.5	11,319	95.5	11,300	
T71	Waddell/Thunderbird	2024	27.9	692.4					
	TOTAL				44,230.1	32,579,818	7,917.0	6,343,300	

Appendix D

Performance Monitoring and Assessment

TABLE D-1
AVERAGE AM PEAK PERIOD SPEED FOR SELECTED FREEWAY CORRIDORS

Freeway Corridor	Dir	From	To	Average AM Peak Period Speed (mph)					
				General-purpose Lanes			HOV Lanes		
				2011	2012	% Change	2011	2012	% Change
I-10 Papago	EB	83rd Ave	I-17	51.1	50.2	-1.8%	55.4	54.5	-1.6%
	WB	I-17	83rd Ave	63.2	66.4	5.1%	65.6	68.1	3.8%
I-10 Papago	EB	I-17	SR 51/Loop 202	54.0	53.1	-1.7%	63.3	62.6	-1.1%
	WB	SR 51/Loop 202	I-17	60.8	62.8	3.3%	68.8	70.4	2.3%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	62.3	61.9	-0.6%	67.1	67.6	0.7%
	WB	US 60	SR 51/Loop 202	61.2	57.5	-6.0%	64.3	63.6	-1.1%
I-10 Maricopa	EB	US 60	Chandler Blvd	66.8	65.5	-1.9%	70.7	71.0	0.4%
	WB	Chandler Blvd	US 60	46.0	44.3	-3.7%	61.3	58.3	-4.9%
I-17	NB	Maricopa TI	I-10	60.1	61.5	2.3%	n/a	n/a	n/a
	SB	I-10	Maricopa TI	53.3	52.9	-0.8%	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	60.6	59.5	-1.8%	63.9	60.4	-5.5%
	SB	Peoria Ave	I-10	55.8	53.8	-3.6%	62.6	58.6	-6.4%
SR 51	NB	I-10/Loop 202	Glendale Ave	65.9	63.4	-3.8%	68.4	64.5	-5.7%
	SB	Glendale Ave	I-10/Loop 202	58.6	55.8	-4.8%	61.7	59.2	-4.1%
SR 51	NB	Glendale Ave	Bell Road	69.2	67.7	-2.2%	65.9	68.8	4.4%
	SB	Bell Road	Glendale Ave	63.3	63.3	0.0%	68.7	67.0	-2.5%
Loop 202	EB	I-10/SR 51	Loop 101	66.2	65.9	-0.5%	70.4	70.5	0.1%
	WB	Loop 101	I-10/SR 51	55.7	57.8	3.8%	67.4	66.7	-1.0%
US 60	EB	I-10	Loop 101	62.0	63.7	2.7%	63.9	63.5	-0.6%
	WB	Loop 101	I-10	53.4	52.9	-0.9%	not available	not available	n/a
US 60	EB	Loop 101	Val Vista Dr	62.9	65.3	3.8%	63.5	67.1	5.7%
	WB	Val Vista Dr	Loop 101	60.0	61.7	2.8%	65.5	69.8	6.6%
US 60	EB	Val Vista Dr	Loop 202	67.3	68.4	1.6%	70.3	71.2	1.3%
	WB	Loop 202	Val Vista Dr	66.4	69.1	4.1%	43.2	71.2	64.8%
SR 143	NB	I-10	Loop 202/McDowell Rd	54.3	not available	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	52.4	not available	n/a	n/a	n/a	n/a
Loop 101	NB	Loop 202 Santan	US 60	56.0	54.7	-2.3%	66.3	65.5	-1.2%
	SB	US 60	Loop 202 Santan	68.5	66.4	-3.1%	74.4	72.4	-2.7%
Loop 101	NB	US 60	Loop 202 Red Mountain	56.1	56.0	-0.2%	67.6	68.2	0.9%
	SB	Loop 202 Red Mountain	US 60	67.5	67.5	0.0%	72.6	74.5	2.6%
Loop 101	NB	Loop 202 Red Mountain	90th St	56.6	54.8	-3.2%	66.1	66.1	0.0%
	SB	90th St	Loop 202 Red Mountain	65.5	66.4	1.4%	73.2	71.0	-3.0%
Loop 101	NB	90th St	Pima Rd	65.4	65.9	0.8%	69.7	70.7	1.4%
	SB	Pima Rd	90th St	65.8	66.8	1.5%	72.9	73.3	0.5%
Loop 101	EB	Pima Rd	SR 51	62.6	61.1	-2.4%	70.5	69.9	-0.9%
	WB	SR 51	Pima Rd	68.0	69.9	2.8%	71.2	75.2	5.6%
Loop 101	EB	SR 51	I-17	48.1	50.8	5.6%	not available	64.0	n/a
	WB	I-17	SR 51	61.9	68.7	11.0%	not available	74.7	n/a

