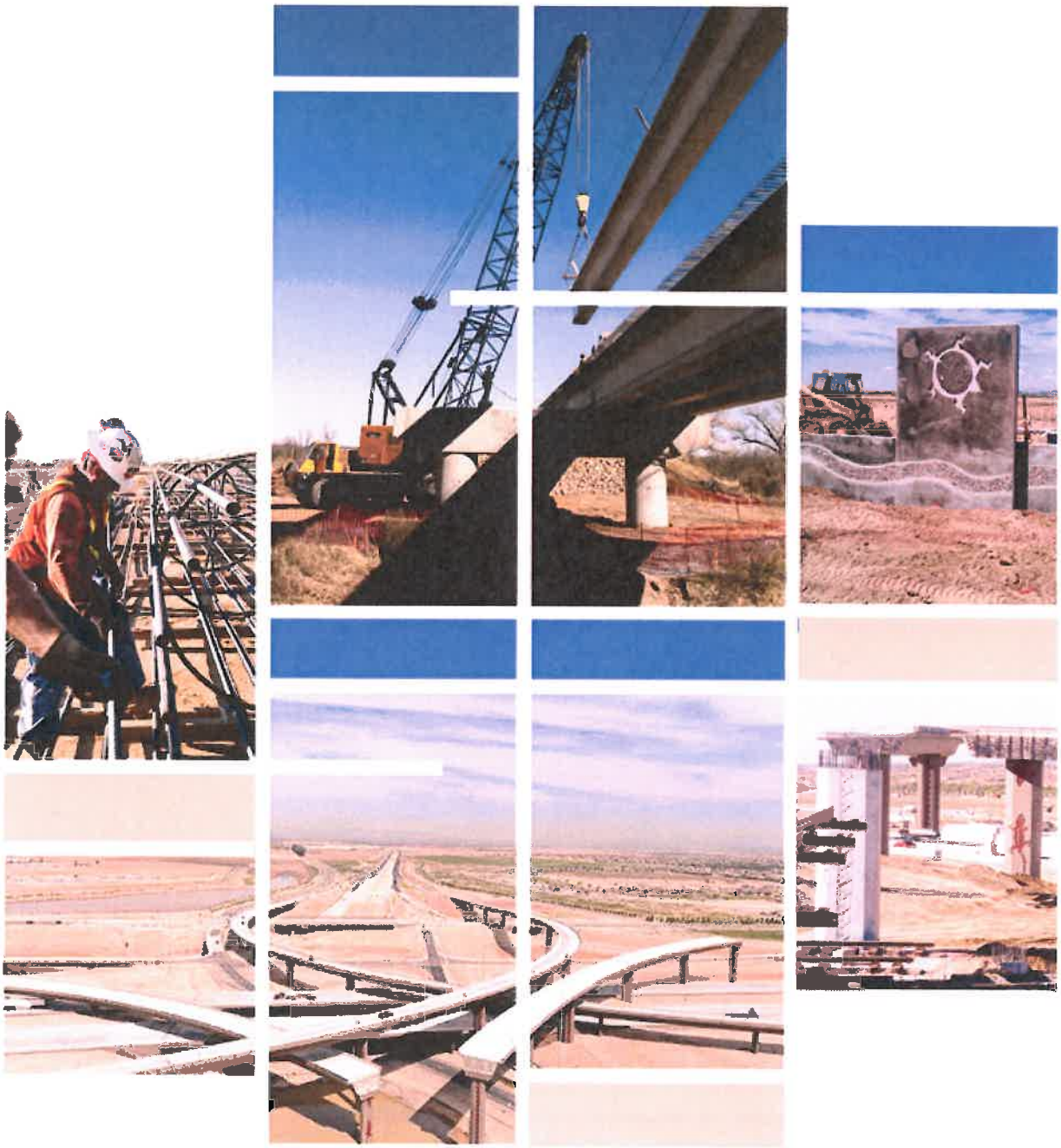
LIFE CYCLE CERTIFICATION

REGIONAL TRANSPORTATION PLAN FREEWAY PROGRAM



January | 2015

Arizona Department of Transportation

Certification of Revenue and Costs

Regional Transportation Plan
Freeway Program
January 2015

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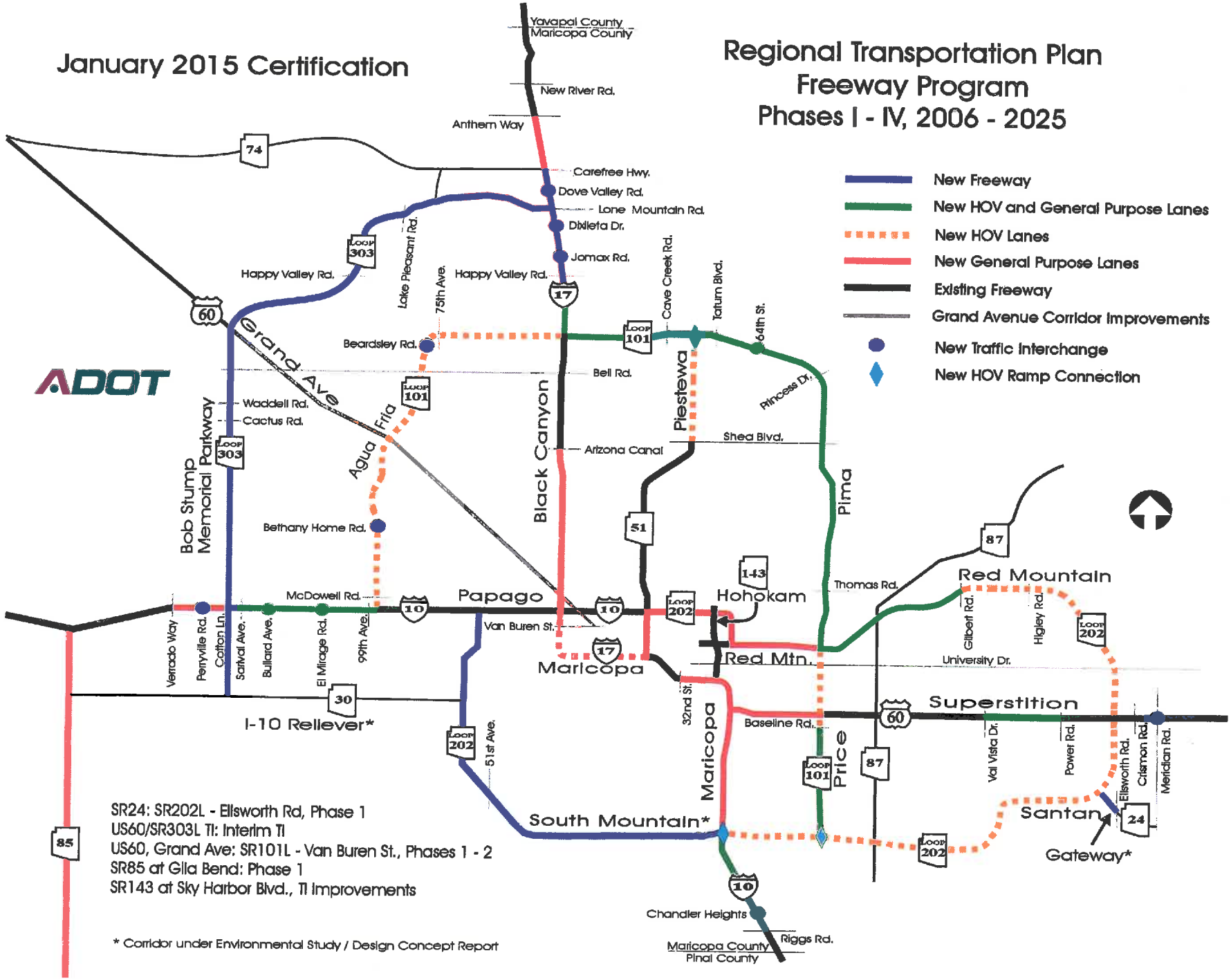
January 2015 Certification

