



2017 Annual Report on the Status of the Implementation of Proposition 400



October 2017



Maricopa Association of Governments

**2017 ANNUAL REPORT
ON THE STATUS OF THE IMPLEMENTATION OF
PROPOSITION 400**

October 2017

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SUMMARY OF FINDINGS AND ISSUES

The *2017 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 by the half-cent sales tax for transportation 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 2017 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 Proposition 400 half-cent sales tax for transportation (Regional Area Road Fund, or RARF) must be used on projects and programs identified in the RTP approved 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.

- Changes to the Plan from Amendments to the MAG Transportation Improvement Program.

The Transportation Improvement Program (TIP), by definition, is an element of the Regional Transportation Plan (RTP), describing in detail the projects and funding covering the first five years of the RTP. As a result, any amendments to the TIP represent corresponding changes to the RTP. During Fiscal Year (FY) 2017, the MAG Regional Council approved amendments to the TIP at nine of its meetings. On June 28, 2017, the MAG Regional Council also approved the new 2040 RTP and FY 2018 – 2022 TIP. Details of these actions may be accessed on the MAG website at <http://www.azmag.gov/TIP>.

- Changes to Regionally Significant Transit Projects.

On June 28, 2017, the MAG Regional Council approved a series of changes to regionally significant transit projects. These changes included deferral of the Tempe Streetcar project opening date to 2020, deferral of the Gilbert Road light rail extension opening date to 2019, and deferral of the Peoria Transit Center Phase II Park-and-Ride project to 2026. In addition, on September 26, 2017, the MAG Regional Council approved the deferral of the Glendale Park-and-Ride opening date to 2023.

- Development of the Next Regional Transportation Plan Update.

According to Federal planning regulations, the next update of the 2040 RTP must be approved through the MAG committee process no later than June 2021. The current target for MAG approval of the next update is June 2020, and it is anticipated that the planning horizon year of the RTP will be extended to 2045. One of major goals of the update will be to incorporate new Federal metropolitan transportation planning regulations from recent Federal transportation legislation into the planning process. A key requirement in the new planning regulations is the identification of transportation system performance measures and performance targets.

HALF-CENT SALES TAX AND OTHER TRANSPORTATION REVENUES

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

- Fiscal Year 2017 receipts from the Proposition 400 half-cent sales tax were 4.3 percent higher than receipts in FY 2016.

The receipts from the Proposition 400 half-cent sales tax in FY 2017 totaled approximately \$411 million, corresponding to a 4.3 percent increase over the total of \$394 million in FY 2016. This represents the seventh consecutive year of higher revenues since FY 2010.

- Forecasts of Proposition 400 half-cent revenues are 3.1 percent lower for the period FY 2018 through FY 2026, compared to the 2016 Annual Report estimate.

Future half-cent revenues for the period FY 2018 through FY 2026 are currently forecasted to total \$4.6 billion. This amount is \$145.7 million, or 3.1 percent, lower than the forecast for the same period presented in the 2016 Annual Report. This decrease reflects a combination of a lower base-year revenue estimate and the annual withholding of \$2.53 million in RARF proceeds to cover administrative costs incurred by the Arizona Department of Revenue for the collection of the tax (HB 2617)

- Forecasts of total Arizona Department of Transportation funds dedicated to the MAG area for FY 2018 through FY 2026 are 22.0 percent higher than the 2016 Annual Report estimate.

The forecast for Arizona Department of Transportation (ADOT) Funds for FY 2018 through FY 2026 totals \$2.9 billion, which is 22.0 percent higher than

the 2016 Annual Report forecast of \$2.4 billion for the same period. This increase reflects funding allocation adjustments in the ADOT five-year construction program.

- Forecasts of total MAG Federal Transportation Funds for FY 2018 through FY 2026 are 19.3 percent higher than the 2016 Annual Report estimate.

Total MAG federal funding for the period FY 2018 through FY 2026 is forecasted to total \$2.5 billion. This is an increase of approximately 19.3 percent from the amount forecasted for the same period in the 2016 Annual Report. This can largely be attributed to the assumed increase in Federal Transit Administration discretionary funding with the proposed expansion of the Glendale light rail corridor. It should be noted that additional federal funds are received in the MAG region and applied to other transportation program areas, which are not covered by this report.

- Federal transportation funding under the FAST Act.

On December 4, 2015, President Obama signed legislation known as the 'Fixing America's Surface Transportation Act', or 'FAST Act'. The MAG area federal transportation funding forecasts included in the 2017 Annual Report correspond to the programs as structured in the FAST Act. The FAST Act is set to run through 2020.

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, 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 2017.

Projects completed during FY 2017

- US 60 (Grand Ave) Bell Road traffic interchange (TI): Construct new interchange.
- Loop 101 (Shea Blvd. to Loop 202): Construct general purpose lanes.
- US 60 (Grand Ave) Thompson Ranch Road TI: Construct intersection improvements.
- Loop 303 El Mirage Road TI: Construct new interchange.
- Loop 303/US 60: Construct new interchange.

Projects advertised for bids or under construction during FY 2017:

- Interstate 17/Black Canyon: Installation of wrong-way vehicle detection system.
 - Loop 303/I-10: Construct new system interchange (Phase II).
 - Loop 202/South Mountain, I-10 Maricopa to I-10 Papago: design, build, and maintain new freeway.
- Construction of the South Mountain Freeway is underway.

The final Environmental Impact Statement (EIS) for the South Mountain Freeway Corridor was released to the public on September 26, 2014. A Record of Decision (ROD) by the Federal Highway Administration was published to the public through the Federal Register on March 13, 2015, selecting a build alternative. The project litigation has concluded and the ROD was upheld on August 19, 2016.

On July 31, 2014, it was announced that the South Mountain Freeway would be delivered as a single public-private-partnership (P3) Design-Build-Maintain project. A Request for Qualifications was released on October 15, 2014 and five proposers responded. Following an evaluation process, a shortlist of three proposers was announced on March 19, 2015. A draft Request for Proposals (RFP) was released for industry review on April 9, 2015, and the Final RFP was released June 12, 2015. ADOT announced the apparent best value proposer on December 28, 2015.

Construction is now underway with the exception of the center segment through the South Mountains. At this time, no stays or injunctions regarding the project have been issued by the court but the ruling is under appeal. The Ninth Circuit Court of Appeals is scheduling oral arguments in October 2017.

- Freeway/Highway Program Rebalance.

In FY 2017, cash flow modeling based on updated revenue forecasts and project cost estimates was conducted. The analysis indicated that there was a revenue surplus in the program in excess of \$1.0 billion. In response to this surplus, MAG, in collaboration with its member agencies, the Arizona Department of Transportation, and the Federal Highway Administration, developed a list of projects to be rebalanced back into the program. A detailed analysis of the projects also was performed to assess the appropriate sequencing of their implementation. On September 27, 2017, the MAG Regional Council approved the rebalancing of the Freeway/Highway Life Cycle Program.

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 ALCP receives significant funding both from 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 2017, a total of more than \$88.0 million in ALCP project expenses was reimbursed or obligated to the implementing agencies

During FY 2017, a total of more than \$88.0 million in ALCP project expenses was reimbursed to implementing agencies. This included reimbursements to eight individual agencies, as well as funding for projects in the MAG intelligent transportation systems (ITS) program. Since the beginning of the program, a total of \$747 million has been disbursed and 67 projects have been completed.

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

During FY 2017, project overview reports were prepared by the lead agencies for three projects in the ALCP. Since the inception of the program, 107 project overviews have been submitted to MAG. Sixteen project agreements were executed in FY 2017. In all, 110 project agreements have been executed to date. Lead agencies deferred approximately \$28 million in federal and regional reimbursements from FY 2017 to later years due to project implementation and local funding issues.

- Funding of the Gilbert Road Bridge over the Salt River.

The ALCP includes a project to construct a new bridge over the Salt River at Gilbert Road. The project, however, had regional funding of less than \$20 million but would cost more than \$45 million to construct. In order to fund the Gilbert Road Bridge, the Maricopa County Department of Transportation requested an exception to the ALCP Policies and Procedures, which prohibit reallocation of project funding until construction has been completed or there is a high degree of certainty that it will be completed within the specified scope and schedule. Specifically, the Maricopa County Department of Transportation requested the reallocation of \$10.0 million in funding from McKellips Road: Loop 101 to SRP-MIC/Alma School Road and \$18.6 million in funding from the Dobson Road: Bridge over the Salt River. Taking into

account the \$14.0 million that had already been programmed on the Gilbert Road: Bridge over the Salt River, \$42.6 million in regional funding would be available. The MAG Regional Council approved the request on March 29, 2017.

- Additional Funding for the Gilbert Road Light Rail Extension.

In October 2012, the MAG Regional Council approved the removal of 16 City of Mesa arterial projects and reallocation of their programmed funding to reimburse costs associated with the construction of a light rail extension on Mesa Main Street from Mesa Drive to Gilbert Road. Following the Regional Council action, Mesa and Valley Metro began work on the project's design. When 60 percent design plans were completed in 2016, it was determined that estimated costs for the project had increased beyond the available funding. To fund the increase, the City of Mesa requested the removal of five additional arterial projects and the reallocation of \$22,389,393 in programmed federal funding to the Gilbert Road light rail extension. The projects included four intersections on McKellips Road at Lindsay Road, Greenfield Road, Higley Road, and Recker Road, as well as the intersection at Lindsay Road and Brown Road. The request was approved by the MAG Regional Council on June 28, 2017.

TRANSIT LIFE CYCLE PROGRAM

The Transit Life Cycle Program (TLCP) is maintained by the Regional Public Transportation Authority (RPTA)/Valley Metro and implements transit projects identified in the MAG Regional Transportation Plan. The RPTA maintains responsibility for administering half-cent sales tax revenues deposited in the Public Transportation Fund for use on transit projects, including light rail transit (LRT) projects. Although Valley Metro/RPTA maintains responsibility for the distribution of half-cent sales tax 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.

- Service improvements were implemented on three routes in FY 2017 and additional routes will be funded during the next five years.

Service improvements implemented during FY 2017:

- Arizona Avenue/Country Club (T44); frequency improvements
- Hayden/McClintock (T57); frequency improvements
- Main Street (T60); frequency improvements

Routes Planned for Implementation during FY 2018 through FY 2022:

- Ray Road (T65); New Route: FY 2018
 - Gilbert Road (T54); Scheduled Improvement: FY 2019
 - Alma School Road (T43); Scheduled Improvement: FY 2020
 - Baseline Road (T45); Funding Start: FY 2020.
 - University Drive (T69); Funding Start: FY 2020
 - Broadway Road (T47); Scheduled Improvement: FY 2021
 - Chandler Boulevard (T50); Scheduled Improvements; FY 2021
 - Bell Road (T46); Funding Start: FY2022
 - Indian School Road (T58); Funding Start: FY2022
- Estimated future costs for the Transit Life Cycle Program are in balance with project future funds for the period of FY 2018 through FY 2026.

Estimated future costs for the period of FY 2018 through FY 2026 are in balance with project future funds available with a remainder of approximately \$284 million (2017 \$'s). Valley Metro/RPTA continually works with its members to find the optimal mix of local, regional and federal funds for the projects in the TLCP. The life cycle process requires a balance to be maintained through effective financing and cash flow management, value engineering of projects, and program adjustments as necessary.

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

A significant portion of the funding for the light rail/high capacity (LRT/HCT) transit system is awarded by the US Department of Transportation through the discretionary "New Starts Program." The MAG area is subject to a highly competitive process with other regions for this Federal funding, resulting in uncertain timing and amounts of New Starts monies over the long term. Therefore, prospective New Starts awards require careful monitoring. Beyond the "New Starts Program" for the LRT/HCT system, other revenues from the Federal Transit Administration are a key source of funding for the bus capital program. Moreover, the FAST-Act retained significant changes to the federal transit funding programs from the last act, Moving Ahead for Progress in the 21st Century (MAP-21). Some of those changes included the elimination of several discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes.

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 in the region have increased recently.

The number of freeway vehicle miles of travel (VMT) per day in the Phoenix-Mesa urbanized area reflects the overall vehicle travel trends for the region. In 2016, there was an increase of 1.33 percent in VMT in the region. This compares with an increase of 1.32 percent in 2015.

- Annual boardings on light rail transit increased and fixed route bus declined during FY 2017.

Light rail transit boardings increased by 9.1 percent, and boardings on bus service (local bus, express, RAPID, circulators, and a rural route) decreased by 5.1 percent, during FY 2017 compared to FY 2016.

CHAPTER ONE

INTRODUCTION

The 2017 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, 2017. This year's report also incorporates changes to arterial and freeway/highway projects approved by the MAG Regional Council on September 27, 2017 due to the magnitude of the amendments. The report likewise 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, TERMINOLOGY AND OTHER METHODOLOGICAL FACTORS

- Accounting Objectives - 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 detailed financial documentation. Estimates of past expenditures and revenue receipts, as well as future costs and revenue collections, are included for use as an aid in assessing past program progress and future program outlook. These figures should not be interpreted as an official, year-by-year financial accounting record of program activities.
- 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, meaning 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. Delaying the issue of the Annual Report to achieve total uniformity with other reports would lessen the ability to provide a timely report to decision-makers and the public. Specific data sources used in the Annual Report are identified in Appendix E.
- Nominal vs. Real Dollars - Revenue projections are expressed in “Year of Expenditure” (YOE) dollars, which reflect the actual number of dollars collected/expended in a given year (nominal dollars). Therefore, there is no correction or discounting for inflation. The effect of inflation on revenues 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 the current year, but may not have been specifically factored, in every case, to a current dollar base year.
- 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 expenditures 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 (for example, total costs reported for a given facility/service in one year being less than that reported in the previous year) 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.

- Project Schedules - In describing project status, both “open to traffic” and “program group for 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 “program group for construction” is utilized to indicate the period in which funding has been identified for construction of the 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.
- Freeway/Highway Project Segment Definitions - 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/limits 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.
- Transit Expenditure Reporting - Since light rail operating expenses were excluded at the inception of 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.
- Freeway/Highway Future Sources and Uses of Funds Adjustments - An adjustment is made in the comparison of future sources and uses of funds for the Freeway/Highway Life Cycle Program that reconciles the net of sources and uses with the projected ending balance estimated by the ADOT Cash Flow Analysis (CFA) for the Freeway/Highway Life Cycle Program. It takes into account the difference between the projected cash flow requirements of the CFA through FY 2026 and the project costs contained in the ADOT Regional Transportation Plan Freeway Program (RTPFP)

Expenditures Report. It represents the cash flow requirements of projects in the Freeway Life Cycle Program that extend beyond the end of FY 2026.

- 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. Conversely, 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 22 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 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. The original tax was approved by Maricopa County voters under Proposition 300 in October 1985 and expired 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 Nine). The next five-year audit (2015 Audit) was initiated in March 2016 and concluded in November 2016. A 10 month progress update is currently being submitted to the office of the Auditor General memorizing the steps MAG has taken to implement the 2016 audit recommendations

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.

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, and the Arizona Department of Transportation.

It is important to note that Proposition 400 applies only to the Maricopa County portion of MAG, and all expenditures related to Proposition 400 are on projects within the Maricopa County area.

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 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 22 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 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, Tolleson, Wickenburg, and Youngtown. 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 Chandler, Glendale, Mesa, Phoenix and Tempe.

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 provided for the establishment of a Citizens Transportation Oversight Committee (CTOC) in a county that has a transportation sales tax such as Maricopa County. The CTOC was responsible for reviewing and advising

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. The CTOC was also charged with annually contracting for a financial compliance audit of expenditures from the Regional Area Road Fund and the Public Transportation Fund.

On May 19, 2017, Governor Doug Ducey signed House Bill 2369 (Chapter Law 315) which eliminated the CTOC. The elimination of the CTOC also resulted in the removal of the CTOC Chairman from the MAG Regional Council and the Transportation Policy Committee.

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 2017.

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. *It is important to note that Proposition 400 applies only to the Maricopa County portion of MAG, and all expenditures related to Proposition 400 are on projects within the Maricopa County area.*

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.

On June 28, 2017, the MAG Regional Council approved the 2040 MAG Regional Transportation Plan (RTP). This was the first update of the RTP since January 2014 and extends the horizon year of the plan from FY 2035 to FY 2040. The 2040 RTP largely continues the policies, priorities, and projects contained in previous plans. In addition, the 2040 RTP encompasses the expanded MAG metropolitan planning area (MPA), which was designated by the Governor on May 9, 2013. The MAG MPA boundary now extends significantly into Pinal County and 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 do not participate in the Life Cycle Programs.

On September 27, 2017, the MAG Regional Council amended the 2040 RTP to include a series of changes to the Arterial Life Cycle Program and Regional Freeway/Highway Life Cycle Program. The 2017 Annual Report on Proposition 400 incorporates these amendments in the project reporting.

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, nitrogen oxides, 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 in the freeway/highway element 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. Widening of non-freeway highways, such as US 60/Grand Avenue, State Route 85 and other State Highways, are also funded. In addition, new 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: Freeway/highway priorities are established by the RTP and are implemented through the schedule of projects in the ADOT Freeway/Highway Life Cycle Program (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 is 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: Arterial street priorities are established by the RTP and are implemented through the schedule of projects in the MAG Arterial Life Cycle Program (see Chapter Seven).

4.1.4 Transit Element

The RTP includes a range of regionally funded transit facilities and services that address needs 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; limited-stop LINK 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/High Capacity Transit: The RTP includes a 65.0-mile Light Rail Transit (LRT)/High Capacity Transit (HCT) system, which incorporates the 19.7-mile, LRT minimum-operating segment (MOS); a 4.6-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 2.7-mile extension south of the MOS in Tempe; and a 5.0-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 Capitol/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. In addition, a 5.0-mile light rail transit corridor from downtown Phoenix south along Central Ave. to Baseline Road was added to the RTP in June 2015.

It is important to note that LRT/HCT capital needs, only, are eligible for the regional half-cent sales tax for transportation, and LRT/HCT operating costs must draw on other funding sources.

Other Transit Services: Other transit services provided in the RTP include rural/non-fixed route transit, commuter vanpools, and paratransit transportation. The RTP also provides for the continued investigation of commuter rail implementation strategies for the region.

Transit Priorities: Transit priorities are established by the RTP and are implemented through the schedule of bus and light rail projects in the RPTA Transit Life Cycle Program (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 should consider: (1) the extent of local public and private funding participation; (2) the social and community impact; (3) the establishment of a complete transportation system for the region as rapidly as practicable; (4) the construction of projects to serve regional transportation needs; (5) the construction of segments to provide connectivity with other elements of the regional transportation system; and (6) other relevant criteria developed by the regional planning agency. 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).
agency.

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. 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, bicycle/pedestrian, 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 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 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: A far reaching 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, and mobility disability 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 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 address regional transportation needs. 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. These kind of criteria were applied when the RTP was originally developed in 2003 to evaluate alternatives and establish implementation priorities. They have also been applied in various forms to evaluate potential adjustments to the priority of corridors, corridor segments, and other transportation projects and services.

MAG continues to place emphasis on performance-based planning, and focuses on enhancing the ongoing transportation system performance monitoring and assessment program. The MAG performance measurement framework was developed with the participation of MAG's member agencies and will continue to be used as a key information source, as the implementation of the RTP moves forward. A major goal of the program is to coordinate study methodologies, prioritize investments, and assess the implementation of strategies, in order to help ensure that projects serve regional transportation needs. A broad range of data supports analysis for multimodal planning and programming activities, and also provides the public with timely and relevant information on the performance of the multi-modal transportation system.

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 has been 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 has been sequenced to result in a continuous and coherent network and to avoid gaps and isolated segments, bottlenecks and dead-end routes. The value of system segments that allow for the efficient connection of existing portions of the transportation system has been considered through the programming process.

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 regional plan that provides geographic balance 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, 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 travel patterns and transportation needs, updated project costs and schedules, and new projections of future revenues.

4.3.1 Plan Changes from Amendments to the MAG Transportation Improvement Program

The Transportation Improvement Program (TIP), by definition, is an element of the Regional Transportation Plan (RTP), describing in detail the projects and funding covering the early years of the RTP. As a result, any amendments to the TIP represent corresponding changes to the RTP. During FY 2017, amendments to the MAG TIP were made by the MAG Regional Council at the meetings listed below. On June 28, 2017, the MAG Regional Council also approved the new 2040 RTP and Fiscal Year 2018 – 2022 TIP. Details of these actions may be accessed on the MAG website at:

<http://www.azmag.gov/committees>

- August 31, 2016
- October 26, 2016
- December 7, 2016
- January 25, 2017
- February 22, 2017
- March 29, 2017
- April 26, 2017
- May 24, 2017
- June 28, 2017

4.3.2 Rebalance of the Regional Freeway Highway Program

In Fiscal Year 2017, cash flow modeling of the Regional Freeway/Highway program indicated that there was a revenue surplus in the program in excess of \$1.0 billion. The surplus was due a combination of increased revenues into the program as well as cost-savings on past and future projects. In response to this surplus, MAG, in collaboration with its partners at Arizona Department of Transportation and the Federal Highway Administration, developed a list of projects to be rebalanced back into the program. A detailed analysis of the projects was also performed to assess the appropriate sequencing of their implementation. On September 27, 2017, the MAG Regional Council approved the Freeway/Highway Life Cycle Program rebalance.

4.3.3 Elimination of Additional Arterial Street Projects to Fund the Gilbert Road Light Rail Extension

In October 2012, the MAG Regional Council approved the removal of 16 City of Mesa arterial projects and reallocation of their programmed funding to reimburse costs associated with the construction of a light rail extension on Mesa Main Street from Mesa Drive to Gilbert Road. Following the Regional Council action, Mesa and Valley Metro began work on the project's design. When 60 percent design plans were completed in 2016, it was determined that estimated costs for the project had increased beyond the available funding. To fund the increase, the City of Mesa requested the removal of five additional arterial projects and the reallocation of \$22,389,393 in programmed federal funding to the Gilbert Road light rail extension.

To select the five projects, the City of Mesa conducted a thorough review of their remaining ALCP projects through the end of the ALCP funding horizon (December 2025). The city considered a number of factors including traffic volumes, crash data, and traffic/roadway configurations. After the analysis, it was determined that the traffic volumes and crash data of the five selected projects did not warrant any improvements. The projects included four intersections on McKellips Road at Lindsay Road, Greenfield Road, Higley Road, and Recker Road, as well as the intersection at Lindsay Road and Brown Road. The request was approved by the MAG Regional Council on June 28, 2017.

4.3.4 Changes to Regionally Significant Transit Projects

On June 28, 2017, the MAG Regional Council approved a series of changes to regionally significant transit projects. These changes included deferral of the Tempe Streetcar project opening date to 2020, deferral of the Gilbert Road light rail extension opening date to 2019, and deferral of the Peoria Transit Center Phase II Park-and-Ride project to 2026. In addition, on September 26, 2017, the MAG Regional Council approved the deferral of the Glendale Park-and-Ride opening date to 2023.

4.3.5 Development of the Next Regional Transportation Plan Update

According to Federal planning regulations, the next update of the 2040 RTP must be approved through the MAG committee process no later than June 2021. The current target for MAG approval of the next update is June 2020, and it is anticipated that the planning horizon year of the RTP will be extended to 2045. One of the major goals of the update will be to incorporate new Federal metropolitan transportation planning regulations from recent Federal transportation legislation into the planning process. A key requirement in the new planning regulations is the identification of transportation system performance measures and performance targets.

It is anticipated that the next iteration of the RTP will be a transitional update maintaining the existing Life Cycle Program structure, but incorporating federally required planning concepts, as appropriate. MAG staff efforts are focusing on the development of specific performance measures and targets for the transportation system in the MAG metropolitan planning area. A collaborative Performance Measures and Targets Advisory Group (PMTAG) has been created to gather input from MAG member agencies with respect to the requirements in the Metropolitan Planning and Asset Management Rules from the U. S. Department of Transportation.

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 discontinued in January 2009 by the legislature in order 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 2017, but may not have been specifically factored, in every case, to a 2017 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 \$4.1 billion through FY 2017. 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 for individual years between FY 2011 and FY 2017 ranging from of 3.4 to 7.0 percent. Most recently, collections for FY 2017 were 4.3 percent higher than those in FY 2016. However, it should be noted that the current estimate of total 20-year revenues from the half-cent sales tax is approximately 44 percent lower than the estimate of \$15.5 billion prepared in November 2006.

Future half-cent revenues for the period FY 2018 through FY 2026 are forecasted to total \$4.6 billion. This amount is approximately 3.1 percent lower than the forecast for the same period in the 2016 Annual Report, in part due to the House Bill (HB) 2617 administrative fee being taken into consideration (additional detail on HB 2617 is provided later in the chapter). Omitting the HB 2617 administrative fee, the forecast is 2.6 percent lower than the forecast for the same period in the 2016 Annual Report. Of the \$4.6 billion total included in the current forecast, \$2.6 billion will be allocated to freeway/highway projects; \$478 million to arterial street improvements; and \$1.5 billion to transit projects and programs. The actual receipts for FY 2017 (\$411.3 million) were slightly lower than amount forecasted for that year in FY 2016 (\$411.4 million). The Proposition 400 half-cent revenue forecasts will be updated again in the fall of 2017.

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%)		
Historical (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
2014	205.5	38.4	121.8	365.7
2015	214.8	40.1	127.3	382.2
2016 (3)	221.5	41.4	131.3	394.2
2017 (4)	231.2	43.2	137.0	411.3
Subtotal	2,291.4	428.1	1,357.7	4,077.2
Forecasted				
2018	243.8	45.5	144.4	433.8
2019	257.7	48.1	152.7	458.6
2020	272.2	50.9	161.3	484.4
2021	286.6	53.5	169.8	510.0
2022	300.9	56.2	178.3	535.4
2023	314.9	58.8	186.6	560.3
2024	329.7	61.6	195.3	586.6
2025	343.5	64.2	203.6	611.3
2026 (5)	209.3	39.1	124.0	372.4
Subtotal	2,558.5	478.0	1,516.0	4,552.5
Total				
Totals	4,849.9	906.1	2,873.7	8,629.7

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

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

(3) Beginning in Fiscal Year 2016, approximately \$2.53 m in RARF proceeds are withheld on an annual basis to cover administrative costs incurred by the Arizona Department of Revenue for collection of the tax (HB2617)

(4) Estimated subject to change.

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

In Fiscal Year 2016, House Bill (HB) 2617 was signed into law by Governor Ducey. HB 2617 provides for the diversion of Proposition 400 sales tax funds for transportation to the Arizona Department of Revenue (DOR). Approximately \$2.53 million per year is withheld to offset DOR expenses associated with collecting the tax. This decreases the amount of funds available for transportation improvements.

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.

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 2017 totaled \$3.2 billion, and forecasted revenues for the period FY 2018 through FY 2026 total \$2.9 billion. This forecast is 22 percent higher than the 2016 Annual Report forecast for the same period. This increase reflects funding allocation adjustments in the ADOT FY 2018-2022 Five-Year Highway Construction Program. Revenue growth rates have also slightly increased over previous forecasts.

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 December 4, 2015, President Obama signed legislation known as the ‘Fixing America’s Surface Transportation Act’, or ‘FAST Act’. The MAG area federal transportation funding forecasts included in 2017 Annual Report correspond to the programs as structured in the FAST Act. .

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 2018 through FY 2026 is

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
Historical			
2006-07	149.7	262.5	412.2
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	60.7	244.7	305.4
2014	63.5	173.2	236.7
2015	69.5	199.4	268.9
2016	72.6	289.3	361.9
2017	78.1	223.6	301.7
Subtotal	795.8	2,374.0	3,169.8
Forecasted			
2018	80.9	346.2	427.1
2019	84.8	65.5	150.3
2020	84.1	193.8	277.9
2021	87.1	181.3	268.4
2022	90.0	129.7	219.7
2023	93.1	399.8	492.9
2024	96.2	313.3	409.5
2025	99.4	248.7	348.1
2026	102.9	252.8	355.7
Subtotal	818.5	2,131.1	2,949.6
Total			
Totals	1,614.3	4,505.1	6,119.4

forecasted to total \$2.5 billion. This forecast is approximately 19.3 percent higher than the amount forecasted for the same period in the 2016 Annual Report. More than three-quarters of the increase can be attributed to the assumed increase in FTA discretionary funding with the proposed two-mile expansion of the Glendale light rail corridor, which is described in greater detail in Chapter 8.

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 as 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 also may 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) STBGP-AZ Funds - STBGP Flexible Funds that ADOT makes available for transit purposes in urban and rural Arizona. It should be noted that STBGP-AZ funds are not included under Formula Programs in Table 5-3 but are listed separately in Table 8-3.

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 \$525 million will be expended from the Formula Programs category and \$1.1 billion will be expended from the Discretionary Programs category during FY 2018 - FY 2026. The Formula Programs estimate increased by 9 percent while the Discretionary Programs increased by 32 percent due to the proposed expansion of the Glendale light rail corridor, which is described in greater detail in Chapter 8.

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

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

Fiscal Year	Transit			MAG STBGP			MAG CMAQ				Grand Total
	FTA Formula	FTA Discr.	Total	Fwy/Hwy	Arterial	Total	Fwy/Hwy	Arterial	Transit	Total	
Historical											
2006	10.2	0.0	10.2	38.1	0.0	38.1	0.0	0.0	2.8	2.8	51.1
2007	15.7	7.8	23.6	42.3	0.0	42.3	0.0	0.0	0.4	0.4	66.2
2008	71.2	18.6	89.8	38.0	0.2	38.2	5.9	11.7	0.0	17.7	145.6
2009	26.8	8.9	35.7	34.4	17.5	51.9	0.0	16.3	2.4	18.7	106.4
2010	14.3	1.6	15.8	39.3	19.6	58.9	29.1	9.3	0.6	39.0	113.7
2011	26.9	1.2	28.1	33.9	39.4	73.2	4.3	3.5	5.6	13.3	114.7
2012	29.3	1.0	30.3	34.1	24.5	58.6	10.6	16.2	9.2	35.9	124.8
2013	21.8	18.2	40.0	34.1	24.1	58.2	8.2	24.4	10.0	42.6	140.8
2014	82.1	20.7	102.8	34.1	21.8	55.9	8.8	22.1	6.8	37.6	196.3
2015	15.0	29.6	44.6	33.7	8.4	42.1	8.6	6.0	11.8	26.4	113.2
2016	41.4	6.5	47.9	12.6	50.5	63.0	8.9	14.3	20.0	43.1	154.1
2017	62.5	0.0	62.5	0.0	58.5	58.5	8.5	6.0	56.6	71.1	192.1
Subtotal	417.3	114.1	531.4	374.5	264.5	639.0	92.9	129.7	126.1	348.7	1,519.0
Forecasted											
2018	72.6	14.5	87.0	0.0	29.8	29.8	9.3	12.4	104.2	125.9	242.6
2019	79.3	90.7	169.9	0.0	40.1	40.1	9.5	7.9	40.4	57.8	267.9
2020	82.9	135.5	218.4	0.0	46.8	46.8	9.7	0.5	24.8	35.0	300.2
2021	57.2	145.4	202.6	0.0	41.8	41.8	9.8	4.9	26.8	41.6	286.0
2022	30.5	113.8	144.3	0.0	50.7	50.7	10.0	1.5	30.7	42.3	237.3
2023	34.1	176.8	210.9	0.0	46.1	46.1	10.2	0.8	31.8	42.8	299.8
2024	59.2	106.3	165.4	0.0	47.4	47.4	10.4	6.1	27.3	43.9	256.7
2025	69.6	148.0	217.6	0.0	51.1	51.1	10.6	7.4	19.7	37.7	306.4
2026	39.6	166.7	206.3	0.0	56.9	56.9	10.8	7.6	25.7	44.1	307.3
Subtotal	524.8	1,097.6	1,622.4	0.0	410.8	410.8	90.4	49.3	331.4	471.0	2,504.2
Total											
Totals	942.1	1,211.7	2,153.7	374.5	675.3	1,049.8	183.3	179.0	457.4	819.7	4,023.2

Notes:

- Values in Table 5-3 represent use of federal funds in life cycle programs, only.
- Values in Table 5-3 represent obligation authority available during the fiscal year, except for FTA funds and CMAQ transit funds, which are the amounts actually expended.
- Forecasted STP and CMAQ revenues are based on a 94.6% Obligation Authority.

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 2018 - FY 2026.

Surface Transportation Block Grant Program Funds (STBGP): STBGP (formerly STP) funds are the most flexible federal transportation funds and may be used for highways, transit or streets. During the period from FY 2018 through FY 2026, it is estimated that \$410.8 million will be available from STBGP funds. This funding will be directed to the Arterial Life Cycle Program. This funding level is 3.5% lower than the 2016 Annual Report estimate for the same period. The decrease is attributable to obligation authority advancements from future years into FY 2017 to ensure that the entirety of the region's funding was authorized.

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 primarily 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 \$471 million from FY 2018 through FY 2026 for the Life Cycle Programs. This represents a 31 percent increase from the 2016 Annual Report estimate for the same period. The increase is primarily attributed to transit CMAQ deferred from FY 2017 to FY 2018 to match anticipated expenditures.

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. In addition, in FY 2014 through legislative action some STAN funding was restored to the MAG program, resulting in a program total of \$141 million, including interest earnings.

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 latest cash flow summary from ADOT (8/17/15) indicates that \$112 million has been spent.

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 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 \$40 million of this funding was directed to 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 2017 total \$9.1 billion. Future regional revenues are projected to total \$10.0 billion for the period FY 2018 through FY 2026. Total revenues for the period FY 2006 through FY 2026 amount to \$19.1 billion, which is slightly more (4.5 percent) than the estimate presented in the 2016 Annual Report.

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 - 2017 Historical	FY 2018 - 2026 Forecast	Total
Proposition 400: Half Cent Sales Tax Extension	4,077.2	4,552.5	8,629.7
ADOT Funds	3,169.9	2,949.5	6,119.4
American Recovery and Reinvestment Act (Freeways) *	112.3	-	112.3
American Recovery and Reinvestment Act (Arterials) **	11.9	-	11.9
American Recovery and Reinvestment Act (Transit) ***	39.6	-	39.6
Statewide Transportation Acceleration Needs (STAN)	141.1	-	141.1
Federal Highway	987.6	881.8	1,869.5
Federal Transit Funds	531.4	1,622.3	2,153.7
Total	9,071.0	10,006.3	19,077.3

* 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 2017, continued cash flow modeling based on updated revenue forecasts and project cost estimates was conducted. The analysis indicated that there was a revenue surplus in the program in excess of \$1.0 billion. In response to this surplus, MAG, in collaboration with its partners at Arizona Department of Transportation and the Federal Highway Administration, developed a list of projects to be rebalanced back into the program. A detailed analysis of the projects was also performed to assess the appropriate sequencing of their implementation. On September 27, 2017, the MAG Regional Council approved the Freeway/Highway Life Cycle Program rebalancing.

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/limits 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.

In the discussion of project status below, the following abbreviations are used:

- DCR: Design Concept Report
- EIS: Environmental Impact Statement
- EA: Environmental Assessment
- CE: Categorical Exclusion
- T.I.: Traffic Interchange

Figure 6-1

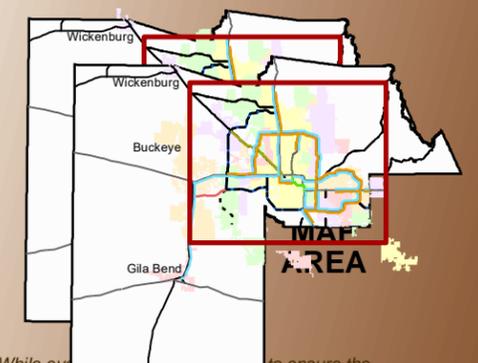


MAG 2017 Annual Report
on Proposition 400
Freeways/Highways

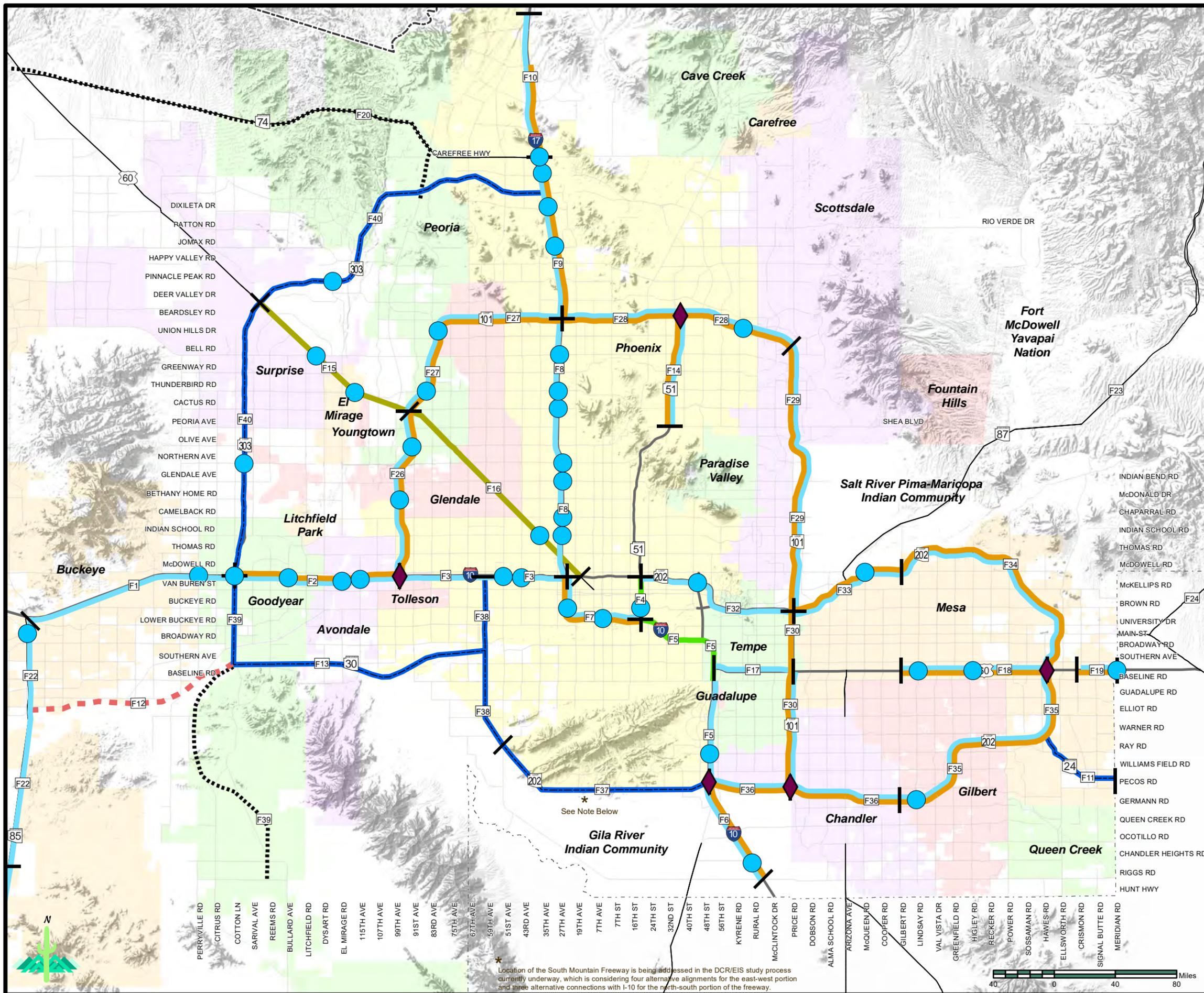
- New/Improved Traffic Interchange
- New High Occupancy Vehicle Ramp Connection
- New Freeway/Highway Construction
- New General Purpose Lanes
- New High Occupancy Vehicle Lanes
- Grand Avenue Corridor Improvements
- Corridor Capacity Improvements
- Interim Corridor Development
- Right of Way Preservation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

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

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* Location of the South Mountain Freeway is being addressed in the DCR/EIS study process currently underway, which is considering four alternative alignments for the east-west portion and three alternative connections with I-10 for the north-south portion of the freeway.