Source: ADOT FMS

n/a = not applicable

TABLE D-2
AVERAGE PM PEAK PERIOD SPEED FOR SELECTED FREEWAY CORRIDORS

Freeway Corridor	Dir	From	To	Average PM Peak Period Speed (mph)					
				General-purpose Lanes			HOV Lanes		
				2011	2012	% Change	2011	2012	% Change
I-10 Papago	EB	83rd Ave	I-17	64.4	66.8	3.7%	64.8	67.3	3.9%
	WB	I-17	83rd Ave	55.9	58.8	5.2%	60.5	62.7	3.6%
I-10 Papago	EB	I-17	SR 51/Loop 202	56.8	56.9	0.2%	63.8	63.7	-0.2%
	WB	SR 51/Loop 202	I-17	37.2	40.6	9.1%	47.0	48.4	3.0%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	48.6	47.9	-1.4%	56.6	55.3	-2.3%
	WB	US 60	SR 51/Loop 202	64.2	60.3	-6.1%	65.7	65.1	-0.9%
I-10 Maricopa	EB	US 60	Chandler Blvd	58.3	57.0	-2.2%	66.5	64.6	-2.9%
	WB	Chandler Blvd	US 60	63.6	61.9	-2.7%	67.2	66.1	-1.6%
I-17	NB	Maricopa TI	I-10	51.1	51.8	1.4%	n/a	n/a	n/a
	SB	I-10	Maricopa TI	59.7	60.9	2.0%	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	49.9	48.4	-3.0%	57.5	52.6	-8.5%
	SB	Peoria Ave	I-10	61.6	61.4	-0.3%	68.4	64.6	-5.6%
SR 51	NB	I-10/Loop 202	Glendale Ave	58.0	55.2	-4.8%	66.1	61.2	-7.4%
	SB	Glendale Ave	I-10/Loop 202	61.8	61.6	-0.3%	63.6	62.1	-2.4%
SR 51	NB	Glendale Ave	Bell Road	68.2	66.6	-2.3%	65.7	68.1	3.7%
	SB	Bell Road	Glendale Ave	66.9	67.6	1.0%	70.2	68.8	-2.0%
Loop 202	EB	I-10/SR 51	Loop 101	63.2	62.1	-1.7%	69.6	69.1	-0.7%
	WB	Loop 101	I-10/SR 51	59.1	60.7	2.7%	66.9	66.1	-1.2%
US 60	EB	I-10	Loop 101	58.4	59.9	2.6%	64.9	64.7	-0.3%
	WB	Loop 101	I-10	64.0	65.2	1.9%	not available	not available	n/a
US 60	EB	Loop 101	Val Vista Dr	61.1	63.0	3.1%	64.8	68.8	6.2%
	WB	Val Vista Dr	Loop 101	64.7	66.7	3.1%	63.9	67.4	5.5%
US 60	EB	Val Vista Dr	Loop 202	67.6	68.8	1.8%	73.2	72.4	-1.1%
	WB	Loop 202	Val Vista Dr	66.0	68.9	4.4%	71.5	70.0	-2.1%
SR 143	NB	I-10	Loop 202/McDowell Rd	54.4	not available	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	53.2	not available	n/a	n/a	n/a	n/a
Loop 101	NB	Loop 202 Santan	US 60	65.5	64.8	-1.1%	72.1	71.0	-1.5%
	SB	US 60	Loop 202 Santan	59.1	57.5	-2.7%	70.2	66.0	-6.0%
Loop 101	NB	US 60	Loop 202 Red Mountain	64.8	65.2	0.6%	72.0	73.0	1.4%
	SB	Loop 202 Red Mountain	US 60	46.4	44.9	-3.2%	60.4	60.3	-0.2%
Loop 101	NB	Loop 202 Red Mountain	90th St	61.6	60.6	-1.6%	68.8	69.2	0.6%
	SB	90th St	Loop 202 Red Mountain	52.1	51.0	-2.1%	65.7	61.4	-6.5%
Loop 101	NB	90th St	Pima Rd	63.8	63.7	-0.2%	69.5	69.9	0.6%
	SB	Pima Rd	90th St	65.3	65.6	0.5%	72.9	72.8	-0.1%
Loop 101	EB	Pima Rd	SR 51	67.0	68.1	1.6%	73.1	74.0	1.2%
	WB	SR 51	Pima Rd	58.5	61.8	5.6%	69.0	70.9	2.8%
Loop 101	EB	SR 51	I-17	59.0	66.4	12.5%	not available	72.4	n/a
	WB	I-17	SR 51	51.4	55.5	8.0%	not available	66.9	n/a