Regional Transportation Plan Freeway Program Phases I - IV, 2006 - 2025

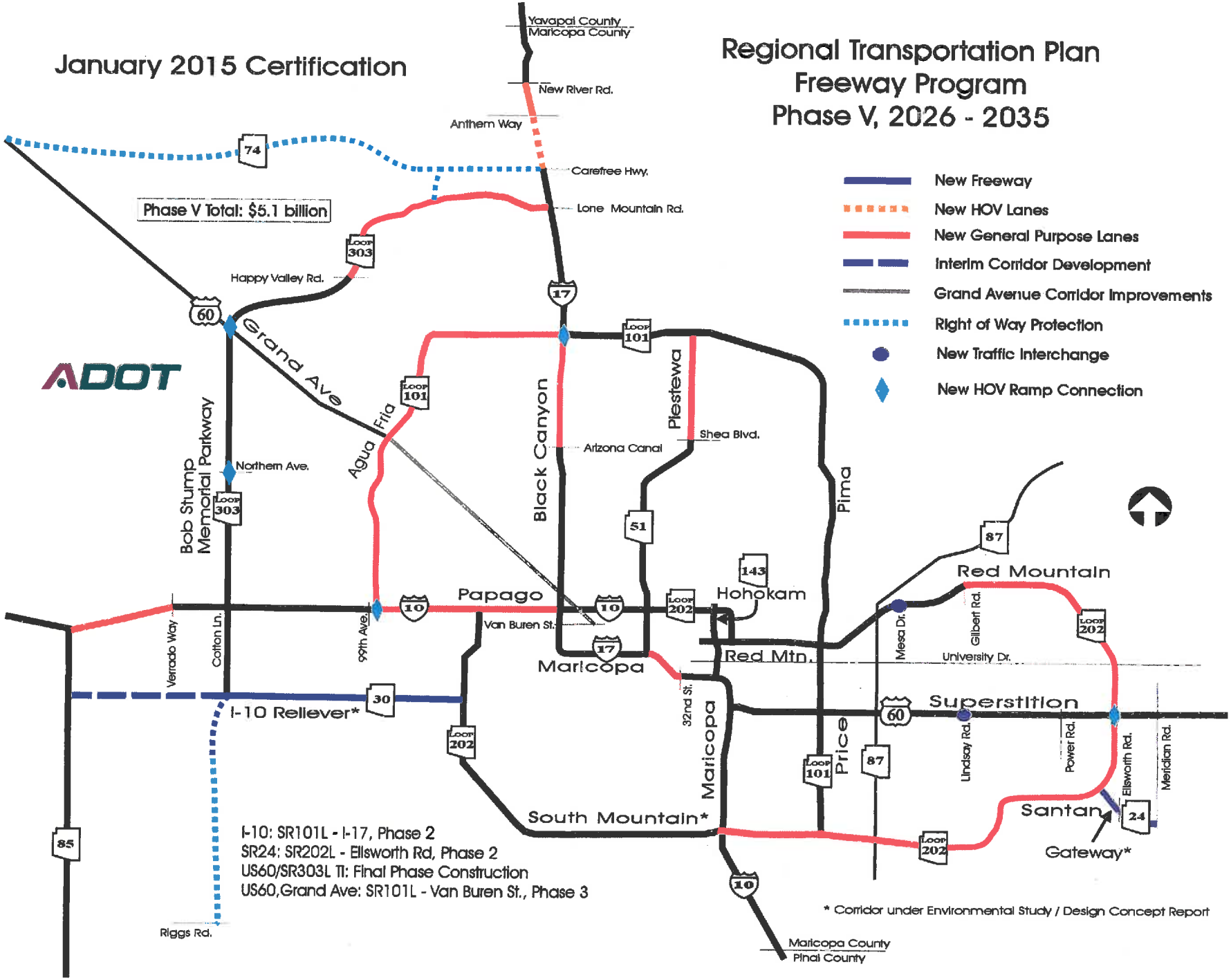


SR24: SR202L - Ellsworth Rd, Phase 1
US60/SR303L TI: Interim TI
US60, Grand Ave: SR101L - Van Buren St., Phases 1 - 2
SR85 at Gila Bend: Phase 1
SR143 at Sky Harbor Blvd., TI Improvements

* Corridor under Environmental Study / Design Concept Report

January 2015 Certification

Regional Transportation Plan Freeway Program Phase V, 2026 - 2035



Introduction

INTRODUCTION

This report presents the Arizona Department of Transportation January 2015 Certification of the Maricopa Association of Governments Regional Transportation Plan Freeway / Highway Life Cycle Program, also known as the RTPFP Life Cycle Program. It reports costs, revenue and progress through December 31, 2014, along with an estimate of future costs and revenue for the remainder of the Program. This certification and review process helps ensure that projected revenues and costs stay in balance as required by Arizona Revised Statutes (A.R.S.) § 28-6352.A.

A Life Cycle Program is a programming approach that forecasts and allocates funds through the full life of a major funding source, in this instance the Maricopa County half-cent sales tax. The tax was approved under Proposition 400 by voters in Maricopa County on November 2, 2004. The tax and the RTPFP Life Cycle Program run from January 2006 through December 2025. This Certification provides an important tool to help ensure that the Arizona Department of Transportation (ADOT) and the Maricopa Association of Governments (MAG) maintain realistic planning and construction schedules based upon anticipated funding and costs, and provides a periodic report to the public and other governmental agencies on the status of the RTPFP.

ADOT utilizes outside experts to assist with economic forecasting and will continue to monitor cost and revenue trends. These experts cannot say with certainty what the future will bring; therefore, ADOT reviews and certifies costs and revenues every six months. This certification process enhances the flow of information to MAG, the public, and other interested parties on a regular basis, and allows ADOT and MAG to cooperatively make program adjustments as needed.

The Proposition 400 half-cent sales tax helps fund three major programs: the RTPFP, Arterial Streets, and Transit. The proceeds of the tax are divided between the Regional Area Road Fund (RARF) which funds the RTPFP and Arterial Streets Life Cycle Programs, and the Public Transportation Fund (PTF) which funds the Transit Life Cycle Program. References in this report to RARF should generally be considered applicable only to the RTPFP unless otherwise indicated. In accordance with A.R.S. § 42-6105.E, 56.2 percent of the half-cent sales tax collection is allocated to the RTPFP, which includes new freeway corridors to serve growth in the region and improvements to the existing freeway/highway system to reduce congestion and improve safety. It also addresses operational and quality of life issues such as noise mitigation, maintenance, litter control and landscaping. The half-cent sales tax, federal highway funds, and ADOT funds are the three major funding sources for the RTPFP.

Program Summary

PROGRAM SUMMARY

Program Changes

Arizona Revised Statues (ARS) 28-6352 (A) requires a budget process that ensures the estimated cost of the freeways and highways in the Regional Transportation Plan (RTP) does not exceed the total amount of revenues estimated to be available.