6.1.1 Corridors

SR-153 (Sky Harbor Expressway):

- On July 25, 2007, the MAG Regional Council deleted SR-153/Sky Harbor Expressway from the Regional Transportation Plan (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 as 44th Street.

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 Avenue in the West Valley for 22-miles. It is planned for three general purpose lanes and one HOV lane in each direction. Loop 202/South Mountain Freeway is located entirely within the City of Phoenix.
- DCR/EIS - A DCR/EIS has been completed 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, Laveen, and on the Gila River Indian Community. The final EIS was released to the public on September 26, 2014. The Record of Decision (ROD) by the Federal Highway Administration was published to the public through the Federal Register on March 13, 2015. The ROD selected a build alternative, which will run east and west along Pecos Road and then turn north between 55th and 63rd Avenues, connecting with Interstate 10 on each end. There was a contestability period which ended on August 10, 2015. The U.S. District Court for the District of Arizona granted ADOT's motion for summary judgment on August 19, 2016. Construction is now underway with the exception of the center segment through the South Mountains. At this time, no stays or injunctions regarding the project have been issued by the court but the ruling is under appeal. The Ninth Circuit Court of Appeals is scheduling oral argument in October 2017.
- I-10/Maricopa to 51st Ave. - 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, placing the freeway within the GRIC boundary was rejected. The alignment selected by FHWA in the ROD

for this segment of Loop 202 is located along Pecos Rd between Interstate 10 and 17th Avenue. West of this point, the selected alignment is located along the GRIC boundary within the City of Phoenix to 51st Avenue.

- 51st Avenue to I-10/Papago - The portion of the roadway alignment that was initially selected in 2007 to be along 55th Avenue, between Lower Buckeye Rd and Interstate 10, was shifted to align along on 59th Avenue in 2010. Within the vicinity of Dobbins Road, ADOT, MAG, and FHWA have made localized alignment shifts to avoid several historic properties in the area. The selected alignment in the ROD in 2015 continues to follow the 59th Avenue alignment.
- Public Private Partnership (P3) - On February 22, 2013, ADOT received an unsolicited proposal to design-build-finance the entire 22-miles of the South Mountain Freeway. Following Arizona's P3 statutes, a comprehensive review of the unsolicited proposal was completed by ADOT, with assistance from MAG and FHWA. On July 31, 2014, it was announced that the South Mountain Freeway would be delivered as a single P3 Design-Build-Maintain project. A Request for Qualifications was released on October 15, 2014 and five developers responded. Following an evaluation process, a shortlist of three developers was announced on March 19, 2015. A draft Request for Proposals (RFP) was released for industry review on April 9, 2015 and the Final RFP was released June 12, 2015. Proposals from the three shortlisted developers were received on November 2, 2015. Following an evaluation period, ADOT announced the apparent best value proposer on December 28, 2015. The selected team was Connect 202 Partners, which consists of Fluor Enterprises Inc., Granite Construction Co., and Ames Construction Inc., with Parsons Brinckerhoff Inc. as the lead designer. Following a negotiation period, the design-build-maintain contract was signed on February 26, 2016. Final design is underway and construction activities have begun in summer of 2016 with a completion target of late 2019. This completion date is three-years ahead of previous schedules for the Loop 202/South Mountain Freeway facility.

The 2017 Regional Freeway Highway Program rebalance has added a line item in to the program (RFHP Map ID 29) for a scheduled maintenance payment to the South Mountain Project in FY 2022.

Loop 303 (Estrella Freeway):

- Overview - Loop 303 is planned as a six-lane freeway facility extending west from I-17 at Lone Mountain Road, 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 Road is also part of the plan. Loop 303 is located in the Cities of Phoenix, Peoria, Surprise, Glendale, and Goodyear, and unincorporated Maricopa County.

- I-17 to Happy Valley Parkway - Construction has been completed on an interim four-lane divided roadway and opened to traffic in May 2011. The segment between Happy Valley Parkway and Lake Pleasant Parkway will be upgraded to a six-lane freeway along with the addition of a service TI at Jomax Parkway. Design is scheduled in FY 2018 with construction in FY 2019(RFHP MAP ID 37). The segment between Lake Pleasant Parkway and I-17, including construction of the full system interchange at I-17, is scheduled to be upgraded to a six-lane freeway and has shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.
- Happy Valley Road to US-60/Grand Avenue - An interim four-lane divided roadway was completed between US-60 and Happy Valley Road 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.

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 was identified for FY 2013. A design-builder was selected and the contract was awarded. The construction project was completed in July 2015. A separate project to construct a grade-separated interchange at El Mirage Road was completed in September 2016.

- US-60/Grand Ave Interchange - Preliminary design of an interim interchange at Loop 303 and US-60/Grand Avenue was completed in spring 2011. Final design was completed, using the construction manager at risk (CMAR) method of project delivery. The CMAR was selected in early 2013, and construction was completed in August 2016. The ultimate 3-level interchange is scheduled beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.

The landscaping project for the US-60/Grand Ave Interchange was designed in FY 2015. Construction began in August 2016 and scheduled for completion in 2018.

- US-60/Grand Avenue to I-10 - An interim two-lane roadway was constructed in the 1990's by ADOT. A DCR and EA on the segment for construction of a freeway facility were completed in 2009, and a "Finding of No Significant Impact" issued. Construction of this six-lane freeway segment began in 2011 and finished in 2015.

Construction of crossroad improvements in anticipation of future traffic interchanges at Bell Road, Waddell Road, and Cactus Road was completed

in March 2011. Construction of the Peoria Avenue to Mountain View Boulevard and Thomas Road to Camelback Road segments were completed in November 2013; the Glendale Avenue to Peoria Avenue segment in February 2014, including the Northern Parkway system interchange; and the Camelback Road to Glendale Avenue segment in January 2015. First phase construction of the I-10 System TI, representing the northern half of the interchange, was also completed in January 2015.

The 2017 Regional Freeway Highway Program rebalance funded new traffic interchanges at Northern Avenue and Olive Avenue on Loop 303. The project includes auxiliary lanes between Peoria Avenue's southern ramps to a new half-diamond service interchange on the north side of Olive Avenue. This project also includes a one-way southbound frontage road from Olive Avenue to Northern Avenue. A design memorandum and schematic plan were prepared for the project in March 2016. Predesign is scheduled to begin in FY 21, Final design in FY 2023, and construction in FY 2024(RFHP Map ID 36).

A project to complete the Phase 2, southern half of I-10 system interchange was added to the program for delivery in FY 2016. Design for this project was programmed in FY 2013. Construction started February 2016 with completion scheduled for October 2017.

Landscaping projects followed the roadway construction projects throughout the entire segment. Landscaping has been completed on all segments except the I-10 Phase 2 TI, Design of the Phase 2 Landscaping began in FY 2017 with a construction start anticipated in November 2017.

- I-10 to SR-30 (RFHP Map ID 35) - A DCR/EA is scheduled for completion in summer of 2017, covering construction of a full freeway facility in the corridor. Construction of this segment was previously shifted beyond FY 2026, but returned to the funded program as part of the 2017 Regional Freeway Highway Program rebalance with funding for Design in 2018 and construction programmed in FY 2020. Connection of the SR-303L to the east leg of SR-30 is programmed under the SR-30 projects.
- SR-30 to Riggs Rd. A location DCR and environmental overview for a freeway concept has been started; but work is currently on-hold. Right-of-way protection for this segment was shifted beyond FY 2026 but remains within the FY 2040 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 Avenue, extending from Loop 202/South Mountain Freeway (Loop 202) to 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. SR-30 is located in the Cities of Buckeye, Goodyear, Avondale, and Phoenix, and unincorporated Maricopa County.

With the 2017 Regional Freeway Highway Program rebalance, right of way acquisition and design for Phase 1 between Loop 202 and Loop 303 is funded in FY 2020, and Phase 1 at-grade arterial type roadway is funded for construction in FY 2022 (RFHP Map ID 34). A major amendment to extend the SR-30 to I-17 was approved by the MAG Regional Council on September 26, 2017. Construction of SR-30 as a full freeway is still unfunded but remains within the FY 2040 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 2019. A location study for the segment between Loop 303 and SR-85 has been placed on hold pending determination of the SR-30/Loop 303 system traffic interchange location.

SR-24 (Gateway Freeway):

- Overview - The Gateway Freeway (formerly Williams Gateway) is planned as a six-lane freeway extending from Loop 202/Santan Freeway to the Phoenix-Mesa Gateway Airport, and east to the Pinal County line at Meridian Road. ADOT is conducting an additional study to extend SR-24 into Pinal County to US-60/SR-79 in the Gold Canyon area. In Maricopa County, SR-24 is located in Mesa.
- DCR/EA - A DCR and EA between Loop 202 and Ironwood Road (the logical terminus, one-mile east of Meridian Road) have been completed and a Finding of “No Significant Impact” has been received.
- Loop 202 (Santan) to Ellsworth Road – Construction of an interim four-lane divided roadway was completed in June 2014, representing the first mile of SR-24. Final freeway construction on this segment has been shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.
- Ellsworth Road to Meridian Road - The City of Mesa has requested advancement of an interim roadway concept for the next three-miles of SR-24. A DCR and environmental document is underway to define an interim facility from Ellsworth Road to Ironwood Road. Construction of an interim facility was programmed with the 2017 Regional Freeway Highway Program rebalance with design in FY 2018 and construction in FY 2020 (RFHP Map ID 33). Final construction of this segment has been shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.

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

- SR-74 - Funding for right-of-way protection on SR 74 has been shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.
- Loop 303 (MC-85 to Riggs Road) - Funding for right-of-way protection has been shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.

6.1.2 Widen Existing Facilities: General Purpose Lanes and HOV Lanes

Interstate 10 (Papago and Maricopa Freeways):

- Overview - Additional general purpose lanes have been identified for construction along nearly the entire length of I-10, between State Route 85 in Buckeye and Riggs Road on the Gila River Indian Community. No additional lanes are planned between the I-17 Stack and SR-51. HOV lanes will also be added along several segments to provide continuous HOV service along I-10, between Loop 303 in Goodyear and Riggs Road on the Gila River Indian Community.
- SR-85 to Verrado Way (RFHP Map ID 1) – A DCR and CE were completed in April 2006 to add one general purpose lane in each direction. Funding for the design and construction of the improvements has been advanced in the rebalanced RTP to FY 2019 and FY 2020 respectively.
- Verrado Way to Sarival Avenue - Construction of one general purpose lane in each direction between Verrado Way in Buckeye and Sarival Avenue in Goodyear, for a distance of five-miles, was completed in summer 2011. This segment now has three general purpose lanes in each direction.
- Sarival Avenue 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 Avenue and Dysart Road was completed in summer 2011. This segment now has four-general purpose lanes and one HOV lane in each direction, for a distance of eight-miles, between Sarival Avenue in Goodyear and Loop 101 in Avondale, Phoenix, and Tolleson.

A new TI has been added to the Regional Freeway Highway Program in this segment of I-10 at El Mirage Road (RFHP Map ID 2). This TI is in final design and is scheduled for construction in FY 2018.

- Loop 101 (Agua Fria) to I-17 Stack TI - A DCR/EA is on-hold pending completion of the improvements from 43rd Avenue and 75th Avenue that will be constructed as part of the South Mountain Freeway P3 project to facilitate the proposed system interchange with Loop 202. Funding for these improvements between 43rd Avenue and 75th Avenue was removed from this corridor and shifted to the South Mountain Freeway P3 project. Improvements in this section will also consider the possibility of a future light rail extension along I-10 in this segment (the Capital/I-10 West light rail extension).
- SR-51 (Piestewa) to 32nd Street – In previous proposals, a local-express lane project was envisioned for this segment of Interstate 10, and ADOT was in the process of developing a DCR and EIS for this proposal. In 2012, at the request of MAG and its member agencies, this proposal was cancelled as the concepts were getting well beyond the funding capabilities of the project envisioned in the Regional Transportation Plan. In 2014, MAG, in partnership with ADOT and FHWA, began an Interstate 10/Interstate 17 Corridor Master Plan (otherwise known as the Spine Study) to identify the long-term vision for a 31-mile freeway segment between the Loop 101 North Stack and Loop 202 Pecos Stack traffic interchanges. This freeway segment represents the transportation Spine of Metro Phoenix as approximately 40 percent of all daily freeway traffic finds its way on this corridor. Results from the Spine Corridor Master Plan were completed and adopted by MAG Regional Council in May of 2017.

Within this segment, two projects were funded as part of the 2017 Regional Freeway Highway Program rebalance. The first is the reconstruction of the I-10/Sky Harbor West Access TI (RFHP Map ID 3) with construction scheduled for FY 2024. The second is the widening of I-10 between the I-17 Split TI and 32nd Street to six general purpose lanes and two HOV lanes in each direction (a portion of RFHP Map ID 4), scheduled for construction in FY 2021. A new DHOV ramp is also proposed as part of the Spine Study at the Split TI connecting I-17 to I-10 to and from the southeast, but that ramp is not currently funded in the rebalanced RTP.

- 32nd Street to Loop 202 (Santan-South Mountain) – As noted above in the previous segment, efforts for the long-term vision of the corridor have recently been completed as part of the Spine Corridor Master Plan for Interstate 10 and were adopted by MAG Regional Council in May 2017.

The Spine Study recommendation for this segment of I-10 includes elements that are funded (noted as RFHP Map ID 4) and unfunded elements that fall outside of the current funding horizon. Both are described below.

Funded elements (RFHP Map ID 4) include widening between 32nd Street and the US-60 TI to a section of six general purpose, two HOV, and auxiliary

lanes as needed. Between the SR-143 TI and the US-60 TI, collector-distributor roadways and braided ramps are being added to improve the operations and safety of the “Broadway Curve.” Associated with this project, the SR-143 TI and the Broadway Road TI will be reconstructed. Between US-60 and Loop 202 (Santan-South Mountain), one additional general purpose lane will be added. Four new bike and pedestrian crossings will also be built with this project. This project is currently planned as a design-build delivery method with preliminary engineering and environmental studies currently underway. Construction is scheduled to begin in FY 2021. This project is located in the Cities of Chandler, Phoenix, and Tempe and the Town of Guadalupe.

Unfunded elements within the RTP that fall within this section that fall within the RTP include:

- Extending the collector-distributor roads south from Baseline Road to Elliot Road.
 - Reconstructing the Baseline Road TI.
 - Adding a DHOV TI at Galveston Street.
 - Minor upgrades to several Tis
 - Adding other new bike and pedestrian crossings
- Loop 202 (Santan-South Mountain) to Riggs Road - A project to construct one general purpose lane and one HOV lane in each direction between Loop 202 (Santan-South Mountain Freeways) and Riggs Road is programmed for FY 2025 (RFHP Map ID 7). Upon completion, this segment will have a total of three general purpose lanes and one HOV lane in each direction.

Within this segment of I-10, a new TI is being proposed at Chandler Heights Road and I-10 (RFHP Map ID 8) and is programmed for construction in FY 2022.

Interstate 17 (Black Canyon Freeway):

- Overview - Construction of additional general purpose lanes has been identified for I-17 between I-10 (Maricopa or “Split” interchange) on the south and New River Road 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 to Anthem Way. Interstate 17 is located within the City of Phoenix and unincorporated Maricopa County.
- North of Anthem Way (SB) (RFHP MAP ID 19) - Construction of improvements north of Anthem Way has been programmed in the rebalanced RTP for FY 2020. Details of this project are currently undefined, but will likely involve adding general purpose lane capacity on this segment.

- New River Road 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 2040 planning horizon of the Regional Transportation Plan. 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 SR-74/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 concrete and add one HOV lane in each direction has been shifted beyond FY 2026 but remains within the FY 2040 planning horizon of the RTP.
- SR-74/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.
- Happy Valley Road TI & Pinnacle Peak Road TI (RFHP Map ID 18) - Final design is currently underway with construction programmed in FY 2018. The project will be delivered by a construction manager at risk process (CMAR) with a guaranteed maximum price (GMP) and construction start expected in September 2018. Interchange configuration alternatives are being considered at Happy Valley Road. Happy Valley TI requires FHWA approval of a Change of Access Report with certain TI configurations which is also subject to environmental approval. Implementation of the Pinnacle Peak Road TI also includes the addition of a general purpose lane between Pinnacle Peak and Happy Valley in each direction.
- Loop 101 to I-10/Maricopa Freeway – In previous proposals, additional lanes were considered for this segment of Interstate 17, and ADOT was in the process of developing a DCR and EIS for this proposal. In 2012, at the request of MAG and its member agencies, this proposal was cancelled. In 2014, MAG, in partnership with ADOT and FHWA, began an Interstate 10/Interstate 17 Corridor Master Plan (the Spine Study) to identify the long-term vision for a 31-mile freeway segment between the Loop 101 North Stack and Loop 202 Pecos Stack traffic interchanges. This freeway segment represents the transportation Spine of Metro Phoenix as approximately 40 percent of all daily freeway traffic finds its way on this corridor. Results from

the Spine Corridor Master Plan were completed and adopted by MAG Regional Council in May of 2017.

The Spine Study recommendation for this segment of I-17 includes elements that are funded with the rebalanced Regional Freeway Highway Program and unfunded elements that fall outside of the current funding horizon. Both will be described below.

Funded elements include the following:

- RFHP Map ID 17 – Major reconstruction of the I-17/Bell Road TI to emphasize east-west traffic scheduled for construction in FY 2027.
- RFHP Map ID 16 – Major reconstruction of the I-17/Thunderbird Road TI to emphasize east-west traffic scheduled for construction in FY 2027.
- RFHP Map ID 15 – I-17 Drainage Improvements between the ACDC and the Greenway Road TI scheduled for construction in FY 2019. This project will eliminate the four oldest drainage pump stations in the valley and must be done prior to the construction of the Valley Metro light rail crossing at Mountain View Road (Metro Center).
- RFHP Map ID 14 - Major reconstruction of the I-17/Northern Avenue TI to emphasize east-west traffic scheduled for construction in FY 2024.
- RFHP Map ID 13 - Major reconstruction of the I-17/Glendale Road TI to emphasize east-west traffic scheduled for construction in FY 2025.
- RFHP Map ID 12 - Major reconstruction of the I-17/Camelback Road TI to emphasize east-west traffic scheduled for construction in FY 2022. This project will be coordinated with the Valley Metro West Phoenix/Central Glendale light rail extension.
- RFHP Map ID 11 – Major reconstruction of the I-17/Indian School Road TI to emphasize east-west traffic scheduled for construction in FY 2020.
- RFHP Map ID 10 – Reconstruction of I-17 between I-10 Split TI and 19th Avenue scheduled for construction in FY 2025. This project will reconstruct all pavements and bridges in the corridor, and will widen the corridor to accommodate a future HOV lane in each direction and auxiliary lanes where required. New DHOV ramps will be added at the 7th Street TI.
- RFHP Map ID 9 – Reconstructs the I-17/Central Avenue Bridge in advance of but compatible with the RFHP Map ID 10 project to accommodate the future Valley Metro South Central extension of the light rail under I-17 at this location. This project is scheduled for construction in FY 2019.

Unfunded elements included in the RTP include the following:

- Grand Avenue – Loop 101– Reconstruction of this segment of I-17 to include the addition of a second HOV lane, bringing the total section to

3 general purpose lanes, 2 HOV lanes, and auxiliary lanes in both direction. The second HOV lane would connect to new DHOV ramps at the Loop 101 TI (connecting to and from the west) on the north end and Grand Avenue on the south end. The Greenway, Cactus and Peoria Tis will also be improved and some new bike and pedestrian crossings over I-17 will be added.

- 19th Avenue – Grand Avenue – Reconstruction of I-17 will occur to add one HOV lane and auxiliary lanes in each direction. The Stack TI will not be dramatically impacted. Major improvements include the reconstruction of the Grand Avenue and BNSF railroad bridges and all the bridges crossing I-17 south of the Stack to 19th Avenue to accommodate the widened I-17. The Van Buren Road bridge replacement will be coordinated with the planned Valley Metro Capital/I-10 West light rail extension. The Jefferson/Adams TI will be upgraded to a standard TI configuration, and the Grand Street TI will be removed. Design accommodations will be made for a future SR-30 freeway connection in the vicinity of the Durango Curve.
- Add a new DHOV ramp at the Split TI connecting I-17 to I-10 to and from southeast. Once this ramp is complete, the HOV lane on I-17 will be continuous between Loop 101 and I-10.

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 2040 planning horizon of the RTP.

US-60 (Grand Ave):

- Overview - A series of improvement projects have been identified for construction along various segments of US-60/Grand Avenue 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 Avenue, described below, Grand Avenue is now six-lanes from Van Buren Street in Phoenix to Loop 303 in Surprise. This portion of US-60 is located in the Cities of Surprise, El Mirage, Youngtown,

Peoria, Glendale and Phoenix, and the Sun Cities areas of unincorporated Maricopa County.

- Loop 303 to 99th Avenue - A project to widen US-60 to six lanes between Loop 303 and 99th Avenue was completed in June 2011. A feasibility study on potential grade separation projects on Grand Avenue between Loop 303 and Loop 101 was completed in January 2009. The US-60 (Grand)/Bell Road TI and the Thompson Ranch Road (Thunderbird Rd) Intersection improvements projects were recently completed. A new project, Greenway Road – Thompson ranch Frontage Road has been added to the program in FY2018. (RFHP Map ID 39)
- 99th Avenue to 83rd Avenue - A project to widen US-60/Grand Avenue to six lanes between 99th Avenue and 83rd Avenue was completed in June 2011.
- Loop 101 to McDowell Road - 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 August 2013. The Glendale/Phoenix segment, from 71st Avenue to Van Buren Street, was completed in August 2014. Funding for additional roadway improvements along this segment had been programmed in FY 2014, but was deleted from the program. A grade separation project, Indian School Road / 35th Avenue Intersection Improvements, has been identified and funding advanced for construction in FY2026(RFHP MAP ID 40).
- Loop 303 to Willetta Avenue – In addition to the Proposition 400 efforts, a long-range vision for US-60/Grand Avenue was finished in 2015 by MAG and its planning partners for this segment under ADOT jurisdiction. The Corridor Optimization, Access Management Plan, and System Study (COMPASS) were developed and identify the long-term plan for US-60. Study results identify an access management plan to over-time reduce private property access from 427 to 215 locations; the opportunity to eliminate ten at-grade crossings of the adjacent BNSF Railway to improve intersection operations; and an additional twelve grade-separated traffic interchanges throughout the corridor to accommodate 2040 travel demand. Presently, the COMPASS recommendations are considered long-term investments for US-60 and are planned to be incorporated into the RTP as illustrative projects.

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 Road. The Superstition Freeway is located in the Cities of Tempe and Mesa.

- 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 Road to Power Road 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 Road to Meridian Road - A project to add one additional HOV lane and one additional GP has been programmed, with Design in FY 2018 and Construction in FY 2020 (RFHP Map ID 41). The DCR Study is nearing completion.

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 2½ miles north of Gila Bend to I-10.
- I-10 to Southern Avenue - Construction to provide four lanes between I-10 and Southern Ave. was completed in fall 2010.
- Southern Avenue to MC-85 - Construction of frontage roads between Southern Ave. and MC-85 was completed in May 2008. With the rebalanced RTP, funding has been programmed in FY 2019 for the construction of the Warner Street Bridge (RFHP Map ID 38).
- 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 Road, including an interchange at Bush Highway, was completed in late 2008.
- New Four Peaks Road to Dos S Ranch Road – Reconstruction of the southbound lanes, construction of a climbing lane and shoulder widening between New Four Peaks Road and Dos S Ranch Road 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. This four-lane facility is the realignment of US-93 and includes roundabout traffic intersections at Tegner Street and US-60.

Loop 101 (Agua Fria, Pima, and Price Freeways):

- Overview - Additional general purpose lanes and HOV lanes have been identified for construction along most of the length of Loop 101. Only additional HOV lanes are planned between the Red Mountain Freeway and Baseline Rd.
- Van Buren Street to I-10 (99th Avenue) - A project to provide improvements along 99th Avenue between I-10 and Van Buren Street at the southern terminus of Loop 101/Agua Fria was completed in spring 2011.
- I-10 (Papago Freeway) to Tatum Boulevard - A project to construct one HOV lane in each direction from I-10 (Papago) to Tatum Boulevard 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.

Three new Loop 101 (Agua Fria) projects have been reintroduced to the funded portion of the RTP through the 2017 rebalance as follows:

- RFHP Map ID 20: I-10 to US-60/Grand Avenue - widening Loop 101 to add one additional general purpose lane in each direction. Project includes the Loop 101/I-10 Papago DHOV ramp. Construction is funded in FY 2025.
- RFHP Map ID 21: US-60/Grand Avenue to 75th Avenue - widening Loop 101 to add one additional general purpose lane in each direction. Construction is funded in FY 2027.
- RFHP Map ID 22: 75th Avenue to I-17 - widening Loop 101 to add one additional general purpose lane in each direction. Construction is funded in FY 2024.
- I-17 to Pima Road - A DCR/CE for GP lanes in this segment was started in FY 2013 and was completed in June 2016. With the 2017 Regional Freeway Highway Program rebalance, this project advanced as a Design-Build project (RFHP Map ID 23) with construction funding available in FY 2019.
- Tatum Boulevard to Pima Road-Princess Drive - Construction of HOV lanes from Tatum Boulevard to Princess Drive on the Pima Freeway was completed in August 2009.
- Pima Road-Princess Drive to Loop 202 (Red Mountain Freeway) - The construction of HOV lanes on the Pima Freeway between Pima Road-Princess Drive 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. Preliminary design of the GP lanes between Shea Boulevard and Red Mountain Freeway was completed in spring 2012. Final design was completed in 2014, and the project was advertised and awarded in spring 2014. Construction began in August 2014 and was completed in 2016. Widening to add one general purpose lane in each direction between Pima Road and Shea Boulevard was funded with the 2017 Regional Freeway Highway Program rebalance (RFHP Map ID 25) and is scheduled for construction in FY 2020. The rebalance also included construction funds in FY 2020 for the Pima Road extension between McDowell Road and McKellips Road (RFHP Map ID 26).

- 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.
- US60 Superstition to Loop 202 (Santan Freeway) - A DCR and EA to add a fourth general purpose lane in each direction was started for this project in 2014. Completion of the study is expected in 2017. Final design of this segment is planned in FY 2018, with construction scheduled in FY 2019 (RFHP Map ID 27).

Loop 202 (Red Mountain and Santan Freeways):

- Overview - Construction of additional general purpose and HOV lanes has been identified for construction along essentially the entire length of Loop 202. 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. Freeway) - Construction was completed on one HOV lane in each direction on the Red Mountain Freeway between Loop 101/Pima-Price Freeways and Gilbert Road in July 2010. A DCR/CE to construct one additional general purpose lane in each direction in this segment was completed in October 2012 and 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. Construction began in October 2014 and was completed in February 2016.
- Gilbert Road (on Santan Freeway) to I-10 (Maricopa Freeway) - 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.

The 2017 RTP rebalance funded the addition of one general purpose lane in each direction along the Loop 202 (Santan) freeway between Gilbert Road and I-10 (Maricopa Freeway). This project (RFHP Map ID 32) is funded for construction in FY 2024.

- Gilbert Road (on Red Mountain Freeway) to Gilbert Road (on Santan Freeway) - 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 approved 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 the design-build project that began construction in October 2014 and was completed in February 2016. The balance of the HOV length (between Broadway Road on the Red Mountain Freeway and Gilbert Road on the Santan Freeway) is funded in the 2017 RTP rebalance for construction in FY 2024 (RFHP Map ID 28).

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 Road - A new traffic interchange along I-10 in the City of Goodyear was completed in FY 2008.
- Bethany Home Road - A new traffic interchange along Loop 101 (Agua Fria Freeway) in the City of Glendale was completed in FY 2008.
- Jomax Road / Dixileta Drive - New traffic interchanges meeting I-17 in the City of Phoenix were opened to traffic in September 2008.
- SR-74/Carefree Highway - The reconstruction of the traffic interchange at I-17 was completed and opened to traffic in October 2008. This project is located in the City of Phoenix and unincorporated Maricopa County.
- 64th Street - The construction of a new traffic interchange at Loop 101 (Pima Freeway) was completed in October 2008. The City of Phoenix has recently connected 64th Street to Mayo Boulevard.
- Dove Valley Road/Sonoran Boulevard - A new traffic interchange at I-17 was completed in January 2010, and was opened to traffic in fall 2013 to coincide with the completion of Dove Valley Road by the City of Phoenix.
- Beardsley Road/Union Hills Road - The widening of the Union Hills Road 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 Road connector with Loop 101. Construction was completed in May 2011. This project is located in the Cities of Peoria and Glendale.

- Perryville Road - A DCR/CE for a new traffic interchange at I-10 was completed in 2012. Funding for construction was programmed in FY 2013. Contractor selection for this design-build project was completed in fall of 2013, and construction was completed in February 2015. This project is located in the Cities of Buckeye and Goodyear.
- Fairway Drive (previously identified as El Mirage Rd) - Funding for construction of a new traffic interchange at I-10 is programmed in FY 2018 (RFHP Map ID 2). A DCR/CE for the project was completed in September 2014. Design and Right of Way funds are programmed in FY 2017, with construction in FY 2018. The final design consultant was selected in May 2015 and final design is now underway. This project is located in the City of Avondale.
- Chandler Heights Rd. - Funding for construction of a new traffic interchange along I-10 on the Gila River Indian Community is programmed in FY 2022 (RFHP Map ID 8).
- Mesa Drive - Funding for construction of ramps to/from the west on Loop 202 (Red Mountain Freeway) in the City of Mesa was moved beyond FY 2026 and is included in FY 2030 in the RTP Potential grade separation projects identified for this segment have been shifted beyond FY 2026 but remain within the FY 2040 planning horizon of the RTP.
- Lindsay Road - Funding for construction of ramps to/from the west on US-60 in the City of Mesa was moved beyond FY 2026 but remain within the FY 2040 planning horizon of the RTP.
- Meridian Road - Preliminary engineering studies were completed in FY 2013. Design of a project to construct a half-diamond interchange with access to/from the west along US-60/Superstition Freeway in Mesa and Apache Junction was completed in spring 2014. Construction began in October 2014, and was completed in December 2015.
- El Mirage Road - A project to design a grade-separated interchange at El Mirage Road and Loop 303 in unincorporated Maricopa County, near Surprise and Peoria, was funded for FY 2014. Final design was completed in spring 2014. Construction began in February 2015 and was completed in June 2016.

- Lindsay Road – The 2017 Regional Freeway Highway Program rebalance added a new TI into the program along the Loop 202 (Santan) freeway at Lindsay Road (RFHP Map ID 31). Construction is funded for FY 2021.

New Direct HOV (DHOV) 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, for HOV traffic between I-10 on the east and Loop 101 on the north, were reprogrammed in the 2017 RTP rebalance to construction in FY 2025 (RFHP Map ID 20).
- I-17/Loop 101 (Pima Freeway) - DHOV ramps at this location, for HOV traffic between I-17 on the south and Loop 101 on the west, 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, for HOV traffic between Loop 202 on the south and US-60 on the west, 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 Road and I-10, which was completed in fall 2011. This ramp facilitates movement between Loop 101 on the north and Loop 202 on the east in Chandler.
- 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. This ramp allows for HOV movement between I-10 on the north and Loop 202 on the east in Chandler.
- I-10/I-17 Split – The I-10/I-17 Corridor Master Plan (or Spine Study) recommended the addition of a new DHOV ramp at this TI connecting I-17 to I-10 to and from the southeast. This project is currently unfunded but has been placed in the RTP as an illustrative project.

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 Phoenix Sky Harbor International Airport from I-10 has been programmed for FY 2024 (RFHP Map ID 3).
- US-60/Grand Ave at Bell Road and Thunderbird/Thompson Ranch Road Intersections - DCRs and EAs for intersection improvements at Bell Road in Surprise and at Thunderbird Road in El Mirage, on US-60/Grand Avenue, were completed in January 2015 and August 2014, respectively. The final design for the Thunderbird Road project was completed in March 2016, and the construction was Awarded in May 2016 with an anticipated completion in Summer 2017 (RFHP Map ID 39). The Bell Road intersection improvement project was completed in March 2017.
- Maryland Avenue DHOV – A direct HOV traffic interchange was constructed at Maryland Avenue and Loop 101 near the University of Phoenix Stadium and Westgate Entertainment District in Glendale. Planning and design for the traffic interchange began in 2009 with the widening of the freeway median completed in 2011, during the design-build construction of HOV lanes along Loop 101 between I-10 and SR-51. Design-build construction of the DHOV interchange began in late 2013 and was completed in 2014 in advance of Super Bowl XLXI in February 2015. Funding for this interchange was provided through the Statewide Transportation Assistance (STAN) fund initiated by the Arizona State Legislature in 2007.
- Other Interchanges - The Freeway Life Cycle Program also funds improvements at certain other existing traffic interchanges. Work has been completed at:
 - Higley Road/US-60 (FY 2006)
 - Cactus Road /I-17 (FY 2007)
 - 43rd Avenue/I-10 (FY 2008)
 - Ray Road/I-10 (FY 2008)
 - Thunderbird Road/Loop 101 (FY 2010)
 - Chaparral Road/Loop 101 (FY2011)
 - Avondale Boulevard/I-10 (FY2011)
 - Olive Avenue/Loop 101 (FY 2012)

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 \$98 million for FY 2018-2026, including development of new projects, system-wide 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 is 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 \$126 million has been identified for FY 2018-2026 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 \$64 million has been expended through FY 2017 for rubberized asphalt on freeway facilities and noise wall projects. The list of noise wall projects was approved by the Regional Council in 2008 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 \$108 million for FY 2018-2026. This estimate reflects the assignment of previous system-wide costs to individual corridors as they are identified.

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 Drive and Power Road on Loop 202/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 Amendments and 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 cost changes or other project changes during FY 2017 may be obtained by reviewing actions to amend the FY 2017-FY 2021 and FY 2018 – FY 2022 MAG Transportation Improvement Programs. The overall Freeway/Highway Life Cycle Program cost for the period FY 2006 - FY 2026 as reported in the 2017 Annual Report is \$9.5 billion, which is 12.0 percent more

than the total of \$8.4 billion indicated in the 2016 report. This increase can be attributed to the Freeway/Highway Program Rebalance, noted below.

6.2.2 Freeway/Highway Program Rebalance

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” (December 2007 to June 2009) 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. 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. This scenario was subsequently incorporated into the Regional Transportation Plan - 2010 Update and the FY 2011-2015 MAG Transportation Improvement Program, which were approved by the MAG Regional Council on July 28, 2010.

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 2017, cash flow modeling based on updated revenue forecasts and project cost estimates was conducted. The analysis indicated that there was a revenue surplus in the program in excess of \$1.0 billion. In response to this surplus, MAG, in collaboration with its member agencies, the Arizona Department of Transportation, and the Federal Highway Administration, developed a list of projects to be rebalanced back into the program. A detailed analysis of the projects was also performed to assess the appropriate sequencing of their implementation. On September 27, 2017, the MAG Regional Council approved the Freeway/Highway Life Cycle Program rebalance.

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 2017, but may not have been specifically factored, in every case, to a 2017 dollar base year.