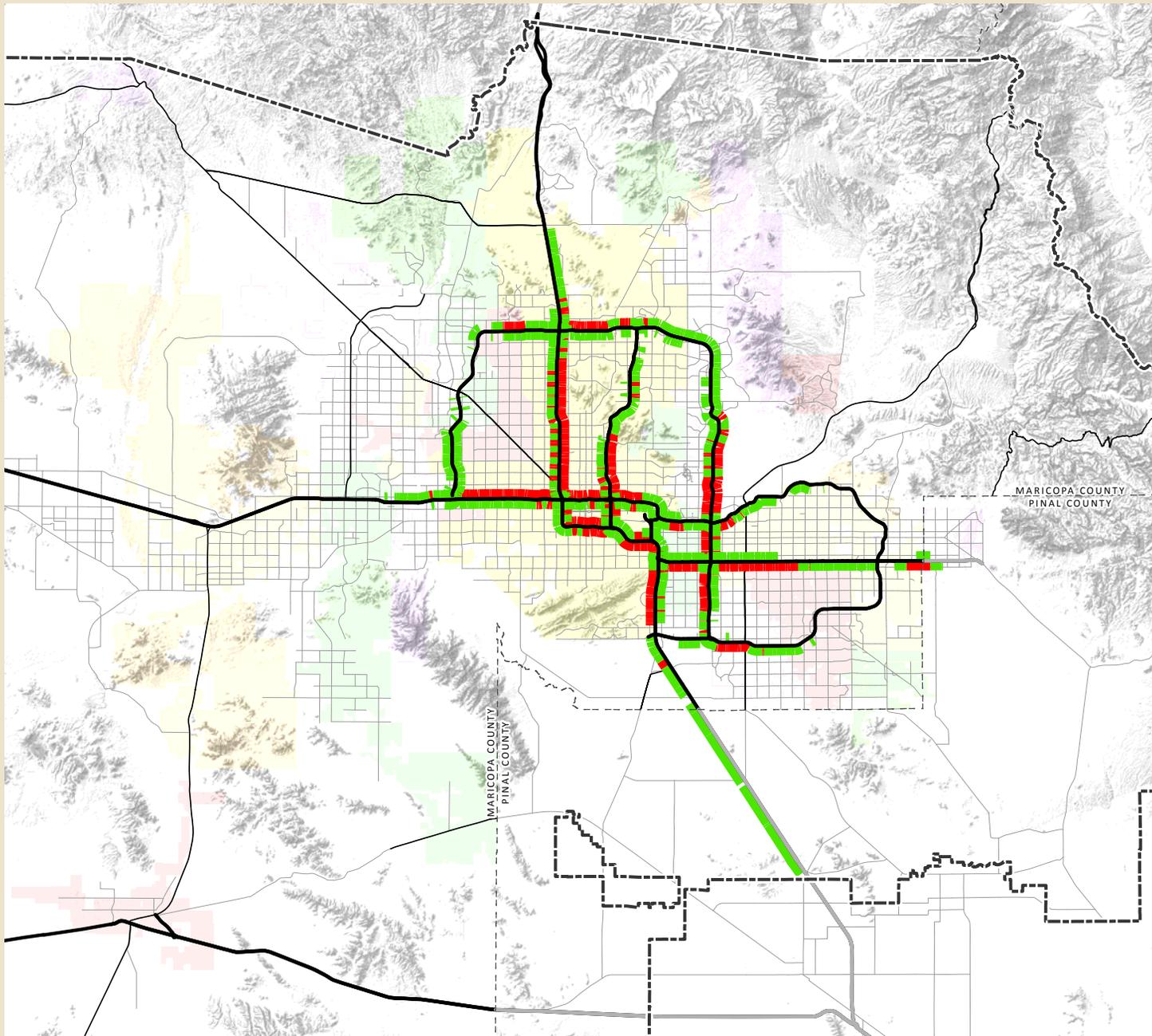
Source: ADOT FMS
n/a = not applicable

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Fig.D-1



2011 Base Year Network: Freeway PM Peak Period Level of Service



- Levels C & D
- Levels E & F
- Freeways
- Highways
- Other Roads
- Metropolitan Planning Area Boundary
- County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).



While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.