ADOT and MAG have worked cooperatively throughout this period of economic uncertainty to evaluate the short and long term impacts on the cost, scheduling and delivery of projects and corridors within the RTPFP.

The following programming changes have been incorporated into the FY 2016 – FY 2020 RTP Freeway Program:

- Adjusted project schedules to align with current status of work in progress.
- Updated design, right of way and construction costs based on latest estimates and cost data.
- Revised the SR202L (South Mountain) corridor based on current implementation plan.
- Advanced design and R/W of I-10/I-17 Near-Term Improvement Strategy projects.
- Added landscape project at I-10/SR303L TI.
- Added two system wide items:
  - DPS Officers to Co-Locate in the ADOT Traffic Operations Center
  - Risk Analysis Process
- Reduced system wide item costs:
  - Preliminary Engineering (Management Consultants)
  - R/W Advance Acquisition
  - R/W Plans and Titles

ADOT and MAG have cooperatively developed a Tentative RTPFP Five Year Construction Program incorporating the latest revenue and cost projections.

ADOT and MAG, with the help of outside economic expertise, will continue to monitor this situation closely to assess impacts to the RTPFP and make future program adjustments as needed.

Note that the current RTPFP Life Cycle Program covers the period from January 2006 through December 2025. However, the current MAG RTP Freeway Program covers the period through FY 2035. Projects that have been deferred out of the Life Cycle Program to those future years will be brought back if and when the revenue situation allows. It is also possible that voters could approve a future extension of the half-cent sales tax. Even without a tax extension, the MAG area will still have ADOT funds and federal highway funds in future years, enabling the Program to continue, although in a somewhat reduced scale.

Estimated Revenues and Program Costs

The Freeway Life Cycle Program runs from 2006 thru 2025 and is divided into "Phases I thru IV" of five years each. Deferral of some projects to future years due to revenue shortfall has resulted in a new "Phase V" in years 2026 - 2035 with an estimated cost of $5.1 billion. Phase V is not part of the current Prop 400 Life Cycle Program.

Total revenue available for the 20 Year Life Cycle Program is estimated to be $9.24 billion. Details are shown in the "Revenue Projections" section. Obligations for the RTP Freeway Program to date total $4.51 billion. The remaining cost to complete the RTP Freeway Program through year 2025 is estimated to be $4.27 billion. Total cost for the 20 Year Life Cycle Program is presently estimated to be $8.78 billion. Details are shown in the "Construction Costs" section.

Overall program totals and forecasts do show positive ending balances for the FY 2016 to FY 2024. However, the cash flow analysis shows a deficit approaching $111 million by the end of 2025. MAG and ADOT will continuously work together to monitor and update estimated costs and revenue to keep costs and revenue in balance.

Project Milestones

Projects Completed / Opened to Traffic since last Certification

ROUTE	SEGMENT	PROJECT TYPE	OPEN TO TRAFFIC	COMMENT
US60, Grand Ave	71st Ave. – McDowell Rd.	Roadway Improvements	July-14	
SR303L	Peoria Ave. – Waddell Rd.	Landscape	July-14	
SR303L	Waddell Rd.- Mountain View Rd.	Landscape	August-14	
SR303L	I-10/SR303L TI, Phase 1	System TI	Sept-14	Public Opening Celebration on August 16, 2014.
I-10, Papago	Perryville Rd.	TI	Oct-14	

GPL = General Purpose Lane; HOV = High Occupancy Vehicle Lane; FMS = Freeway Mgmt System; TI = Traffic Interchange

Projects Advertised / Awarded since last Certification					
ROUTE	SEGMENT	PROJECT TYPE	ADVERTISE	AWARD	COMMENT
SR202L Red Mountain	SR101L – Broadway Rd.	GPL/HOV	Sept-13	Sept-14	Design Build, Pulice-Granite
I-17	SR101L (Agua Fria) – Anthem Way	FMS	Apr-14	July-14	Gannett Fleming
I-10	67th Ave.	Noise Walls	June-14	Sept-14	Includes SR101L/SR51, FNF
SR303L	El Mirage Rd.	TI	June-14	Nov-14	Haydon Building Corp.
SR202L Santan	Dobson Rd. – I-10	FMS	June-14	Sept-14	Includes I-10, Ray Rd. – Wild Horse Pass, C S Construction
US60 Superstition	Meridian Rd	Half TI	July-14	Sept-14	Haydon Building Corp.
SR303L	US60/SR303L TI, Interim	TI	Oct-13	Nov-14	CMAR, Haydon Building Corp.
SR303L	Glendale Ave. – Peoria Ave.	Landscape	Aug-14	Oct-14	Valley Crest Landscape
SR303L	Camelback Rd. – Glendale Ave.	Landscape	Aug-14	Nov-14	M. Anderson Construction
SR303L	Thomas Rd. – Camelback Rd.	Landscape	Sept-14	Dec-14	Valley Crest Landscape
GPL = General Purpose Lane; HOV = High Occupancy Vehicle; TI = Traffic Interchange; FMS = Freeway Management System, CMAR = Construction Manager At Risk					

Design Concept Reports and Environmental Studies						
ROUTE	SEGMENT	PROJECT TYPE	STUDY TYPE	STUDY STATUS	ENVR. TYPE	ENVR. STATUS
I-10 Papago	SR101L Agua Fria - I-17 Black Canyon	GPL	DCR	Underway on-hold	EA	On-hold
I-10 Maricopa	SR143 – SR202L	Freeway Widening	DCR	Underway	CE	Underway
I-10 Maricopa	SR202L Santan - I-8	Freeway Widening	DCR	Underway on-hold	EA	On-hold
I-17 Black Canyon	Pinnacle Peak Rd.	Reconstruct TI	PA	Underway	CE	Underway
I-17 Black Canyon	Happy Valley Rd.	Reconstruct TI	PA	Underway	CE	Underway
I-17 Black Canyon	I-10/I-17 Split – 19th Ave.	Auxiliary Lanes	PA	Underway	CE	Underway
SR30 (SR801) I-10 Reliever	SR85 – SR303L	New Freeway	DCR	Underway on-hold	EA	On-hold
SR30 (SR801) I-10 Reliever	SR303L – SR202L South Mountain	New Freeway	DCR	Underway	EA	Underway
US60 Grand Avenue	Bell Rd.	TI Improvements	DCR	Underway	EA	Underway
US60 Superstition	Crismon Rd. – Ironwood	Freeway Widening	DCR	Underway	CE	Underway
SR101L Pima	I-17 - Princess Dr.	GPL	DCR	Underway	CE	Underway
SR101L Price	Baseline Rd. – SR202L Santan	GPL	DCR	Underway	CE	Underway
SR202L South Mountain	I-10 Maricopa - I-10 Papago	New Freeway	DCR	Underway	EIS	Underway
SR303L	Hassayampa Fwy – SR30	New Freeway	AFR	Underway	EO	Underway
SR303L	SR30 - I-10 Papago	New Freeway	DCR	Underway	EA	Underway

DCR = Design Concept Report; EA = Environmental Assessment; CE = Categorical Exclusion
EIS = Environmental Impact Statement; EO = Environmental Overview; PA = Project Assessment;
NA = Not Applicable; HOV = High Occupancy Vehicle; GPL = General Purpose Lane; TI = traffic Interchange; ASR = Alternative Selection Report; AFR = Alternative Feasibility Report

Revenue Projections

ADOT
Financial Management Services

Douglas A. Ducey, Governor
John S. Halikowski, Director
Kristine Ward, Assistant Director

LETTER OF CERTIFICATION

The Financial Management Services Office of the Arizona Department of Transportation (ADOT) has developed the following information describing the estimated funds available for construction of the Regional Transportation Plan Freeway Program (RTPFP) from Fiscal Year 2006 through Fiscal Year 2026. The time period covered in this certification is as of November 30, 2014.