As indicated in Table 6-1, expenditures through FY 2017 equal \$5.0 billion (YOE \$'s) and estimated future costs covering the period FY 2018-2026 amount to \$4.5 billion (2017 \$'s). The total FY 2006-2026 cost for the program is currently estimated to be \$9.5 billion (YOE and 2017\$'s). As indicated in Appendix A, the estimated cost for the Life Cycle Program through FY 2040 totals \$12.2 billion (YOE and 2017 \$'s).

**TABLE 6-1
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2017 and Year of Expenditure Dollars in Millions)**

Category	Expenditures through FY 2017 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2018 -2026 (2017 Dollars)	Total Cost: FY 2006-2026 (2017 and YOE Dollars)
	Design	Right-of-Way	Construction	Total		
New Corridors	213.5	753.7	1,243.8	2,210.9	1,705.8	3,916.7
Widen Existing Facilities	162.0	314.0	1,512.6	1,988.6	1,777.0	3,765.5
New/Improved Interchanges	38.9	32.3	333.2	404.4	583.5	987.9
Maintenance	0.0	0.0	131.3	131.3	126.2	257.5
Freeway Management	18.5	0.0	79.7	98.2	97.6	195.7
Noise Mitigation	3.3	0.2	60.0	63.6	0.8	64.5
Minor/Other Projects	10.4	2.9	55.8	69.1	59.8	128.9
Pre-Engr., Adv. R/W, Admin.	27.3	8.6	0.1	36.0	108.4	144.4
Total	473.9	1,111.7	3,416.6	5,002.2	4,459.0	9,461.2

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 2018 and FY 2026. Sources for the Life Cycle Program between FY 2018 through FY 2026 include the Proposition 400 half-cent sales tax extension (\$2.6 billion); ADOT funds, (\$3.0

billion); MAG Federal highway funds (\$90 million); bond and loan proceeds (\$540 million); and other income (\$118 million). Expenses totaling \$1.8 billion are deducted from these sources, which includes transfers for RTP implementation identified in legislation, estimated future debt service, and repayment of other financing. In addition, an allowance for inflation of \$425 million is deducted. Including a beginning balance of \$721 million, there is a net total of \$4.8 billion (2017 \$'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 2018 through FY 2026, which result in a cash flow requirement of \$4.6 billion (2017 \$'s). A comparison of these projects costs with the expected revenues indicates a positive balance of approximately \$194 million (2017 \$'s) through FY 2026.

6.4 FREEWAY/HIGHWAY PROGRAM OUTLOOK

In FY 2017, cash flow modeling based on revised revenue forecasts and updated project cost estimates was conducted. The analysis indicated that there was a revenue surplus in the program in excess of \$1.0 billion. In response to this surplus, MAG, in collaboration with its member agencies, the Arizona Department of Transportation, and the Federal Highway Administration, developed a list of projects to be rebalanced back into the program. The list of rebalanced projects was approved by the MAG Regional Council on September 27, 2017.

MAG and ADOT will continue their cooperative effort to monitor and update estimated costs, revenue forecasts, and project schedules, as well as identify cost savings through value engineering, risk management, and enhanced project development coordination.

TABLE 6-2
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2018-2026
(2017 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	Projected Future Funding: FY 2018-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	2,558.5
ADOT Funds	2,949.6
MAG CMAQ and STP (Federal Highway)	90.4
Other Income	117.6
Bond and Loan Proceeds	540.0
Plus Beginning Balance	420.5
Less Debt Service and Other Expenses	(1,781.4)
Less Inflation Allowance	(424.9)
Total (2017 \$'s)	4,770.3
USES OF FUNDS	
Category	Estimated Future Costs: FY 2018-2026 (2017 Dollars)
New Corridors	1,705.8
Widen Existing Facilities	1,777.0
New/Improved Interchanges	583.5
Maintenance (Litter & Landscaping)	126.2
Freeway Management	97.6
Noise Mitigation	0.8
Minor/Other Projects	59.8
Pre-Engr., Adv. R/W, Admin.	108.4
Cash Flow Adjustment*	117.2
Total (2017 \$'s)	4,576.2

* This amount reconciles the net of sources and uses in Table 6-2 of \$194.05 million with the projected ending balance estimated by the ADOT Cash Flow Analysis (CFA) for the Freeway Life Cycle Program. It takes into account the difference between the projected cash flow requirements of the CFA through FY 2026 and the project costs contained in the ADOT Regional Transportation Plan Freeway Program (RTPFP) Expenditures Report. It also takes into account the differences in revenue estimation between the ADOT CFA and regional funding forecasts. It represents the cash flow requirements of projects in the Freeway Life Cycle Program that extend beyond the end of 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 ALCP projects in the. The projects shown in Figure 7-1 are cross-referenced with the data in the Appendix B by the code associated with each project.

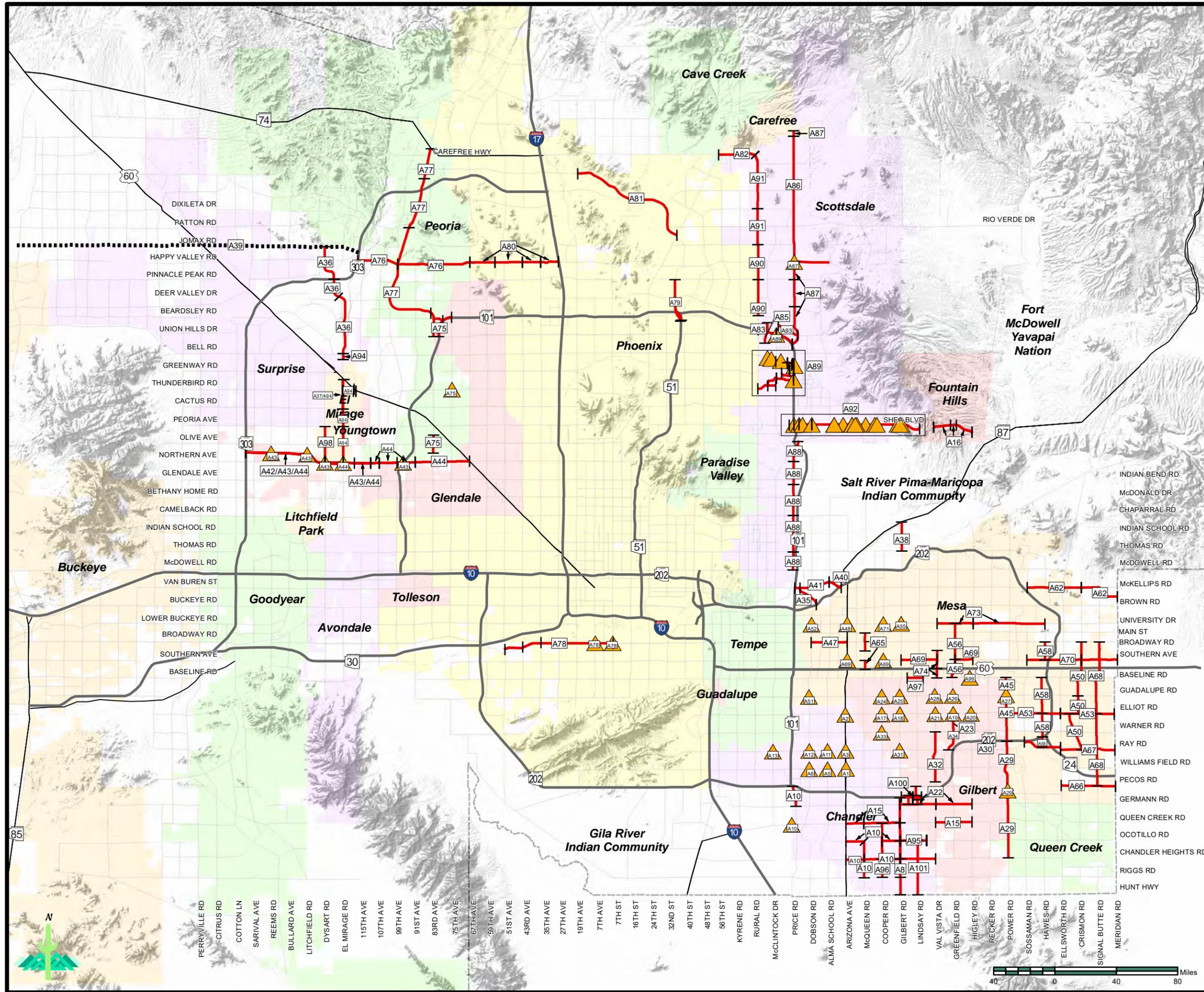
Figure 7-1



MAG 2017 Annual Report on Proposition 400

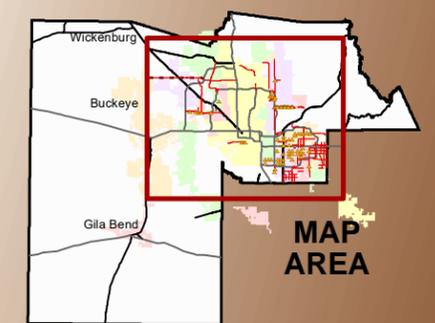
New/Improved Arterials

- 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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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 210 individually defined projects.

Through FY 2017, 67 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.
- Airpark Design Concept Report (design only)
- 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
- Black Mountain Blvd.: SR51 and 101L/Pima Fwy. To Pinnacle Peak Rd.
- Chandler Blvd. at Dobson Rd.: Intersection Improvements
- Dobson Rd. at Guadalupe Rd.: Intersection Improvements
- El Mirage Rd.: Deer Valley Drive to Loop 303
- El Mirage Rd.: Bell Rd to Deer Valley Dr.
- El Mirage Rd.: Bell Rd. to Picerne Dr.
- El Mirage Rd.: Northern to Cactus (design only)
- El Mirage Rd.: Peoria Ave. to Cactus Rd.
- Frank Lloyd Wright at 76th/78th/82nd Street: Intersection Improvements
- Germann Rd.: Vail Vista Dr. to Higley Rd.
- Gilbert Rd. at University Dr.: Intersection Improvements
- Gilbert Rd.: Chandler Heights Rd. to Hunt Hwy.
- Gilbert Rd.: Ocotillo Rd to Chandler Heights
- Gilbert Rd.: Queen Creek Rd. to Hunt Hwy. (design & right-of-way only)
- Gilbert Rd.: Queen Creek Rd. to Ocotillo Rd
- Gilbert Rd.: SR202L/Germann Road to Queen Creek Rd.
- Greenfield Rd.: Baseline Rd. to Southern Ave.
- Guadalupe Rd. at Gilbert Rd.: Intersection Improvements
- 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.
- Lake Pleasant Pkwy.: West Wing Pkwy to Loop 303
- Loop 101 at Beardsley Rd/Union Hills Dr.

- Loop 101 Frontage Rd.: Hayden Rd to Scottsdale Rd.
- McQueen Rd.: Chandler Heights Rd. to Riggs Rd.
- McQueen Rd.: Ocotillo Rd. to Chandler Heights Rd.
- McQueen Rd.: Ocotillo Rd. to Riggs Rd. (design & right-of-way only)
- Mesa Dr.: US-60 to Southern Ave.
- Northern Parkway: Reems and Litchfield Overpasses
- Northern Parkway: Sarival to Dysart
- Northsight Blvd.: Hayden Rd. to Frank Lloyd Wright Blvd.
- Ocotillo Rd.: Arizona Ave. to McQueen Rd.
- Old Price Rd. at Queen Creek Rd.
- Pima Rd.: SR101L to Thompson Peak Pkwy.
- 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
- Power Rd: Santan Fwy to Pecos Rd.
- 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.: Ellsworth Rd. to Signal Butte Rd.
- Ray Rd.: Signal Butte Rd. to Meridian Rd.
- Ray Rd.: Sossaman Rd. to Ellsworth Rd.
- Scottsdale Rd.: Thompson Peak Pkwy. to Pinnacle Peak Rd. (Phase I)
- 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.: Loop 101 to 96th Street ITS Improvements
- Shea Blvd.: Palisades Blvd. to Fountain Hills Blvd.
- Shea Blvd.: Technology Dr. to Cereus Wash
- Signal Butte Rd: Elliot Rd to Ray Rd
- Sonoran Blvd.: 15th Ave. to Cave Creek Rd
- Southern Avenue Area Design Concept Report (design only).
- 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 improve traffic flow and help the transportation system 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

to identify and recommend 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 \$59 million in reimbursements has been provided to ITS projects through FY 2017. It is estimated that an additional \$7 million (2017 \$'s) in reimbursements will be provided for ITS projects between FY 2018 and FY 2019.

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), as originally identified in the MAG 2003 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 2017, a total of more than \$88 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 \$747 million in reimbursements or obligations has been provided (\$688 arterial street and \$59 ITS projects). An additional \$15 million has been provided for MAG Implementation Studies for a grand total of \$762 million.

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 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
 ARTERIAL STREET LIFE CYCLE PROGRAM
 SUMMARY OF PAST AND ESTIMATED FUTURE
 REIMBURSEMENTS: FY 2006-2026
 (2017 and Year of Expenditure Dollars in Millions)**

Category	Reimbursements from Regional Funding		
	Reimbursements through FY 2017 (YOE Dollars)	Estimated Future Reimbursements: FY 2018-2026 (2017 Dollars)	Total Reimbursements: FY 2006-2026 (2017 and YOE Dollars)
Capacity / Intersection Improvements	688.2	862.5	1,550.7
Intelligent Transportation Systems	58.6	7.4	66.0
MAG Implementation Studies	14.9	15.5	30.4
Total	761.7	885.4	1647.1

Table 7-1 provides a summary of project reimbursements and obligations that have occurred through FY 2017. Table 7-1 also indicates the anticipated level of future reimbursements for the period FY 2018 - FY 2026. As indicated, a total of over \$885 million 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 28 percent of total project costs. This amount is less than the ALCP match minimum of 30 percent because the reimbursement amount takes into account the funding that has been put into grants for the Gilbert Road Light Rail Extension before expenditures have been made. Omitting the Gilbert Road Light Rail Extension project from the calculations, local funding, to date, has represented approximately 38 percent of total project costs.

7.2.2 Future Fiscal Status

Table 7-2 summarizes the future funding sources and uses applicable to the Arterial Life Cycle Program for FY 2018 through FY 2026. Sources for the Life Cycle Program include the Proposition 400 half-cent sales tax extension (\$478 million); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$28 million); and Federal Highway Surface Transportation Program (STP) funds (\$434 million). In addition, an allowance for inflation of \$75 million has been deducted. Including a beginning balance of approximately \$48 million, this yields a net total of \$912 million (2017 \$'s) for use on arterial street projects (including ITS and Implementation Studies) through FY 2026.

Table 7-2 also lists the estimated future regional funding reimbursements totaling \$885 million, identified in the Life Cycle Program for the period FY 2018 through FY 2026. As shown, projected Arterial Life Cycle Program revenues are somewhat above estimated future reimbursements, with a \$27 million difference.

TABLE 7-2
ARTERIAL STREET LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2018-2026
(2017 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	Projected Future Regional Funding FY 2018-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	478.0
Federal Highway / MAG CMAQ	27.9
Federal Highway / MAG STP	433.7
Other Income	-
Bond and Loan Proceeds	0.0
Plus Beginning Balance	47.6
Less Debt Service	0.0
Less Inflation Allowance	(75.0)
Total (2017\$'s)	912.3
USES OF FUNDS	
Category	Estimated Future Regional Disbursements: FY 2018-2026 (2017 Dollars)
Capacity / Intersection Improvements	862.5
Intelligent Transportation Systems	7.4
MAG Implementation Studies	15.5
Total (2017\$'s)	885.4

7.2.3 Gilbert Road Bridge over the Salt River

The ALCP includes three different projects to construct new bridges over the Salt River at Dobson Road, McKellips Road, and Gilbert Road. In 2009, the Maricopa County Department of Transportation performed an assessment of the three bridge projects and found that the cost to construct any one of them would exceed \$45 million. Given that each project had less than \$20 million in regional

funding, construction became cost prohibitive and the further development efforts were put on hold.

In 2015, the Maricopa County Department of Transportation initiated a second review in an attempt to prioritize each of the three projects. Part of the review included engagement of various stakeholders including the Salt River Pima-Maricopa Indian Community and the City of Mesa. The review also included a technical analysis of the existing Gilbert Road bridge structure, which was found to pose potential risk to the traveling public during periods of high water flow. A traffic analysis was also conducted and found that closure of the low-flow crossing for the north bound lanes of Gilbert Road during water releases from the Salt and Verde River reservoirs had a significant impact on traffic flow in the area.

As a result of the review, the Maricopa County Department of Transportation concluded that the Gilbert Road Bridge was the highest priority. A design consultant for the project was selected in 2016 and as part of those efforts, a Cost Risk Analysis (CRA) was performed to evaluate cost and schedule risk. At the conclusion of the CRA, the project's cost was estimated at \$65.5 million (2016 dollars).

In order to fund the Gilbert Road Bridge, the Maricopa County Department of Transportation requested an exception to the ALCP Policies and Procedures, which prohibit reallocation of project funding until construction has been completed or there is a high degree of certainty that it will be completed within the specified scope and schedule. Specifically, the Maricopa County Department of Transportation requested the reallocation of \$10.0 million in funding from McKellips Road: Loop 101 to SRP-MIC/Alma School Road and \$18.6 million in funding from the Dobson Road: Bridge over the Salt River. Taking into account the \$14.0 million that had already been programmed on the Gilbert Road: Bridge over the Salt River project, \$42.6 million in regional funding would be available.

The MAG Regional Council approved the request on March 29, 2017.

7.2.4 Gilbert Road Light Rail Extension

In October 2012, the MAG Regional Council approved the removal of 16 City of Mesa arterial projects and reallocation of their programmed funding to reimburse costs associated with the construction of a light rail extension on Mesa Main Street from Mesa Drive to Gilbert Road. Following the Regional Council action, Mesa and Valley Metro began work on the project's design. When 60 percent design plans were completed in 2016, it was determined that estimated costs for the project had increased beyond the available funding. To fund the increase, the City of Mesa requested the removal of five additional arterial projects and the reallocation of \$22,389,393 in programmed federal funding to the Gilbert Road light rail extension.

To select the five projects, the City of Mesa conducted a thorough review of their remaining ALCP projects through the end of the ALCP funding horizon (December 2025). The city considered a number of factors including traffic volumes, crash data, and traffic/roadway configurations. After the analysis, it was determined that the traffic volumes and crash data of the five selected projects did not warrant any improvements. The projects included four intersections on McKellips Road at Lindsay Road, Greenfield Road, Higley Road, and Recker Road, as well as the intersection at Lindsay Road and Brown Road.

The request was approved by the MAG Regional Council on June 28, 2017.

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, \$688 million has been disbursed and 67 arterial street projects have been completed. Additional blocks of funding have been provided for ITS projects and implementation studies, amounting to \$59 million and \$15 million, respectively.

During FY 2017, project overview reports were prepared by the lead agencies for 13 projects in the ALCP. Since the inception of the program, 107 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 16 project agreements were executed in FY 2017. Eight jurisdictions received reimbursements or obligations for project work during FY 2017 totaling almost \$89 million, including the MAG ITS program. In all, 110 project agreements have been executed to date. Lead agencies deferred approximately \$28 million in federal and regional reimbursements from FY 2017 to later years due to project implementation and local funding issues.

On June 28, 2017, the MAG Regional Council approved the FY 2018 ALCP. The Regional Area Road Fund (RARF) forecast, released by the Arizona Department of Transportation in the fall of 2016, indicated a slight decrease in half-cent revenues. The projection of Federal funds into the program also decreased under the FAST Act. Given the amount of reimbursements that were deferred beyond the funding horizon, the temporary elimination of program bonding and project inflation remained in place.

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. Consistent with 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.

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 identity 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 and the single Valley Metro brand.

8.1 STATUS OF BUS PROJECTS

Transit Standards and Performance Measures

Proposition 400 and the federal transportation bill, Fixing America's Surface Transportation Act (FAST-Act), emphasize a performance based transit system. As a result, Valley Metro began a multi-phase process to update and expand its standards. The effort resulted in the Board adopted Transit Standards and Performance Measures (TSPM). TSPM addresses the following items:

- Service delivery
- Service types
- Service standards
- Passenger stop spacing
- Performance measures
- Planning tools
- Performance thresholds
- New service implementation standards
- Application principles
- Service design standards
- Fleet prioritization

The TSPM effort applies to future service changes through the agency's Short Range Transit Program (SRTP) planning process. The SRTP is a five-year planning document that identifies regionally and locally funded transit service change concepts for the next five years. The SRTP builds on previous and ongoing Valley Metro efforts and is developed in accordance with adopted TLCP policies. The SRTP is updated annually based route performance review, input from member agencies and Valley Metro staff through sub-regional meetings and the regional Service Planning Working Group (SPWG). Modifications to existing or planned Proposition 400 services or Proposition 400 service additions are reviewed through a set of guiding principles; the outcome of the analysis serves as an input to the TLCP annual planning and programming process. The SRTP also serves as an input to Valley Metro Fleet Management Plan, bi-annual service change process and the Transportation Improvement Program (TIP).

The TLCP 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 TLCP 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 2018 through FY 2022).

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, queue-jumpers, signal priority systems or other enhancements. The Arterial BRT routes are intended to operate during peak and off-peak periods. Freeway BRT/Express routes are also included in the RTP. 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 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 \$78.4 million (2017 and YOE \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026 (see Table 8-2). This total represents approximately 1.3 percent of the total regional funding budget allocated for transit. There are 20 BRT/Express routes identified for funding in the TLCF 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 TLCF as an illustrative project is the Chandler Blvd. Arterial BRT. A total of 13 routes have received funding since the start of the program.

In addition, the LINK services that had been implemented on Main Street and on Country Club Dr/Arizona Ave are being combined into the local routes that operate on those streets. Performance of the LINK routes did not meet expectations and do not meet adopted standards. The services in the corridors no longer operate as LINK service, but frequency on the local routes 40 and 112 were increased so that overall service levels are better than previously operated.

Routes Implemented During FY 2017

- None

Routes Planned for Implementation During FY 2018 through FY 2022

- None

8.1.2 Bus Operations: Supergrid

Commonly referred to as “Supergrid Routes,” the regional grid routes are bus routes operated 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 as defined in the Valley Metro Transit Standards and Performance Measures level of service standards. Other elements of the fixed route bus network are local routes; these routes 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.

Figure 8-1



MAG 2017 Annual Report
on Proposition 400
**Bus Rapid Transit (BRT)/
Express Bus**

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

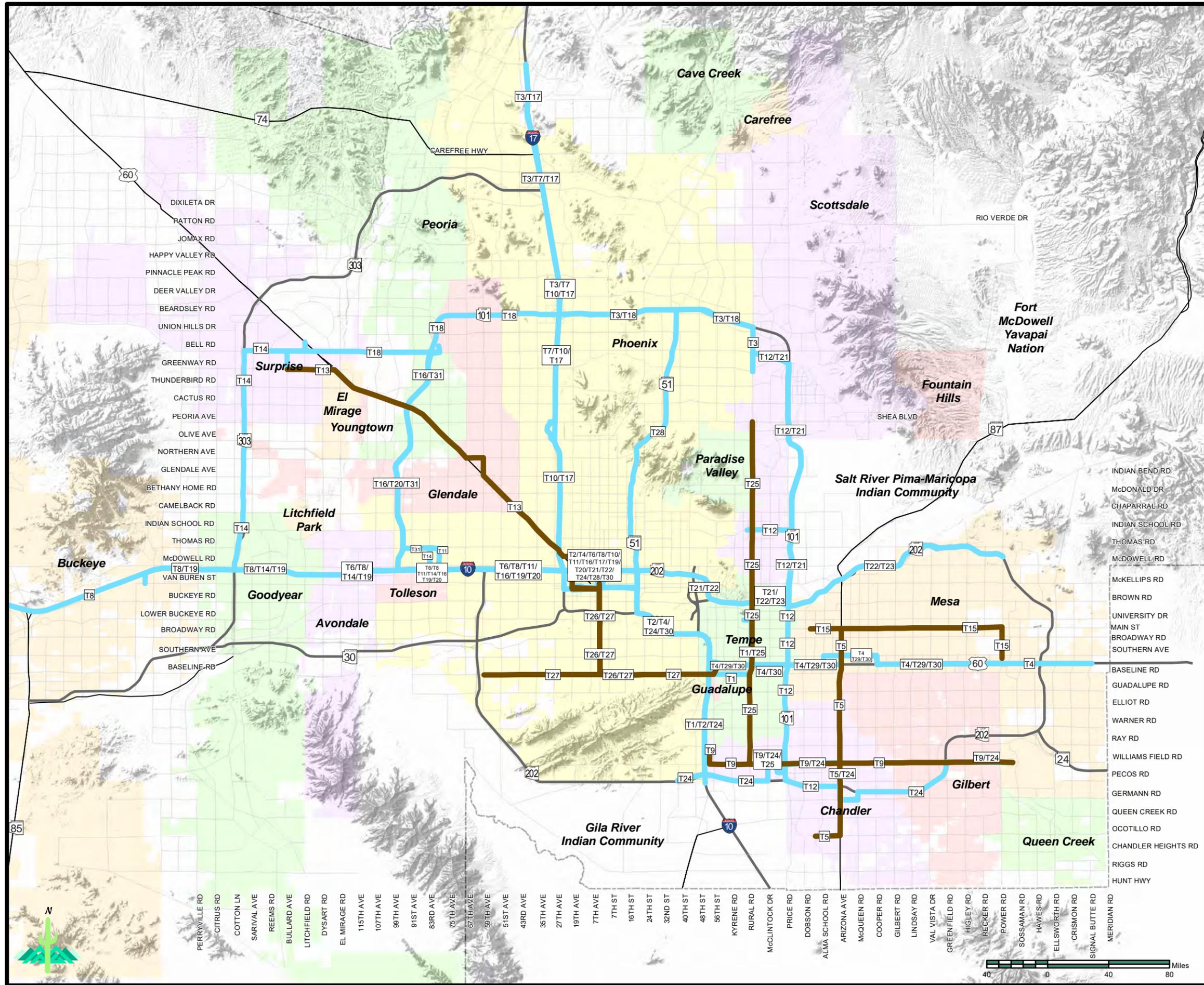
Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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Regional Grid bus operations account for \$739.9 million (2017 and YOE \$'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-2). This represents approximately 12.1 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, due to the decline in revenues. Lower service levels have been programmed in order to implement more of the routes through FY 2026. An additional 9 routes have been shifted beyond FY 2026 but are in the Regional Transportation Plan. Included in the TLCP as an illustrative project is the Litchfield Rd. regional grid route. In total, 22 routes have received funding since the start of the program.

In general, supergrid 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. In addition, weekend service was to be 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. Service improvements were made on three routes in FY 2017. One new route (primarily locally funded) is planned for implementation, and four routes are planned for improvements in FY 2018 through 2022, and four routes will have increased funding from the TLCP for existing service. These are existing routes that will receive TLCP funding and may also receive improved service levels and/or route extensions.

Routes Implemented During FY 2017

- Arizona Avenue/Country Club (T44); Scheduled Improvement: FY 2017.
- Hayden/McClintock (T57); Scheduled Improvement: FY 2017.
- Main Street (T60); Scheduled Improvement: FY 2017.

Routes Planned for Implementation During FY 2018 through FY 2022

- Ray Road (T65); New Route: FY 2018
- Gilbert Road (T54); Scheduled Improvement: FY 2019.
- Alma School Road (T43); Scheduled Improvement: FY 2020.
- Baseline Road (T45); Funding Start: FY 2020.
- University Drive (T69); Funding Start: FY 2020.
- Broadway Road (T47); Scheduled Improvement: FY 2021.
- Chandler Boulevard (T50); Scheduled Improvements; FY 2021
- Bell Road (T46); Funding Start: FY2022
- Indian School Road (T58); Funding Start: FY2022

Figure 8-2



MAG 2017 Annual Report
on Proposition 400

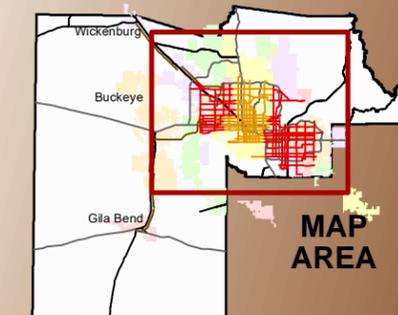
Super Grid Bus System

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

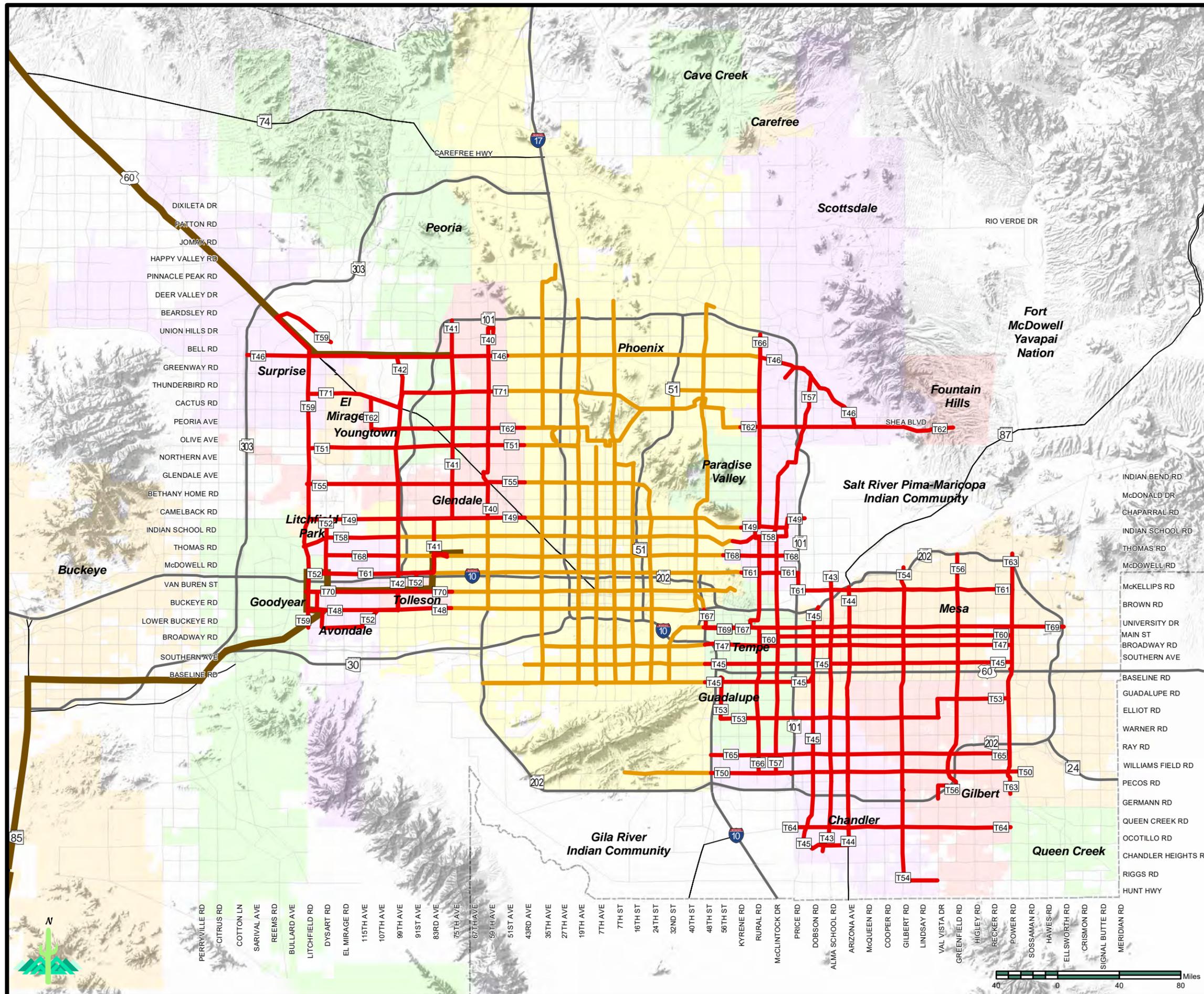
Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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8.1.3 Bus Operations: Other

Other bus services operating costs account for a total of \$806.5 million (2017 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. On July 1, 2016 Valley Metro began to operate a seamless, transfer-free regional ADA service. Previously, customers would need to transfer among systems (e.g. between East Valley Dial-a-Ride and Phoenix Dial-a-Ride) in order to complete multi-jurisdictional trips. The new Regional ADA service is a significant improvement in the delivery of services to ADA certified passengers.

These services account for a total of \$466 million (2017 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). During the next five years (FY 2018 through FY 2022), it is anticipated that \$155 million (2017 \$'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 \$7.8 million (2017 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 publicly 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. These services account for a total of \$13.3 million (2017 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

RPTA Planning, Administration and Passenger Support Services – 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. These services account for a total of \$91 million (2017 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). In addition, passenger support services account for a total of \$151 million (2017 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

Existing Local and Express Service: Supplementary funding is allocated to local and express services which existed previous to Prop 400, which complement the planned BRT and regional grid networks. This accounts for a total of \$77.2 million (2017 and YOE \$'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

8.1.4 Bus Capital: Facilities

Design and construction is underway on a number of facilities including park-and-ride and transit center facilities. Other passenger facilities are to be implemented over the next several years. It is anticipated that a total of \$19.1 million (2017 \$'s) in regional funding will be expended during the next five years (FY 2018 through FY 2022) on 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 \$251.9 million (2017 and YOE \$'s) during FY 2006 through 2026 (see Table C-4). Due to the decline in revenues, many of the facilities originally programmed are currently unfunded through FY 2026. Capital projects currently completed or funded through FY 2026 are the completion of 11 park-and-ride lots; 2 transit centers (4 bus-bay); 1 transit center (6 bus-bay); 1 transit center (for major activity centers); 2 new bus maintenance facilities; the purchase of BRT Right-of-way and associated improvements in 2 corridors; and 424 bus stop pullouts/improvements at various locations.

8.1.5 Bus Capital: Fleet

Over the planning horizon associated with Proposition 400, fleet purchases account for a total of \$907.3 million (2017 and YOE \$'s) during FY 2006 to FY 2026 (see Table C-5). Planned fleet purchases through FY 2026 include 1,503 buses for fixed route networks; 23 buses for rural routes; 603 Dial-a-Ride (DAR) vans for paratransit purposes; and 1,541 vanpool vans. It is anticipated that a total of \$329.9 million (2017 \$'s) in regional funding will be expended during the period FY 2018 through FY 2022 on vehicle purchases. These purchases will include 464 fixed route buses, 3 rural transit buses, 166 paratransit vehicles, and 414 commuter vans. Both replacement and expansion vehicles are included in these numbers.

8.2 STATUS OF HIGH CAPACITY/ LIGHT RAIL TRANSIT PROJECTS

An extensive High Capacity / Light Rail Transit (HCT/LRT) component is included in the TLCF for the MAG Region. This includes completed and planned future extensions of HCT/LRT corridors throughout the region as well as support infrastructure for the system. A portion of this amount supported the initial 20-mile Central Phoenix / East Valley (CP/EV) light rail.