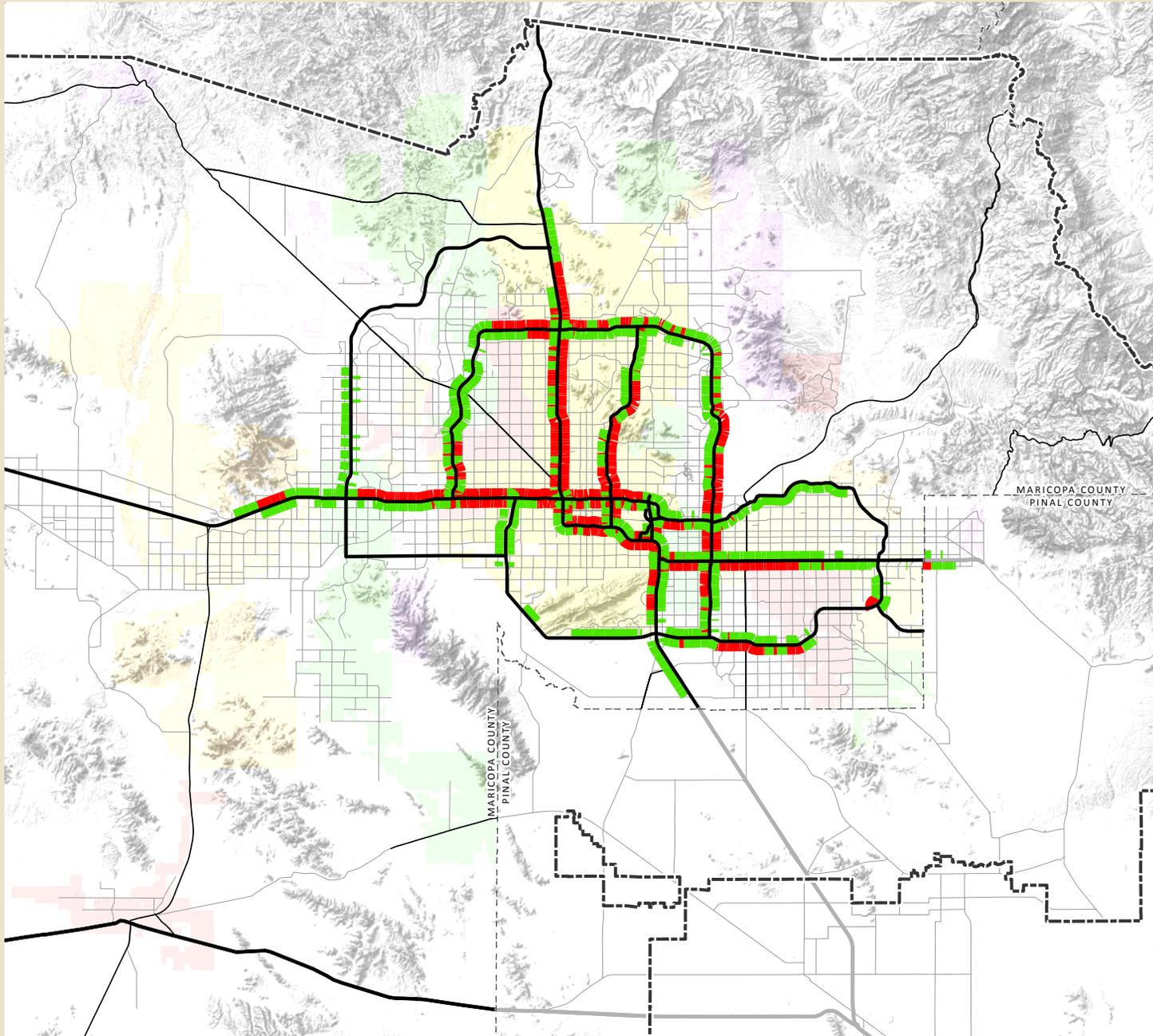
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Fig. D-2



2025 RTP Network: Freeway PM Peak Period Level of Service



-  Levels C & D
-  Levels E & F
-  Freeways
-  Highways
-  Other Roads
-  Metropolitan Planning Area Boundary
-  County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).