The results contained herein primarily represent the September 2014 official forecast of Maricopa County transportation excise tax revenues plus the MAG share of ADOT HURF funds and other available monies for the period described above and are so certified.

This information is intended primarily for internal planning purposes and requires reliance upon a variety of data and information sources. The revenue forecasts rely upon assumptions regarding future economic conditions and on forecasts of certain independent economic variables. These assumptions may or may not prove to be accurate. If the assumptions do not prove accurate, differences between forecast and actual results may occur.

Kristine Ward
Assistant Director for Finance and Accounting

4/2/15
Date

FINANCIAL ASSUMPTIONS

Following are the assumptions made in estimating revenues available for the Regional Transportation Plan Freeway Program.

Bond Proceeds and Debt Service: The issuance of bonds secured by RARF, HURF and federal aid revenues are assumed. Interest on the bond issues is assumed to be 5.0% maximum. Bond maturities are assumed at between 3 and 26 years. RARF debt service will be fully paid by the completion of the Proposition 400 RARF half cent sales tax on December 31, 2025. HURF debt service extends beyond FY 2026 and is paid with MAG 15.2% monies.

Regional Area Road Fund (RARF) Transportation Excise Tax: The September 2014 official revenue forecast for the Proposition 400 RARF half cent sales tax was developed from the August 2014 Risk Analysis Process panel session and reflects the economic conditions at that time. It may or may not prove accurate over the longer term and actual revenues will differ from forecast revenues.

Highway User Revenue Fund (HURF) 15.2% Funds: The MAG area receives annual funding from the Highway User Revenue Fund, which consists of fuel taxes, vehicle license taxes, registration fees and other sources. It is divided by statute among the Department of Public Service (DPS), ADOT, and counties, cities and towns. ADOT receives 50.5% of HURF after an initial distribution to DPS and other items that are taken "off the top." ADOT sets aside 12.6% of its distribution by state law, plus another 2.6% by State Transportation Board policy, for controlled access highways and freeways in the MAG and PAG (Pima Association of Governments) areas, of which 75% is allocated to the MAG area and 25% is allocated to the PAG area. This distribution is often referred to as the ADOT 15.2% funds.

ADOT 37% Funds: After the deduction of the 15.2% funds, ADOT's share of HURF funds pay for ADOT operations, maintenance and debt service on outstanding bonds. The remainder is then combined with ADOT's share of federal highway funds and forms the basis for the ADOT highway construction program. This block of funds is often called the ADOT discretionary funds, of which a 37% share is programmed for freeways in the MAG area.

Federal Aid: Federal Aid includes Surface Transportation Program funding (STP), Congestion Mitigation and Air Quality funds (CMAQ) and other federal highway funds that are either statutorily or discretionarily sub-allocated to the MAG area. The forecast assumes $33.4 million of MAG sub-allocated STP funds per year will be dedicated to the RTPFP in FY 2015 and $13.6 million in FY 2016 in the form of debt service for Grant Anticipation Notes (GAN). As part of the MAG 2003 Regional Transportation Plan, 19.1% of MAG's CMAQ funds are dedicated to the MAG Regional Transportation Plan Freeway Program.

American Recovery and Reinvestment Act (ARRA): A $787 billion economic stimulus package was signed into law by President Obama on February 17, 2009. The ADOT highway portion was $349.7 million which included $129.4 million for the RTPFP.

Interest Income: Assumes 0.8% in FY 2015, 1.5% in FY 2016, 2.5% in FY 2017, and 3.0% thereafter, with 99% invested. Interest income is dependent on prior month's average cash balance.

Third Party Billing: Represents local, developer and other funds for programmed projects.

Other Income: Includes building rent, sales of excess property and other miscellaneous income.

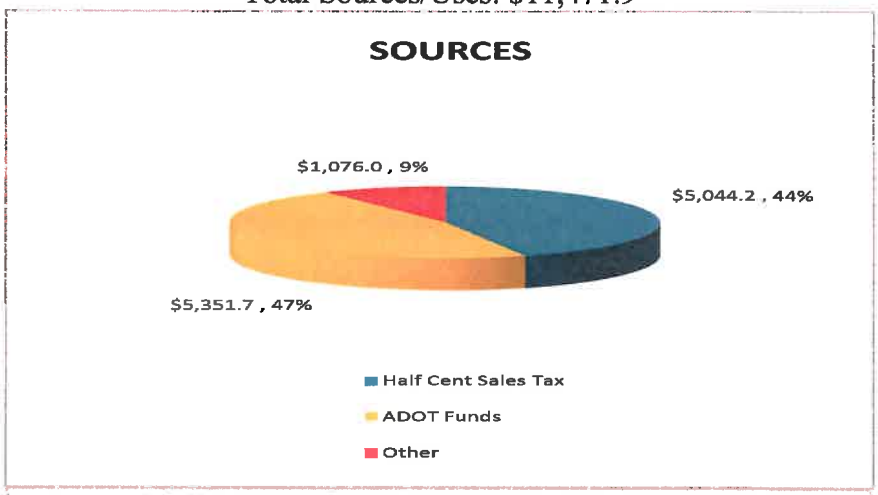
Discount Factor: The base year for the discount factor is FY 2015. An annual discount factor is applied to the total revenues less non-project related expenditures in order to be consistent with the constant dollar (non-inflated) estimated construction and right of way cash flows.

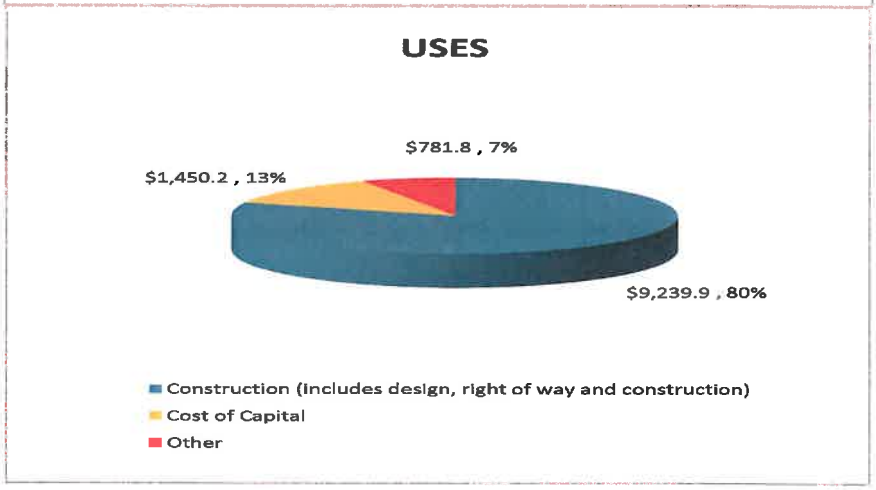
Revenue Sources and Uses

The following pie chart depicts the sources and uses of Regional Transportation Plan Freeway Program revenues. The sources consist of the transportation excise tax (half cent sales tax), ADOT Funds and various other revenues. The transportation excise tax makes up 44 percent of the total revenues, with ADOT Funds reflecting 47 percent and the remaining 9 percent consisting of various other funding sources, primarily MAG share of federal aid.