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 TLCF accounts for a total of \$3.32 billion (2017 and YOE \$'s) for HCT/LRT projects (see Table 8-2). This amount represents approximately 54.4 percent of the total regional funding dedicated to transit. Approximately \$2.7 billion (2017 and YOE \$'s) of this amount applies toward construction of route extensions. The remaining \$615 million (2017 and YOE \$'s) applies to support infrastructure affiliated with the HCT/LRT system. Operating costs are not supported by any of the regional funding for HCT/LRT system and are not reported in this document. (See Section 8.4.2)

Figure 8-3



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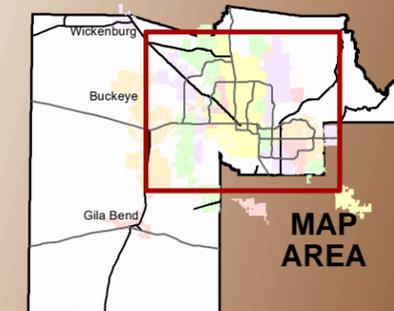
Light Rail Transit (LRT)/
High Capacity Transit

-  Existing Light Rail Corridor
-  Future High Capacity Transit Corridor
-  Freeways
-  Highways
-  Other Roads
-  County Boundary

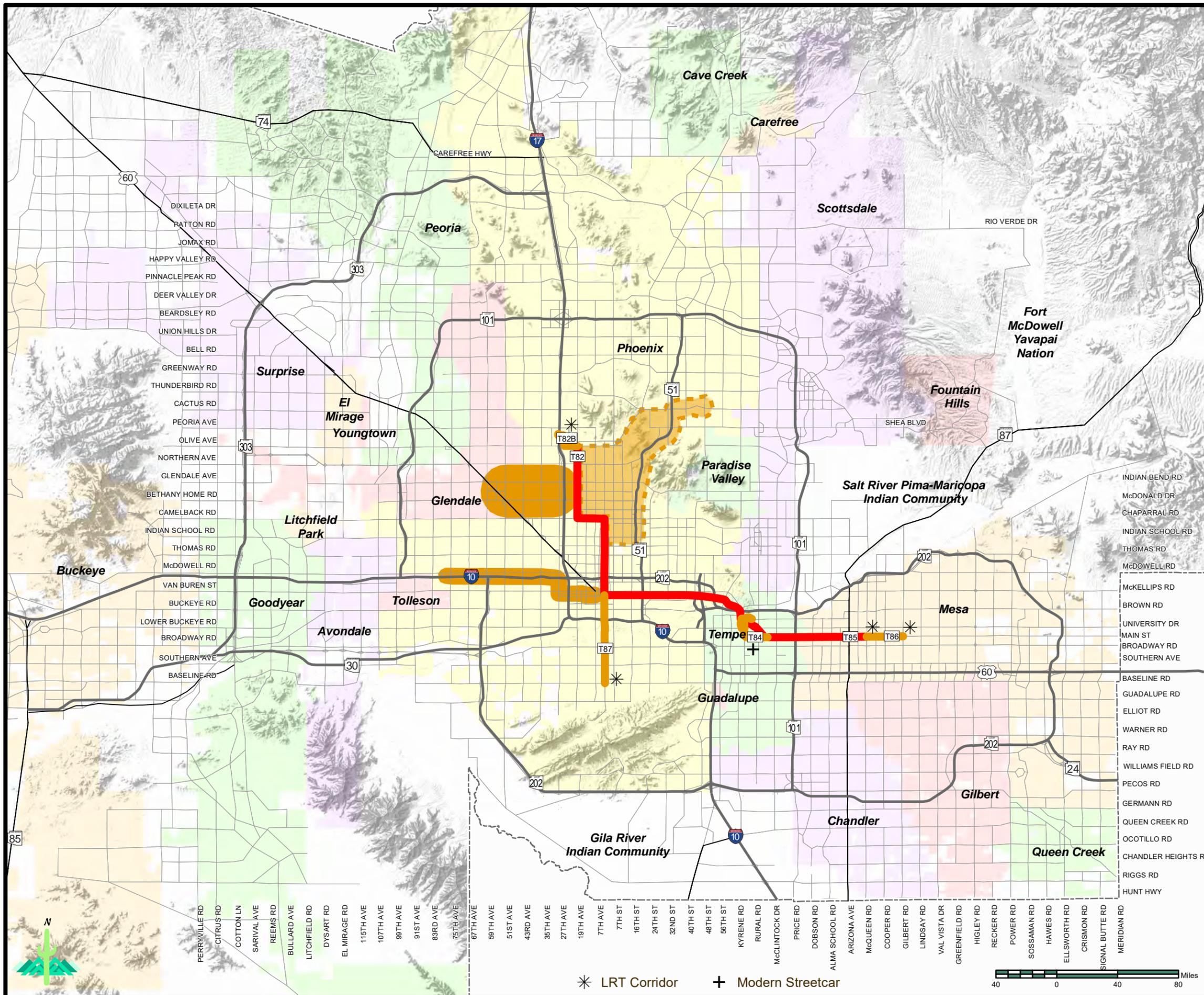
The Transit Life Cycle Program does not include funding for the Eligible High Capacity Corridors

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

The alignment for the CP/EV LRT covers a total of 19.7 miles, extending from Montebello 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 segment was completed and began operations in December 2008.

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.

The CP/EV system is complemented 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

The TLCP for the period FY 2006 through FY 2026, support infrastructure affiliated with the HCT/LRT system accounts for a total of \$615 million (2017 and YOE \$'s, see Table C-6). Of this amount, \$272.4 million applies toward infrastructure along the CP/EV, including bridges, regional park-and-rides, operations and maintenance facility, rail vehicles and legislatively mandated non-prior rights utilities; \$169.5 million applies toward corridor preliminary planning, project development and system integration planning (to be expended by 2026); and \$173.5 million applies to other HCT/LRT improvements throughout the system (to be expended by 2026).

The other improvements covered by the \$173.5 million above include the purchase of system expansion vehicles not specifically programmed as part of a corridor extension; expansion of the current Operations and Maintenance Center (OMC) by FY 2020; and improvements or rehabilitation of existing vehicles and system infrastructure.

Non-prior rights utility relocations are legislatively mandated to be funded with Prop 400 revenues. These had been reported separately in the support

infrastructure category in past Annual Reports. These costs are part of each extension project and are reported as such, so to eliminate confusion these costs are now reported with the corridors project costs.

8.2.3 High Capacity / Light Rail Transit: Corridors

The completions of eight additional LRT/HCT segments on the system are included in the TLCP using regional and local funding. These include: (1) a 4.6-mile Northwest Extension, which in FY 2007 was split into two phases; (2) a 3.0-mile Tempe Streetcar; (3) a 3.1-mile light rail extension from the east terminus of the CP/EV to Mesa Drive; (4) a 1.9-mile extension from Mesa Dr. to Gilbert Rd., which was amended into the Regional Transportation Plan in 2013; (5) a 5.0-mile corridor to Glendale (proposed to be extended to 7.0 mile); (6) an 11.0-mile corridor along I-10 into west Phoenix; (7) a 12.0-mile corridor to northeast Phoenix; and (8) a 5.0 mile corridor south along Central Avenue to Baseline Road. The development of the route extensions account for a total of \$2.7 billion (2017 and YOE \$'s) during FY 2006 through FY 2026 (see Table C-7).

Local sources will provide approximately half of the funding for the Northwest Extension (phase II) 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.

Central Mesa Extension:

The Central Mesa LRT Extension extends along Main Street from the end of line station for the CP/EV at Sycamore eastward to Mesa Drive. The extension consists of four stations and a park-and-ride on the northeast corner of Main Street and Mesa Drive. Construction on the extension began in May 2012 and was completed in August 2012. Revenue service on the extension began on August 22, 2015.

Northwest Extension:

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 substantially complete and opened for revenue operations in March 2016.

The Northwest Phase II Light Rail Extension was initially approved in 2007 and would terminate along Mountain View Road east of Interstate 17 (I-17). In 2013, the City of Phoenix requested that Valley Metro evaluate design options that would extend the alignment over I-17 and terminate at the Metrocenter Mall.

Valley Metro completed the evaluation and recommended that the alignment to be extended across I-17 and terminate on an elevated station platform. The City of Phoenix City Council approved the refined alignment on November 18, 2014. The Northwest Phase II Light Rail Extension is scheduled to be complete in 2023.

Tempe Streetcar:

Initially approved in FY 2011, the Tempe Streetcar project was revised in 2013 at the request of the Federal Transit Administration (FTA) to better fit new federal funding criteria. Valley Metro and the City of Tempe made several modifications to the streetcar route. The modified project includes an alignment along Rio Salado Parkway and connects with the one-mile downtown Tempe loop on Ash and Mill Avenues then travels south to Apache Boulevard, where the route would continue on Apache Boulevard east to the Dorsey LRT station. The modified alignment was adopted by Tempe City Council in June 2014. Between June 2014 and May 2015, Valley Metro and City of Tempe staff continued to refine the project's definition, including stop locations and street configurations. In May/June of 2015, MAG approved the revised project to be part of the RTP and TIP. The FTA issued a finding of no significant environmental effect from the project in October 2015. Construction is scheduled to begin in early 2018 and estimated to be completed in 2020.

Gilbert Road Extension:

The extension to Gilbert Rd., which was amended into the RTP in 2013, will be funded with a combination of federal funds from the region and local sales tax from 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 Block Grant Program (STBGP) funds from Federal Highway Administration which are being flexed to transit. The project is currently in construction, with revenue operations beginning in early 2019.

Capitol/I-10 West:

The Capitol/I-10 West LPA recommendation for alignment and technology were formally adopted by Phoenix City Council in May 2012 and by MAG regional council in July 2012. The 11-mile light rail alignment would extend from downtown Phoenix through the State Capitol area to approximately 79th Avenue and the I-10 West freeway. In 2016, the City of Phoenix Council voted to phase the project, with the initial phase terminating near the Capitol and scheduled to be complete in 2023. The second phase is proposed to be complete by 2030. The Environmental Assessment on Phase I is scheduled to be completed in the early 2018.

West Phoenix/Central Glendale:

The West Phoenix/Central Glendale project will travel westbound from the existing CP/EV line through Phoenix to the city of Glendale. In 2013, Valley Metro, city of Phoenix, and the city of Glendale initiated a transit corridor study to identify determine a route location and a type of transit that would best serve the transportation needs in the corridor. In consultation with the cities of Phoenix and Glendale, it is proposed that the corridor be expanded to 7 miles, with the specific alignment to be determined in 2018. A major amendment will be required to extend the route. Completion of the extension is anticipated in 2026.

Northeast Phoenix:

The Northeast Phoenix LRT corridor is planned to connect to the current 20-mile CP/EV LRT and extend near Paradise Valley Mall. While remaining in the RTP, the project has been shifted beyond the TLCP horizon year of FY 2026 to accommodate the decrease in actual and forecasted revenues. Construction is anticipated to be complete in 2034.

South Central:

The South Central Phoenix LRT corridor is planned to connect to the current 20-mile CP/EV LRT and extend south along Central Avenue to baseline Road. This project was amended into the RTP in 2015. The project has an anticipated completion in 2023. This project is programmed to be funded by federal, City of Phoenix and regional half-cent funds. The regional half-cent funds were made available by delaying Phase II of the Capitol/I-10 West project beyond 2026.

8.3 TRANSIT PROGRAM CHANGES

The \$6.1 billion for FY 2006-2026 estimated total transit costs represent a 7.5 percent increase over the figure of \$5.68 billion provided in the 2016 Annual Report. The most significant change was in the Light Rail category, as a result of the proposal to increase the length of the Glendale corridor to 7 miles; and improvements to the and regional ADA service, which eliminated the need for transfers among systems. The FY 2017 changes amounted to a net total increase of approximately \$427 million. 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 “funding start date” for a number of bus routes was shifted beyond FY 2026, due to TLCP adjustments made in FY 2009, FY 2010 and FY 2012. 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
(2016, 2017 and Year of Expenditure Dollars in Millions)**

Category	2016 Annual Report Total Costs: FY 2006 - 2026 (2016 and YOE Dollars)	2017 Annual Report Total Costs: FY 2006 - 2026 (2017 and YOE Dollars)	Change in Total Costs: 2016 vs. 2017
Bus Operations: BRT/Express	77.8	78.4	0.6
Bus Operations: Regional Grid	736.1	739.9	3.8
Bus Operations: Other	783.7	806.5	22.8
Bus Capital Projects: Facilities	251.5	251.9	0.3
Bus Capital Projects: Fleet	893.0	907.3	14.2
Light Rail Transit: Support Infrastructure	601.8	615.3	13.5
Light Rail Transit Capital: Route Extensions	2,331.3	2,703.1	371.7
Total	5,675.3	6,102.3	427.0

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 2017 TLCP update on May 18, 2017. 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 maintain financial balance within the bus component of the TLCP.

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 TLCP. 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 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 TLCP is \$6.1 billion (2017 and YOE \$'s) as indicated in Table 8-2. Expenditures through FY 2017 total \$2.42 billion (YOE \$'s), while estimated future costs total \$3.68 billion (2017 \$'s).

TABLE 8-2
TRANSIT LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2017 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2017 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2018-2026 (2017 Dollars)	Total Costs: FY 2006 - 2026 (2017 and YOE Dollars)
	Operations	Capital Investments	Total		
Bus Operations: BRT/Express	61.8	--	61.8	16.5	78.4
Bus Operations: Regional Grid	308.5	--	308.5	431.5	739.9
Bus Operations: Other	383.8	--	383.8	422.7	806.5
Bus Capital Projects: Facilities	--	218.3	218.3	33.5	251.9
Bus Capital Projects: Fleet	--	429.9	429.9	477.4	907.3
Light Rail Transit: Support Infrastructure	--	443.6	443.6	171.7	615.3
Light Rail Transit Capital: Route Extensions	--	573.1	573.1	2,130.0	2,703.1
Total	754.1	1,665.0	2,419.0	3,683.2	6,102.3

8.4.3 Future Fiscal Status

Future funding sources and uses that apply to the TLCP are summarized in Table 8-3 for the period FY 2018 through FY 2026. Available funding sources include the Proposition 400 half-cent sales tax extension (\$1.5 billion); Regional Area Road Fund transfer (\$50 million); Federal Transit/Formula Program funds (\$525 million); Federal Transit/Discretionary Program funds (\$1,098 million); Federal Highway/CMAQ funds (\$331 million); Federal Highway/STP funds (\$35.3 million); and other income from local sources (\$804 million). Additional revenue from future bus farebox receipts are estimated as a total of \$138 million. To cover estimated future debt service a total of \$189.3 million is deducted from these sources. Additionally, \$418.6 million is deducted as an allowance for inflation.

With a beginning balance of \$79 million, a net total of \$3.97 billion (2017 \$'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 \$3.68 billion (2017 \$'s) are also listed in Table 8-3 for the period covering FY 2018 through FY 2026, as identified in the TLCP. Expressed in 2017 \$'s these costs are estimated at \$871 million for bus operations, \$511 million for bus capital projects, and \$2.3 billion for light rail transit capital projects. Projected revenues are sufficient to meet future projects costs with a surplus of approximately \$284 million (2017 \$'s) remaining in the TLCP. Significant efforts taken over the past several years by Valley Metro in conjunction with their members and MAG have attributed to the fiscally balanced program.

8.5 TRANSIT PROGRAM OUTLOOK

The TLCP 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 2018 through FY 2026 are in balance with project future funds available with a remainder of approximately \$284 million (2017 \$'s). Over the past several years, the 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. Valley Metro will continue to work with its members and MAG to program additional improvements.

Through the discretionary Section 5309 “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. In addition to 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, FAST-Act signed by the President on December 4, 2015, retained significant changes to the federal transit funding programs from MAP-21. Some of those changes included the elimination of several discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes.

TABLE 8-3
TRANSIT LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2018-2026
(2017 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Category	Projected Future Funding: FY 2018-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	1,516.0
Regional Area Road Fund	50.1
Federal Transit / Formula Program Funds	524.8
Federal Transit / Discretionary Program Funds	1,097.6
Federal Highway/ MAG CMAQ	331.3
STBGP-AZ	35.3
Other Income	803.5
Bond and Loan Proceeds	0.0
Bus Farebox Revenues	138.0
Plus Beginning Balance	78.5
Less Debt Service	(189.3)
Less Inflation Allowance	(418.6)
Total (2017 \$'s)	3,967.1
USES OF FUNDS	
Category	Estimated Future Costs: FY 2018-2026 (2017 Dollars)
Bus Operations: BRT/Express	16.5
Bus Operations: Regional Grid	431.5
Bus Operations: Other	422.7
Bus Capital Projects: Facilities	33.5
Bus Capital Projects: Fleet	477.4
Light Rail Transit: Support Infrastructure	171.7
Light Rail Transit Capital: Route Extensions	2,130.0
Total (2017 \$'s)	3,683.2

CHAPTER NINE

TRANSPORTATION SYSTEM PERFORMANCE

On December 4, 2015 former President Obama signed into law the Fixing America's Surface Transportation Act, or FAST Act. This federal transportation legislation replaces the Moving Ahead for Progress in the 21st Century Act (MAP-21), which had been continued through 36 short term extensions and continuing resolutions. The FAST Act provides substantially the same transportation planning guidance contained in, MAP-21; it increases funding by 11 percent over five years but largely maintains current program structures and funding shares between highway and transit. Since it is a long-term legislation, it allows state and local governments to plan and finance projects with greater certainty through 2020.

The FAST Act also makes changes and reforms to a number of federal transportation programs, including streamlining the approval process for new transportation projects by providing new safety tools and establishing new programs to advance critical freight projects. Guidance includes the following requirements: (1) coordination between states and metropolitan areas and between the public and private sectors, (2) linkages and connections between different forms of transportation, (3) recognition of environmental mitigation considerations, and (4) broad participation to ensure that decisions will be responsive to local needs. In addition, FAST continues to place increased emphasis on: (1) following a performance-based approach to transportation decision-making, (2) establishing performance targets, and (3) integrating state departments of transportation and public transit operators' targets into the metropolitan planning process.

A significant part of the reforms made by MAP-21 included transitioning to a performance-based program, including establishing national performance goals for Federal-aid highway programs. The FAST Act supports and continues this overall performance management approach, within which States and Metropolitan Planning Organizations (MPO) invest resources in projects that collectively will make progress toward national goals.

Six rules have become effective and each rule has specific, metric, measure and target setting requirements. Rulemaking includes the following: The Highway Safety Improvement Program (HSIP), the Safety Performance Measures and the Statewide and Metropolitan Planning Rule, the Pavement and Bridge Condition Performance Measures, the Asset Management, the System Performance/Freight Movement and Congestion Mitigation and Air Quality (CMAQ) Program Performance Measures Rules. The Federal Transit Administration has also published the final Public Transportation Safety Program Guidance, effective Sept 12, 2016, and the Transit Asset Management (TAM) Rule, effective October 1, 2016. Still in proposed format is the FTA Public

Transportation Agency Safety Plan Rule, initially posted in February 2016. MAG will continue to follow general transportation planning concepts as included in the FAST Act, and has initiated work in coordination with state and transit partners to follow performance based planning and programming criteria and principles in developing targets required by the final rules.

Performance measurement and management is not a new activity at MAG; over the last six years, a performance measurement and management program has been developed in cooperation with regional partner agencies and member jurisdictions. The program has been integral to the development of MAG's Unified Planning Work Program (UPWP). Based on a robust data collection and processing component, the program includes a series of analytic procedures, various reporting methodologies and web-based products, allowing policymakers, technical users and the general public easy access to performance data and visualization. The material presented in this chapter documents performance of the regional transportation system, utilizing the on-going MAG data monitoring and assessment program,

At the state level, Proposition 400 legislation set forth the factors to be considered during the development of the 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 multimodal system across various facilities such as freeway, arterial and transit corridors.

In conjunction with the adoption of the RTP in November 2003 and the passage of Proposition 400 in November 2004, the Arizona Legislature issued A.R.S. 28-6313 which requires the Auditor General to contract with a nationally recognized independent auditor to conduct a performance audit of the regional transportation system beginning in 2010 and every five years thereafter. The 2010 Performance Audit of the RTP was successfully completed and released to the public on December 21, 2011. The audit examined the RTP multimodal plan and evaluated it using specific performance measures included in MAG's Performance Measurement Program. The 2015 Performance Audit of the RTP was initiated in April of 2016. MAG worked closely with the Auditor General's contractor providing all required information to comply with their requests. Recommendations included enhancements to existing web-based products such as adding baseline budget and schedule information to the RTP Project Cards as well as linking transit performance measures to the MAGnitude Dashboard. A final RTP Performance Audit Report was published in November of 2016. A 10 month progress update is currently being submitted to the office of the Auditor General memorializing the steps MAG has taken to implement Audit

recommendations, including progress on establishment of regional targets as mandated by the FAST federal legislation.

Pursuant to national goals and performance management requirements set forth in the current federal transportation legislation (FAST), and state level (Proposition 400), MAG continues to place emphasis on performance-based planning, and programming in order to ensure compliance with the associated regulatory requirements, the RTP set forth a number of goals and objectives, and has built a framework of performance measures and measurement tools which are available to member agencies and the public on MAG's website at <http://performance.azmag.gov/>.

The following are a few examples of MAG's goals with the performance products that address them:

- 1) Goal: "Provide a safe and secure environment for the traveling public, addressing roadway hazards, pedestrian and bicycle safety, and transit security." Product: Tables and graphic analysis showing trends in total crashes for the major corridors of the urban freeway system in the MAG region, as well as total injuries and fatalities on arterial facilities by mode. These data provide a reference for MAG programming activities involving member agencies as they factor safety into project prioritization and selection.
- 2) Goal: "Maintain an acceptable and reliable level of service on transportation and mobility systems serving the region, taking into account performance by mode and facility type." Product: Tables, graphs and interactive maps that allow the user to select a freeway or arterial corridor and choose a peak period to obtain results for measures of delay, congestion, or travel time index. The map is accompanied by charts which track statistics through the day and a map depicting graphic gauges that compares percentage changes in performance between 2011 and 2014
- 3) Goal: "Provide the people of the region with transportation modal options necessary to carry out their essential daily activities and support equitable access to the region's opportunities." Product: Regional maps and charts showing the location and extent of areas within walking distance of transit stops that provide high frequency service, and the population in those areas that fall below the poverty line.

On a continuous basis, MAG continues to focus on enhancing the ongoing Transportation System Performance Monitoring and Assessment Program by monitoring available data sets, online tools, and publicly available information sources to continue to provide quality products that meet or exceed industry standards.

9.1 PERFORMANCE MONITORING AND ASSESSMENT CONCEPTS

The transportation system performance monitoring and assessment process includes the collection of observed data, and the development of analysis and comparative statistics that reveal trends in system performance over time.

9.1.1 Monitoring Current Conditions

The optimum combination of accuracy and detail for performance measurement is based on real time, observed data sources. These data provide 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; delays; number and types of accidents and, as a result of special studies, intersection queue lengths. For transit systems, common data items cover: boardings and fare box revenues by route; on-board passenger loadings at various points in the system; operating costs; and service standards.
- Data Sources - Data from the Arizona Department of Transportation's (ADOT) Freeway Management System (FMS), which now includes 158 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. Currently the FMS instrumented portion covers approximately 56 percent of the entire MAG freeway system. As the FMS system continues to grow, it will allow the use of these data for future reliability, vehicle hours of delay and other performance calculations over the entire urban highway system.

For the past five years, MAG has also acquired traffic speed data for freeways and arterials in the region from third party commercial sources; this acquisition has enhanced the baseline traffic data archive serving planning, programming and performance measurement activities. A major national private data provider is under contract with MAG to supply GPS-probe based speed data for all regional freeways and all major arterials, thus

supplementing the existing arterial database and ADOT FMS freeway database. This acquisition is proposed to be renewed on a yearly basis allowing the current data archive to be more geographically complete and enabling MAG to perform analysis on system and corridor performance from comprehensive data sources. In 2013, the Federal Highway Administration (FHWA) made available, free of charge to States and Metropolitan Planning Organizations (MPOs), the National Performance Management Research Data Set (NPMRDS), a national data set of average travel times for use in performance measurement. MAG has received the 2016 iteration of this data set and will continue with the analysis for performance measurement and travel demand model calibration.

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

Emerging Data Sources and Tools. In 2013, the Federal Highway Administration (FHWA) made available, free of charge to States and Metropolitan Planning Organizations (MPOs), the National Performance Management Research Data Set (NPMRDS), which is a national data set of average travel times for use in performance measurement. Additionally, the University of Maryland's Center for Advanced Transportation Technology Laboratory ("CATTLAB") has developed a data tool called The Regional Integrated Transportation Information System (RITIS), and MAG has established a partnership with the CATTLAB. MAG used third party probe based data to generate the map in Figure 9-1 reflecting the amount of time afternoon commuters should expect to lose as the difference between peak hours and free flow conditions.

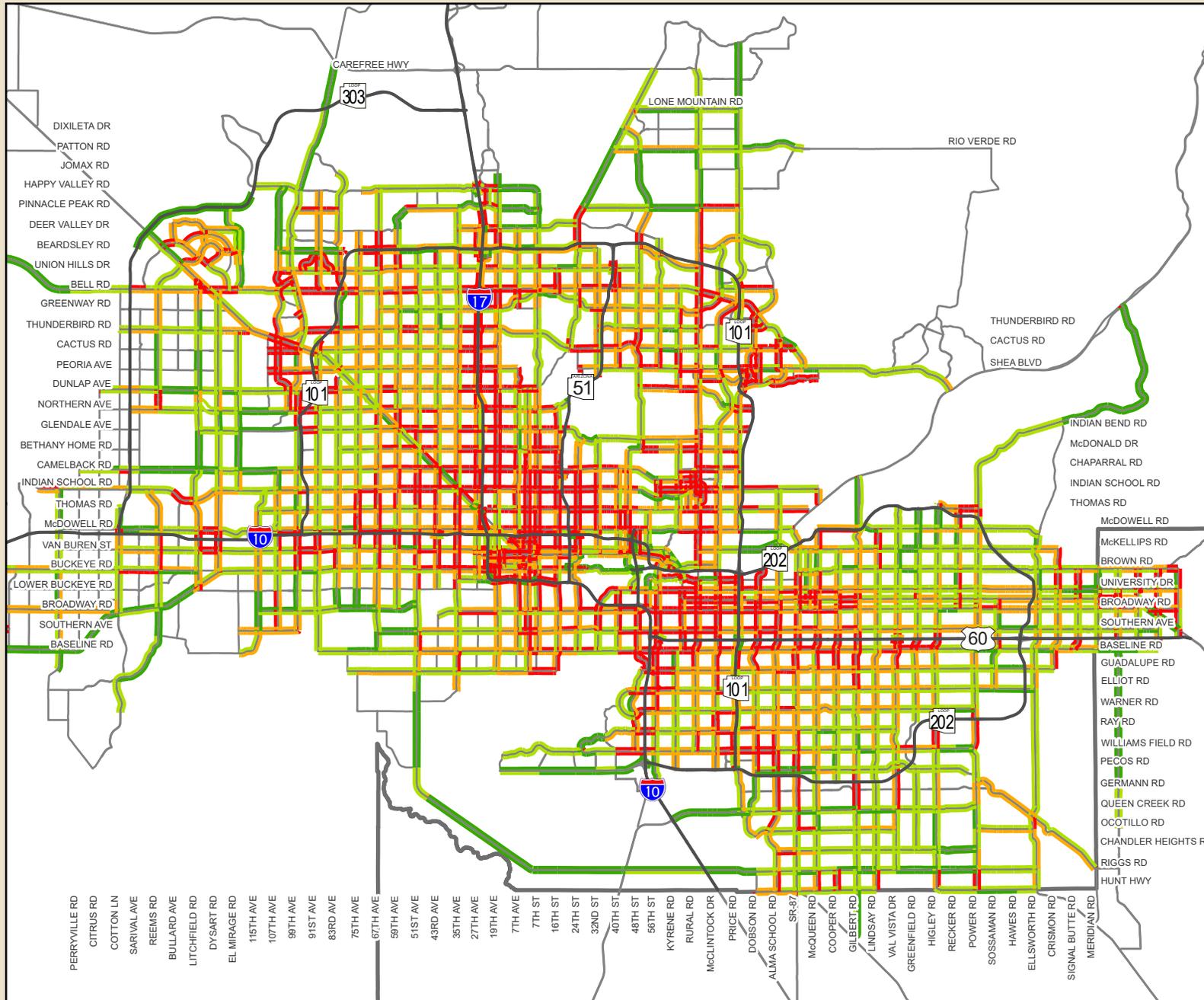
Recent Monitoring Results - Per Capita Freeway Vehicle-Miles of Travel (VMT) is defined as the average number of freeway miles a vehicle in the Phoenix-Mesa urbanized area travels per day per person. This measure reflects overall vehicle travel trends for the region. Table 9-1 lists the total number of freeway vehicle miles traveled each year during 2013 to 2016. Between 2013 and 2016, Freeway VMT figures are trending upward, showing an increase of 7.5 percent, whereas the level of VMT per capita in 2016 has maintained its level as compared to 2015.

MAG 2017 Annual Report on Proposition 400

Fig. 9-1



2014 PM Peak Period Average Delay Arterial Roadways



Legend

**Average Delay
(seconds per mile)
3PM - 7PM (2014)**

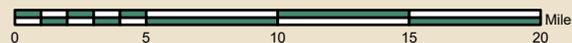
- 0 - 10
- 10 - 20
- 20 - 30
- 30+

- Freeways
- Major Roads

Delay calculated in seconds per mile relative to free flow speed.



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Map derived from weekday speed data for analysis year.
Source: Maricopa Association of Governments

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

	2013	2014	2015	2016
Total Freeway VMT*	29,400,899	30,802,738	31,209,013	31,625,257
Population of Phoenix-Mesa Urbanized Area**	3,414,591	3,490,349	3,542,153	3,591,674
Per Capita Freeway VMT	8.61	8.83	8.81	8.81

Source:

*ADOT Highway Performance Monitoring System (HPMS) 2016 Draft

** ACS and Census 2010 (2016 Draft Estimate)

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 supported a variety of performance factors and have enabled historical comparisons to be made.

9.2.1 Transportation Monitoring Data

Currently, traffic data is available for the MAG Region from various studies and surveys completed within the last five years. Besides the yearly ADOT FMS and private sector speed data mentioned previously, data sources include:

- 2007 Travel Time and Speed Study
- 2007 Regional On-Board Transit Survey
- 2007 Internal Truck Travel Survey
- 2008 Regional Household Survey
- 2011 MAG Complete Streets Study
- 2011 MAG Design Assistance Program Guidebook
- 2011 MAG Non-Recurring Congestion Study
- 2011/12 Traffic Data Collection Management Study
- 2012 Transit Standards and Performance Measures Study
- 2012-2013 Southwest Corridor Major Investment Study (data base)
- 2012-2013 Mode Choice Model Update (data base)
- 2012-2013 Central Phoenix Framework Study (data base)
- 2012-2013 Sustainable Transportation-Land Use Study (data base)
- 2013 Bottleneck Data collection and Model Validation Study
- 2013 Airport Travel Model Update and Data Collection
- 2013 Special Events Travel Forecasting Model and Collection of Special Events Data
- 2015 MAG Truck Travel Model Update

- 2015 Arizona State University Travel Survey and Model Update
 - 2016 Valley Metro Transit Performance Report
 - 2016 Valley Metro Ridership Report
 - 2016 MAG Multimodal Level of Service Study
 - 2016 Arizona State University Travel Survey and Model Update
 - 2016 MAG Bottleneck Study
 - 2017 MAG Freight Transportation Plan
- 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 273 in-pavement loop detectors and 83 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. (<http://www.az511.gov/traffic/>)

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-hour periods. 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. (<http://mag.ms2soft.com/>)

- 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 congested conditions 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 total minutes in the peak hours.

Figure 9-2 depicts the location of the instrumented regional freeway segments for which TTI's have been calculated. Appendix Table D-1 provides a detailed listing of the calculated commuting TTI's for the a.m. and p.m. commuting peak periods on the instrumented freeway corridors, based on 2014 and 2015 ADOT FMS data.

The 2015 TTI a.m. peak period are registering lower values which indicates increased levels of travel time reliability, with the exception of a

SR-51 southbound segment between Glendale Avenue and I-10 which experienced an increase of 2.23 percent; nevertheless, this is an improvement as compared to the same segment in 2014 which showed an increase of 3.15 percent in travel time. The highest percent changes in travel time indices between 2014 and 2015 are seen during the PM peak periods, certain corridors have experienced significant service level declines, such as westbound I-10 between I-17 and SR-51, and eastbound I-10 between SR-51 and US-60, experiencing travel time increases of 19 percent and 9 percent respectively.

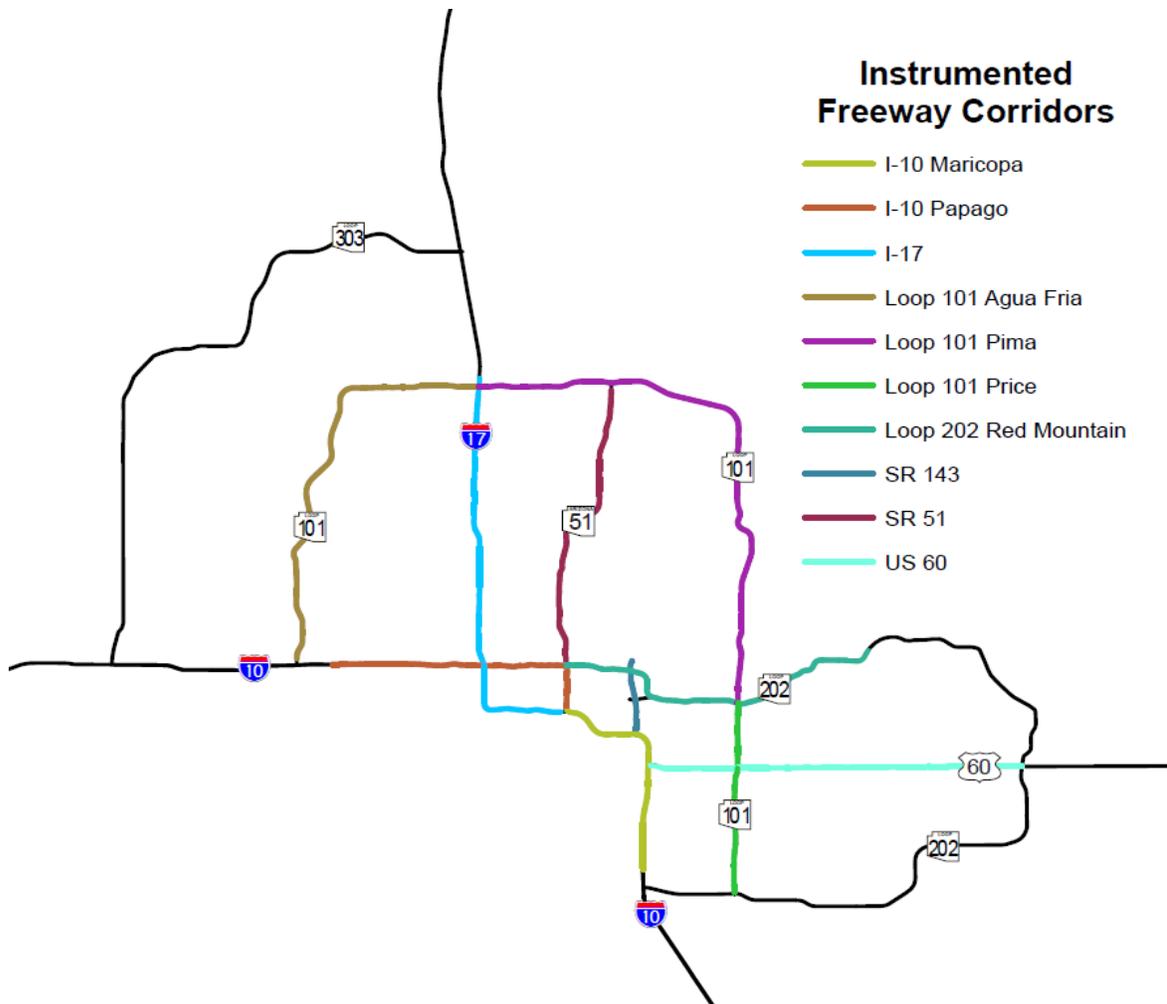
With respect to the SR-101 and SR-202 Corridors, the highest percent change in travel time is seen on the southbound segment of SR-101 between SR-202 and US-60 for the PM peak, and on the northbound segment of SR- 101 between Pima Rd. and SR-51 for the PM peak experiencing increases of 6.86 and 5.56 percent in travel time index respectively.

As a whole, the percent increases in travel times comparing 2014 and 2015 are been moderate across the freeway system, the most significant differences are seen in the direction of central locations with higher concentrations of job destinations near the urban core. This pattern is generally an indicator of a recovered regional economy.

- Speed Data - Currently, the three 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 2011), ADOT's Freeway Management System (FMS) permanent count detector database, and the National Performance Measurement Research Data Base (NPMRDS), made available to States and MPOs by the FHWA. The source for private sector and national traffic data is mainly probe 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 Transportation Planning Division traffic detector stations.

Appendix Tables D-2 and D-3 depict changes in average speed for freeway corridors monitored by ADOT'S FMS System between 2014 and 2015. Comparing these two years, it can be observed that general purpose lanes have generally maintained their morning peak period average speeds in 2015, with the exception of eastbound I-10 in between 83rd Ave. and SR-51 and northbound I-10 between Chandler Blvd. and US-60, where speeds have decreased between 15 and 17 percent as compared with 2014. Westbound US60, has also experienced speed decreases of up to 8 mph. between SR-101 and the I-10 interchange.

**FIGURE 9-2
SELECTED FREEWAY CORRIDORS**



During the afternoon peak period, for 2015, the freeway system in general maintained balanced speed conditions as compared to 2014; a few segments located within the urban core corridors experienced a significant decline. General purpose lanes and HOV lanes on westbound I-10 between SR-51 and I-17 experienced significantly decreased speeds up to 10 mph. Similarly, eastbound I-10 between SR-51 and US-60, speeds experienced decreases of 6 and 8 mph. on general purpose lanes and HOV lanes respectively.

A number of projects continued and initiated construction phase during 2014-2015 outside of the urban core area, such as additional travel lanes and an interim interchange on SR-303. Additionally, on SR-101 between

SR-202 and Shea Blvd., additional travel lanes have been installed in both directions; a new traffic interchange has been open to traffic on US -60 and Meridian Rd., New general purpose and HOV lanes have been added to SR-202 between SR-101 and Broadway Rd. Despite, the significant non-recurring congestion effects during road work and maturation periods, none of these segments have experienced measurable loss of throughput or speeds.

With regards to arterial corridors, the highest increases in travel time are experienced in morning and afternoon peak periods especially in popular commute directions, accessing and exiting major freeway corridors and approaching and leaving regional employment centers. For example, in the morning peak period, travel time on the westbound Glendale Avenue corridor increased by 8 percent between 59th Ave. and the I-17; on the northbound Arizona Ave. corridor, travel time between Riggs Rd. and SR-202 increased by 6 percent. The Chandler Blvd. corridor in Ahwatukee, experienced increases of approximately 6 percent as well. In the afternoon peak period, when commuter travel is exiting the freeway corridors, southbound Gilbert Rd. between SR-202 and Queen Creek Road and southbound Scottsdale Rd. from SR-101 to Bell Road experienced the highest travel time increases at 8 and 7 percent respectively.