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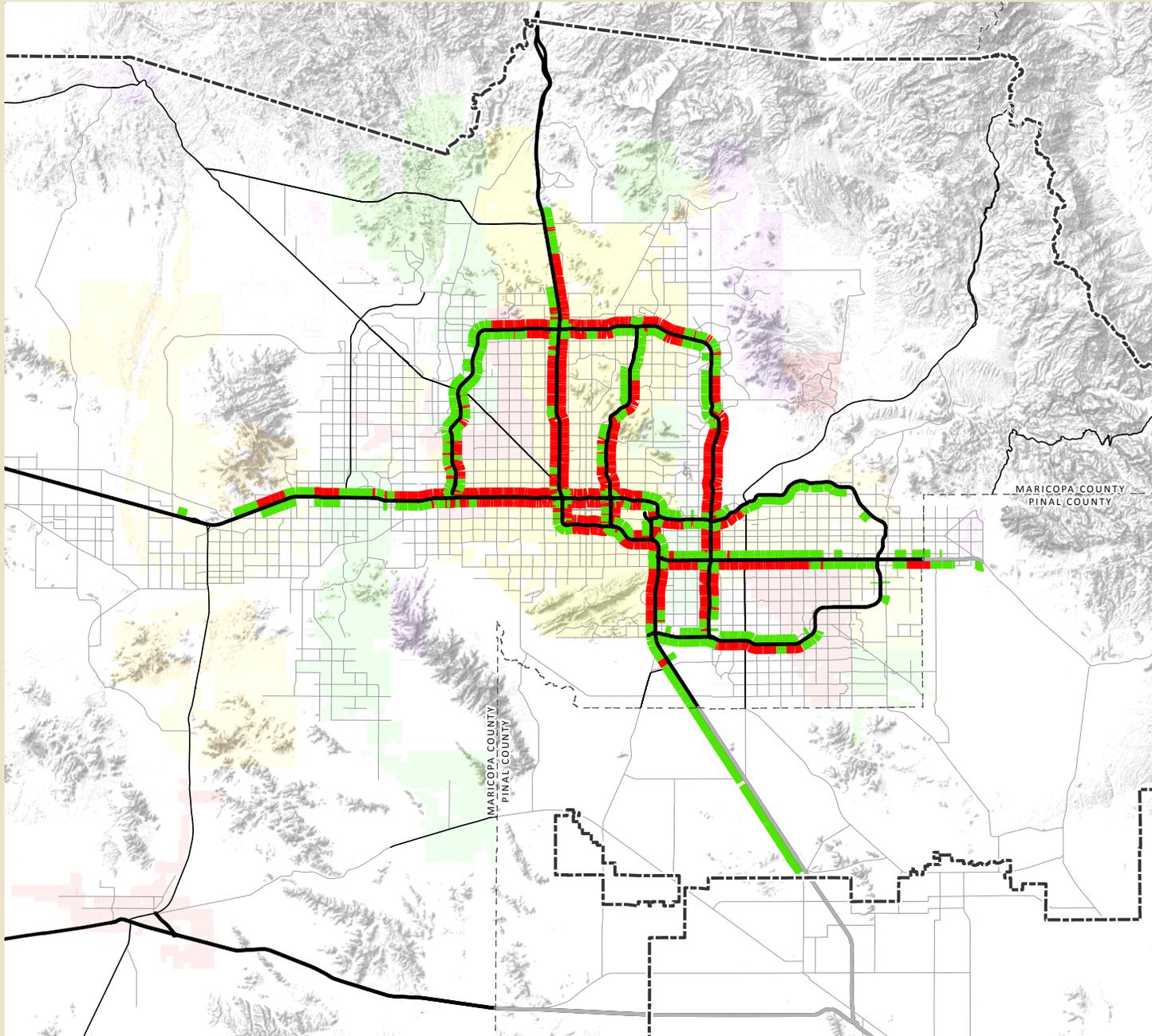
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Fig. D-3



2025 No Build Network: Freeway PM Peak Period Level of Service

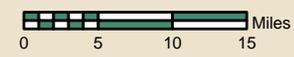


-  Levels C & D
-  Levels E & F
-  Freeways
-  Highways
-  Other Roads
-  Metropolitan Planning Area Boundary
-  County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).



While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.