Of the available funding, 80 percent is used for design, right of way and construction. Of the remainder, 13 percent is used for cost of capital and 7 percent is used for the discount factor and MAG/Regional Public Transit Authority (RPTA) transfers.

Certified Financial Plan
Fiscal Years 2006 – 2026
(Dollars in Millions)
Total Sources/Uses: $11,471.9





Net Revenues

The following chart reflects a breakdown of the individual revenues and costs for the Regional Transportation Plan Freeway Program for the most recent and current Certifications, as well as changes occurring in the interim.

(Dollars in Millions)

REVENUES	Jul-14	Jan-15	CHANGE
Beginning Cash Balance /1	$153.2	$153.2	$0.0
1/2 Cent Sales Tax /2	$5,111.8	$5,044.2	($67.6)
Highway User Revenues /2	$1,546.7	$1,554.1	$7.4
Federal Aid /3	$621.8	$619.1	($2.7)
MAG Major Projects /4	$3,560.0	$3,671.3	$111.3
3rd Party /5	$67.7	$72.7	$5.0
STAN /6	$126.3	$126.3	($0.0)
Interest Income /7	$114.0	$126.1	$12.0
Other Income /8	$100.1	$104.9	$4.9
Subtotal: Revenues	$11,401.7	$11,471.9	$70.2

EXPENDITURES	Jul-14	Jan-15	CHANGE
Cost of Capital /9	($1,434.7)	($1,450.2)	($15.6)
Discount Factor /10	($502.1)	($521.8)	($19.7)
MAG/Valley Metro Transfer	($197.1)	($197.1)	$0.0
Other Costs /11	($58.3)	($62.9)	($4.6)
Subtotal: Costs	($2,192.2)	($2,232.0)	($39.9)
Net Funds Available	**$9,209.5**	**$9,239.9**	**$30.4**

Notes

Figures may not add due to rounding.

/1 Beginning cash balance on July 1, 2006 and actuals through November 30, 2014.

/2 September 2014 Official Forecast.

/3 Includes MAG STP, CMAQ funds and ARRA.

/4 Includes ADOT 37% Funds programmed for freeways and highways in the MAG region. This funds the MAG major projects. The remaining subprogram amounts are included in the statewide program. MAG Major Projects increased to $165,873 million in FY 2020. The PAG region had a large project that was not obligated in FY 2014 so it distorted the Sub-program 3-year moving average for MAG, PAG and TOC. The MAG 3-year moving average sub-program Percentage went down and the MAG Major percentage increased for FY 2020. This is an anomaly so for FY 2021 Major Projects, the CBO inflator was added to the FY 2021 figure.

/5 Third Party revenue includes local, developer and other funds for programmed projects. Third Party revenue is net of Loan Repayment expenditures.

/6 Includes $10 million from the STAN Restoration account for interest payments on the Mesa HPAN (construction phase) and $9.9 million from the STAN MAG 60% account for the Maryland TI project in FY 2014.

/7 Interest income is on a cash basis and assumes .8% in FY 2015, 1.5% in FY 2016, 2.5% in FY 2017 and 3.0% in FY 2018 and beyond with 99% invested. Interest income is dependent on fund balances.

/8 Includes rental receipts, sale of excess property and miscellaneous income.

/9 Cost of Capital includes RARF bonds, HURF bonds, HELP and GAN loans, RARF, HURF and GAN debt service, HELP Loan Repayment and Debt Service Reserve Interest.

/10 The revenue figures include an inflation factor. The cost estimates are in today's dollars, not inflated. A discount factor deflates the revenues to align the cost estimates.

/11 Includes personal services, rental cars, travel and fuel. Increased by Bond issuance costs assumed at .5%.

Construction Costs

Douglas A. Ducey, Governor
John S. Halikowski, Director
Dallas Hammit, State Engineer
Steve Boschen, Division Director

LETTER OF CERTIFICATION

The Intermodal Transportation Division of the Arizona Department of Transportation (ADOT) has completed a six month review and update of costs associated with construction of the Regional Transportation Plan (RTP) Freeway Program. Construction and design costs have been updated by our Urban Project Management Group; AECOM, HDR and PB, our three management consultants; and the consultants currently preparing final construction plans. Right-of-way costs have been updated by the ADOT Right-of-Way Group reflecting current appraisals and changes in right-of-way requirements. This information updates and replaces certain information contained in the July 2014 Certification.

The construction and right-of-way cost data in this document provide an accurate accounting of costs incurred and include a realistic estimate of future costs based upon current construction costs and real estate values. Estimated future costs are subject to changes in the economy and are affected by variables in international, national, state and localized market values and trends.

The results of our review provide an accurate basis upon which to schedule and fund the balance of the Freeway Construction Program for Fiscal Years 2016-2020. However, the Department will continue to monitor all trends and make periodic adjustments as required.

Dallas Hammit, PE
Deputy Director for Transportation

3/3/2015
Date

Freeway Construction Costs and Revenues

The design and construction cost estimates for the Regional Transportation Plan Freeway Program (RTPFP) projects are reviewed and updated by the three management consultants, AECOM, HDR and PB. They also provide preliminary engineering services by developing scoping, Stage I (15%) and Stage II (30%) project documents for the RTPFP. This effort helps define design and right of way requirements, allowing ADOT to establish better cost estimates for design, right of way, utility relocations and construction, at the project and corridor level. The management consultants also monitor cost estimates through the remaining design phases, including the final estimates. They also evaluate contractor bids for RTPFP construction projects to monitor construction unit price cost trends, such as the cost of concrete, asphalt, structures, drainage and other items used to establish project cost estimates. These recent bid prices are then used to update cost estimates for projects in the scoping and design phases.

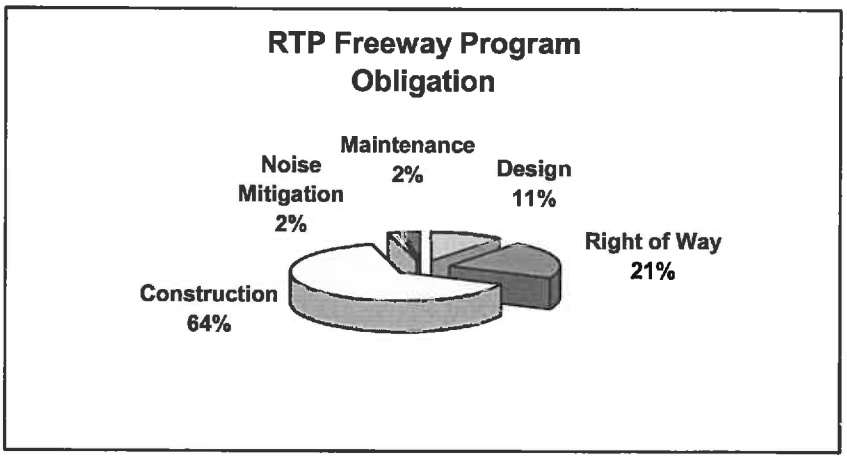
A revenue forecast was developed during the August 2014 Risk Analysis Process. Panel members from various segments of the transportation and economic community were invited to discuss future risks and trends in costs and revenues. The risk analysis process consultant utilized the panel input to update construction cost forecast models and to calculate discount factors. The consultant, MAG, and ADOT Financial Management Services reviewed the discount factors and made further adjustments to fit current cost trends. The projections of future cost and revenue trends developed in the Risk Analysis Process Economic Forecasts are used to help ensure that there are sufficient resources to complete the RTPFP Life Cycle Program.