9.2.2 Congestion Measures and Trends

Two of the most common measures of congestion are Travel Time Index (TTI) and Planning Time Index (PTI). TTI is the measure of how long it will take to drive a segment of road, compared to how long it would take if there were no congestion. For example, a mile long segment of road that averages one minute of travel time with a TTI of 1.1 for a peak period, would take 66 seconds to complete. PTI is similar, but is calculated on the 95th percentile travel time. PTI tells someone how much extra time to build in to be on time to work 95% of the time. PTI is the principal measure of the reliability of the travel time on a given roadway. Performing analysis over the course of a number of consecutive years makes it possible for decision makers to see year-to-year comparisons and evaluate trends. The complete set of trend charts sampled in Figure 9-3 is available on the MAG Performance Dashboard, comparing congestion changes over the period from 2011 to 2014. The 2014 chart includes a TTI dashboard gauge that communicates the trend simply. (Note: The legend that explains the gauges can be found on the map in Figure 9-4.) Figure 9-5 shows a specific segment of westbound I-10 during the afternoon peak period. The calculated Travel Time Index for this particular segment only changed slightly from 2011 to 2014 (1.07 to 1.06), but the PTI actually improved significantly, amounting to about a 20% increase. The segment depicted in Figure 9-3 is over nine miles long and the reduced PTI means the average person who drives that whole segment could leave two minutes later than they did in 2011 and still be 95% sure they'll get to their destination on time.

**FIGURE 9-3
Congestion Charts, 2011 & 2014**

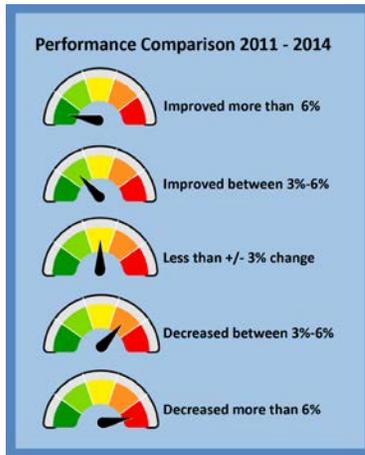
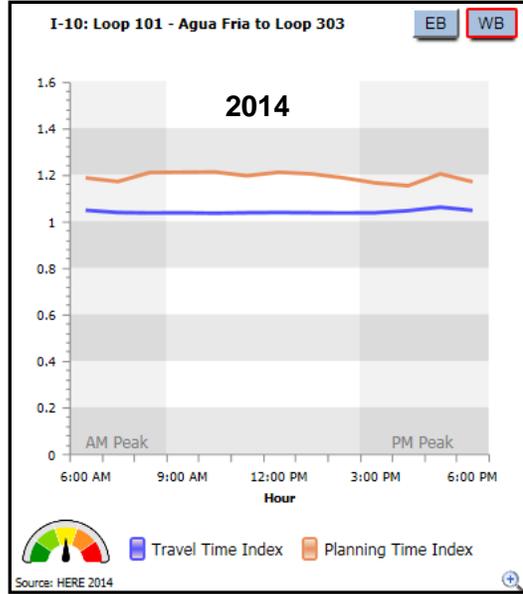
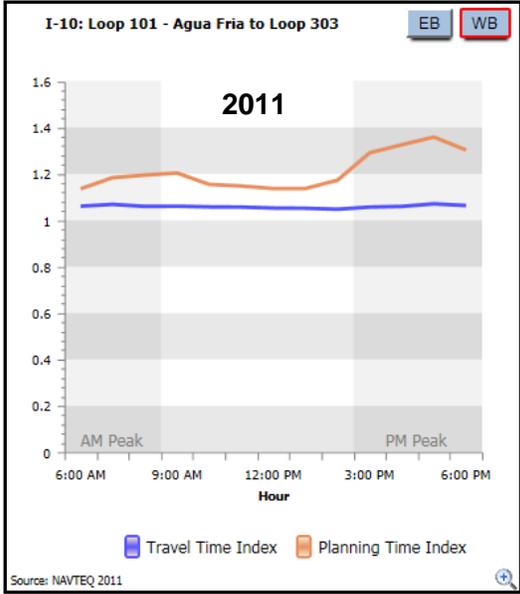
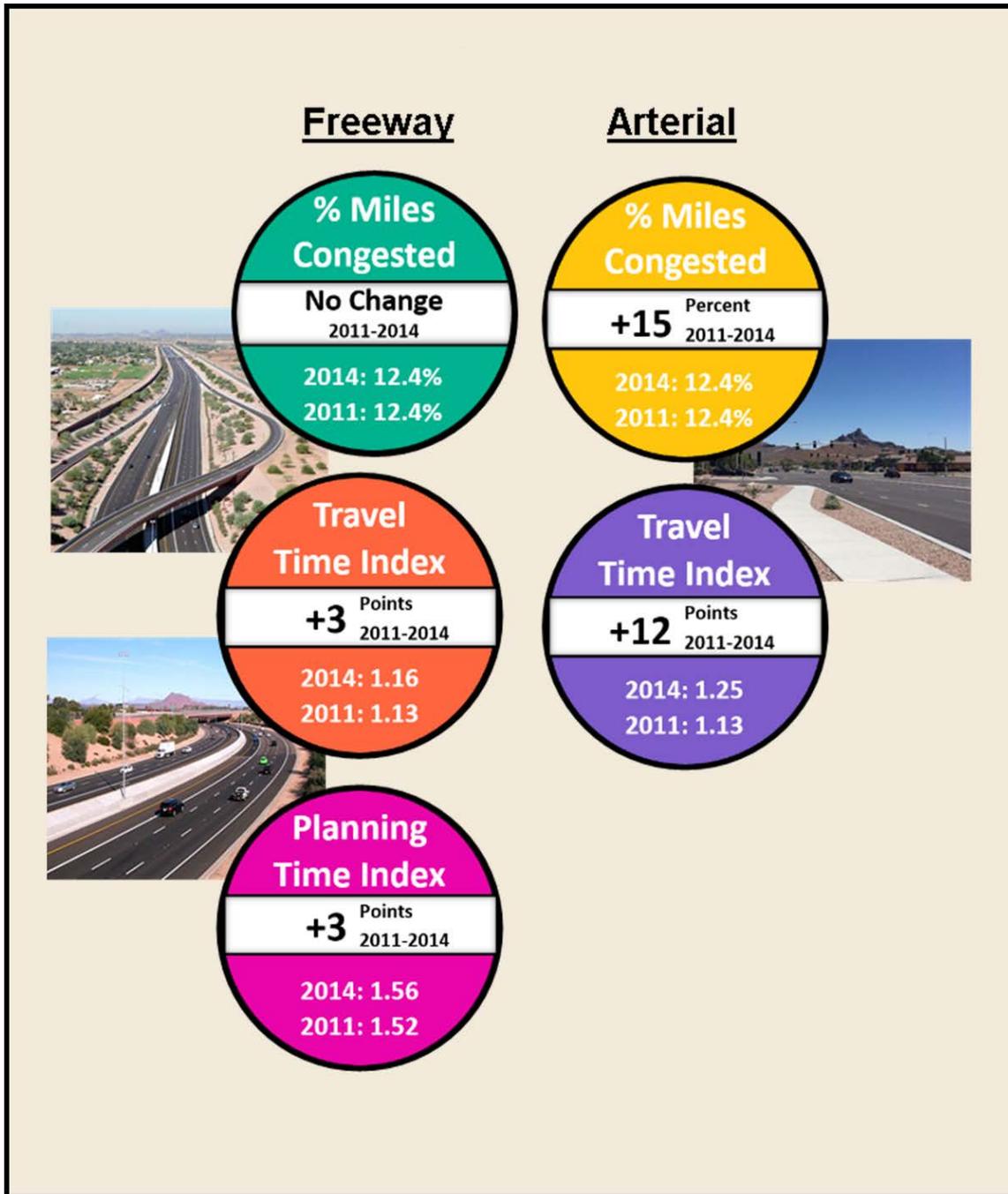


FIGURE 9-4
System Wide Congestion Trends



MAG's Performance Measurement program has developed maps like the one depicted in Figure 9-5 showing how congestion on each segment of I-10 westbound during afternoon commute hours improved or declined between 2011 and 2014.

Additional comparative information for the remainder of the freeway corridors can be found in MAGnitude at http://azmag.gov/Documents/TRANS_2016-10-28_PSD_05_2011-14-Trend-Analysis.pdf. These same measures are used system wide to communicate how well capacity on our freeways and arterials is keeping up with demand. Figure 9-4 shows system summary graphics comparing key measures for freeways and arterials.

9.3 TRANSIT SYSTEM PERFORMANCE

There are two key components to the transit performance monitoring effort: the Transit Performance Report (TPR) and the Ridership Report. 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 Ridership Report, which covers 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 Standards and Performance Measures

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 are being incorporated into the TPR, as well as reported on the Transit Ridership Report and Dashboard.

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.

Travel Time Conditions

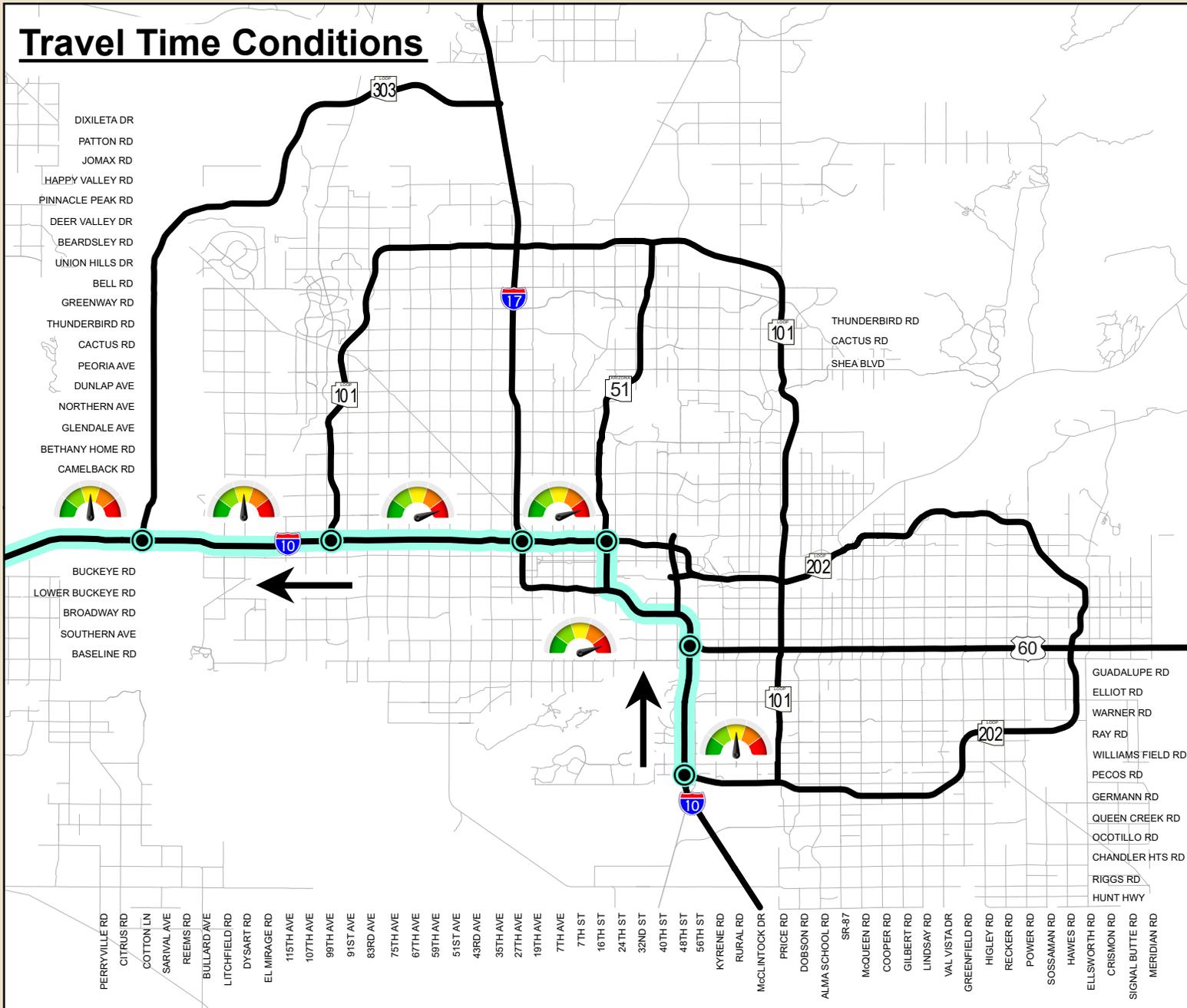


Fig. 9-5



Freeway Segment Travel Time Index % Change (2011-2014)

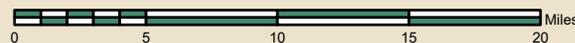
Travel Time Conditions

- Improved 6% +
- Improved 3-6%
- Less than +/- 3% Change
- Decreased 3-6%
- Decreased 6% +
- Segment Endpoints



MARICOPA COUNTY

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Source: Maricopa Association of Governments

Map derived from weekday speed data for analysis year.
Source: Maricopa Association of Governments

A Technical Advisory Group (TAG) made up of Valley Metro member agencies and MAG, was formed in November 2012, being tasked with the development of Regional Transit Service, Facility Standards and Performance Measures. Phase I of this effort was completed with Valley Metro/RPTA Board adoption in November of 2013, and included service standards and service delivery goals and objectives. The Advisory Group also developed transit standards, performance measures and a fully documented process for transit service changes. Phase II which was built upon the effort initiated as part of Phase I, was completed in December 2014. Phase II focused on the development of transit service performance measures, service thresholds, application principles, and implementation standards for new service. Phase II recommendations were approved by the Valley Metro Board of Directors in December 2014. Phase III was initiated in December 2014 to establish standards and performance measures for regionally funded transit vehicles such as buses and light rail vehicles and transit facilities such as bus stops and park and ride facilities. Phase III is now complete and approved by the Valley Metro Board of directors June 16, 2016.

9.3.2 Performance Targets and Operating Results

The original performance measures developed during the Service Efficiency and Effectiveness Study are listed in Tables 9-2 through 9-4. These tables also include actual operating results, from the 2014 and 2015 Transit Performance Reports (TPR). The annual (TPR) provides information to the Boards of Directors and member cities concerning ridership, operating costs, fare revenue and performance indicators for region-wide transit services. The modes covered by the TPR include fixed route bus, paratransit, and light rail transit. Fixed route bus service includes local routes, super grid (major arterial routes), express/bus, circulators, rural connector routes and shuttles.

Since the adoption of service provision goals and standards, in December 2014, Valley Metro has undertaken the development of transit service performance measures and thresholds to evaluate transit operations and assess the attainment of the adopted service provision goals. Transit service performance measures are intended to assess the effectiveness of transit operations in achieving the adopted system goals.

**TABLE 9-2
LIGHT RAIL TRANSIT (LRT) PERFORMANCE MEASURES**

Measure	2014 Results	2015 Results	2016 Results
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	40.00%	41.00%	38.00%
Operating Cost per Boarding	\$2.18	\$2.19	\$2.25
Subsidy (Net Operating Cost per Boarding)	\$1.31	\$1.29	\$1.39
Operating Cost per Revenue Hour	\$12.60	\$12.60	\$12.05
Service Effectiveness			
Annual Total Boardings	14,331,488	14,276,884	15,574,737
Boardings per Revenue Mile	5.77	5.75	5.35
ADA On-time Performance	93.50%	92.10%	93.40%

Source: FY 2016 Valley Metro Transit Performance Report

**TABLE 9-3
FIXED ROUTE BUS PERFORMANCE MEASURES**

Measure	2014	2015	2016
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	21.90%	20.50%	17.30%
Operating Cost per Boarding	\$3.83	\$4.07	\$4.53
Subsidy (Net Operating Cost per Boarding)	\$3.00	\$3.24	\$3.74
Operating Cost per Revenue Mile	\$7.65	\$7.90	\$7.96
Average Fare	\$0.84	\$0.83	\$0.79
Service Effectiveness			
Annual Increase in Total Boardings	-2.23%	-2.29%	-8.33%
Annual Increase in Average Boardings Weekday	-4.16%	-2.46%	-6.87%
Sat.	-3.59%	3.78%	-6.78%
Sun.	-2.17%	1.37%	-6.22%
Average Boardings per Revenue Mile	2.0	1.9	1.76

Source: FY 2015 Valley Metro Transit Performance Report

**TABLE 9-4
PARATRANSIT PERFORMANCE MEASURES**

Measure	2014	2015	2016
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	7.00%	7.70%	7.60%
Operating Cost per Boarding	\$37.29	\$33.78	\$35.64
Subsidy (Net Operating Cost per Boarding)	\$34.69	\$31.17	\$32.95
Operating Cost per Revenue Hour	\$88.99	\$84.70	\$89.19
Service Effectiveness			
ADA On-time Performance	96.83%	95.50%	96.60%

Source: FY 2015 Valley Metro Transit Performance Report

9.4 PERFORMANCE AUDIT OF THE REGIONAL TRANSPORTATION PLAN

In conjunction with the adoption of the RTP in November 2003 and the passage of Proposition 400 in November 2004, the Arizona Legislature issued A.R.S. 28-6313, which requires the Auditor General to contract with a nationally recognized independent auditor to conduct a performance audit of the regional transportation system beginning in 2010 and every five years thereafter. The 2010 Performance Audit of the RTP was successfully completed and released to the public on December 21, 2011. The audit examined the RTP multimodal plan and evaluated it using specific performance measures included in MAG's Performance Measurement Program.

By August of 2014 all recommendations derived from the audit were completed by MAG, with the exception of two that would require legislative and policy changes. Performance measurement for freeway, arterial and transit facilities was abundantly documented, quantified and communicated via dashboard visualization, web archives and project descriptions located on web-based project cards.

The second iteration of the state-mandated Performance Audit of the MAG Regional Transportation Plan was initiated in March 2016. MAG assisted the Auditor General's consultants at all stages of the auditing process by providing necessary background documentation to assess the performance of the RTP, as well as demonstrating compliance with prior audit recommendations. A final RTP Performance Audit Report was published in November of 2016. A 10 month progress update is currently being submitted to the office of the Auditor General memorializing the steps MAG has taken to implement 2016 Audit recommendations.

9.5 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 serves as a repository of historical, simulated and observed data for the transportation system in the MAG Region. In light of MAP-21/FAST legislation and federal rulemaking documents, this program has reached an important level of development and is poised to serve as the performance measurement and management component supporting planning and programming activities at MAG. A major 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.

MAP-21 and FAST establishes performance-based programs and sets forth requirement for performance goals, outcomes and targets. MAG staff efforts are focusing on the development of specific performance measures and targets for

the transportation system in the MAG metropolitan planning area. A collaborative Performance Measures and Targets Working Group (PMTAG) was created to gather input from MAG member agencies with respect to the requirements included in the Metropolitan Planning, System Performance and Freight, Safety and Asset Management Proposed Rules from the Federal Highway and Transit Administration.

The monitoring 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, analysis and decision making. Web-based, performance monitoring products published by MAG include MAGnitude (a performance dashboard) and the RTP Project Cards. These products serve as a primary source for roadway system and corridor performance information in the region, providing a broad range of data to support analysis for multimodal planning and programming activities at MAG.

Extensive reporting has been also developed by Valley Metro, starting with the SEES report, which established an initial set of performance measures to monitor and evaluate bus and rail systems in the region. Valley Metro also publishes a web-based Performance Dashboard documenting ridership, productivity and financial statistics for the regional transit system. These measures are complemented by the results of the Service Standards and Performance Measures effort.

The MAG Performance Measurement Framework was developed with the participation of MAG's member agencies and will continue to be used as a vital information source, 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 continues to use the evaluative tools developed with the Congestion Management Process in 2010 to coordinate results, prioritize investments, and assess the 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.

Appendix A

Freeway/Highway Life Cycle Program

ABREV.1
2
3
U**PROGRAM GROUPS**GROUP 1 (FY 2018 – FY 2022)
GROUP 2 (FY 2023 - FY2026)
GROUP 3 (FY 2027 - FY 2040)
UNDERWAY***PROJECT CATEGORIES**

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

*Includes projects programmed in FY 2017

TABLE A-1
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2017 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-FY17) YOЕ \$'s	R/W (FY06-FY17) YOЕ \$'s	CONST. (FY06-FY17) YOЕ \$'s	TOTAL (FY06-FY17) YOЕ \$'s	COSTS (FY18-FY26) '17 \$'s	TOTAL COSTS (FY06-FY26) YOЕ & '17 \$'s	COSTS (FY27-FY40) '17 \$'s	TOTAL COSTS (FY06-FY40) YOЕ & '17's	Program Group for 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					20.0	20.0		20.0	1	
	Desert Creek TI	105.3	0.5	NEW TI					20.4	20.4		20.4	1	
	SR 85 - 303L (RW & DCR)	112.0	11.0	GPL	1.5	0.5	0.0	2.0	0.0	2.0		2.0		
	County Line - 303L (MC Oversight)	112.0	42.0	GPL	0.3		0.0	0.3	0.1	0.4		0.4		
	SR85 - Verrado Way (GPL)	112.0	8.2	GPL	0.0		0.0	0.0	108.9	108.9		108.9	3	
	Verrado Way - Sarival Rd (GPL)	120.2	6.1	GPL	2.6		28.2	30.8		30.8		30.8		8/16/2011
	Perryville Road TI (Design Build)	122.7	0.0	NEW TI	1.7	4.0	23.8	29.5	0.1	29.6		29.6		10/19/2014
	Subtotal				6.0	4.5	52.0	62.5	149.5	212.1	0.0	212.1		
F2	<u>SR-303 to SR-101</u>													
	303L - 101L Agua Fria Median (RW & DCR)	124.0	9.0	GPL HOV	2.7	0.2	0.0	3.0		3.0		3.0		
	303L - I-17 Blk Canyon (MC Oversight)	124.0	18.0	GPL HOV	0.3		0.0	0.3	0.0	0.3		0.3		
	303L - I-17 Blk Canyon (RW & DCR)	124.0	18.0	GPL HOV	2.9	1.9	0.0	4.8	0.0	4.8		4.8		
	Perryville Dr - Bullard Ave (FMS)	124.7	5.0	FMS	0.3		0.0	0.3	4.4	4.7		4.7		
	Sarival Ave - Dysart Rd (GPL Outside)	126.0	4.0	GPL	2.9		35.8	38.7	0.2	39.0		39.0		1/15/2011
	Sarival Avenue - 107th Avenue (Landscape)	126.0	4.0	LS	0.7		4.3	5.0		5.0		5.0		
	Sarival Rd - 101L Agua Fria (GPL HOV Med)	126.0	8.0	GPL HOV	4.4		88.6	93.0	0.0	93.0		93.0		7/30/2010
	Bullard Road TI (New TI)	127.7	0.0	NEW TI	1.2	5.6	9.7	16.6		16.6		16.6		4/11/2008
	Dysart Road - 101L Agua Fria (Landscape)	130.0	4.0	LS	0.5		4.0	4.5	0.4	4.9		4.9		
	Litchfield Rd Dysart Road - 83rd Ave (FMS)	130.0	6.0	FMS	0.5		4.5	5.0	1.0	6.0		6.0		
	Fairway Drive TI (El Mirage Rd)	130.7	0.0	NEW TI	1.7	0.0	0.1	1.9	23.8	25.6		25.6	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		2.8		FY 2011
	Subtotal				18.2	7.8	150.0	176.0	29.9	205.8	0.0	205.8		
F3	<u>SR-101 to I-17</u>													
	101L AGUA Fria - I-17 Black Canyon (DCR & RW)	133.0	9.0	GPL	3.0	0.6	0.2	3.8	0.1	3.9		3.9		
	43rd Avenue / 51st Avenue TIs	139.7	0.0	IMP TI	0.4		2.6	3.1		3.1		3.1		8/8/2007
	51st Avenue TI	140.7	0.0	IMP TI	0.0	0.0	0.0	0.1		0.1		0.1		See Above
	Subtotal				3.4	0.7	2.9	6.9	0.1	7.0	0.0	7.0		
F4	<u>I-17 (Stack) to I-17 (Split)</u>													
	I-17 Black Cyn - SR 51 Piestewa (MC Oversight)	142.0	5.0	GPL	0.2	0.0	0.0	0.2	0.0	0.3		0.3		
	SR51 - 202L Santan (DCR & RW)	147.0	11.0	GPL HOV	12.9	15.3	0.3	28.5	0.2	28.7		28.7		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY17) YOЕ \$'s	R/W (FY06-FY17) YOЕ \$'s	CONST. (FY06-FY17) YOЕ \$'s	TOTAL (FY06-FY17) YOЕ \$'s	COSTS (FY18-FY26) '17 \$'s	TOTAL COSTS (FY06-FY26) YOЕ & '17 \$'s	COSTS (FY27-FY40) '17 \$'s	TOTAL COSTS (FY06-FY40) YOЕ & '17's	Program Group for Construct.	Date Open to Traffic
	Sky Harbor West Airport Access	148.0	1.0	NEW TI					100.0	100.0		100.0	2	
	I-17 Split - SR202L Santan (DB)	149.5	12.5	GPL HOV					525.5	525.5		525.5		
	Subtotal				13.1	15.3	0.3	28.7	625.7	654.4	0.0	654.4		
F5	<u>24th St. to SR-202</u>													
	Salt River - Baseline Rd (RW)	150.7	3.5	GPL HOV	0.0	146.5	9.5	156.0	3.1	159.1		159.1		
	32nd St - 202L Santan, Ph 1	151.5	3.5	GPL HOV								0.0	1	
	32nd St - 202L Santan, Ph 2	151.5	3.5	GPL HOV								0.0	1	
	32nd St - 202L Santan, Ph 3	151.5	4.0	GPL HOV								0.0	2	
	Southern Ave - SR143 Hohokam (GPL)	153.0	2.0	GPL	0.3		3.3	3.6	0.0	3.6		3.6		10/3/2008
	SR143 Hohokam - SR202 Santan (NTIS)	153.4	7.6	GPL	2.2	2.6	0.5	5.2	7.0	12.2		12.2	2	
	Alameda Dr and Guadalupe Rd (Pedestrian Bridges)	153.5	0.5	PED BR										
	Broadway Rd - Baseline Rd EB	153.5	2.5	GPL	0.0			0.0	2.6	2.6		2.6	1	
	Broadway Rd - Baseline Rd WB	153.5	2.5	GPL	0.0			0.0	2.8	2.8		2.8	1	
	Baseline Rd - Ray Rd EB	156.0	3.5	GPL	0.8			0.8	1.4	2.2		2.2	1	
	Baseline Rd - Ray Rd WB	156.0	3.5	GPL	0.0			0.0	1.4	1.4		1.4	1	
	Baseline Rd - Riggs Rd (MC Oversight)	156.0	11.5	GPL	0.0		0.0	0.0		0.0		0.0		
	Ray Rd TI (TI Impr)	160.0	0.5	IMP TI	0.8		9.6	10.4		10.4		10.4		7/13/2007
	Subtotal				4.1	149.0	23.0	176.1	18.3	194.3	0.0	194.3		
F6	<u>SR-202 to Riggs Rd.</u>													
	202L Santan - Riggs Rd (GPL)	162.0	6.0	GPL	2.0			2.0	65.6	67.6		67.6	1	
	Chandler Heights Rd TI	166.2	0.0	NEW TI					15.0	15.0		15.0	1	
	Subtotal				2.0	0.0	0.0	2.0	80.6	82.6	0.0	82.6		
	TOTAL I-10				46.8	177.3	228.1	452.2	904.0	1,356.2	0.0	1,356.2		
	I-17													
F7	<u>I-10/Maricopa - I-10/Papago</u>													
	16th St - 19th Ave (AUX Lanes) NTIS-Design	194.0	17.0	AUX	7.6	0.2	0.4	8.2	2.4	10.6		10.6		
	I-10 Maricopa - 101L Agua Fria (RW & DCR)	194.0	19.0	GPL HOV	0.0		0.0	0.0	0.0	0.0		0.0		
	I-10 Maricopa - I-10 Papago (MC Oversight)	194.0	6.0	HOV								0.0		
	I-10 Split - 19th Ave	194.0	4.0	HOV					217.4	217.4		217.4	2	
	Central Avenue Bridge	196.3	0.4	GS	0.0			0.0	23.5	23.5		23.5	1	
	Subtotal				7.6	0.2	0.4	8.2	243.2	251.4	0.0	251.4		
F8	<u>I-10/Papago to SR-101</u>													
	McDowell Rd - Arizona Canal (MC Oversight)	200.1	7.0	GPL	0.6		0.0	0.6	0.0	0.6		0.6		
	McDowell Rd - Arizona Canal	200.1	7.0	GPL								0.0		
	I-10 Papago - 101L Agua Fria, Wrong Way Detection	200.5	14.5	ATM	0.0			0.0	3.8	3.9		3.9		
	Indian School Rd TI Improvements	202.8	0.4	IMP TI					59.5	59.5		59.5	1	
	Camelback Rd TI Improvements	203.8	0.4	IMP TI	0.0			0.0	68.6	68.6		68.6	1	
	Glendale Ave TI Improvements	205.8	0.4	IMP TI					75.0	75.0		75.0	2	

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	Northern Ave TI Improvements	206.8	0.4	IMP TI					66.9	66.9		66.9	2	
	Arizona Canal - 101L Agua Fria (DCR)	208.0	6.8	GPL	2.0		0.0	2.0	0.1	2.1		2.1		
	Arizona Canal - 101L Agua Fria (FMS)	208.0	6.8	FMS	0.5		4.7	5.2		5.2		5.2		
	Peoria Ave - 101L Agua Fria	209.0	6.0	GPL							180.0	180.0	3	
	Peoria Ave - Greenway Rd (Drainage)	209.0	3.0	MINOR	1.0		0.0	1.0	30.0	31.0		31.0		
	Cactus Rd TI	209.0	0.0	IMP TI	0.8	0.3	6.8	7.8		7.8		7.8		12/3/2006
	Thunderbird Rd TI Improvements	210.8	0.4	IMP TI					19.8	19.8		19.8	2	
	Bell Rd TI Improvements	212.8	0.4	IMP TI					14.4	14.4		14.4	2	
	Subtotal				4.8	0.3	11.6	16.7	337.9	354.6	180.0	534.6		
F9	<u>SR-101 to SR-74</u>													
	101L Agua Fria - Anthem Way (FMS)	215.0	14.0	FMS	0.8	0.0	6.8	7.6	0.8	8.4		8.4		
	101L Agua Fria - Black Canyon TI (RW)	215.0	17.0	GPL HOV		77.1	0.1	77.3	1.2	78.4		78.4		
	101L Agua Fria - SR74 (DCR)	215.0	9.0	GPL HOV	3.8		0.0	3.8		3.8		3.8		
	101L Agua Fria - Jomax Rd (GPL HOV)	215.0	4.0	GPL HOV	4.9		76.7	81.6	0.0	81.6		81.6		11/8/2009
	101L Agua Fria - SR74 (Landscape)	215.0	9.0	LS	0.8		6.6	7.4		7.4		7.4		
	Pinnacle Peak Rd TI	216.5	1.0	IMP TI	0.6		0.0	0.7	0.0	0.7		0.7	1	
	Pinnacle Peak TI & Happy Valley Rd TI	216.5	2.0	IMP TI	0.9		0.1	0.9	44.4	45.3		45.3	1	
	Jomax Rd - SR74 Carefree Hwy (GPL HOV)	219.0	5.0	GPL HOV	4.6		93.0	97.6	0.2	97.8		97.8		7/30/2010
	Jomax Rd TI / Dixletta Rd TI	219.0	0.0	NEW TI	4.1	2.7	40.8	47.6	0.0	47.6		47.6		10/1/2008
	Dove Valley Rd TI	222.5	0.0	NEW TI	2.2		20.4	22.7	0.0	22.7		22.7		4/21/2010
	Dove Valley Rd TI (Furnish Signals)	222.5	0.0	NEW TI			0.1	0.1	0.0	0.1		0.1		
	Subtotal				22.7	79.9	244.7	347.3	46.6	393.8	0.0	393.8		
F10	<u>SR-74 to New River Rd.</u>													
	SR74 Carefree Hwy TI	223.5	0.0	NEW TI	1.6		22.7	24.3		24.3		24.3		10/10/2008
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.3	0.0	0.3		0.3		0.3		
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.4	0.0	0.4		0.4		0.4		
	SR74 Carefree - Anthem Way (GPL)	224.0	5.0	GPL	3.5		13.7	17.2		17.2		17.2		5/15/2010
	SR74 Carefree - Anthem Way (HOV)	224.0	5.0	HOV							89.5	89.5	3	
	Anthem Way - New River (GPL)	229.0	3.0	GPL						57.4		57.4	3	
	North of Anthem Way, SB	229.0	12.0	GPL					50.0	50.0		50.0		
	Subtotal				5.1	0.7	36.4	42.2	50.0	92.2	146.9	239.1		
	TOTAL I-17				40.2	81.1	293.1	414.3	677.7	1,092.1	326.9	1,419.0		
	SR-24													
F11	<u>202L Santan -Meridian Rd.</u>													
	202L Santan - Ellsworth Rd, Ph 1 (New)	0.0	1.0	NEW	14.8	27.2	79.7	121.8	0.0	121.8		121.8		5/4/2014
	202L Santan - Ellsworth Rd, Ph 2 (New)	0.0	1.0	NEW						46.9		46.9	3	
	Ellsworth Rd - Ironwood Dr Interim Ph 1	1.0	6.0	NEW	0.6		0.1	0.7	145.7	146.4	93.3	239.7	3	
	Subtotal				15.5	27.2	79.8	122.5	145.7	268.1	140.2	408.3		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	TOTAL SR-24				15.5	27.2	79.8	122.5	145.7	268.1	140.2	408.3		
	SR-30													
F12	SR-85 to SR-303													
	SR85 - 303L Estrella (DCR)	100.0	12.0	NEW	3.4		0.2	3.5	1.9	5.4	192.7	198.1	3	
	Subtotal				3.4	0.0	0.2	3.5	1.9	5.4	192.7	198.1		
F13	SR-303 to SR-202													
	303L Estrella - 202L South Mountain (DCR & RW)	112.0	16.5	NEW	14.8	15.1	0.4	30.3	342.2	372.5		372.5		
	303L Estrella - Estrella Pkwy	112.0	4.2	NEW							181.9	181.9	3	
	Estrella Pkwy - Dysart Rd	116.2	3.3	NEW							166.8	166.8	3	
	Dysart Rd - Avondale Blvd	119.5	2.0	NEW							75.1	75.1	3	
	Avondale Blvd - 97th Ave	121.5	2.5	NEW							91.3	91.3	3	
	97th Ave - 67th Ave	124.0	3.8	NEW							103.9	103.9	3	
	67th Ave - 202L South Mountain	127.8	0.7	NEW							216.3	216.3	3	
	Subtotal				14.8	15.1	0.4	30.3	342.2	372.5	835.3	1,207.8		
	TOTAL SR-30				18.2	15.1	0.5	33.8	344.1	377.9	1,028.0	1,405.9		
	SR-51													
F14	Shea Blvd to SR-101													
	202L Red Mtn - 101L Pima (MC Oversight)	1.0	15.7	HOV	0.0	0.0	0.0	0.0		0.0		0.0		
	Glendale Ave - 101L Pima (FMS)	5.7	13.0	FMS	0.3	0.0	2.4	2.7	0.0	2.7		2.7		
	Shea Blvd - 101L Pima (HOV/ HOV Ramp)	9.5	7.3	HOV	4.0		48.7	52.7		52.7		52.7		2/13/2009
	Shea Blvd - 101L Pima (GPL)	9.5	5.2	GPL							60.2	60.2	3	
	Subtotal				4.3	0.0	51.1	55.4	0.0	55.4	60.2	115.6		
	TOTAL SR-51				4.3	0.0	51.1	55.4	0.0	55.4	60.2	115.6		
	US-60 (GRAND AVE.)													
F15	SR-303 to SR-101													
	303L Estrella - 99th Ave (Ph 1)	138.0	10.0	GPL	7.3	1.2	24.8	33.3	0.1	33.4		33.4		6/14/2011
	303L Estrella - 101L Agua Fria (Ph 2) (MIS)	138.0	9.0	IMP	0.1		0.0	0.1		0.1		0.1		
	Bell Road TI (DESIGN BUILD)	142.5	0.0	IMP TI	3.2	9.3	52.4	64.9	7.0	71.9		71.9		3/7/2017
	Greenway Rd - Thompson Ranch Frontage Road	144.3	1.1	MINOR	0.6		0.1	0.6	6.2	6.9		6.9	U	
	Thompson Ranch Rd TI (Thunderbird)	145.5	0.0	IMP TI	2.3	5.6	6.5	14.4	2.3	16.6		16.6		6/2/2017
	99th Ave - 83rd Ave, Incl New River Bridge	148.0	3.0	GPL	1.3	1.2	9.5	12.0		12.0		12.0		4/30/2011
	83rd Ave & Peoria Ave (Intersection Impr)	148.5	1.8	MINOR	0.1		2.0	2.2		2.2		2.2		10/4/2006
	Subtotal				14.9	17.4	95.2	127.4	15.6	143.1	0.0	143.1		
F16	SR-101 to Van Buren													
	101L Agua Fria - 71st Ave	149.0	3.5	IMP			6.4	6.4		6.4		6.4		8/7/2013
	101L Agua Fria - Van Buren (DCR)	149.0	14.0	IMP	1.2		0.0	1.2	0.1	1.3		1.3		