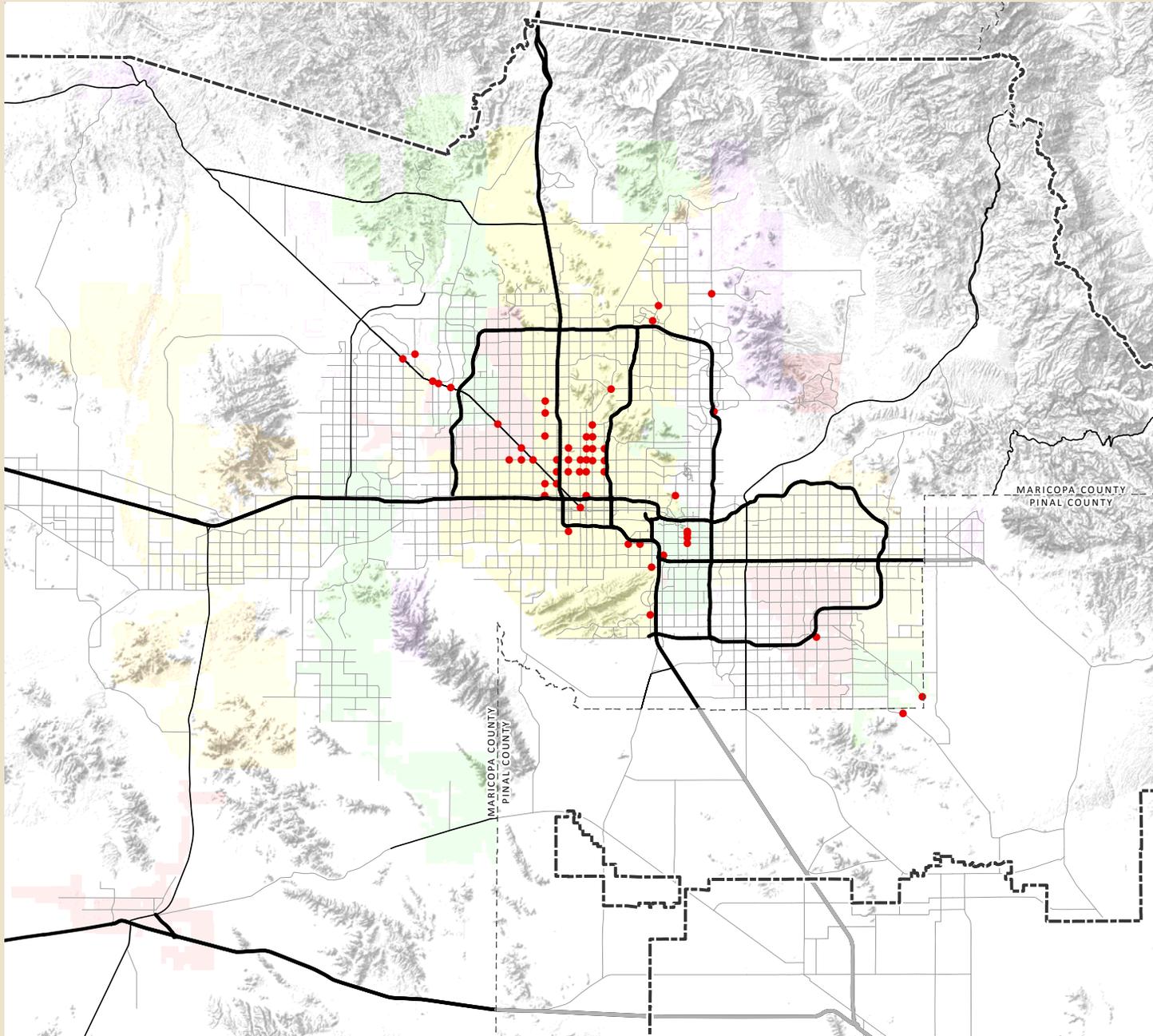
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Fig. D-4



2011 Base Year Network: Intersections PM Peak Period Level of Service E & F

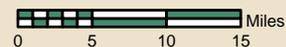


- Level of Service E & F
- Freeways
- Highways
- Other Roads
- ⊞ Metropolitan Planning Area Boundary
- ⊞ County Boundary