Obligations

Obligations by phase and corridor are listed in the table below. These figures are through December 31, 2014. Regional Transportation Plan Freeway Program (RTPFP) obligations since the last certification increased $321 million, from $4,189 million to $4,510 million.

Regional Transportation Plan Freeway Program Obligations
Through December 31, 2014
(dollars in millions)

Corridor	Design	Right of Way	Construction	Noise Mitigation	Maintenance	Total
I-10, Papago & Maricopa	$24.0	$204.6	$214.4	$0.0	$0.0	$443.0
I-10 Reliever (SR30)	$0.0	$20.3	$0.0	$0.0	$0.0	$20.3
I-17, Black Canyon	$14.6	$94.5	$317.2	$0.0	$0.0	$426.4
SR51, Piestewa	$3.7	$0.1	$49.9	$0.0	$0.0	$53.7
US60, Grand Ave	$6.7	$23.2	$60.7	$0.0	$0.0	$90.6
US60, Superstition	$3.2	$2.3	$128.9	$0.0	$0.0	$134.5
SR74	$0.0	$2.9	$5.8	$0.0	$0.0	$8.7
SR85	$18.5	$25.5	$98.4	$0.0	$0.0	$142.4
SR87, Duthie-Martin	$2.5	$0.8	$35.8	$0.0	$0.0	$39.1
SR88, Apache Trail	$0.2	$0.0	$0.0	$0.0	$0.0	$0.2
US93	$0.0	$10.3	$31.6	$0.0	$0.0	$41.9
SR101L, Agua Fria	$2.4	$1.2	$185.0	$0.0	$0.0	$188.6
SR101L, Pima	$15.0	$4.0	$202.1	$0.0	$0.0	$221.1
SR101L, Price	$5.0	$0.0	$43.9	$0.0	$0.0	$48.9
SR143, Hohokam	$3.6	$0.3	$20.7	$0.0	$0.0	$24.6
SR153, Sky Harbor	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR202L, Red Mountain	$4.3	$5.0	$394.2	$0.0	$0.0	$403.5
SR202L, Santan	$1.8	$0.0	$114.0	$0.0	$0.0	$115.8
SR202L, South Mountain	$8.3	$129.4	$0.0	$0.0	$0.0	$137.7
SR303L	$104.7	$378.0	$878.7	$0.0	$0.0	$1,361.4
SR24, Gateway Freeway	$12.0	$43.0	$82.2	$0.0	$0.0	$137.2
Systemwide	$244.2	$21.2	$22.4	$70.5	$111.9	$470.2
TOTAL	$474.7	$966.7	$2,885.9	$70.5	$111.9	$4,509.8



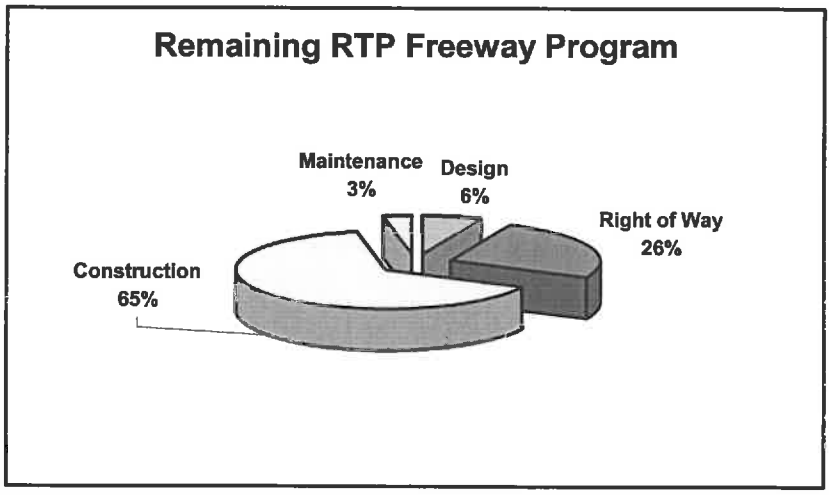
Remaining System Costs

There remain $4.3 billion of costs associated with the Regional Transportation Plan Freeway Program (RTPFP).

Regional Transportation Plan Freeway Program
(dollars in millions)

Corridor	Design	Right of Way	Construction	Multi Phase*	Noise Mitigation	Maintenance	Total
I-10, Papago & Maricopa	$28.1	$75.0	$570.7	$0.0	$0.0	$0.0	$673.9
I-10 Reliever (SR30)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
I-17, Black Canyon	$60.2	$240.0	$512.9	$0.0	$0.0	$0.0	$813.1
SR51	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
US60, Grand Ave	$5.0	$0.0	$56.2	$0.0	$0.0	$0.0	$61.2
US60, Superstition	$2.4	$0.0	$30.0	$0.0	$0.0	$0.0	$32.4
SR74	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR85	$0.0	$0.0	$5.3	$0.0	$0.0	$0.0	$5.3
SR87, Duthie-Martin	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR88, Apache Trail	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
US93	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR101L, Agua Fria	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR101L, Pima	$13.9	$0.0	$197.8	$0.0	$0.0	$0.0	$211.7
SR101L, Price	$3.5	$0.0	$49.9	$0.0	$0.0	$0.0	$53.4
SR143, Hohokam	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR153, Sky Harbor	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
SR202L, Red Mountain	$0.4	$0.0	$5.3	$0.0	$0.0	$0.0	$5.7
SR202L, Santan	$3.4	$0.0	$57.5	$0.0	$0.0	$0.0	$60.9
SR202L, South Mountain	$30.0	$662.9	$1,059.3	$0.0	$0.0	$0.0	$1,752.2
SR303L	$21.3	$85.3	$178.3	$0.0	$0.0	$0.0	$284.9
SR 24, Gateway Freeway	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Systemwide	$98.7	$28.2	$51.4	$0.0	$0.0	$134.0	$312.2
TOTAL	$266.9	$1,091.3	$2,774.6	$0.0	$0.0	$134.0	$4,266.9

- Multi Phase: Includes more than one phase (For example, "Design and Right-of-Way" or "Design and Construction," etc.).



Roadway Design

ADOT currently has 8 major RTP Freeway Program projects under design. Major design work continues on the following projects:

Corridor	Project Location	Length (Miles)	Design Status
I-10 Papago	Fairway Dr. (El Mirage Rd.)	TI	Stage I
SR51/Black Mountain Blvd.*	SR101L Pima – Pinnacle Peak Rd.	2	CMAR Final
US60, Grand Ave.	Thunderbird Rd.	TI	Stage I
US60, Grand Ave.	Bell Rd.	TI	Design Build Final
SR85	Warner St. New Bridge	Bridge	On-hold
SR202L, South Mountain	I-10 Maricopa to I-10 Papago	New Freeway	P3
SR303L	I-10/SR303L TI Landscape	System TI	Final
SR303L	I-10/SR303L TI, Phase II System TI	System TI	Stage IV

Stage I = 15% Plans; Stage II = 30% Plans; Stage III = 60% Plans;
Stage IV = 95% Plans; Final = 100% Plans; P3 = Public Private Partnership;
DB = Design Build process; CMAR = Construction Manager at Risk process;
TI = Traffic Interchange;

* City of Phoenix project (Arterial Life Cycle Program) administered by ADOT.