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
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	101L Agua Fria - McDowell Rd (RW & MIS)	149.0	13.0	IMP	1.0	8.4	0.5	10.0	1.3	11.3		11.3		
	101L Agua Fria - Van Buren Ph 2	149.0	14.0	IMP	0.0		0.0	0.0	0.1	0.1		0.1	Dropped in FY2014	
	71st Ave - McDowell Rd (101L - McDowell Rd)	152.5	6.0	IMP	5.3	2.4	24.1	31.8	0.9	32.6		32.6		7/14/2014
	71st Ave - Grand Canal Bridge (Impr)	152.5	5.0	MINOR	0.1		3.6	3.7		3.7		3.7		5/16/2007
	Indian School Rd / 35th Ave Int. Improvement	158.8	0.4	IMP TI					10.6	10.6	75.3	85.9	2	
	Subtotal				7.5	10.8	34.6	53.0	13.0	66.0	75.3	141.3		
	TOTAL US-60 (GRAND)				22.4	28.2	129.8	180.5	28.6	209.1	75.3	284.4		
	US-60 (SUPERSTITION FWY.)													
F17	I-10 to SR-101													
	I-10 Maricopa – 101L Price (GPL)	172.0	4.5	GPL	2.7		27.3	30.0	0.0	30.0		30.0		3/29/2010
	I-10 Maricopa - Meridian Rd (MC Oversite)	172.0	22.0	GPL	0.0	0.0	0.0	0.0		0.0		0.0		
	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	4.7		88.1	92.7		92.7		92.7		3/15/2007
	Lindsay Rd TI (Half TI)	182.9	0.5	NEW TI							8.2	8.2	3	
	Val Vista Dr – Power Rd (Landscaping)	183.0	6.0	LS			5.0	5.0		5.0		5.0		
	Higley Rd TI	186.4	1.0	IMP TI	0.4	0.2	5.0	5.6		5.6		5.6		7/24/2007
	Subtotal				5.1	0.2	98.1	103.3	0.0	103.3	8.2	111.5		
F19	SR-202 to Meridian Rd.													
	Crismon Rd - Idaho Rd (FMS)	192.4	2.0	FMS					3.9	3.9		3.9		
	Crismon Rd - Meridian Rd (GPL HOV)	192.4	2.0	GPL HOV	1.6		0.1	1.7	29.0	30.7		30.7	1	
	Meridian TI (West Half)	194.0	1.0	NEW TI	1.8	1.2	10.2	13.2	0.4	13.5		13.5		10/17/2015
	Subtotal				3.4	1.2	10.3	14.9	33.3	48.1	0.0	48.1		
	TOTAL US-60 (SUPERSTITION)				11.2	1.4	135.7	148.2	33.3	181.5	8.2	189.7		
	SR-74													
F20	US-60 to SR-303													
	US60 Grand - 303L Estrella (RW Protection)	0.0	26.0	RW PROT	0.4		0.0	0.4		0.4		0.4		
	US60 Grand - 303L Estrella (RW Protection)	0.0	26.0	RW PROT							1.9	1.9		
	US60 Grand - I-17 Black Canyon (RW PROT SURVEY)	0.0	31.0	RW PROT	0.0	0.2	0.0	0.2		0.2		0.2		
	US60 Grand - MP 13 (RW PROT)	0.0	13.0	RW PROT		0.2	0.0	0.2		0.2		0.2		
	US60 Grand - I-17 Black Canyon (RW)	0.0	31.0	RW PROT							40.1	40.1		
	US60 Grand – 303L Estrella (Pass Ln MP 13-15)	13.0	2.0	MINOR	0.5	0.1	3.5	4.1		4.1		4.1		4/1/2011
	US60 Grand – 303L Estrella (Pass Ln MP 20-22)	20.0	2.0	MINOR	0.5	1.1	2.9	4.5	0.1	4.6		4.6		10/20/2010
	Subtotal				1.4	1.6	6.4	9.4	0.1	9.5	42.0	51.4		
	TOTAL SR-74				1.4	1.6	6.4	9.4	0.1	9.5	42.0	51.4		
	SR-85													

PROJECTS				EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY17) YOЕ \$'s	R/W (FY06-FY17) YOЕ \$'s	CONST. (FY06-FY17) YOЕ \$'s	TOTAL (FY06-FY17) YOЕ \$'s	COSTS (FY18-FY26) '17 \$'s	TOTAL COSTS (FY06-FY26) YOЕ & '17 \$'s	COSTS (FY27-FY40) '17 \$'s	TOTAL COSTS (FY06-FY40) YOЕ & '17's	Program Group for Construct.	Date Open to Traffic
F21	<u>I-8 to MC-85</u>													
	SR85 Corridor (MC Oversight)	120.0	35.0	GPL	0.2		0.0	0.3	0.0	0.3		0.3		
	I-8 - I-10 (RW) FY2006-2013)	120.0	35.0	GPL	0.1	32.7	2.1	35.0		35.0		35.0		
	SR85 at Gila Bend, Phase 1 (New)	120.5	2.5	GPL	3.3	3.4	18.2	24.9		24.9		24.9		1/8/2013
	MP 130.7 – MP 137.0 (New)	130.7	6.3	GPL	0.3		24.9	25.2		25.2		25.2		1/29/2010
	MP 139.01 – MP 141.71 (New)	139.0	2.7	GPL	0.3		22.9	23.2		23.2		23.2		11/26/2008
	Subtotal				4.3	36.1	68.1	108.5	0.0	108.5	0.0	108.5		
F22	<u>MC-85 to I-10</u>													
	Hazen Rd - Broadway Rd (Design)	149.5	3.5	GPL	2.3	0.0	0.1	2.4	0.1	2.5		2.5		
	MC85 - Southern Ave (New)	150.0	3.0	GPL	0.5		9.2	9.6		9.6		9.6		5/29/2008
	Southern Ave – I-10 Papago (New)	152.0	3.0	GPL	1.6		11.1	12.6		12.6		12.6		7/27/2011
	Broadway Rd - Lower Buckeye (Connecting Rd)	153.0	3.0	GPL			4.7	4.7		4.7		4.7		FY 2009
	Warner Street Bridge	153.4	0.2	GPL					5.7	5.7		5.7		
	Subtotal				4.3	0.0	25.0	29.3	5.8	35.2	0.0	35.2		
	TOTAL SR-85				8.6	36.1	93.1	137.8	5.9	143.7	0.0	143.7		
	SR-87													
F23	<u>Forest Boundry to Mile Post 213.0</u>													
	Forest Boundary – New Four Peaks (Widening)	194.0	8.0	MINOR / TI	3.0	0.6	22.6	26.3		26.3		26.3		9/30/2008
	New Four Pks Rd - Dos S Ranch (Widening)	202.0	5.4	MINOR	2.7	0.2	13.7	16.5	0.0	16.5		16.5		5/9/2011
	MP 211.8 - MP 213 (Drainage)	211.8	1.2	MINOR	0.3	0.1	1.0	1.4		1.4		1.4		5/9/2011
	Subtotal				6.1	0.9	37.3	44.2	0.0	44.2	0.0	44.2		
	TOTAL SR-87				6.1	0.9	37.3	44.2	0.0	44.2	0.0	44.2		
	SR-88													
F24	<u>Fish Creek Hill</u>													
	Fish Creek Hill (Ret Walls)	223.0	2.0	MINOR	0.6		0.0	0.6		0.6		0.6		FY 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	2.8	15.5	35.8	54.0		54.0		54.0		2/26/2010
	Subtotal				2.8	15.5	35.8	54.0	0.0	54.0	0.0	54.0		
	TOTAL US-93				2.8	15.5	35.8	54.0	0.0	54.0	0.0	54.0		
	SR-101													
F26	<u>I-10 to US-60</u>													
	I-10 Papago - Tatum Blvd (HOV) DESIGN BUILD	1.7	31.0	HOV	2.2	0.3	106.9	109.3	0.7	109.9		109.9		10/29/2011

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY17) YOЕ \$'s	R/W (FY06-FY17) YOЕ \$'s	CONST. (FY06-FY17) YOЕ \$'s	TOTAL (FY06-FY17) YOЕ \$'s	COSTS (FY18-FY26) '17 \$'s	TOTAL COSTS (FY06-FY26) YOЕ & '17 \$'s	COSTS (FY27-FY40) '17 \$'s	TOTAL COSTS (FY06-FY40) YOЕ & '17's	Program Group for Construct.	Date Open to Traffic
	I-10 Papago - VanBuren (99th Ave) (Widening)	1.7	1.7	MINOR	0.9	0.8	4.0	5.7	0.0	5.7		5.7		12/19/2010
	I-10 Papago - I-17 Black Canyon, Ph 1 (FMS)	1.7	21.7	FMS	0.9		9.8	10.7		10.7		10.7		
	I-10 Papago - I-17 Black Canyon, Ph 2 (FMS)	1.7	21.7	FMS	0.8	0.0	7.8	8.6	1.3	9.9		9.9		
	I-10 Papago - Grand Ave (GPL DHOV)	1.7	9.5	GPL DHOV				0.0	268.8	268.8		268.8	2	
	Bethany Home Rd TI, North Half	6.0	0.5	NEW TI	1.2		8.4	9.6	0.0	9.6		9.6		9/14/2007
	Maryland Ave HOV Ramps DESIGN BUILD	6.5	0.8	HOV TI	0.7	0.0	13.7	14.5	1.0	15.5		15.5		3/29/2014
	Northern Ave - 31st Ave (Med LS)	8.0	14.0	MINOR	0.2		0.7	0.9		0.9		0.9		
	Olive Ave TI (Impr)	9.0	1.0	IMP TI	0.4		3.4	3.9		3.9		3.9		7/2/2011
	Subtotal				7.3	1.1	154.7	163.1	271.8	434.9	0.0	434.9		
F27	<u>US-60 to I-17</u>													
	Grand Ave - I-17 - 75th Ave (GPL)	11.2	6.0	GPL					1.8	1.8	91.6	93.4	3	
	Thunderbird Rd TI (Impr)	12.0	1.0	IMP TI	0.4		3.6	4.0		4.0		4.0		7/28/2009
	Beardsley Rd / Union Hills Dr (TI Impr)	15.8	1.0	NEW TI	0.8	0.3	19.0	20.1		20.1		20.1		5/6/2011
	75th Ave - I-17 Black Canyon (GPL)	17.2	5.8	GPL				0.0	62.0	62.0		62.0	2	
	Subtotal				1.2	0.3	22.6	24.0	63.8	87.8	91.6	179.4		
F28	<u>I-17 to Princess Dr.</u>													
	I-17 Black Cyn - 202L Red Mtn (MC Oversight)	23.0	28.0	HOV	0.0		0.0	0.0		0.0		0.0		
	I-17 Black Cyn - Princess Dr (GPL) (DCR & RW)	23.0	12.6	GPL	3.6	0.0	0.3	3.9	0.2	4.0		4.0		
	I-17 Black Canyon - SR51 Piastewa (FMS)	23.0	6.6	FMS	1.4		5.2	6.6		6.6		6.6		
	I-17 Black Cyn - Pima Rd (GPL)	23.0	13.0	GPL	0.0			0.0	153.3	153.3		153.3	1	
	SR51 Piastewa - Princess Dr (FMS)	30.0	6.0	FMS	0.0		3.1	3.1		3.1		3.1		
	Tatum Blvd - Princess Dr (HOV)	31.0	5.0	HOV	1.4		16.3	17.7		17.7		17.7		7/19/2009
	64th St TI	33.0	1.0	NEW TI	2.9	2.3	24.3	29.5		29.5		29.5		10/24/2008
	Hayden Rd - Princess Drive (Drainage)	35.5	1.0	MINOR	0.0			0.0		0.0		0.0		
	Subtotal				9.3	2.3	49.2	60.8	153.5	214.3	0.0	214.3		
F29	<u>Princess Dr. to SR-202</u>													
	Princess Dr - 202L Red Mountain (HOV)	36.0	15.4	HOV	4.4		57.4	61.9		61.9		61.9		11/8/2008
	Pima Rd - Shea Blvd (GPL)	36.0	5.0	GPL					61.6	61.6		61.6	1	
	Princess Drive TI (Study)	36.0	1.0	TI	0.5		0.0	0.5	0.9	1.4		1.4		
	Shea Blvd - 202L Red Mtn (GPL) Constr	41.0	15.4	GPL	5.6		94.0	99.6	0.6	100.2		100.2		12/16/2016
	Shea Blvd - Chaparral Rd (GPL) Design	41.0	5.5	GPL	4.8	0.0	0.4	5.2	0.0	5.2		5.2		
	Chaparral Rd - 202L Red Mtn (GPL) Design	46.0	5.0	GPL	4.5	0.0	0.4	4.9	0.0	5.0		5.0		
	Chaparral Rd TI Improvements	46.0	0.2	TI IMP	0.2		0.9	1.2		1.2		1.2		FY 2011
	Pima Rd Extension, JPA	49.5	1.5	GPL					3.9	3.9		3.9	1	
	Subtotal				20.0	0.0	153.3	173.3	67.1	240.4	0.0	240.4		
F30	<u>SR-202/Red Mt. to SR-202/Santan</u>													
	202L Red Mountain - Baseline (HOV) Design	51.0	4.2	HOV	1.3		0.0	1.3		1.3		1.3		
	202L Red Mountain - 202L Santan (HOV)	51.0	7.0	HOV	2.0		35.8	37.8		37.8		37.8		2/10/2010
	US60 Superstition - 202L Santan (GPL)	55.1	6.4	GPL	1.8		0.2	2.0	44.6	46.6		46.6	1	

PROJECTS				EXPENDITURES				ESTIMATED FUTURE COSTS				COMMENTS		
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	Baseline Rd - 202L Santan (FMS) Ramp Meters	55.6	4.8	FMS	0.1		0.4	0.5		0.5		0.5		
	Guadalupe Rd - Chandler Blvd (FMS)	56.6	4.6	FMS	0.2		3.1	3.3		3.3		3.3		
	Galveston Street (Drainage Imprv.)	59.0	1.0	MINOR	0.0		1.4	1.5		1.5		1.5		
	Subtotal				5.5	0.0	40.9	46.4	44.6	90.9	0.0	90.9		
	TOTAL SR-101				43.3	3.7	420.7	467.6	600.7	1,068.3	91.6	1,159.9		
	SR-143													
F31	SR-143 at SR-202													
	SR143 / SR202L TI	0.8	1.5	NEW TI	5.2	0.4	22.0	27.5		27.5		27.5		7/9/2012
	Subtotal				5.2	0.4	22.0	27.5	0.0	27.5	0.0	27.5		
	TOTAL SR-143				5.2	0.4	22.0	27.5	0.0	27.5	0.0	27.5		
	SR-202													
F32	I-10 to SR-101/Pima													
	I 10 / SR51 TI - US60 (MC Oversight)	0.0	10.0	GPL	0.0		0.0	0.0		0.0		0.0		
	I 10 / SR51 TI - 101L Pima (GPL) (DESIGN BUILD)	0.0	10.0	GPL	10.5		205.8	216.3		216.3		216.3		8/11/2010
	Mill Ave & Washington St (GPL)	4.5	2.5	GPL	1.2		5.7	6.8		6.8		6.8		4/11/2009
	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 (HOV)	10.0	6.5	HOV	3.3		24.3	27.6		27.6		27.6		8/27/2010
	101L Pima – Gilbert Rd (FMS)	10.0	6.5	FMS	0.3		3.4	3.7		3.7		3.7		
	101L Pima – Broadway Rd (GPL HOV) DESIGN BLD	10.0	20.0	GPL	4.9	3.1	137.3	145.3	6.5	151.8		151.8		12/18/2015
	Mesa Drive TI (Ramps Only)	14.0	0.5	NEW TI							13.5	13.5	3	
	Subtotal				8.5	3.1	164.9	176.6	6.5	183.1	13.5	196.6		
F34	Gilbert Rd. to US-60													
	Gilbert Rd - Higley Rd (GPL)	16.5	4.5	GPL							51.9	51.9	3	
	Higley Rd - US60 Superstition (GPL)	21.0	9.0	GPL							108.3	108.3	3	
	Power Rd-University Dr (Habitat Mitigation Monitoring)	23.0	5.0	MINOR			0.2	0.2		0.2		0.2		
	Broadway Rd - US60 Superstition (HOV)	28.8	2.2	HOV								0.0	2	
	US60 Superstition System TI HOV Ramps	29.5	1.0	HOV							42.1	42.1	3	
	Broadway Rd - Ray Rd (FMS)	30.0	10.7	FMS	0.5		0.0	0.5	6.5	7.0		7.0		
	Subtotal				0.5	0.0	0.2	0.7	6.5	7.2	202.3	209.5		
F35	US-60 to Val Vista Dr. - Gilbert Rd.													
	Broadway Rd - Dobson Rd (GPL)	30.1	14.5	GPL				0.0	53.5	53.5		53.5	2	
	US60 Superstition - Gilbert Rd (GPL)	31.0	13.6	GPL							138.9	138.9	3	
	Subtotal				0.0	0.0	0.0	0.0	53.5	53.5	138.9	192.4		
F36	Val Vista Dr. - Gilbert Rd. to I-10/Maricopa													
	Ray Rd - Dobson Rd (FMS)	39.7	9.6	FMS	0.6		4.6	5.2	1.0	6.2		6.2		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	Lindsay Rd TI	43.0	1.0	TI	0.0			0.0	17.9	17.9		17.9	1	
	Gilbert Rd - I-10 Maricopa (HOV & 2 HOV Ramps)	44.5	13.0	HOV	2.1		99.2	101.3	0.0	101.3		101.3		10/9/2011
	Gilbert Rd - I-10 Maricopa (GPL)	44.6	10.4	GPL	0.0			0.0	91.7	91.7		91.7	2	
	Dobson Rd - I-10 Maricopa (FMS)	49.3	6.0	FMS	0.4	0.0	5.7	6.1	0.4	6.6		6.6		
	Subtotal				3.1	0.0	109.6	112.7	111.0	223.6	0.0	223.6		
F37	I-10/Maricopa to 51st Ave.													
F38	I-10 Maricopa - I-10 Papago (RW)	56.0	21.5	NEW		75.4		75.4	1.6	77.0		77.0		
	I-10 Maricopa - I-10 Papago (DCR)	56.0	21.5	NEW	31.0		1.1	32.1	1.2	33.3		33.3		
	I-10 Maricopa - I-10 Papago (Design, Build, Maintain)	56.3	21.0	NEW	25.8	387.9	235.8	649.5	992.6	1,642.1		1,642.1	U	
	I-10 Maricopa- I-10 Papago (MP 76) (Maintenance)	56.3	21.0	NEW					6.1	6.1		6.1		
	Chandler Blvd; 19th Ave - 27th Ave	63.0	1.0	NEW									U	
	Subtotal				56.8	463.2	236.9	757.0	1,001.5	1,758.5	0.0	1,758.5		
	TOTAL SR-202				80.6	466.4	723.1	1,270.1	1,178.9	2,449.0	354.7	2,803.7		
	SR-303													
F39	Riggs Rd. to I-10													
	Riggs Rd - SR30 / MC85 (Study)	86.0	14.0	NEW	1.6	0.0	0.1	1.7	0.6	2.3	46.6	48.9		
	MC85 - I-17 Black Canyon (RW)	100.0	3.0	NEW		7.1	0.0	7.1		7.1		7.1		
	MC85 - Van Buren St, Ph1 (I-10) (DCR & RW)	100.0	3.0	NEW	5.8	0.0	0.3	6.1	5.5	11.6		11.6		
	MC85 - Van Buren St, Ph 2 (I-10)	100.0	3.0	NEW				0.0	119.5	119.5		119.5	1	
	Subtotal				7.4	7.1	0.4	14.9	125.6	140.5	46.6	187.1		
F40	I-10 to US-60													
	I-10 / 303L System TI, Ph 2	103.0	1.0	NEW	9.3	4.7	65.7	79.7	21.8	101.5		101.5	U	
	I-10 / 303L System TI, Ph 2 (Landscape)	103.0	1.0	LS	0.2			0.2	5.3	5.5		5.5		
	I-10 / 303L TI Ph2 (Noise Analysis)	103.0	1.0	NEW	0.0			0.0	0.0	0.0		0.0		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.3		0.1	1.4	0.1	1.5		1.5		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.6		0.0	1.6	0.0	1.6		1.6		
	I-10 / 303L System TI, Ph 1, I-10 Realignment	103.9	1.7	NEW	19.5	89.5	181.2	290.2	0.2	290.5		290.5		9/3/2014
	I-10 / 303L TI, Ph 1 (Landscape)	103.9	1.7	LS	0.5	0.0	6.7	7.2	1.0	8.2		8.2		
	I-10 Papago - Northern Ave (FMS)	103.9	6.1	FMS	0.1		0.0	0.2	4.6	4.8		4.8		
	SR303L / FCDMC Study (JPA)	104.0	NA	NEW	0.4		0.0	0.4	0.0	0.4		0.4		
	Thomas Rd - Peoria Ave (30% Design & RW)	105.6	7.0	NEW	2.4	65.0	4.2	71.6	0.0	71.6		71.6		
	Thomas Rd - Camelback Rd (Seg C) (New)	105.6	2.0	NEW	4.6		37.2	41.8		41.8		41.8		11/22/2013
	Thomas Rd - Camelback Rd (Landscape)	105.6	2.0	LS	0.3	0.0	2.9	3.2	0.0	3.2		3.2		
	Camelback Rd - Glendale Ave (Seg) (New)	107.6	2.0	NEW	4.4		52.6	57.1		57.1		57.1		5/21/2014
	Camelback Rd - Glendale Ave (Landscape)	107.6	2.0	LS	0.3		2.6	2.9	0.3	3.1		3.1		
	Glendale Ave - Peoria Ave (Seg) (New)	109.6	3.0	NEW	7.9		86.7	94.6	0.1	94.7		94.7		9/16/2013
	Glendale Ave - Peoria Ave (Landscape)	109.6	3.0	LS	0.5		5.3	5.7	0.3	6.0		6.0		

PROJECTS				EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS		
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY17) YOЕ \$'s	R/W (FY06-FY17) YOЕ \$'s	CONST. (FY06-FY17) YOЕ \$'s	TOTAL (FY06-FY17) YOЕ \$'s	COSTS (FY18-FY26) '17 \$'s	TOTAL COSTS (FY06-FY26) YOЕ & '17 \$'s	COSTS (FY27-FY40) '17 \$'s	TOTAL COSTS (FY06-FY40) YOЕ & '17's	Program Group for Construct.	Date Open to Traffic
	Northern Ave - Clearview Blvd (FMS)	110.0	7.4	FMS	0.0			0.0	5.1	5.2		5.2		
	Northern Ave Parkway	111.0	1.0	NEW TI						0.0	85.6	85.6	3	
	Northern Ave / Olive Ave TI	111.0	0.8	NEW TI	0.1		0.0	0.1	13.0	13.2		13.2	2	
	Peoria Ave -Bell Rd (30% Design & RW)	112.6	3.4	NEW	1.7	28.3	1.3	31.3	0.1	31.4		31.4		
	Peoria Ave - Mtn View Rd (Seg D & F) (New)	112.6	5.9	NEW	4.3		146.2	150.5	2.3	152.8		152.8		11/13/2013
	Peoria Ave - Waddell Rd (Landscape)	112.6	2.0	LS	0.3	0.0	2.8	3.1	0.1	3.2		3.2		
	Cactus Rd, Waddell Rd & Bell Rd (New)	113.6	0.2	NEW	3.9		33.5	37.4	0.0	37.4		37.4		3/8/2011
	Waddell Rd	114.0	0.2	NEW	0.1		0.0	0.1	0.0	0.1		0.1		
	Waddell Rd - Mtn View Rd (F) (New)	114.6	3.0	NEW	7.2		4.3	11.5		11.5		11.5		11/13/2013
	Waddell Rd - Mtn View Blvd (Landscape)	114.6	3.9	LS	0.5	0.0	3.1	3.6	0.1	3.7		3.7		
	Bell Rd	116.0	0.2	NEW	0.2		0.0	0.2	0.0	0.2		0.2		
	Bell Rd - US60 Grand (30% Design & RW)	116.6	3.0	NEW	1.4	11.3	0.4	13.0	0.2	13.3		13.3		
	US60 Grand / 303L TI (Interim)	118.1	1.1	NEW	6.6	0.0	53.7	60.4	3.5	63.9		63.9		8/3/2016
	US60 / 303L TI (Interim) (Landscape)	118.1	1.1	LS	0.4		2.5	2.8	0.7	3.5		3.5		
	US60 Grand / 303L TI (Final)	118.1	1.1	NEW					8.2	8.2	116.4	124.6	3	
	Subtotal				80.1	198.9	693.0	971.9	67.1	1,039.0	202.0	1,241.0		
F41	US-60 to I-17													
	US60 Grand - I-17 Black Cyn (MC Oversight)	119.2	20.0	NEW	0.0	0.0	0.0	0.0	0.1	0.1		0.1		
	US60 Grand - Happy Valley Rd (DESIGN BUILD)	119.6	7.0	NEW	4.2	0.6	36.5	41.3	3.4	44.7		44.7		5/30/2015
	El Mirage Rd TI	123.2	1.0	NEW TI	2.8	0.3	24.0	27.1	2.8	29.9		29.9		6/26/2016
	Happy Valley Rd - I-17 Blk Cyn (RW & 30% Design)	125.2	13.0	NEW	6.7	41.6	0.0	48.4	0.0	48.4		48.4		
	Happy Valley Rd – Lake Pleasant Rd (Interim)	125.2	5.3	NEW	14.4		114.2	128.6		128.6		128.6		5/13/2011
	Happy Valley Rd – Lake Pleasant Rd (Final)	125.2	5.3	NEW					41.1	41.1		41.1	1	
	Lake Pleasant Rd – I-17 Black Canyon (Interim)	130.5	7.2	NEW	10.5		82.1	92.6		92.6		92.6		5/13/2011
	Lake Pleasant Rd - I-17 Black Canyon (Final)	130.5	7.2	NEW										
	Lake Pleasant Rd – I-17 Black Canyon (Landscape)	130.5	7.2	LS	0.0		0.3	0.3	0.0	0.3		0.3		
	Lake Pleasant - I-17 Black Canyon (FMS)	130.5	9.2	FMS	0.1			0.1	5.1	5.2		5.2		
	Subtotal				38.7	42.5	257.2	338.4	52.5	390.9	0.0	390.9		
	TOTAL SR-303				126.1	248.5	950.6	1,325.2	245.2	1,570.4	248.6	1,819.0		
	SYSTEMWIDE PROGRAMS													
	Maintenance (Landscape, Litter & Sweep)						131.3	131.3	126.2	257.5	148.5	406.0		
	Freeway Management (FMS, Frwy. Service Patrol)				10.6	0.0	18.1	28.7	59.6	88.3	18.9	107.2		
	Noise Mitigation (Quiet Pavement, Noise Walls)				3.3	0.2	60.0	63.6	0.8	64.5	150.0	214.5		
	Engineering (Prelim. Engr., R/W Mgmt, Risk Mgmt.)				26.9	8.2	0.1	35.2	108.4	143.6	81.8	225.4		
	Subtotal				40.9	8.4	209.6	258.8	294.9	553.8	399.2	953.0		
	TOTAL SYSTEMWIDE PROGRAMS				40.9	8.4	209.6	258.8	294.9	553.8	399.2	953.0		
	GRAND TOTALS				473.9	1,111.7	3,416.6	5,002.2	4,459.0	9,461.2	2,774.9	12,236.1		

Appendix B

Arterial Life Cycle Program

TABLE B-1
ARTERIAL STREET LIFE CYCLE PROGRAM
REGIONAL FUNDING REIMBURSEMENTS AND TOTAL EXPENDITURES: FY 2006-2026, FY 2027-2035
(2017 and Year of Expenditure Dollars in Millions)

TABLE B-1

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 FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
CHANDLER												
A1	Arizona Ave/Chandler Blvd	3.582	0.000	0.000	3.582	7.209	0.000	0.000	7.209	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2027	3.00	Project deleted in exchange for ACILND1003
A5	Chandler Blvd/Alma School Rd	2.957	0.390	0.942	4.289	1.234	9.577	0.000	10.810	2018	0.25	HSIP Recipient
A6	Chandler Blvd/Dobson Rd	2.500	0.000	0.000	2.500	10.316	0.000	0.000	10.316	2012	0.25	Project Completed
A7	Chandler Blvd/Kyrene Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A8	Gilbert Rd: SR-202L to Hunt Hwy	24.538	0.000	1.770	26.308	46.978	0.000	0.000	46.978	2015	5.50	
	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	3.244	0.000	0.000	3.244	4.849	0.000	0.000	4.849	----	----	Project Completed. Design and ROW project only.
	Gilbert Rd: Queen Creek Rd to Ocotillo Rd	7.537	0.000	0.000	7.537	16.198	0.000	0.000	16.198	2015	1.00	Project Completed
	Gilbert Rd: Ocotillo Rd to Chandler Heights	6.160	0.000	0.000	6.160	8.908	0.000	0.000	8.908	2015	1.00	FY15 RARF Closeout Project. Project Completed
	Gilbert Rd: Chandler Heights Rd to Riggs Rd	0.423	0.000	0.885	1.308	3.353	0.000	0.000	3.353	2015	1.00	Project Completed. Project combined with ACIGIL1003F
	Gilbert Rd: Riggs Rd to Hunt Hwy	0.423	0.000	0.885	1.308	3.353	0.000	0.000	3.353	2015	1.00	Project Completed. Project combined with ACIGIL1003E
A9	Kyrene Rd/Ray Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A10	Price Rd Substitute Projects	20.310	18.935	1.408	40.652	28.345	46.692	0.000	75.037	2021	----	
	Chandler Heights Rd: Arizona Avenue to McQueen Road	1.048	6.277	0.000	7.325	0.743	9.743	0.000	10.486	2018	1.00	
	Chandler Heights Road: McQueen Road to Gilbert Road	1.721	5.082	0.000	6.804	0.000	16.943	0.000	16.943	2020	3.00	Project limits extended from Gilbert Rd. to Val Vista Rd. Gilbert Rd. to Val Vista Rd. segment to be completed separately.

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	McQueen Road: Ocotillo Road to Riggs Road	1.618	0.000	0.000	1.618	2.311	0.000	0.000	2.311	----	----	Project completed. Design and ROW project only. Construction split into ACIPRC1003I and ACIPRC1003J.
	Ocotillo Road: Arizona Avenue to McQueen Road	4.157	0.000	1.408	5.565	7.878	0.000	0.000	7.878	2017	1.00	Project completed. HSIP Recipient
	Ocotillo Road: Cooper Road to Gilbert Road	0.103	6.397	0.000	6.499	0.147	7.818	0.000	7.965	2018	2.50	
	Price Rd at Germann Rd: Intersection Improvements	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACIOCT1003
	Old Price Rd at Queen Creek Rd: Intersection Improvements	1.664	0.000	0.000	1.664	2.377	0.000	0.000	2.377	2017	0.80	Project completed. Project limits changed from Price Rd at Germann Rd to Old Price Rd at Germann Rd.
	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
	McQueen Rd: Ocotillo Rd to Chandler Heights	3.896	0.000	0.000	3.896	6.397	0.000	0.000	6.397	2018	1.00	ACI-PRC1003C construction phase split into ACIPRC1003I and ACIPRC1003J
	McQueen Rd: Chandler Heights to Riggs Rd	3.049	0.000	0.000	3.049	4.131	0.000	0.000	4.131	2017	1.00	ACI-PRC1003C construction phase split into ACIPRC1003I and ACIPRC1003J
	Chandler Heights Rd: Gilbert Rd to Val Vista Rd	0.000	1.180	0.000	1.180	0.000	12.187	0.000	12.187	2023	2.00	New segment from ACIPRC1003B
A11	Ray Rd/Alma School Rd	2.217	0.000	0.000	2.217	14.217	0.000	0.000	14.217	2012	0.25	Project Completed. HSIP Recipient
A12	Ray Rd/Dobson Rd	0.202	6.515	0.000	6.718	0.289	9.460	0.000	9.749	2026	0.30	
	Ray Rd at Dobson Rd: Intersection Improvements Phase I	0.202	0.064	0.000	0.266	0.289	0.244	0.000	0.532	2018	0.30	Project split into two phases.
	Ray Rd at Dobson Rd: Intersection Improvements Phase II	0.000	6.452	0.000	6.452	0.000	9.216	0.000	9.216	2026	0.30	Project split into two phases.
A13	Ray Rd/McClintock Dr	0.000	3.775	0.000	3.775	0.000	2.083	6.428	8.511	2027	0.30	
A14	Ray Rd/Rural Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A95	Ocotillo Rd: Gilbert Rd to 148th Street	0.820	2.358	0.000	3.178	0.000	9.313	0.000	9.313	2019	1.50	Substitute project in exchange for ACIPRC1003F
A96	Cooper Rd: South of Queen Creek to Riggs Rd	1.037	8.384	3.776	13.197	1.100	15.154	0.000	16.254	2019	2.00	Substitute project in exchange for AIICHN3003, AIIKYR1003, and AIIRAY5003
	Cooper Rd: South of Queen Creek Rd to Chandler Heights	0.000	4.790		4.790	0.000	5.576	0.000	5.576	2018	2.00	New Project
	Cooper Rd: Chandler Heights to Riggs Rd	0.000	3.594	3.776	7.369	0.000	9.578	0.000	9.578	2019	2.00	New Project
	Cooper Rd: South of Queen Creek Rd to Riggs Rd	1.037	0.000	0.000	1.037	1.100	0.000	0.000	1.100	----	----	New Project. Design only.
A101	Lindsay Road: Ocotillo Rd to Hunt Hwy	0.000	4.433	3.018	7.451	0.000	22.685	0.000	22.685	2024	3.00	
CHANDLER/GILBERT												
A15	Queen Creek Rd: Arizona Ave to Higley Rd	19.580	8.282	5.112	32.974	26.862	13.950	0.000	40.811	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

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOE\$)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOE\$)	Expend through FY17 (YOE\$)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOE\$)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	CHANDLER Queen Creek Rd: McQueen Rd to Gilbert Rd	3.015	8.282	5.112	16.409	3.197	13.950	0.000	17.147	2018	2.00	
	GILBERT Queen Creek Rd: Val Vista Dr. to Higley	10.893	0.000	0.000	10.893	15.562	0.000	0.000	15.562	2011	1.00	Project Completed. Savings reallocated to AIIIGUD3003 and ACIGER2003B
EL MIRAGE/MARICOPA COUNTY												
A94	El Mirage Rd: Northern Ave to Bell Rd (Phase I)	20.329	8.585	0.000	28.913	28.421	22.778	0.000	51.199	2015	4.25	
	El Mirage Road Design Concept Report	1.448	0.000	0.000	1.448	1.448	0.000	0.000	1.448	----	----	Project completed.
	El Mirage Rd: Bell Rd to Picerne Dr (MC)	4.253	0.000	0.000	4.253	6.075	0.000	0.000	6.075	2014	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: 127th Ave to Grand (ELM)	1.112	0.000	0.000	1.112	1.588	0.000	0.000	1.588	----	----	Project completed. Design only.
	El Mirage Rd: Northern Ave to Peoria Ave (MC)	1.743	8.585	0.000	10.327	2.489	13.609	0.000	16.099	2018	2.00	
	Thunderbird Rd: 127th Avenue to Grand Avenue (ELM)	5.150	0.000	0.000	5.150	7.357	7.403	0.000	14.760	2018	0.50	
	El Mirage Rd: Peoria Ave to Cactus Rd (ELM)	5.956	0.000	0.000	5.956	8.508	1.765	0.000	10.274	2018	1.00	
A37	El Mirage Rd: Northern Ave to Bell Rd (Phase II)	0.331	13.222	0.000	13.553	0.473	13.080	0.000	13.553	2031	3.60	
	El Mirage Rd: Cactus to Grand Avenue (ELM)	0.331	13.222	0.000	13.553	0.473	13.080	0.000	13.553	2018	1.60	
	El Mirage Rd: Grand Avenue to Picerne Drive (MC)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2031	2.00	Project deleted in exchange for ACIDYS1003
A98	Dysart Rd: Northern Ave to Peoria Ave	0.000	0.000	0.000	0.000	0.000	11.100	0.000	11.100	2019	2	Substitute project in exchange for ACIELM3003B
FOUNTAIN HILLS												
A16	Shea Blvd: Palisades Blvd to Cereus Wash	3.332	2.172	0.692	6.196	4.764	5.443	0.000	10.207	2021	3.00	
	Shea Blvd: Palisades Blvd to Fountain Hills Blvd	0.248	0.000	0.000	0.248	0.358	0.000	0.000	0.358	----	----	Project is for design only. Project Completed.
	Shea Blvd: Technology Dr to Cereus Wash	3.084	0.000	0.000	3.084	4.406	0.000	0.000	4.406	2017	0.80	Project completed.
	Shea Blvd: Fountain Hills Blvd to Technology Dr	0.000	2.172	0.692	2.864	0.000	5.443	0.000	5.443	2021	2.20	
GILBERT												
A17	Elliot Rd/Cooper Rd	0.000	4.140	0.000	4.140	0.000	15.411	0.000	15.411	2019	0.50	
A18	Elliot Rd/Gilbert Rd	0.000	3.775	3.600	7.375	0.000	13.744	0.000	13.744	2020	0.50	
A19	Elliot Rd/Greenfield Rd	0.000	3.774	0.000	3.774	0.000	12.432	0.000	12.432	2022	0.50	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
A20	Elliot Rd/Higley Rd	0.000	3.775	1.137	4.912	0.000	11.497	0.000	11.497	2023	0.50	
A21	Elliot Rd/Val Vista Dr	0.000	3.775	0.699	4.474	0.000	14.981	0.000	14.981	2021	0.50	
A22	Germann Rd: Gilbert Rd to Power Rd	4.726	14.946	1.458	21.131	6.751	21.113	0.000	27.864	2020	4.00	
	Germann Rd: Gilbert Rd to Val Vista Dr	0.000	14.946	1.458	16.404	0.000	21.113	0.000	21.113	2019	2.00	
	Germann Rd: Val Vista Dr to Higley Rd	4.726	0.000	0.000	4.726	6.751	0.000	0.000	6.751	2017	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	5.224	5.224	2027	2.00	
A24	Guadalupe Rd/Cooper Rd	5.188	0.692	0.000	5.879	7.411	0.988	0.000	8.399	2017	0.50	Received project savings from ACIQNC1003C.
A25	Guadalupe Rd/Gilbert Rd	6.512	0.000	0.000	6.512	9.302	0.000	0.000	9.302	2015	0.50	Project Completed
A26	Guadalupe Rd/Greenfield Rd	0.000	2.992	1.919	4.912	0.000	10.496	0.000	10.496	2023	0.50	
A27	Guadalupe Rd/Power Rd	0.000	2.379	3.901	6.280	0.000	7.428	0.000	7.428	2026	0.50	
A28	Guadalupe Rd/Val Vista Dr	0.000	3.775	0.000	3.775	0.000	12.647	0.000	12.647	2023	0.50	
A30	Ray Rd: Val Vista Dr to Power Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2025	0.50	Project deleted in exchange for ACILND2003
A31	Ray Rd/Gilbert Rd	0.000	0.000	3.775	3.775	0.000	7.594	0.000	7.594	2023	0.50	
A32	Val Vista Dr: Warner Rd to Pecos	10.398	0.000	0.000	10.398	16.308	0.000	0.000	16.308	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2022	0.50	Project deleted in exchange for AIHIG1003
A99	Higley Rd/Baseline Rd	0.000	3.775	0.000	3.775	0.000	4.919	0.000	4.919	2019	0.50	Substitute project in exchange for AIWRN2003
A100	Lindsay Rd/SR-202L Transportation Interchange and Corridor Improvements	0.000	16.683	0.000	16.683	0.000	39.091	0.000	39.091	2021	3.00	
	Lindsay Rd/SR-202L Transportation Interchange & Frontage Rd	0.000	2.225	0.000	2.225	0.000	23.086	0.000	23.086	2021	1.25	
	Lindsay Rd: Pecos Rd to Germann Rd	0.000	7.608	0.000	7.608	0.000	8.492	0.000	8.492	2019	1.00	
	Mustang Drive: Rivulon Blvd to Germann Rd	0.000	6.850	0.000	6.850	0.000	7.512	0.000	7.512	2021	0.75	
GILBERT/MESA/MARICOPA COUNTY												
A29	Power Rd: Santan Fwy to Chandler Heights	20.591	0.000	0.000	20.591	36.765	27.993	0.000	64.758	2024	6.00	
	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)	15.448	0.000	0.000	15.448	29.418	0.000	0.000	29.418	2014	1.50	Project Completed. 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	4.00	