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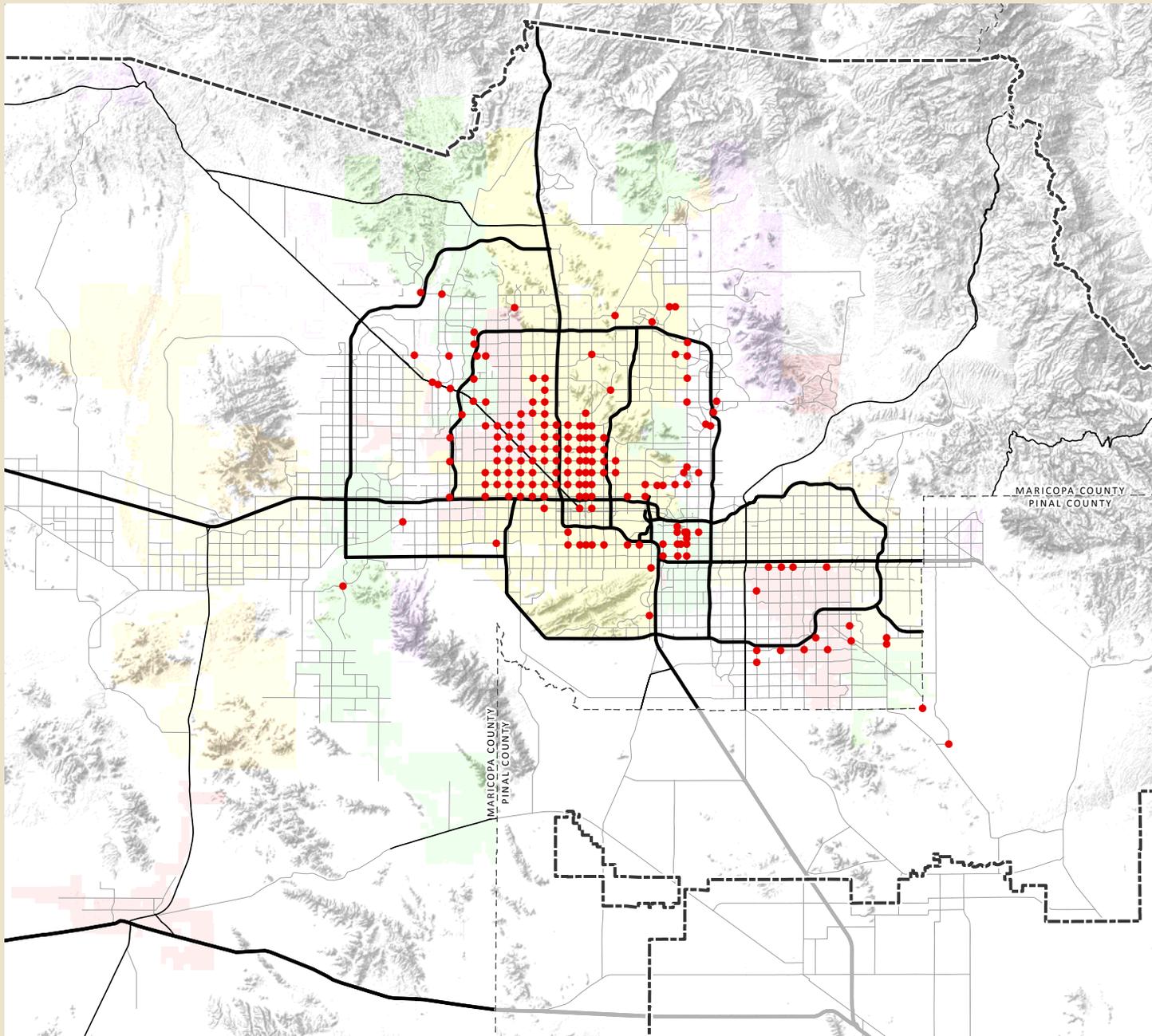
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Fig. D-5



2025 RTP Network: Intersections PM Peak Period Level of Service E & F



- Level of Service E & F
- Freeways
- Highways
- Other Roads
- ⬡ Metropolitan Planning Area Boundary
- ⬡ County Boundary