Right of Way

During the January 2015 Certification period from July 1, 2014 through December 31, 2014, the Right-of-Way Group acquired 71 acres of land for the RTP Freeway Program. When added to the previously acquired acreage, as of December 31, 2014, the Right-of-Way Group has acquired a total of 4,192 acres for the RTP Freeway Program.

RTP Freeway Program Right-of-Way
(acres)

Corridor	Previously Acquired	Acquired during this Certification Period	Total
I-10, Papago & Maricopa	99.5	3.6	103.1
I-10 Reliever (SR30)	75.6	0.0	75.6
I-17, Black Canyon	245.0	0.0	245.0
SR51, Piestewa	0.0	0.0	0.0
US60, Grand Ave.	8.5	0.0	8.5
US60, Superstition	0.0	0.0	0.0
SR74	13.0	0.0	13.0
SR85	1,109.7	0.0	1,109.7
SR87, Duthie-Martin	25.4	0.0	25.4
SR88, Apache Trail	0.0	0.0	0.0
US93	94.0	0.0	94.0
SR101L, Agua Fria	2.4	0.0	2.4
SR101L, Pima	3.8	0.0	3.8
SR101L, Price	0.0	0.0	0.0
SR153, Sky Harbor	0.0	0.0	0.0
SR202L, Red Mountain	0.2	0.0	0.2
SR202L, Santan	0.0	0.0	0.0
SR202L, South Mountain	320.6	0.0	320.6
SR303L	1,979.9	67.2	2,047.1
SR24, Gateway Freeway	144.0	0.0	144.0
Systemwide	0.0	0.0	0.0
Total	**4,121.6**	**70.8**	**4,192.4**

Historical Overview

ADOT

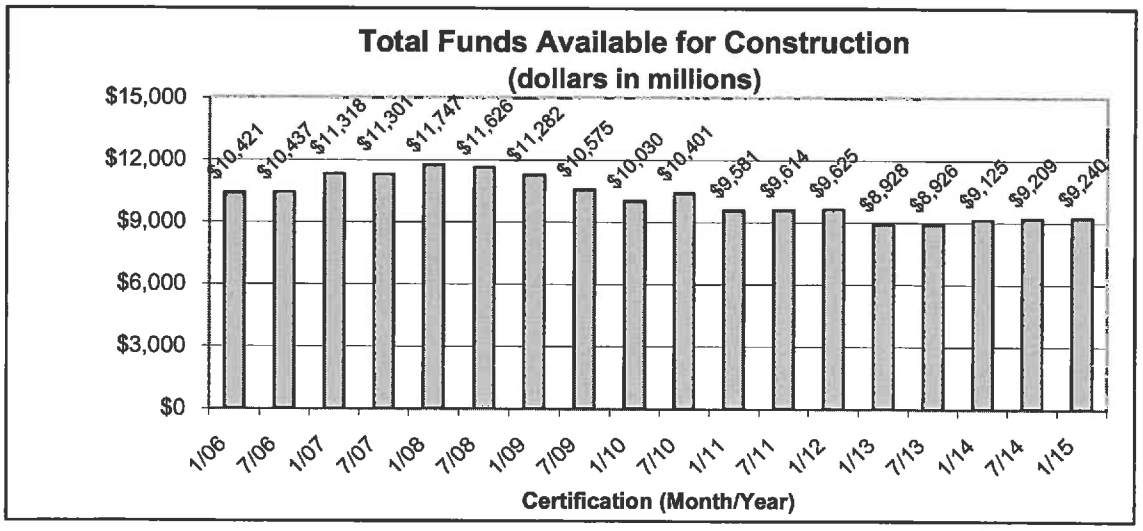
Historical Overview of Funding

ADOT has been certifying estimated revenues available for construction of the Regional Transportation Plan (RTP) Freeway Program since January 2006. Table 1 shows the revenue estimates and associated costs beginning with the January 2006 Certification. Graph 1 shows the level of funding available for construction of the RTP Freeway Program.

Table 1
Historical RTP Freeway Program Funds Available for Construction
(dollars in millions)

Certification Date	Revenues				Costs				Available for Construction
	1/2 Cent Tax	ADOT Funds	Other	Total	Capital	Discount Factor	Other	Total	
1/06	$8,178	$7,990	$665	$16,834	-$2,279	-$3,908	-$225	-$6,412	$10,421
7/06	$8,200	$8,112	$677	$16,989	-$2,403	-$3,906	-$242	-$6,551	$10,437
1/07	$8,652	$8,372	$725	$17,749	-$2,483	-$3,703	-$244	-$6,430	$11,318
7/07	$8,652	$8,372	$732	$17,756	-$2,577	-$3,635	-$244	-$6,456	$11,301
1/08	$8,646	$8,417	$821	$17,883	-$2,584	-$3,326	-$245	-$6,136	$11,747
7/08	$8,421	$8,411	$908	$17,741	-$2,379	-$3,486	-$250	-$6,115	$11,626
1/09	$7,764	$7,444	$955	$16,163	-$2,391	-$2,237	-$254	-$4,881	$11,282
7/09	$6,708	$7,359	$1,109	$15,177	-$2,367	-$1,980	-$255	-$4,602	$10,575
1/10	$6,472	$6,506	$1,156	$14,134	-$2,367	-$1,518	-$218	-$4,104	$10,030
7/10	$6,456	$6,460	$1,171	$14,087	-$1,914	-$1,554	-$219	-$3,686	$10,401
1/11	$5,240	$6,423	$1,241	$12,904	-$1,741	-$1,361	-$221	-$3,323	$9,581
7/11	$5,243	$6,253	$1,302	$12,797	-$1,736	-$1,228	-$219	-$3,183	$9,614
1/12	$5,122	$6,192	$1,318	$12,632	-$1,517	-$1,256	-$234	-$3,007	$9,625
1/13	$5,096	$5,070	$1,371	$11,538	-$1,475	-$874	-$261	-$2,609	$8,928
7/13	$5,096	$5,404	$1,026	$11,526	-$1,455	-$884	-$260	-$2,599	$8,926
1/14	$5,110	$5,218	$1,031	$11,359	-$1,435	-$546	-$253	-$2,234	$9,125
7/14	$5,112	$5,233	$1,057	$11,402	-$1,435	-$502	-$256	-$2,193	$9,209
1/15	$5,044	$5,352	$1,076	$11,472	-$1,450	-$522	-$260	-$2,232	$9,240

Graph 1



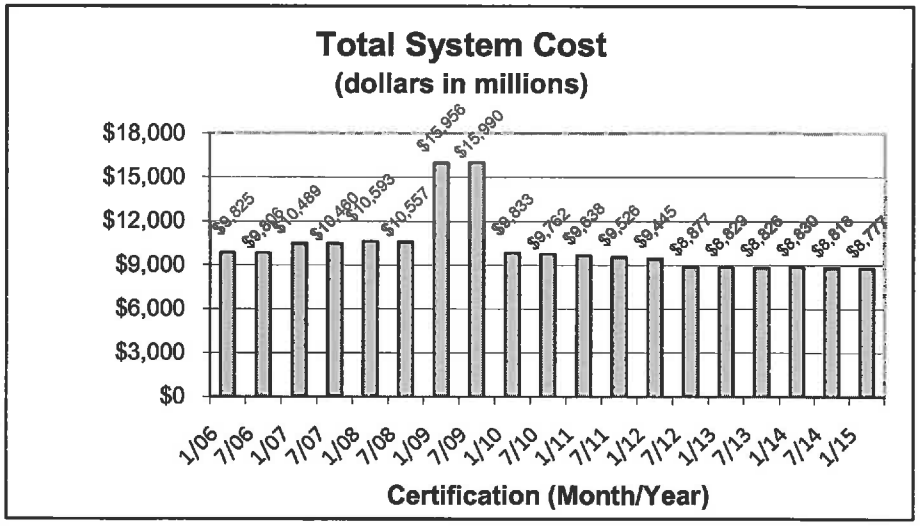
Historical Overview of Costs

ADOT has been certifying estimated costs to complete the Proposition 400 Regional Transportation Plan (RTP) Freeway Life Cycle Program (FLCP) since January 2006. Table 2 shows the cost estimates for the system beginning with the January 2006 Certification. Graph 2 represents the estimated total cost of the RTP Freeway Program.