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			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
A45	Power Rd: Baseline Rd to Santan Fwy	7.760	8.193	0.000	15.953	22.040	31.571	0.000	53.611	2018	4.50	
	Power Rd: East Maricopa Floodway to Santan Fwy/Loop 202 (MES)	0.000	8.193	0.000	8.193	0.000	31.571	0.000	31.571	2022	3.50	
	Power Rd: Baseline Rd to East Maricopa Floodway (MC)	7.760	0.000	0.000	7.760	22.040	0.000	0.000	22.040	2009	1.00	Project Completed
MARICOPA COUNTY												
A35	Dobson Rd: Bridge over Salt River	0.000	0.000	0.000	0.000	0.692	1.000	43.110	44.802	2035	1.60	Regional funding for project reallocated to ACIGIL2003.
A36	El Mirage Rd: Bell Rd to Jomax Rd	14.355	0.853	0.000	15.208	12.601	12.298	5.590	30.489	2027	5.80	
	El Mirage Rd: Bell Rd to Deer Valley Dr	8.821	0.853	0.000	9.673	12.601	0.000	0.000	12.601	2010	3.00	FY15 RARF Closeout Project. 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	1.60	
	El Mirage Rd: Deer Valley Dr to L303	5.535	0.000	0.000	5.535	0.000	0.000	0.000	0.000	2009	1.20	FY10 RARF Closeout Project. Project Completed.
A38	Gilbert Rd: Bridge over Salt River	1.400	41.237	0.000	42.637	2.000	66.893	0.000	68.893	2022	1.60	
A39	Jomax Rd: SR-303L to Sun Valley Parkway	0.000	6.830	17.761	24.591	0.000	9.757	25.373	35.130	----	----	ROW project only
A40	McKellips Rd: Bridge over Salt River	0.000	0.000	14.005	14.005	0.925	0.000	72.000	72.925	2035	0.80	Regional funding for project reallocated to ACIGIL2003.
A41	McKellips Rd: SR-101L to SRP-MIC/Alma School Rd	0.294	12.591	14.567	27.453	0.421	12.184	0.000	12.604	2020	2.00	Portion of project funding reallocated to ACIGIL2003.
A42	Northern Pkwy: Sarival to Grand (Phase I)	60.713	0.000	0.000	60.713	89.174	0.000	0.000	89.174	2013	12.50	Total corridor length is 12.5 miles
	Northern Parkway: Sarival to Dysart	58.112	0.000	0.000	58.112	85.458	0.000	0.000	85.458	2013	12.50	Project Completed
	Northern Parkway: ROW Protection	2.601	0.000	0.000	2.601	3.716	0.000	0.000	3.716	2013	12.50	Project Completed
A43	Northern Pkwy: Sarival to Grand (Phase II)	27.147	80.873	0.000	108.020	30.915	96.340	0.000	127.255	2023	12.50	
	Northern Parkway: Sarival to Dysart	2.400	0.000	0.000	2.400	4.077	0.000	0.000	4.077	2014	4.10	Landscape and construction project.
	Northern Pkwy: Dysart to 111th	13.978	29.535	0.000	43.513	14.823	38.014	0.000	52.837	2019	2.50	Project received funding from ACINOR1003G. Project scope includes Agua Fria Bridge.
	Northern Parkway: Reems and Litchfield Overpasses	7.214	0.000	0.000	7.214	12.013	0.000	0.000	12.013	2016	0.20	Project Completed. Combined two segments
	Northern Parkway: 99th Ave to East Loop 101 Ramps	1.779	9.795	0.000	11.574	0.002	12.272	0.000	12.274	2020	0.50	Project renamed in FY2018.
	Northern Pkwy: Dysart Overpass	0.833	0.000	0.000	0.833	0.000	1.000	0.000	1.000	----	0.40	Design project only. Construction to occur as part of ACINOR1003H.
	Northern Parkway: 111th Ave to Grand	0.000	4.779	0.000	4.779	0.000	5.068	0.000	5.068	----	5.50	ROW project only. Received savings from ACINOR1003G.
	Northern Parkway: Interim Construction	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project Deleted. Funding shifted to ACINOR1003B and ACINOR1003E

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			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	Northern Parkway: Loop 101 to Grand Ave Scoping Assessment	0.943	0.000	0.000	0.943	0.000	1.000	0.000	1.000	----	----	New project. Pre-design only. Received project savings from ACINOR1003E.
	Northern Parkway: Dysart and El Mirage Overpasses	0.000	36.764	0.000	36.764	0.000	38.986	0.000	38.986	2021	0.8	Construction project only.
A44	Northern Pkwy: Sarival to Grand (Phase III)	0.943	67.050	0.000	67.993	0.000	99.330	0.000	99.330	2027	12.50	
	Northern Pkwy: El Mirage Alternative Access	0.000	2.915	0.000	2.915	0.000	3.182	0.000	3.182		12.50	
	Northern Pkwy: El Mirage Overpass	0.943	0.000	0.000	0.943	0.000	1.000	0.000	1.000	----	0.40	Design project only. Construction to occur as part of ACINOR1003H.
	Northern Pkwy: Agua Fria to 111th	0.000	2.817	0.000	2.817	0.000	4.024	0.000	4.024	2023	1.00	
	Northern Pkwy: 111th to 107th	0.000	15.423	0.000	15.423	0.000	21.154	0.000	21.154	2024	0.50	
	Northern Pkwy: 107th to 99th	0.000	20.572	0.000	20.572	0.000	34.120	0.000	34.120	2025	1.00	
	Northern Pkwy: Loop 101 to 91st	0.000	3.575	0.000	3.575	0.000	5.108	0.000	5.108	2025	0.50	
	Northern Pkwy: 91st to Grand Intersection Improvements	0.000	5.907	0.000	5.907	0.000	9.939	0.000	9.939	2026	3.00	
	Northern Pkwy: ROW Protection	0.000	0.000	0.000	0.000	0.000	2.213	0.000	2.213	----	12.50	
	Northern Pkwy: Ultimate Construction	0.000	15.840	0.000	15.840	0.000	18.591	0.000	18.591	2026	12.00	
MESA												
A46	Baseline Rd: Power Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2017	6.00	
	Baseline Rd: Power Rd to Ellsworth Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Baseline Rd: Ellsworth Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A47	Broadway Rd: Dobson Rd to Country Club	0.081	3.751	4.741	8.574	0.116	24.014	0.000	24.130	2022	2.00	
A48	Country Club/University Dr	0.000	8.325	0.000	8.325	0.000	25.268	0.000	25.268	2023	1.00	
A49	Country Club/Brown Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	12.406	9.919	22.324	0.000	25.921	11.138	37.059	2026	9.00	
	Crismon Rd: Broadway Rd to Guadalupe Rd	0.000	0.000	9.919	9.919	0.000	7.827	11.138	18.965	2027	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.

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			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
A51	Dobson Rd/Guadalupe Rd	2.124	0.000	0.000	2.124	3.100	0.000	0.000	3.100	2010	0.50	Project Completed
A52	Dobson Rd/University Dr	0.000	0.000	4.921	4.921		0.763	7.460	8.224	2027	0.50	
A53	Elliot Rd: Power Rd to Meridian Rd	0.180	22.146	8.646	30.973	0.257	58.167	0.000	58.425	2026	6.00	
	Elliot Rd: Power Rd to Ellsworth Rd	0.000	8.840	8.646	17.486	0.000	19.605	0.000	19.605	2025	3.00	Received project savings from ACIRAY2003B and ACIRAY2003C.
	Elliot Rd: Ellsworth Rd to Signal Butte Rd	0.001	11.780	0.000	11.782	0.002	18.381	0.000	18.383	2019	2.00	Received project savings from ACIRAY2003B and ACIRAY2003C.
	Elliot Rd: Power Rd to Meridian Rd	0.179	0.000	0.000	0.179	0.255	0.000	0.000	0.255	----	----	Project completed. Pre-design/scoping only.
	Elliot Rd: Signal Butte Rd to Meridian Rd	0.000	1.526	0.000	1.526	0.000	20.181	0.000	20.181	2019	1.00	
A54	Germann Rd: Ellsworth Rd to Signal Butte Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A55	Gilbert Rd/University Dr	2.741	0.000	0.000	2.741	11.765	0.000	0.000	11.765	2010	0.50	Project Completed
A56	Greenfield Rd: University Rd to Baseline Rd	5.777	0.000	6.585	12.361	9.692	13.176	0.000	22.868	2024	3.00	
	Greenfield Rd: Baseline Rd to Southern Ave	5.777	0.000	0.000	5.777	9.692	0.000	0.000	9.692	2010	1.00	Project Completed
	Greenfield Rd: Southern Ave to University Rd	0.000	0.000	6.585	6.585	0.000	13.176	0.000	13.176	2024	2.00	
A57	Guadalupe Rd: Power Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2019	6.00	
	Guadalupe Rd: Power Rd to Hawes Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Hawes Rd to Crimson Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Crimson Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	0.595	23.058	6.393	30.046	2027	6.00	
	Hawes Rd: Broadway Rd to US60	0.000	0.000	0.000	0.000	0.000	10.697	0.000	10.697	2025	2.00	
	Hawes Rd: Baseline Rd to Elliot Rd	0.000	7.108	0.000	7.108	0.000	5.979	4.389	10.368	2027	2.00	
	Hawes Rd: Elliot Rd to Santan Freeway	0.000	4.415	0.000	4.415	0.000	6.383	2.003	8.386	2027	1.25	
	Hawes Rd: Santan Freeway to Ray Rd	0.416	0.000	0.000	0.416	0.595	0.000	0.000	0.595	2011	0.75	Project Completed

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			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
A59	Higley Rd Parkway: S 60 to SR-202L	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2020	6.50	
	Higley Rd Parkway: SR-202L to Brown Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A61	Lindsay Rd/Brown Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2023	0.50	Project was deleted in FY 2018. Funding was transferred to the Gilbert Road LRT extension.
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	2024	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	0.162	0.000	0.000	0.162	0.231	0.000	0.000	0.231	----	----	
	Corridor Study	0.162	0.000	0.000	0.162	0.231	0.000	0.000	0.231	----	----	
	McKellips Rd/Lindsay Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2018. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Greenfield Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2018. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Higley Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2018. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Power Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Recker Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2018. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Val Vista Dr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2020	7.00	
	Meridian Rd: Baseline Rd to Ray Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.

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	Meridian Rd: Ray Rd to Germann Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	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	17.208	11.087	0.000	28.296	24.583	19.928	0.000	44.511	2019	2.00	
	Mesa Dr: US 60 to Southern Ave	16.436	0.088	0.000	16.524	23.480	0.126	0.000	23.605	2017	1.00	Project Completed. Received project savings from ACIRAY2003B.
	Mesa Dr: 8th Ave to Main Street	0.773	10.999	0.000	11.772	1.104	19.802	0.000	20.906	2018	1.00	Project limits changed from Mesa Dr at Broadway Rd. Project received savings from ACIRAY2003B.
A66	Pecos Rd: Ellsworth Rd to Meridian Rd	0.000	15.381	0.000	15.381	0.000	25.187	0.000	25.187	2022	3.00	
A67	Ray Rd: Sossaman Rd to Meridian Rd	3.127	0.000	0.000	3.127	14.380	0.000	0.000	14.380	2026	5.00	
	Ray Rd: Sossaman Rd to Ellsworth Rd	3.023	0.000	0.000	3.023	4.319	0.000	0.000	4.319	2011	2.00	Project Completed
	Ray Rd: Ellsworth Rd to Signal Butte Rd	0.000	0.000	0.000	0.000	8.061	0.000	0.000	8.061	2015	2.00	Project Completed. Project segmented from Ray Rd: Ellsworth Rd to Meridian Rd. Project savings reallocated.
	Ray Rd: Signal Butte Rd to Meridian Rd	0.103	0.000	0.000	0.103	2.000	0.000	0.000	2.000	2014	1.00	Project Completed. Project segmented from Ray Rd: Ellsworth Rd to Meridian Rd. Project savings reallocated.
A68	Signal Butte Rd: Broadway to Pecos Rd	0.000	33.034	0.000	33.034	13.000	33.385	0.000	46.385	2026	8.00	
	Signal Butte Rd: Broadway Rd to Elliot Rd	0.000	11.693	0.000	11.693	0.000	18.151	0.000	18.151	2025	4.00	
	Signal Butte Rd: Elliot Rd to Ray Rd	0.000	8.677	0.000	8.677	13.000	0.000	0.000	13.000	2016	2.00	Project Completed. Project segmented from Signal Butte Rd: Elliot Rd to Pecos Rd. Project savings reallocated.
	Signal Butte Rd: Ray Rd to Pecos Rd	0.000	12.664	0.000	12.664	0.000	15.234	0.000	15.234	2025	2.00	Project segmented from Signal Butte Rd: Elliot Rd to Pecos Rd.
A69	Southern Ave: Country Club Dr to Recker Rd	1.047	28.940	0.000	29.987	1.496	43.681	0.000	45.177	2019	2.00	
	Southern/Country Club Dr	0.342	6.469	0.000	6.811	0.488	12.159	0.000	12.647	2021	0.50	
	Southern Ave/Stapley Dr	0.594	11.528	0.000	12.122	0.849	18.185	0.000	19.034	2021	0.50	HSIP Recipient
	Southern Ave: Gilbert Rd to Val Vista Dr	0.000	4.715	0.000	4.715	0.000	6.826	0.000	6.826	2020	2.50	Project limits were expanded. Received project savings from ACIRAY2003C.
	Southern Ave: Greenfield Rd to Higley Rd	0.006	6.228	0.000	6.234	0.009	6.510	0.000	6.519	2020	1.50	Project limits were expanded.
	Southern Avenue Area DCR	0.105	0.000	0.000	0.105	0.150	0.000	0.000	0.150	----	----	Project completed. Pre-design/scoping only.
A70	Southern Ave: Sossaman Rd to Meridian Rd	0.000	0.000	13.310	13.310	0.000	27.151	0.000	27.151	2025	5.00	
	Southern Ave: Sossaman Rd to Crismon Rd	0.000	0.000	8.014	8.014	0.000	16.363	0.000	16.363	2026	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	

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			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
A71	Stapley Dr/University Dr	0.000	7.785	0.000	7.785	0.000	19.361	0.000	19.361	2022	0.50	
A72	Thomas Rd: Gilbert Rd to Val Vista Dr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A73	University Dr: Val Vista Dr to Hawes Rd	0.067	22.642	0.000	22.708	0.095	35.308	0.000	35.403	2024	6.00	
	University Dr: Val Vista Dr to Higley Rd	0.000	11.204	0.000	11.204	0.000	15.600	0.000	15.600	2023	2.00	
	University Dr: Higley Rd to Sossaman Rd	0.000	9.018	0.000	9.018	0.000	16.127	0.000	16.127	2024	3.00	Project limits were expanded from University Dr: Higley Rd to Hawes Rd and segmented into two phases
	University Dr: Sossaman Rd to 88th St	0.067	2.419	0.000	2.486	0.095	3.581	0.000	3.676	2018	1.50	Project limits were expanded from University Dr: Higley Rd to Hawes Rd and segmented into two phases
A74	Val Vista Dr: University Dr to Baseline Rd	0.055	3.543	0.000	3.598	0.078	13.023	0.000	13.101	2026	3.50	
	Val Vista Dr: Baseline Rd to US-60	0.055	0.785	0.000	0.840	0.078	1.049	0.000	1.128	2018	1.00	Project limits were expanded from Val Vista Dr: Baseline Rd to Southern Ave and segmented into two phases.
	Val Vista Dr: US-60 to Pueblo	0.000	2.758	4.722	7.480	0.000	11.973	0.000	11.973	2021	1.50	Project limits were expanded from Val Vista Dr: Baseline Rd to Southern Ave and segmented into two phases.
	Val Vista Dr: Southern Ave to University Dr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project Deleted in exchange for ACIBSL2003
A97	Baseline Rd: 24th Sreet to Consolidated Canal	0.057	8.083	0.000	8.140	0.081	4.801	0.000	4.882	2018	1.00	Substitute project in exchange for ACIVAL1003B. Received project savings from ACISGB1003B and ACIRAY2003B.
	Mesa Main Street: Mesa Dr to Gilbert Rd Light Rail Extension	122.824	52.932	0.000	175.755	44.565	141.740	0.000	186.304	2019	2.00	
PEORIA												
A75	Beardsley Connection: SR-101L to Beardsley Rd at 83rd Ave/Lake Pleasant Pkwy	22.095	0.000	0.000	22.095	34.621	0.000	0.000	34.621	2014	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	3.226	0.000	0.000	3.226	6.734	0.000	0.000	6.734	2014	1.00	FY15 ALCP RARF Closeout Project. Project Completed. Savings transferred to ACILKP1003A
	75th Ave at Thunderbird Rd: Intersection Improvement	1.893	0.000	0.000	1.893	5.931	0.000	0.000	5.931	2014	0.20	Project Completed
A76	Happy Valley Rd: L303 to 67th Avenue	20.634	1.895	11.114	33.644	50.492	22.150	0.000	72.642	2024	5.750	
	Happy Valley Rd: Agua Fria to Loop 303	0.000	0.000	0.000	0.000	0.000	3.115	0.000	3.115	2019	0.75	Project segmented

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	Happy Valley Rd: Lake Pleasant Pkwy to 67th Ave	20.634	0.000	0.000	20.634	50.277	0.000	0.000	50.277	2010	5.00	Project Completed
	Happy Valley Rd: Lake Pleasant Pkwy to Agua Fria	0.000	1.895	11.114	13.010	0.215	19.035	0.000	19.250	2019	1.50	Project segmented
A77	Lake Pleasant Pkwy: Union Hills to SR74	42.672	0.000	0.000	42.672	60.960	0.000	47.500	108.460	2029	14.30	
	Lake Pleasant Pkwy: West Wing Parkway to Loop 303	15.545	0.000	0.000	15.545	22.207	0.000	0.000	22.207	2016	2.50	Project Completed. Project received savings from ACIBRD1003B.
	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	10.00	Project Completed
	Lake Pleasant Pkwy: Loop 303 to SR-74/Carefree Hwy	0.000	0.000	0.000	0.000	0.000	0.000	47.500	47.500	2029	1.80	
PHOENIX												
A78	Avenida Rio Salado: 51st Ave. to 7th St.	44.693	0.000	0.000	44.693	59.686	25.006	0.000	84.692	2018	6.00	Project has been segmented into two phases.
	Avenida Rio Salado Phase I: 51st Ave to 43rd Ave and 35th Ave to 7th Street	44.693	0.000	0.000	44.693	53.106	12.711	0.000	65.817	2017	5.00	
	Avenida Rio Salado Phase II: 51st Ave to 35th Ave, 7th Ave, and 7th Street	0.000	0.000	0.000	0.000	6.580	12.295	0.000	18.875	2019	3.00	
A79	Black Mountain Blvd: SR-51 and Loop 101/ Pima Fwy to Pinnacle Peak Rd.	22.530	0.000	0.000	22.530	36.146	0.000	0.000	36.146	2016	2.00	
A80	Happy Valley Rd: 67th Ave to I-17	5.343	0.000	13.291	18.634	7.162	15.947	15.375	38.483	2030	4.50	
	Happy Valley: I-17 to 35th Ave	5.343	0.000	0.078	5.421	7.162	0.000	0.000	7.162	2005	1.00	FY15 RARF Closeout Project. Project Completed
	Happy Valley: 35th Ave to 43rd Ave	0.000	0.000	5.232	5.232	0.000	11.700	0.000	11.700	2024	1.00	
	Happy Valley: 43rd Ave to 55th Ave	0.000	0.000	4.671	4.671	0.000	1.592	7.905	9.497	2029	1.50	
	Happy Valley: 55th Ave to 67th Ave	0.000	0.000	3.310	3.310	0.000	2.655	7.470	10.124	2029	1.50	
A81	Sonoran Blvd: 15th Avenue to Cave Creek	32.572	0.000	0.000	32.572	58.650	0.000	0.000	58.650	2013	8.00	Project completed.
SCOTTSDALE/CAREFREE												
A87	Pima Rd: SR101L to Happy Valley Rd and Dynamite Rd to Cave Creek	31.633	65.617	0.625	97.250	45.675	95.369	0.000	141.043	2022	12.45	
	Pima Rd: Thompson Peak Parkway to Pinnacle Peak (SCT)	17.847	0.000	0.000	17.847	25.540	0.000	0.000	25.540	2012	1.50	Project completed. Savings reallocated to ACISCT1003A
	Happy Valley Rd: Pima Rd to Alma School Rd	0.000	6.947	0.000	6.947	0.000	11.350	0.000	11.350	2023	2.20	Project limits expanded from Pima Rd at Happy Valley to Happy Valley Rd: Pima Rd to Alma School Rd. Savings received from ACISCT1003A and ACISAT1003A.
	Pima Rd: Pinnacle Peak to Happy Valley Rd (SCT)	0.146	15.844	0.000	15.991	0.209	20.808	0.000	21.017	2020	1.00	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	Pima Rd: Dynamite Blvd to Stagecoach Rd (SCT)	0.000	37.892	0.000	37.892	0.000	55.270	0.000	55.270	2025	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	2025	0.25	
	Pima Rd: SR101L to Thompson Peak Pkwy (SCT)	13.639	0.000	0.000	13.639	19.926	0.000	0.000	19.926	2008	2.50	Project Completed
SCOTTSDALE												
A82	Carefree Hwy: Cave Creek Rd to Scottsdale Rd	0.000	8.012	0.000	8.012	0.000	14.344	0.000	14.344	2024	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	----	----	This project was deleted in FY2009.
A85	Miller Rd/SR-101L Underpass	0.010	13.994	0.000	14.005	0.015	28.992	0.000	29.007	2024	1.30	
	Corridor Study	0.010	0.690	0.000	0.700	0.015	0.985	0.000	1.000	----	----	Pre-design/study only.
	Miller Rd/SR-101L Underpass	0.000	13.305	0.000	13.305	0.000	19.007	0.000	19.007	2020	0.25	
	Miller Road: Princess Blvd. to Legacy Blvd	0.000	0.000	0.000	0.000	0.000	9.000	0.000	9.000	2024	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	2025	2.00	
A88	Pima Rd: McKellips Rd to Via Linda	7.535	23.184	0.000	30.719	10.848	38.567	0.000	49.416	2022	7.40	
	Pima Rd: Via Linda to Via De Ventura	0.072	1.266	0.000	1.339	0.103	2.251	0.000	2.354	2018	1.30	
	Pima Rd: Via De Ventura to Krail	7.463	0.000	0.000	7.463	10.745	0.000	0.000	10.745	2012	1.30	Project Completed
	Pima Rd: Thomas Rd to McDowell Rd	0.000	9.463	0.000	9.463	0.000	8.761	0.000	8.761	2024	1.00	
	Pima Rd: Krail to Chaparral	0.000	6.326	0.000	6.326	0.000	16.515	0.000	16.515	2019	1.80	
	Pima Rd: Chaparral Rd to Thomas Rd	0.000	6.128	0.000	6.128	0.000	11.041	0.000	11.041	2024	2.00	
A89	Scottsdale Airport: Runway Tunnel	12.208	53.536	0.001	65.746	17.441	91.112	0.000	108.553	2026	7.10	
	Frank Lloyd Wright -Loop 101 Traffic Interchange	0.000	5.983	0.000	5.983	0.000	8.547	0.000	8.547	2024	0.40	
	Raintree -Loop 101 Traffic Interchange	0.000	3.167	0.000	3.167	0.000	4.524	0.000	4.524	2024	0.40	
	Northsight Blvd: Hayden to Frank Lloyd Wright	9.374	0.000	0.000	9.374	13.392	0.000	0.000	13.392	2015	0.35	Project Completed. Received project savings from ACISHA2003H. Project savings reallocated to ACIPMA1003B.
	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	2025	0.75	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	Redfield Rd: Raintree Dr to Hayden Rd	0.000	1.500	0.000	1.500	0.000	2.215	0.000	2.215	2018	1.00	Renamed in FY15.
	Raintree Drive: Scottsdale Rd to Hayden Rd	1.584	14.468	0.000	16.052	2.263	20.602	0.000	22.865	2019	1.20	Renamed in FY15.
	Raintree Drive: Hayden to Loop 101	0.000	6.304	0.000	6.304	0.000	20.709		20.709	2020	1.00	
	Frank Lloyd Wright at 76th/78th/82nd Street: Intersection Improvements	0.398	0.000	0.000	0.398	0.568	0.000	0.000	0.568	2014	0.50	Project Completed. Savings transferred to ACISAT1003C.
	Southbound Loop 101 Frontage Road Connections	0.112	2.940	0.000	3.052	0.160	6.798	0.000	6.957	2018	0.75	Project Scope changed in FY2012
	Hayden Rd - Loop 101 Interchange Improvements	0.000	11.428	0.001	11.429	0.000	16.652	0.000	16.652	2026	0.75	
	Airpark DCR	0.741	0.000	0.000	0.741	1.058	0.000	0.000	1.058	-----	-----	Project Completed. Received project savings from ACISHA2003E
A90	Scottsdale Rd: Thompson Peak Pkwy to Jomax Rd	9.120	7.928	0.000	17.049	13.029	54.937	0.000	67.966	2022	4.00	
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy Phase I	9.120	0.000	0.000	9.120	13.029	0.000	0.000	13.029	2015	2.00	Project segmented into two phases. Phase one completed. Received project savings from ACIPMA1003A ACISHA2003E. Transferred project savigns to ACIPMA1003B.
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy Phase II	0.000	6.128	0.000	6.128	0.000	18.000	0.000	18.000	2024	2.00	Project segmented into two phases.
	Scottsdale Rd: Pinnacle Peak Pkwy to Jomax Rd	0.000	1.800	0.000	1.800	0.000	36.937	0.000	36.937	2024	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	2024	5.50	
	Scottsdale Rd: Jomax Rd to Dixileta Dr	0.000	9.499	0.000	9.499	0.000	18.081	0.000	18.081	2025	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	2025	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	2025	2.00	
A92	Shea Blvd: SR-101L to SR-87	5.366	17.197	0.000	22.563	7.610	25.210	0.000	32.820	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	2024	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	2007	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	2025	0.25	
	Shea Blvd at 120/124th St	0.183	0.000	0.000	0.183	0.206	0.000	0.000	0.206	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	2007	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.

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY17 (YOES)	Estimated Future Reimb (2017\$)		Total Reimb. (2017\$, YOES)	Expend through FY17 (YOES)	Estimated Future Expend (2017\$)		Total Expend. (2017\$, YOES)			
			FY18-FY26	FY27-FY35			FY18-FY26	FY27-FY35				
	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	2023	6.25	
	Shea Blvd at Loop 101	0.000	3.688	0.000	3.688	0.000	5.269	0.000	5.269	2023	1.00	
	Shea Blvd at 110th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2025	0.25	
	Shea Blvd at 114th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2025	0.25	
	Shea Blvd at Frank Lloyd Wright Blvd	0.000	0.664	0.000	0.664	0.000	1.489	0.000	1.489	2025	0.25	
	Shea Blvd at 115th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2025	0.25	
	Shea Blvd at 125th St	0.000	0.880	0.000	0.880	0.000	1.257	0.000	1.257	2025	0.25	
	Shea Blvd at 135th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2025	0.25	
	Shea Blvd at 136th St	0.000	0.376	0.000	0.376	0.000	0.637	0.000	0.637	2025	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	1.00	
	TOTALS	688.2	862.5	196.5	1747.1	953.0	1792.7	287.0	3032.8	----	----	

TABLE B-2
ARTERIAL STREET LIFE CYCLE PROGRAM - INTELLIGENT TRANSPORTATION SYSTEMS
REGIONAL FUNDING REIMBURSEMENTS: FY 2006-2026
(2017 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. (2017\$, YOES\$)	FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
	Reimb. through FY17 (YOES\$)	Estimated Future Reimb (2016\$)					
		FY18-FY26	FY27-FY35				
REGION-WIDE							
Intelligent Transportation System Projects	58.598	7.358	0.000	65.956	2019	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
(2017 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018-2026 (2017 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T1	Ahwatukee Connector	0.00	0.00	0.00	1.29	1.29	2031	
T2	Ahwatukee Express	5.07	0.00	5.07	0.00	5.07	2006	I-10 East RAPID (Phoenix assumed funding in FY 2011)
T3	Anthem Express	0.00	0.00	0.00	3.13	3.13	2031	
T4	Apache Junction Express	0.00	0.00	0.00	4.57	4.57	2027	
T5	Arizona Avenue LINK	8.11	0.00	8.11	0.00	8.11	2011	
T6	Avondale Express	0.00	0.00	0.00	0.00	0.00	2020	Route implemented early as a part of existing Route 563. Costs accounted for in route T19.
T7	Black Canyon Freeway Corridor	0.00	0.00	0.00	2.11	2.11	2031	
T8	Buckeye Express	0.00	0.00	0.00	4.02	4.02	2030	
T9	Chandler Boulevard LINK	0.00	0.00	0.00	8.32	8.32	2032	Designated as illustrative project in FY 2010.
T10	Deer Valley Express	5.51	0.00	5.51	0.00	5.51	2006	I-17 RAPID (Phoenix assumed funding in FY 2011)
T11	Desert Sky Express	1.98	0.00	1.98	0.00	1.98	2006	I-10 West RAPID (Phoenix assumed funding in FY 2011)
T12	East Loop 101 Connector	2.06	0.00	2.06	0.00	2.06	2009	Route 511 - Chandler/Scottsdale Airpark Express (route eliminated in FY2015)
T13	Grand Avenue Limited	2.16	1.16	3.32	1.26	4.58	2006	
T14	Loop 303 Express	0.00	0.00	0.00	3.74	3.74	2031	
T15	Main Street LINK	13.20	0.00	13.20	0.00	13.20	2009	
T16	North Glendale Express	6.33	3.98	10.32	4.15	14.46	2008	Route 573 - Northwest Valley
T17	North I-17 Express	0.00	0.00	0.00	3.38	3.38	2031	
T18	North Loop 101 Connector	2.94	0.00	2.94	0.00	2.94	2008	Route 572 - Surprise/Scottsdale Express (route eliminated in FY 2011)
T19	Papago Fwy Connector	3.18	4.85	8.03	2.82	10.85	2009	Routes 562 - Goodyear Express and Route 563 - Buckeye Express
T20	Peoria Express	0.00	0.00	0.00	3.53	3.53	2031	
T21	Pima Express	0.00	0.00	0.00	3.35	3.35	2030	
T22	Red Mountain Express	3.51	4.06	7.57	4.47	12.04	2009	Routes 535 & 536 - Northeast Mesa Express (route 536 eliminated in FY 2011)
T23	Red Mountain Fwy Connector	0.00	0.00	0.00	2.88	2.88	2032	
T24	Santan Express	0.00	0.00	0.00	8.20	8.20	2032	
T25	Scottsdale/Rural LINK	0.00	0.00	0.00	1.25	1.25	2035	Limited implementation (Rural/Apache LRT station to Scottsdale/Thunderbird park and ride)

Map Code	Route	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018-2026 (2017 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T26	South Central Avenue	0.00	0.00	0.00	0.00	0.00	2013	Advanced 2 years, funded by the City of Phoenix
T27	South Central Avenue LINK	0.00	0.00	0.00	5.53	5.53	2031	
T28	SR 51 Express	4.12	0.00	4.12	0.00	4.12	2006	SR-51 RAPID (Phoenix assumed funding in FY 2011)
T29	Superstition Fwy Connector	0.00	0.00	0.00	1.36	1.36	2028	
T30	Superstition Springs Express	0.00	0.00	0.00	4.37	4.37	2032	
T31	West Loop 101 Connector	3.64	2.48	6.13	2.67	8.80	2009	Routes 575 & 576 - Northwest Valley Express (route 576 eliminated in FY 2011)
	TOTAL	61.82	16.55	78.37	76.40	154.77		

TABLE C-2
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2017 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T40	59th Avenue	10.58	10.03	20.61	11.09	31.70	2006		Route 59 - 59th Avenue
T41	83rd Avenue/75th Avenue	0.00	2.03	2.03	12.28	14.31	2030		
T42	99th Avenue	0.00	0.00	0.00	10.71	10.71	2032		
T43	Alma School Rd.	4.25	9.78	14.03	13.45	27.47	2006	2018	Route 104 - Alma School Road
T44	Arizona Avenue/Country Club	11.35	24.65	36.00	27.51	63.51	2006	2012	Route 112 - Country Club Drive/Arizona Avenue
T45	Baseline Rd	5.50	8.64	14.15	12.15	26.30	2013		Route 77 - Baseline Road
	Dobson Rd	18.13	16.35	34.48	18.56	53.04	2009		Route 96 - Dobson Road
	Southern Ave	29.33	32.66	61.98	36.48	98.46	2006	2009	Route 61 - Southern Avenue
T46	Bell Road	0.00	5.33	5.33	11.13	16.46	2022		Route 170 - Bell Road
T47	Broadway	3.86	15.41	19.27	23.37	42.64	2011		Route 45 - Broadway Road
T48	Buckeye Road	0.00	0.00	0.00	1.25	1.25	2035		
T49	Camelback Road	1.60	1.70	3.29	4.21	7.51	2006	2019	Route 50 - Camelback Road
T50	Chandler Blvd.	30.30	28.09	58.39	32.87	91.26	2008		Route 156 - Chandler Boulevard
T51	Dunlap/Olive Avenue	0.00	0.00	0.00	6.69	6.69	2031		
T52	Dysart Road	0.00	0.00	0.00	2.82	2.82	2030		
T53	Elliot Road	8.17	16.42	24.60	18.32	42.92	2011	2014	Route 108 - Elliot Road
T54	Gilbert Road	11.34	21.36	32.69	24.98	57.68	2010		Route 136 - Gilbert Road
T55	Glendale Avenue	23.07	17.11	40.18	18.96	59.14	2006	2008	Route 70 - Glendale Avenue
T56	Greenfield Road	0.00	0.00	0.00	10.21	10.21	2030		
T57	Hayden/McClintock	16.99	40.38	57.38	45.12	102.50	2006	2021	Route 81 - Hayden Road/McClintock Drive
T58	Indian School Road	0.00	2.87	2.87	5.99	8.86	2032		
T59	Litchfield Road	0.00	0.00	0.00	4.30	4.30	2035		Designated as illustrative project in FY 2010.
T60	Main Street	19.41	27.41	46.82	30.60	77.42	2009		Route 40 - Apache/Main Street
T61	McDowell/McKellips	7.06	16.04	23.10	17.77	40.87	2013		Route 17 - McDowell Road
T62	Peoria Ave./Shea	15.50	11.41	26.92	12.64	39.55	2006		Route 106 - Peoria Road/Shea Boulevard
T63	Power Road	11.72	17.95	29.67	20.03	49.70	2011		Route 184 - Power Road
T64	Queen Creek Road	0.00	0.00	0.00	1.06	1.06	2035		
T65	Ray Road	0.00	1.05	1.05	1.17	2.22	2031		
T66	Scottsdale/Rural	69.10	62.39	131.49	69.65	201.14	2006	2007	Route 72 - Scottsdale/Rural Road