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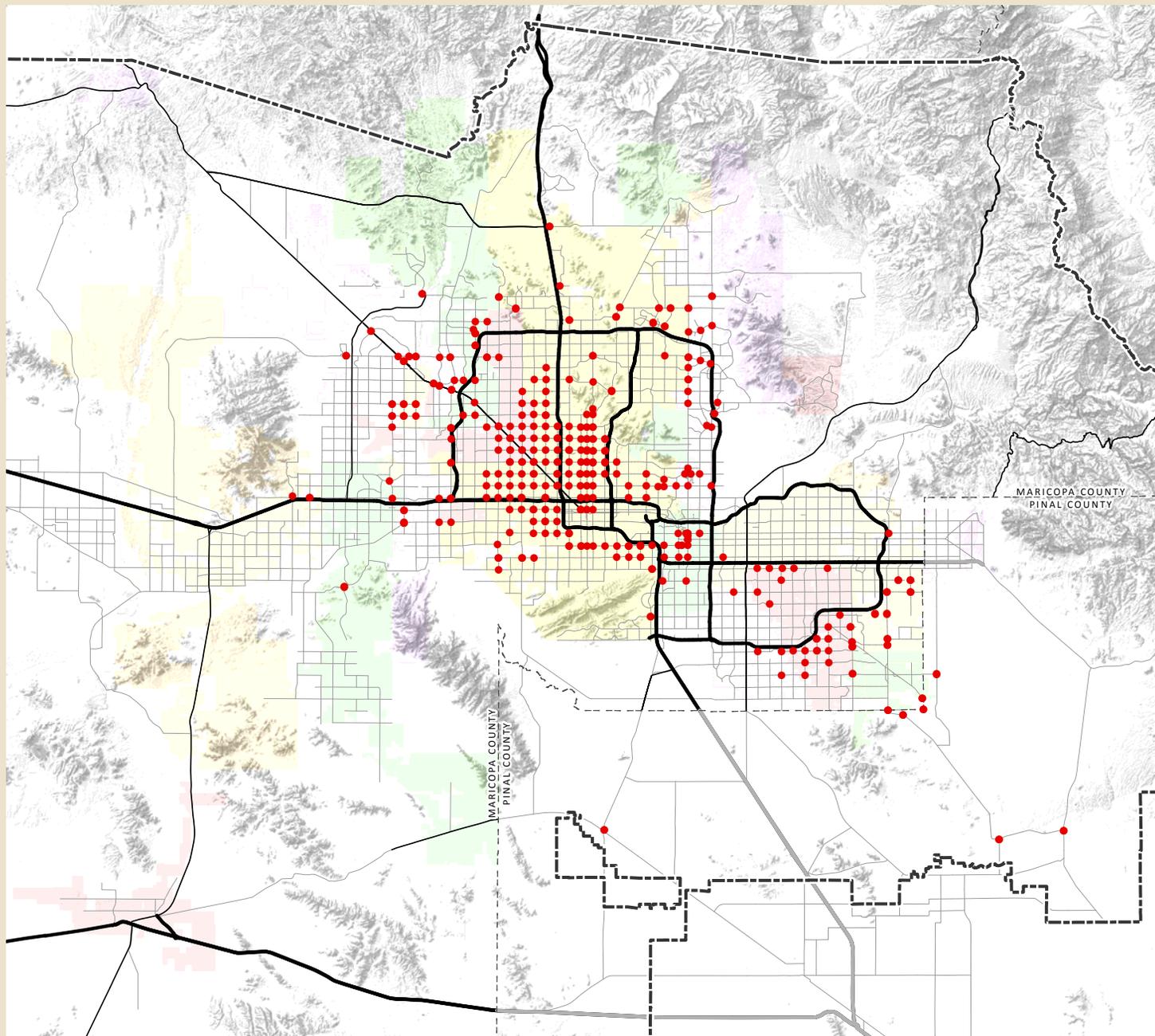
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Fig. D-6



2025 No Build Network: Intersections PM Peak Period Level of Service E & F

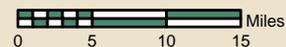


- Level of Service E & F
- Freeways
- Highways
- Other Roads
- ⬜ Metropolitan Planning Area Boundary
- ⬜ County Boundary

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Appendix E

2013 Annual Report Data Sources

2013 ANNUAL REPORT DATA SOURCES

- **RARF revenue forecasts:**

“Maricopa County Transportation Excise Tax – Forecasting Process and Results FY 2013-2026”; ADOT Financial Management Services, October 2012.

- **RARF historical collections:**

File: “ V:\Revenues\RARF\Ongoing RARF Revenues 2013.xlsx”; compiled by MAG staff from Arizona Department of Revenue data.

- **ADOT funds historical collections:**

File: “Final July 2013 Certification MAG RTP Cash Flow”
From: ADOT
Date: 8/16/3

- **ADOT funds forecasts:**

File: “Final July 2013 Certification MAG RTP Cash Flow”
From: ADOT
Date: 8/16/3

- **Freeway/highway expenditures (Appendix A):**

File: “RTPFP Project Expenditures Report (9 26 2013) FINAL”
From: ADOT
Date: 9/26/2013

- **Arterial program funding sources (beg. bal., debt serv., infla.)**

File: “Chap 7 Tables (Art) Updated JAB”
From: MAG
Date: 8/28/2013

- **Arterial program reimbursements (Appendix B):**

File: “Ann Rept – Arterial Appdx Tables updated 9-16-13”
From: MAG
Date: 9/17/2013

- **MAG Federal Funding:**

File: "13 Ann Rept - FHWA-FA EOY TLK JAB"
From: MAG
Date: 8/28/2013

File: "2013 Ann Rept - FHWA-FTA version 2"
From: RPTA
Date: 9/17/2013

- **Transit expenditures (Appendix C):**

File: "2013 Ann Rept – Transit Apdx Tables"
From: RPTA
Date: 9/13/2013

- **Transit program funding sources and uses:**

File: "2013 Ann Rept – Chap 8 Tables"
From: RPTA
Date: 9/13/2013