Table 2
Historical RTP Freeway Program Cost Estimates
(dollars in millions)

Certification Date	Obligations	Cost to Complete	Total System Cost
1/06	$178.0	$9,647.1	$9,825.1
7/06	$234.3	$9,571.3	$9,805.6
1/07	$435.2	$10,053.4	$10,488.6
7/07	$779.0	$9,681.0	$10,460.0
1/08	$1,171.3	$9,421.2	$10,592.5
7/08	$1,506.8	$9,050.0	$10,556.8
1/09	$2,053.1	$13,902.4	$15,955.5
7/09	$2,120.9	$13,868.8	$15,989.7
1/10	$2,372.6	$7,460.0	$9,832.6
7/10	$2,636.9	$7,125.5	$9,762.4
1/11	$2,972.0	$6,665.6	$9,637.6
7/11	$3,146.8	$6,379.1	$9,525.9
1/12	$3,510.8	$5,933.8	$9,444.6
7/12	$3,825.3	$5,051.4	$8,876.7
1/13	$3,893.9	$4,934.8	$8,828.7
7/13	$3,955.8	$4,869.7	$8,825.5
1/14	$4,040.7	$4,789.2	$8,829.9
7/14	$4,189.0	$4,629.3	$8,818.3
1/15	$4,509.8	$4,266.9	$8,776.7

Graph 2



Economic Forecasts

ADOT

Economic Forecasts

Estimating future revenue and costs for construction and right-of-way is an essential part of the RTPFP Life Cycle Program to help ensure that future costs and revenue stay in balance. The forecasts rely on information about past and current economic conditions and assumptions about future conditions and the interrelationships between multiple variables. Those assumptions and the economic models may or may not prove accurate and differences between forecast and actual results most likely will occur. ADOT and MAG work cooperatively to monitor cost and revenue trends and adjust the Life Cycle Program accordingly.

In order to deal with the variability between estimated and actual values, ADOT introduced the Risk Analysis Process (RAP) in 1992. It is generally done each year in August or September for ADOT by HDR Decision Economics, a firm that specializes in economic forecasting. Data is collected from a variety of sources, including regional, state, national and international factors which influence costs and revenues, plus input from a panel of local experts along with historic data. A complex statistical risk-based analysis is then performed to forecast future cost and revenue. The process results in a series of forecasts, with specified probabilities of occurrence, rather than a single "best guess" estimate. It represents a snapshot of conditions and opinions at the time and may be adjusted upward or downward by ADOT for the subsequent January and July Certification reports as conditions change.

Because the Certification is based on remaining costs in current dollars, future estimates of revenue are discounted to current dollars based on the RARF official forecast.

Revenue Forecast:

This year's panel inputs produced a mean forecast of $5,639.3 million for the period FY 2015-2026 with a compound growth rate (CGR) of 4.9 percent. The Department's Official Forecast for FY 2015-2026 totals $5,646.4 million with a compound growth rate of 4.5 percent. This year's official forecast is $120.3 million lower than last year's official forecast.

The Official Forecast result incorporates the 50 percent confidence interval growth rate amount for each year of the forecast except for FY 2015. The FY 2015 forecast of $378.4 million was developed by ADOT staff independently of the econometric model using time series techniques and historical and projected growth rates from the model.

RAP Results – RARF Revenue Forecast

Fiscal Year	Mean Forecast	Official Forecast	Confidence Level
2015	$366.8	$378.4	
2016	$394.0	$402.0	50%
2017	$416.0	$421.0	50%
2018	$438.2	$441.8	50%
2019	$459.0	$460.1	50%
2020	$480.0	$479.1	50%
2021	$498.5	$498.3	50%
2022	$520.7	$519.2	50%
2023	$542.6	$540.4	50%
2024	$568.4	$563.0	50%
2025	$593.4	$586.6	50%
2026 /1	$361.7	$356.5	50%
Total	$5,639.3	$5,646.4	
Average CGR	4.9%	4.5%	

Note: /1 Reflects the end of the one-half cent transportation excise tax extension on December 31, 2025.

Average CGR = Average annual compound growth rate

Construction Costs:

HDR Decision Economics performed a statistical analysis of highway construction costs for the ADOT. The purpose was to develop construction cost escalation factors, in a risk analysis framework, to be used by ADOT for planning purposes. The study relies on historical trend analysis and expert consensus-based risk assessment for cost of key construction items.

The study included construction costs in eight broad categories that were selected based on their contribution to the overall dollar value of highway construction contracts in Arizona. It also considered a range of potential explanatory variables (at the state, national and international levels) that may impact local construction prices and assessed historical trends and correlations for those variables. Those factors include such items as regional and national construction spending, construction wages, regional gross state product, prices for major construction commodities and equipment, the consumer price index, the producer price index for highway and street construction, crude oil prices and international exchange rates. A panel of local experts on construction costs also provided estimates of future costs.

Discount factors representing the rate of construction cost growth are calculated using software developed by HDR Decision Economics. Data from the August 2014 Risk Analysis Process for construction was utilized to compute factors for design and construction. These factors represent potential cost growth which includes general inflation.

RAP Results – Construction Discount Factors

Fiscal Year	Official Value
2016	1.85%
2017	2.23%
2018	2.32%
2019	2.27%
2020	2.27%
2021	2.27 %
2022	2.27%
2023	2.27%
2024	2.61%
2025	2.61%
2026	2.61%

While the transportation industry anxiously watched the balance of the Highway Trust Fund's Highway Account and Mass Transit Account dip to record lows over the summer, a short-term, 10-month "patch" saved both accounts from insolvency. Despite the lack of a long-term funding solution for transportation projects on a national level, the economic outlook industry is cautiously optimistic about the growth of highway and street projects in the near term.

The uncertainty in the amount and commitment of national funding is weighing down short-term growth forecasts. However, confidence seems to return within the next year and a half, bolstering the five-year construction outlook.

Coinciding with the short-term moderately forecasted growth in transportation construction, commodity prices of steel and cement reflect uncertainty in short-term forecasts. Forecasts of these commodities' prices have been revised downward – but are still increasing – for 2014 through 2016 due to an expected decline in domestic demand. Additionally, commodity prices for steel and cement may experience regional variation. Large infrastructure projects in industries such as marine ports and mining may cause regional increases in prices due to high demand. However, overall, prices are anticipated to increase by less than 4 percent annually. Also, according to the Energy and Metals Consensus Forecasts (August 2014), crude oil prices have experienced a marked decrease in recent months due to lessened political concerns, abundant supply and slow-moving demand in Europe. Currently, the two-year forecasts of crude oil prices remain flat to slightly decreasing, reflecting stability of demand and political climate. Though RAP panel members' projections for construction material costs are higher than last year's projections in the short term, they remain somewhat low by historical standards.