Map Code	Route	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T67	Tatum / 44th Street	0.00	0.00	0.00	0.56	0.56	2030		
T68	Thomas Road	3.14	7.88	11.02	8.74	19.76	2014	2031	Route 29 - Thomas Road
T69	University Drive	1.04	16.83	17.87	27.21	45.08	2020		Route 30 - University Drive
T70	Van Buren	4.06	8.94	13.00	10.81	23.81	2013		Route 3 - Van Buren Street
T71	Waddell/Thunderbird	2.96	8.75	11.71	10.27	21.98	2015		Route 138 - Thunderbird Road
	TOTAL	308.47	431.46	739.93	562.95	1,302.88			

TABLE C-3
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: OTHERS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2017 and Year of Expenditure Dollars in Millions)

Route	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018- 2026 (2017 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
ADA Paratransit	197.94	268.22	466.16	309.95	776.11	2006	
Regional Passenger Support Services	81.87	69.12	150.99	74.53	225.52	2006	
Existing Local Service	8.65	5.75	14.40	8.55	22.95	2006	
Existing Express Service	39.06	23.77	62.84	26.06	88.89	2006	
Rural/Non-Fixed Route Service	4.42	3.35	7.77	3.77	11.53	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	5.90	7.40	13.30	5.12	18.42	2006	
RPTA Planning and Administration	45.94	45.06	91.00	42.95	133.95	2006	Primarily funded through RPTA's allocation from Regional Area Road Fund
TOTAL	383.79	422.66	806.46	470.92	1,277.38		

TABLE C-4
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FACILITIES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2017 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018 - 2026 (2017 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	No. of Units Construc./ Installed through FY 2017	Tot. No. of Units to be Construc./ Installed through FY 2026	Tot. No. of Units to be Construc./ Installed through FY 2035	Other Project Information
Arterial BRT Right-of-Way and Improvements	24.04	0.00	24.04	74.87	98.90	25	25	51	
Bus Stop Pullouts/Improvements	4.27	0.00	4.27	0.00	4.27	424	424	424	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	13.31	13.31	0	0	1	Rural facility was postponed beyond 2031 and 1 DAR facilities is started
Intelligent Transportation Systems (ITS) / Vehicle Management Systems (VMS)	18.57	14.43	33.00	0.00	33.00				Funding designated for system wide radio communications. Also see note below.
Park & Ride Lots	55.46	17.43	72.89	6.46	79.35	6	11	12	
Standard Bus Maintenance Facilities	106.52	0.00	106.52	94.49	201.01	2	2	3	Additional costs for expansion and rehabilitation in FY2027-2035)
Transit Centers (4 Bay)	3.49	0.00	3.49	13.36	16.85	0	2	7	
Transit Centers (6 Bay)	1.15	1.64	2.79	7.69	10.48	0	1	3	
Transit Centers (Major Activity Centers)	4.86	0.00	4.86	9.18	14.04	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	218.35	33.50	251.85	219.36	471.21				

TABLE C-5
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FLEET
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2017 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2017: (YOE Dollars)	Est. Future Costs: FY 2018 - 2026 (2017 Dollars)	Total Est. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2017 Dollars)	Total Est. Costs: FY 2006-2035 (2017 and YOE Dollars)	No. of Units Acquired through FY 2017	Tot. No. of Units to be Acquired through FY 2026	Tot. No. of Units to be Acquired through FY 2035	Other Project Information
Paratransit	18.78	23.40	42.18	31.88	74.06	299	603	872	
Fixed Route	380.20	421.76	801.96	349.70	1,151.66	818	1,503	1,999	
Rural Route	3.55	1.19	4.74	4.20	8.95	20	23	32	
Vanpool	27.37	31.02	58.39	36.30	94.70	807	1,541	2,231	
TOTAL	429.90	477.38	907.27	422.09	1,329.36				

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
(2017 and Year of Expenditure Dollars in Millions)

Facility	Expenditures: through FY 2017 of Expenditure Dollars) (Year				Est. Future Costs: FY 2018-2026 (2017 Dollars)	Tot. Costs: FY 2006- 2026 (2017 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2017 Dollars)	Tot. Costs: FY 2006- 2035 (2017 and YOE Dollars)	Target Opening Date	Project Length (Center- line Miles)	Other Project Information
	Design	R/W	Construc.	Total							
CPEV Regional Reimbursements	0.00	0.00	272.40	272.40	0.00	272.40	0.00	272.40	12 / 2008	20	Includes final disbursement request
Central Mesa Extension: Main St./Sycamore to Main St./Mesa Dr. *	4.25	0.00	0.00	4.25	0.00	4.25	0.00	4.25	8/2015	3.1	AA Costs
Northwest Extension 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 Streetcar: Main St./ Rural Rd. to Southern Ave.	6.72	0.00	0.00	6.72	0.00	6.72	0.00	6.72	6/2020	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.	0.95	0.00	0.00	0.95	0.00	0.95	0.00	0.95	3/2019	1.9	AA Costs - Project funded by City of Mesa
Capitol/I-10 West Phase I: Washington Ave./Central Ave. to Capitol	10.06	0.00	0.00	10.06	2.00	12.06	0.00	12.06	12/2023	2	AA Costs
Capitol/I-10 West Phase II: Capitol to 79th Ave.	0.00	0.00	0.00	0.00	2.23	2.23	0.00	2.23	12/2030	9	AA Costs
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	3.39	0.00	0.00	3.39	4.58	7.97	0.00	7.97	10/2026	5	AA Costs
Northwest Extension Phase 2: 19th Ave./Dunlop to Metrocenter	2.36	0.00	0.00	2.36	4.40	6.75	0.00	6.75	12/2023	1.8	AA & Draft EA
South Central: Washington/Jefferson to Baseline Rd.	8.18	0.00	0.00	8.18	0.00	8.18	0.00	8.18	10/2023	5	AA & EA/CE - Project funded by City of Phoenix

Facility	Expenditures: through FY 2017 of Expenditure Dollars) (Year				Est. Future Costs: FY 2018-2026 (2017 Dollars)	Tot. Costs: FY 2006- 2026 (2017 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2017 Dollars)	Tot. Costs: FY 2006- 2035 (2017 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	0.56	0.00	0.00	0.56	8.15	8.71	0.00	8.71	9/2034	12	AA & Draft EA
50th Street LRT Station	0.79	0.93	4.68	6.40	16.80	23.20	0.00	23.20	5/2019		New project adding a station on CPEV line
Systemwide Support Infrastructure	0.00	0.00	86.74	86.74	86.71	173.45	183.72	357.17	N/A		Includes LRV expansions, OMC expansion and major upgrades
System Planning and Capital Project Development	38.42	0.00	0.00	38.42	46.84	85.26	52.46	137.73	N/A		
Utility Reimbursements											Reclassified to be included in each corridor project
TOTAL	78.86	0.93	363.82	443.61	171.72	615.32	236.18	851.51			

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
(2017 and Year of Expenditure Dollars in Millions)

Map Code	Facility	Expenditures: through FY 2017 (Year of Expenditure Dollars)				Est. Future Costs: FY 2018-2026 (2017 Dollars)	Tot. Costs: FY 2006-2026 (2017 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2017 Dollars)	Tot. Costs: FY 2006-2035 (2017 and YOE Dollars)	Target Opening Date	Project Length (Center-line Miles)	Other Project Information
		Design	R/W	Construc.	Total							
T85	Central Mesa Extension: Main St./Sycamore to Main St./Mesa Dr. *	7.91	17.89	161.09	186.89	3.83	190.72	0.00	190.72	11/2015	3.1	
T82	Northwest Extension Phase 1: 19th Ave/Bethany Home to 19th Ave/Dunlop	18.72	75.15	235.73	329.59	0.00	329.59	0.00	329.59	07/2016	3.2	
T84	Tempe Streetcar: Main St./ Rural Rd. to Southern Ave.	9.01	0.00	0.00	9.01	158.61	167.62	0.00	167.62	08/2018	2.6	Permission to enter Project Development in 2013
T86	Gilbert Road: Main St./Mesa Dr. to Main St./Gilbert Rd.	49.10	0.01	0.10	49.21	127.73	176.94	0.00	176.94	10/2018	1.9	Project is funded by City of Mesa
T81	Capitol/I-10 West Phase I: Washington Ave./Central Ave. to Capitol	0.00	0.00	0.00	0.00	153.82	153.82	0.00	153.82	12/2023	2.0	
	Capitol/I-10 West Phase II: Capitol to 79th Ave.	0.00	0.00	0.00	0.00	128.88	128.88	738.74	867.62	12/2030	9.0	
T80	Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	0.00	0.00	0.00	0.00	655.32	655.32	0.00	655.32	10/2026	5.0	
T82B	Northwest Extension Phase 2: 19th Ave./Dunlop to Metrocenter	0.00	0.00	0.00	0.00	270.10	270.10	0.00	270.10	12/2023	1.6	
	South Central: Washington/Jefferson to Baseline Rd.	0.00	0.00	0.00	0.00	621.11	621.11	0.00	621.11	10/2023	5.0	Project is funded by City of Phoenix
T83	Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.00	0.00	0.00	0.00	9.52	9.52	1,013.48	1,023.00	9/2035	12.0	Project begins in FY 33
	TOTAL	84.74	93.05	396.91	574.70	2,128.92	2,703.62	1,752.22	4,455.84			

TABLE C-8
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2017

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2017 (Thousands)	Farebox Revenues: through FY 2017 (YOE Dollars)	Annual Average Boardings: through FY 2017 (Thousands)	Annual Average Farebox Revenues: through FY 2017 (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	1,789.3	1,961,195	255.6	280,200	
T6	Avondale Express	2020	19.0	77.6					
T7	Black Canyon Freeway Corridor	2031	16.6	67.7					
T8	Buckeye Express	2030	43.7	66.9					
T9	Chandler Boulevard Arterial BRT	2032	18.5	226.6					
T10	Deer Valley Express	2006	13.6	188.2	900.2	1,429,493	180.0	285,900	
T11	Desert Sky Express	2006	22.6	89.1	520.4	724,549	104.1	144,900	
T12	East Loop 101 Connector	2009	44.6	45.9	37.3	160,578	4.1	17,800	
T13	Grand Avenue Limited	2006	25.9	17.5	147.5	274,715	12.3	22,900	
T14	Loop 303 Express	2031	38.1	77.8					
T15	Main Street Arterial BRT	2009	13.0	295.2	2,434.6	2,185,432	304.3	273,200	
T16	North Glendale Express	2008	29.6	61.1	434.5	906,341	43.4	90,600	
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	532.5	877,496	59.2	97,500	
T20	Peoria Express	2031	24.1	73.6					
T21	Pima Express	2030	35.4	72.2					
T22	Red Mountain Express	2009	32.8	69.0	523.7	792,655	58.2	88,100	
T23	Red Mountain Fwy Connector	2032	19.2	78.5					

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2017 (Thousands)	Farebox Revenues: through FY 2017 (YOE Dollars)	Annual Average Boardings: through FY 2017 (Thousands)	Annual Average Farebox Revenues: through FY 2017 (YOE Dollars)	Other Project Information
T24	Santan Express	2032	44.9	228.9					
T25	Scottsdale/Rural Arterial BRT	2035	13.2	282.8					
T26	South Central Avenue	2013	9.4	29.2					
T27	South Central Avenue Arterial BRT	2031	11.4	120.9					
T28	SR 51 Express	2006	22.3	128.3	541.6	1,047,606	108.3	209,500	
T29	Superstition Fwy Connector	2028	17.5	26.8					
T30	Superstition Springs Express	2032	31.9	162.5					
T31	West Loop 101 Connector	2009	31.4	39.5	346.4	517,872	38.5	57,500	
	TOTAL				8,919.3	12,357,298	1,318.1	1,874,400	

TABLE C-9
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2017

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2017 (Thousands)	Farebox Revenues: through FY 2017 (YOE Dollars)	Annual Average Boardings: through FY 2017 (Thousands)	Annual Average Farebox Revenues: through FY 2017 (YOE Dollars)	Other Project Information
T40	59th Avenue	2006	16.2	161.0	3,990.1	3,314,554	332.5	276,200	
T41	83rd Avenue/75th Avenue	2030	21.4	542.4					
T42	99th Avenue	2032	16.5	401.3					
T43	Alma School Rd.	2006	19.1	75.0	997.5	718,420	83.1	59,900	
T44	Arizona Avenue/Country Club	2006	16.3	191.4	3,112.5	4,013,723	259.4	334,500	
T45	Baseline Road	2013	19.6	162.4	1,594.9	2,262,938	319.0	452,600	
T45	Dobson Road	2009	15.7	295.7	5,647.6	4,812,161	627.5	534,700	
T45	Southern Avenue	2006	28.1	568.8	11,760.6	9,795,670	980.0	816,300	
T46	Bell Road (via 303)	2022	38.1	1,138.5					
T47	Broadway	2011	27.8	93.3	1,170.9	987,232	167.3	141,000	
T48	Buckeye Road (Litchfield Road to Central Ave.)	2035	22.7	586.5					
T49	Camelback Road	2006	28.5	17.1	437.5	338,401	36.5	28,200	
T50	Chandler Blvd.	2008	32.7	471.5	3,524.4	4,193,645	352.4	419,400	
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	862.0	744,648	123.1	106,400	
T54	Gilbert Road	2010	20.9	232.6	1,897.8	1,786,669	237.2	223,300	
T55	Glendale Avenue	2006	32.7	240.3	10,276.7	5,072,311	856.4	422,700	
T56	Greenfield Road	2030	15.2	369.3					
T57	Hayden/McClintock	2006	29.7	235.9	3,584.9	3,169,279	298.7	264,100	
T58	Indian School Road	2032	30.4	879.1					
T59	Litchfield Road	2035	21.5	523.8					
T60	Main Street	2009	17.3	343.5	5,428.8	4,855,119	603.2	539,500	
T61	McDowell/McKellips	2013	41.8	114.7	1,992.6	1,044,760	398.5	209,000	
T62	Peoria Ave./Shea	2006	43.0	249.4	3,398.0	2,969,076	283.2	247,400	
T63	Power Road	2011	14.2	275.6	924.1	914,972	132.0	130,700	

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2017 (Thousands)	Farebox Revenues: through FY 2017 (YOE Dollars)	Annual Average Boardings: through FY 2017 (Thousands)	Annual Average Farebox Revenues: through FY 2017 (YOE Dollars)	Other Project Information
T64	Queen Creek Road (Pecos P&R to Power Road)	2035	12.0	293.4					
T65	Ray Road	2031	18.4	447.9					
T66	Scottsdale/Rural	2006	28.9	915.4	15,664.1	18,392,016	1,305.3	1,532,700	
T67	Tatum / 44th Street	2030	22.8	682.2					
T68	Thomas Road	2014	26.7	770.5	1,425.1	685,596	356.3	171,400	
T69	University Drive (to Ellsworth Road)	2020	27.8	802.2		250,400			
T70	Van Buren	2013	23.4	76.9	1,258.7	616,946	251.7	123,400	
T71	Waddell/Thunderbird	2015	27.9	692.4	371.9	212,945	124.0	71,000	
	TOTAL				79,320.6	71,151,481	8,127.3	7,104,400	

Appendix D

Performance Monitoring and Assessment

**TABLE D-1
TRAVEL TIME INDEX FOR SELECTED FREEWAY CORRIDORS (GENERAL PURPOSE LANES)**

Freeway	Direction	From	To	AM Peak Period TTI			PM Peak Period TTI		
				2014	2015	% change	2014	2015	% change
I-10	EB	AZ 85	Loop 303	1.053	1.032	-1.99%	1.013	1.011	-0.15%
	WB	Loop 303	AZ 85	1.034	1.013	-2.05%	1.033	1.028	-0.51%
I-10	EB	Loop 303	Loop 101 Agua Fria	1.094	1.049	-4.15%	1.029	1.014	-1.42%
	WB	Loop 101 Agua Fria	Loop 303	1.040	1.017	-2.23%	1.047	1.035	-1.17%
I-10	EB	Loop 101 Agua Fria	I-17	1.855	1.878	1.22%	1.041	1.045	0.43%
	WB	I-17	Loop 101 Agua Fria	1.043	1.029	-1.37%	1.385	1.448	4.55%
I-10	EB	I-17	SR 51	1.440	1.458	1.22%	1.315	1.359	3.38%
	WB	SR 51	I-17	1.084	1.079	-0.48%	2.359	2.808	19.01%
I-10	EB	SR 51	US 60	1.100	1.085	-1.38%	1.588	1.731	9.03%
	WB	US 60	SR 51	1.216	1.225	0.72%	1.217	1.275	4.80%
I-10	EB	US 60	Loop 202 Santan	1.051	1.041	-1.00%	1.232	1.222	-0.78%
	WB	Loop 202 Santan	US 60	1.594	1.651	3.57%	1.089	1.085	-0.41%
I-17	NB	I-10 Maricopa	I-10 Papago	1.077	1.065	-1.09%	1.424	1.513	6.25%
	SB	I-10 Papago	I-10 Maricopa	1.379	1.394	1.05%	1.106	1.116	0.91%
I-17	NB	I-10 Papago	Peoria Ave	1.087	1.081	-0.52%	1.429	1.436	0.48%
	SB	Peoria Ave	I-10 Papago	1.523	1.510	-0.86%	1.113	1.121	0.75%
I-17	NB	Peoria Ave	Loop 101 Agua Fria	1.087	1.074	-1.19%	1.151	1.136	-1.27%
	SB	Loop 101 Agua Fria	Peoria Ave	1.272	1.239	-2.62%	1.090	1.106	1.51%
I-17	NB	Loop 101 Agua Fria	Loop 303	1.037	1.030	-0.63%	1.035	1.028	-0.69%
	SB	Loop 303	Loop 101 Agua Fria	1.036	1.030	-0.58%	1.015	1.020	0.49%
US 60	EB	I-10	Loop 101 Price	1.053	1.050	-0.26%	1.205	1.231	2.15%
	WB	Loop 101 Price	I-10	1.456	1.542	5.93%	1.074	1.089	1.41%
US 60	EB	Loop 101 Price	Val Vista Dr	1.055	1.047	-0.79%	1.174	1.205	2.67%
	WB	Val Vista Dr	Loop 101 Price	1.320	1.315	-0.37%	1.055	1.050	-0.51%
US 60	EB	Val Vista Dr	Loop 202 Santan	1.048	1.045	-0.32%	1.044	1.037	-0.66%
	WB	Loop 202 Santan	Val Vista Dr	1.049	1.037	-1.13%	1.035	1.025	-0.99%
US 60	EB	Loop 202 Santan	Goldfield Rd	1.049	1.048	-0.10%	1.072	1.072	0.01%
	WB	Goldfield Rd	Loop 202 Santan	1.042	1.029	-1.29%	1.032	1.031	-0.06%
SR 51	NB	I-10	Glendale Ave	1.108	1.099	-0.81%	1.317	1.352	2.63%
	SB	Glendale Ave	I-10	1.406	1.437	2.23%	1.197	1.206	0.74%
SR 51	NB	Glendale Ave	Loop 101 Pima	1.075	1.059	-1.53%	1.099	1.092	-0.68%
	SB	Loop 101 Pima	Glendale Ave	1.185	1.164	-1.78%	1.052	1.051	-0.07%

TABLE D-1 (continued)
TRAVEL TIME INDEX FOR SELECTED FREEWAY CORRIDORS (GENERAL PURPOSE LANES)

Freeway	Direction	From	To	AM Peak Period TTI			PM Peak Period TTI		
				2014	2015	% change	2014	2015	% change
SR 143	NB	I-10	McDowell Rd	1.070	1.086	1.48%	1.059	1.079	1.93%
	SB	McDowell Rd	I-10	1.062	1.090	2.67%	1.213	1.277	5.26%
Loop 101 Agua Fria	NB	I-10	Union Hills Dr	1.067	1.048	-1.74%	1.056	1.042	-1.33%
	SB	Union Hills Dr	I-10	1.055	1.033	-2.05%	1.067	1.066	-0.10%
Loop 101 Agua Fria	NB/EB	Union Hills Dr	I-17	1.224	1.242	1.49%	1.028	1.031	0.25%
	WB/SB	I-17	Union Hills Dr	1.047	1.036	-1.06%	1.152	1.188	3.14%
Loop 101 Price	NB	Loop 202 Santan	US 60	1.343	1.367	1.81%	1.093	1.098	0.49%
	SB	US 60	Loop 202 Santan	1.087	1.078	-0.81%	1.235	1.254	1.53%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	1.310	1.308	-0.14%	1.082	1.069	-1.24%
	SB	Loop 202 Red Mountain	US 60	1.073	1.054	-1.79%	1.668	1.782	6.86%
Loop 101 Pima	NB	Loop 202 Red Mountain	Pima Rd / 90th St	1.374	1.355	-1.42%	1.140	1.148	0.66%
	SB	Pima Rd / 90th St	Loop 202 Red Mountain	1.097	1.079	-1.65%	1.440	1.445	0.32%
Loop 101 Pima	NB	Pima Rd / 90th St	Pima Rd / Princess Dr	1.072	1.045	-2.53%	1.099	1.074	-2.29%
	SB	Pima Rd / Princess Dr	Pima Rd / 90th St	1.099	1.080	-1.76%	1.118	1.096	-1.94%
Loop 101 Pima	NB/WB	Pima Rd / 90th St	SR 51	1.046	1.029	-1.61%	1.265	1.335	5.56%
	EB/SB	SR 51	Pima Rd / 90th St	1.249	1.248	-0.07%	1.044	1.034	-0.95%
Loop 101 Pima	WB	SR 51	I-17	1.066	1.045	-1.94%	1.480	1.534	3.64%
	EB	I-17	SR 51	1.537	1.586	3.22%	1.063	1.075	1.12%
Loop 202 Red Mountain	EB	I-10	Washington St	1.073	1.063	-0.94%	1.084	1.087	0.25%
	WB	Washington St	I-10	1.282	1.288	0.47%	1.289	1.289	0.03%
Loop 202 Red Mountain	EB	Washington St	Loop 101 Price	1.046	1.039	-0.66%	1.205	1.218	1.08%
	WB	Loop 101 Price	Washington St	1.312	1.315	0.21%	1.043	1.043	0.00%
Loop 202 Red Mountain	EB	Loop 101 Price	McDowell Rd	1.073	1.056	-1.63%	1.093	1.122	2.68%
	WB	McDowell Rd	Loop 101 Price	1.132	1.089	-3.84%	1.047	1.045	-0.21%
Loop 202 Red Mountain	EB/SB	McDowell Rd	US 60	1.079	1.061	-1.63%	0.996	1.008	1.18%
	NB/WB	US 60	McDowell Rd	1.035	1.032	-0.29%	1.027	1.032	0.47%
Loop 202 Santan	EB	I-10	Loop 101 Price	1.053	1.052	-0.10%	1.030	1.037	0.63%
	WB	Loop 101 Price	I-10	1.060	1.060	0.00%	1.044	1.048	0.40%
Loop 202 Santan	EB	Loop 101 Price	Lindsay Rd	1.065	1.056	-0.84%	1.204	1.252	3.95%
	WB	Lindsay Rd	Loop 101 Price	1.212	1.220	0.67%	1.047	1.051	0.34%
Loop 202 Santan	EB/NB	Lindsay Rd	US 60	1.053	1.043	-0.96%	1.037	1.042	0.44%
	SB/WB	US 60	Lindsay Rd	1.052	1.049	-0.32%	1.021	1.028	0.66%

**TABLE D-2
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			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
I-10 Papago	EB	83rd Ave	I-17	46.9	47.8	40.3	-15.7%	52.2	52.3	46.4	-11.3%
	WB	I-17	83rd Ave	67.2	66.1	65.6	-0.8%	68.2	68.0	67.3	-1.0%
I-10 Papago	EB	I-17	SR 51/Loop 202	52.1	55.2	45.7	-17.2%	62.3	63.8	62.4	-2.3%
	WB	SR 51/Loop 202	I-17	63.1	63.8	63.7	-0.2%	70.7	71.3	70.6	-0.9%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	62.0	62.4	60.9	-2.4%	68.3	68.3	67.8	-0.8%
	WB	US 60	SR 51/Loop 202	57.9	58.4	56.5	-3.3%	63.8	64.7	62.7	-3.0%
I-10 Maricopa	EB	US 60	Chandler Blvd	65.1	65.7	65.0	-1.1%	71.9	72.9	72.6	-0.4%
	WB	Chandler Blvd	US 60	43.8	47.9	39.7	-17.2%	60.1	63.3	57.6	-8.9%
I-17	NB	Maricopa TI	I-10	61.4	62.5	61.8	-1.0%	n/a	n/a	n/a	n/a
	SB	I-10	Maricopa TI	49.5	49.7	44.5	-10.4%	n/a	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	58.7	58.4	58.0	-0.8%	59.7	59.4	59.2	-0.3%
	SB	Peoria Ave	I-10	50.9	50.2	46.1	-8.2%	53.4	54.8	51.0	-7.0%
I-17	NB	Peoria Ave	Loop 101	not available	63.7	63.0	-1.0%	not available	74.1	72.9	-1.6%
	SB	Loop 101	Peoria Ave	not available	56.6	54.8	-3.0%	not available	68.7	67.5	-1.7%
SR 51	NB	I-10/Loop 202	Glendale Ave	62.7	62.3	61.3	-1.6%	63.1	63.6	62.9	-1.1%
	SB	Glendale Ave	I-10/Loop 202	55.1	55.3	not available	not available	54.9	61.2	not available	not available
SR 51	NB	Glendale Ave	Loop 101	66.7	67.1	67.5	0.5%	71.9	73.7	74.1	0.5%
	SB	Loop 101	Glendale Ave	61.4	63.8	62.1	-2.7%	66.9	70.3	69.1	-1.7%
Loop 202 Red Mountain	EB	I-10/SR 51	Loop 101	66.9	66.7	66.2	-0.7%	71.2	72.9	71.8	-1.5%
	WB	Loop 101	I-10/SR 51	57.1	58.4	53.9	-7.7%	64.4	65.7	62.9	-4.3%
Loop 202 Red Mountain	EB	Loop 101	Gilbert Rd	not available	67.4	not available	not available	not available	not available	not available	not available
	WB	Gilbert Rd	Loop 101	not available	66.3	not available	not available	not available	not available	not available	not available
US 60	EB	I-10	Loop 101	63.4	64.7	64.5	-0.3%	66.9	69.3	69.3	0.0%
	WB	Loop 101	I-10	51.4	52.1	44.0	-15.5%	not available	not available	not available	not available
US 60	EB	Loop 101	Val Vista Dr	64.9	65.2	64.4	-1.2%	67.6	67.8	68.8	1.5%
	WB	Val Vista Dr	Loop 101	60.7	60.2	58.2	-3.4%	69.6	69.4	69.3	-0.2%
US 60	EB	Val Vista Dr	Loop 202	67.4	67.5	67.6	0.2%	70.0	70.8	72.9	3.0%
	WB	Loop 202	Val Vista Dr	69.7	69.6	69.2	-0.5%	71.6	73.9	73.4	-0.8%
SR 143	NB	I-10	Loop 202/McDowell Rd	not available	55.5	56.1	1.2%	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	not available	61.6	61.2	-0.6%	n/a	n/a	n/a	n/a
Loop 101 Price	NB	Loop 202 Santan	US 60	54.3	57.7	51.8	-10.2%	66.6	68.6	65.6	-4.4%
	SB	US 60	Loop 202 Santan	67.3	67.7	66.2	-2.1%	74.9	75.6	74.8	-1.1%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	57.1	60.2	55.2	-8.4%	70.4	73.0	71.5	-2.1%
	SB	Loop 202 Red Mountain	US 60	68.0	62.1	68.0	9.5%	75.5	75.9	76.0	0.2%
Loop 101 Pima	NB	Loop 202 Red Mountain	90th St	52.8	not available	not available	not available	64.6	not available	not available	not available
	SB	90th St	Loop 202 Red Mountain	65.4	not available	not available	not available	72.2	not available	not available	not available
Loop 101 Pima	NB	90th St	Pima Rd	66.4	not available	not available	not available	70.7	not available	not available	not available
	SB	Pima Rd	90th St	66.9	not available	not available	not available	73.0	not available	not available	not available

Freeway Corridor	Dir	From	To	Average AM Peak Period Speed (mph)							
				General-purpose Lanes				HOV Lanes			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
Loop 101 Pima	EB	SR 51	Pima Rd	59.9	61.4	58.3	-5.0%	63.4	70.8	69.0	-2.6%
	WB	Pima Rd	SR 51	70.2	70.8	70.9	0.1%	74.5	75.4	75.5	0.1%
Loop 101 Pima	EB	I-17	SR 51	49.9	52.2	46.1	-11.7%	not available	not available	not available	not available
	WB	SR 51	I-17	69.4	69.6	69.3	-0.4%	not available	not available	not available	not available
Loop 101 Agua Fria	EB	Union Hills Dr	I-17	not available	not available	58.0	not available	not available	not available	69.0	not available
	WB	I-17	Union Hills Dr	not available	not available	70.7	not available	not available	not available	76.8	not available
Loop 101 Agua Fria	NB	Northern Ave	Union Hills Dr	not available	not available	64.2	not available	not available	not available	not available	not available
	SB	Union Hills Dr	Northern Ave	not available	not available	66.2	not available	not available	not available	not available	not available
Loop 101 Agua Fria	NB	I-10	Northern Ave	not available	not available	66.3	not available	not available	not available	75.7	not available
	SB	Northern Ave	I-10	not available	not available	65.9	not available	not available	not available	not available	not available

Source: ADOT FMS

n/a = not applicable

**TABLE D-3
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			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
I-10 Papago	EB	83rd Ave	I-17	66.4	66.5	65.7	-1.2%	67.6	67.7	67.7	0.1%
	WB	I-17	83rd Ave	57.3	57.7	52.6	-8.8%	61.0	61.2	56.8	-7.2%
I-10 Papago	EB	I-17	SR 51/Loop 202	56.0	54.0	49.6	-8.1%	63.3	62.2	60.0	-3.4%
	WB	SR 51/Loop 202	I-17	36.9	40.1	30.3	-24.5%	43.8	46.6	36.0	-22.8%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	46.7	48.3	40.7	-15.6%	54.3	54.6	47.4	-13.3%
	WB	US 60	SR 51/Loop 202	58.0	57.6	54.6	-5.2%	64.3	63.8	62.1	-2.6%
I-10 Maricopa	EB	US 60	Chandler Blvd	55.2	57.9	54.9	-5.0%	65.9	67.3	65.0	-3.4%
	WB	Chandler Blvd	US 60	61.4	61.9	60.4	-2.3%	68.0	70.1	69.9	-0.4%
I-17	NB	Maricopa TI	I-10	48.3	47.9	40.8	-14.9%	n/a	n/a	n/a	n/a
	SB	I-10	Maricopa TI	60.6	59.7	57.7	-3.4%	n/a	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	45.3	47.4	44.6	-6.0%	50.4	51.3	49.5	-3.4%
	SB	Peoria Ave	I-10	60.5	59.5	58.4	-1.9%	59.7	61.0	59.8	-1.9%
I-17	NB	Peoria Ave	Loop 101	not available	59.9	59.1	-1.4%	not available	70.1	68.7	-2.1%
	SB	Loop 101	Peoria Ave	not available	62.7	60.9	-2.8%	not available	73.1	71.7	-1.9%
SR 51	NB	I-10/Loop 202	Glendale Ave	53.9	55.2	50.3	-8.8%	59.6	60.3	57.7	-4.3%
	SB	Glendale Ave	I-10/Loop 202	61.2	59.1	not available	not available	57.8	63.2	not available	not available
SR 51	NB	Glendale Ave	Loop 101	64.3	65.3	63.4	-2.8%	70.0	71.9	70.3	-2.2%
	SB	Loop 101	Glendale Ave	67.6	68.4	68.0	-0.6%	70.3	73.4	73.1	-0.4%
Loop 202 Red Mountain	EB	I-10/SR 51	Loop 101	62.1	61.3	58.1	-5.3%	69.1	70.1	66.3	-5.4%
	WB	Loop 101	I-10/SR 51	60.2	60.7	59.1	-2.7%	67.4	68.0	69.2	1.7%
Loop 202 Red Mountain	EB	Loop 101	Gilbert Rd	not available	65.4	not available	not available	not available	not available	not available	not available
	WB	Gilbert Rd	Loop 101	not available	68.8	not available	not available	not available	not available	not available	not available
US 60	EB	I-10	Loop 101	59.3	60.8	57.3	-5.7%	65.6	67.7	65.7	-3.0%
	WB	Loop 101	I-10	65.1	65.0	64.0	-1.6%	not available	not available	not available	not available
US 60	EB	Loop 101	Val Vista Dr	62.5	63.4	59.1	-6.8%	68.9	68.7	67.6	-1.5%
	WB	Val Vista Dr	Loop 101	66.2	66.8	66.5	-0.5%	68.2	70.2	70.8	0.8%
US 60	EB	Val Vista Dr	Loop 202	67.8	68.1	67.7	-0.6%	70.6	70.8	72.2	2.0%
	WB	Loop 202	Val Vista Dr	69.5	69.9	69.5	-0.5%	70.5	72.5	73.3	1.1%
SR 143	NB	I-10	Loop 202/McDowell Rd	not available	55.0	55.3	0.6%	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	not available	56.2	55.7	-0.9%	n/a	n/a	n/a	n/a
Loop 101 Price	NB	Loop 202 Santan	US 60	65.5	66.4	65.2	-1.8%	72.3	73.0	72.5	-0.8%
	SB	US 60	Loop 202 Santan	58.2	58.9	56.2	-4.5%	68.0	69.7	66.5	-4.7%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	67.4	67.0	66.5	-0.8%	75.6	76.5	77.3	1.1%
	SB	Loop 202 Red Mountain	US 60	42.7	41.8	37.0	-11.7%	60.5	63.2	56.5	-10.5%
Loop 101 Pima	NB	Loop 202 Red Mountain	90th St	60.4	not available	not available	not available	68.6	not available	not available	not available
	SB	90th St	Loop 202 Red Mountain	50.7	not available	not available	not available	62.7	not available	not available	not available
Loop 101 Pima	NB	90th St	Pima Rd	63.7	not available	not available	not available	69.5	not available	not available	not available
	SB	Pima Rd	90th St	66.0	not available	not available	not available	72.6	not available	not available	not available

Freeway Corridor	Dir	From	To	Average PM Peak Period Speed (mph)							
				General-purpose Lanes				HOV Lanes			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
Loop 101 Pima	EB	SR 51	Pima Rd	69.0	69.9	69.9	0.1%	68.2	76.0	76.2	0.3%
	WB	Pima Rd	SR 51	58.8	59.0	52.3	-11.3%	67.9	68.0	62.5	-8.1%
Loop 101 Pima	EB	I-17	SR 51	66.6	66.5	65.0	-2.3%	not available	not available	not available	not available
	WB	SR 51	I-17	54.0	53.5	47.6	-11.0%	not available	not available	not available	not available
Loop 101 Agua Fria	EB	Union Hills Dr	I-17	not available	not available	68.2	not available	not available	not available	75.7	not available
	WB	I-17	Union Hills Dr	not available	not available	60.4	not available	not available	not available	68.9	not available
Loop 101 Agua Fria	NB	Northern Ave	Union Hills Dr	not available	not available	64.9	not available	not available	not available	not available	not available
	SB	Union Hills Dr	Northern Ave	not available	not available	63.5	not available	not available	not available	not available	not available
Loop 101 Agua Fria	NB	I-10	Northern Ave	not available	not available	66.0	not available	not available	not available	74.1	not available
	SB	Northern Ave	I-10	not available	not available	60.5	not available	not available	not available	not available	not available

Source: ADOT FMS

n/a = not applicable

Appendix E

2017 Annual Report Data Sources

TABLE E-1
2017 ANNUAL REPORT DATA SOURCES

From ADOT:

- 2017 RTPFP Project Expenditures Report for MAG final.xlsx
E-mail: 2017 RTPFP Project Expenditure Report, 8/29/2017, 4:30 PM
- July 2017 MAG Certification Cash Flow Ext.xlsx
E-mail: July 2017 MAG Certification Cash Flow, 8/29/2017, 3:02 PM
- Maricopa County Transportation Excise Tax – Forecasting Process and Results FY 2017-2026, September 2016.

From MAG:

- FY 2018 ALCP – September 27, 2017
- Database: RARF Revenues
Source: V-Drive/Revenues/RARF/Ongoing RARF Revenues 2018 (as of Oct. 2017)
- 2017 Ann Report – Chap 09 updated 10-6-17.doc
Email: Monique de los Rios Urban 2017 Rept Deliverable 1, 10/6/17 3:20 PM
- 2017 Table D-2.xlsx, 2017 Table D-3.xlsx
Email: Monique de los Rios Urban 2017 Rept Deliverable 2 & 3, 10/6/17 3:23 PM
- 2017 Chapter 9 Tables.xlsx
Email: Monique de los Rios Urban 2017 Rept Deliverable 4, 10/6/17 3:27 PM

From RPTA:

- 2017 Ann. Rept. – Chap. 8 Tables (submitted 8-24-17).xlsx
E-mail: Annual Report Tables, 8/24/2017, 3:44 PM
- 2017 Ann. Rept. – Transit Apdx Tables (submitted 8-24-17).xlsx
E-mail: Re: Annual Report Tables, 8/24/2017, 3:44 PM
- 2017 Ann. Rept. – Chap. 8 Tables (submitted 10-6-17).xlsx, 2017 Ann Rept. – Chap. 8 Table 5-3 (submitted 10-6-17).xlsx
E-mail: 2017 Annual Report on Prop. 400, 10/6/17, 7:34 AM