

REPORT HIGHLIGHTS

In November 2004, Maricopa County voters passed Proposition 400 (Prop 400) authorizing a 20-year continuation of a countywide, half-cent sales tax dedicated to transportation that sunsets on December 31, 2025. With the passage of Prop 400, voters added a significant investment in new and improved freeways, arterial street improvements, and transit features including bus and light rail to address transportation needs. These projects were specified as part of the region's Regional Transportation Plan (RTP) to help with mobility, congestion, and safety outcomes. These projects are planned, funded, implemented, and operated by several entities in Maricopa County including the Maricopa Association of Governments (MAG), Arizona Department of Transportation (ADOT), Valley Metro Regional Public Transportation Authority, Valley Metro Rail, Inc., and 27 local jurisdictional cities, towns, native nations, and Maricopa County.¹ We refer to these entities as the RTP Partners in this report.



Were Promised Prop 400 Projects Delivered as Expected to Meet Transportation Goals and Will Remaining Projects be Completed as Planned?

For the most part, MAG and its RTP Partners delivered Prop 400 projects as promised and realized many accomplishments in accordance with revised plans vetted by the appropriate decision makers. In fact, despite funding challenges resulting from the 2008 Great Recession that required the deferral of some projects beyond the Prop 400 horizon, many projects were already delivered as intended and improvements to-date have contributed towards better mobility in the region. The few Prop 400 freeway and roadway projects that remained outstanding as of June 30, 2020 are scheduled to be completed within the general Prop 400 timeframe. While Prop 400 sales tax collections cease on December 31, 2025, funds collected will still be available and used to complete envisioned projects for several additional years.

ANNUAL PROGRAMS TO REBALANCE PROJECTS



- Freeway, arterial, and transit projects were revisited annually to prioritize, add, or eliminate projects as warranted.
- Strong controls existed to match costs with available funding.
- RTP Partners demonstrated accountability to Prop 400 promises and transparency about project change decisions with staff publicly providing supporting data and justifications to local and regional oversight bodies for approval.

FREEWAY PROJECTS



- Multiple rebalancing efforts allowed the region to complete 280 of 344 original miles of new and improved freeways despite the funding shortfalls caused by the Great Recession.

ARTERIAL PROJECTS



- Sales tax funding for arterial projects was limited to amounts identified when Prop 400 passed, thus keeping program distribution more feasible as local jurisdictions were required to pay for any budget overages.
- 140 of 271 promised miles of new or improved arterial streets and 16 of 32 original intersections were open to traffic with another 112 miles underway to be completed prior to the end of Prop 400 in December 2025.
- Only 19 arterial miles and 3 intersections were deferred to date.

¹ Valley Metro Regional Public Transportation Authority operates the bus transit system and Valley Metro Rail, Inc. operates the light rail transit system. For purposes of this audit, we refer to the entities together as Valley Metro.

- 91 freeway miles were in-progress and projects encompassing approximately 39 miles were delayed beyond the Prop 400 sunset at the end of calendar year 2025, but were still planned for completion in the current 2040 Regional Transportation Plan.²

LIGHT RAIL PROJECTS

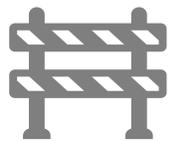


- 6.3 miles of the initial 27.7 miles were completed as of June 30, 2020.
- An additional 11.6 miles were planned to be completed by the time Prop 400 sunsets, for a total of 17.9 miles added with Prop 400 funding.
- Three planned projects were deferred due to the City of Phoenix's reduced available funding and its focus and prioritization on its city sales-tax funded transportation and transit program.

BUS TRANSIT PROJECTS



- Funding challenges required Valley Metro to defer:
 - 4 of 13 of park-and-ride lots.
 - 12 of 16 transit centers.
 - 65 percent of 1,200 new bus stops.
- Transit fleet purchases provided additional vehicles and transit services, although purchases will fall short of Prop 400 plans due to funding challenges.
- While some planned services were deferred due to the 2008 Great Recession, many improvements were made to bus service operations in terms of geographic coverage, daily span of service, and frequency of service.



Did Prop 400 Spending on Freeway and Arterial Projects Increase Mobility and Relieve Congestion?

Generally, yes—Prop 400 freeway and arterial projects completed have made positive impacts on mobility and congestion in the MAG region over the last five years. While performance can vary depending on the location and time period measured, we used the most relevant geographical area and aligned data with our July 1, 2015 through June 30, 2020 audit period where possible. We found that, between calendar years 2015 and 2019, systemwide average speed increased and delays improved on the freeways and arterial streets—often in areas where Prop 400 projects were completed. However, average travel time on certain freeways and arterial streets worsened during peak periods.

SPEED



- Systemwide speed increased, except for a slight decline during the evening peak period.
- Fastest speeds at 71 miles per hour were on Loop 202 Red Mountain.
- Slowest speeds averaging 40 miles per hour were on the I-10 between Loop 101 Agua Fria and I-17 eastbound in the morning and westbound in the evening.

DELAY

- Phoenix area had one of the largest reductions in delays when compared to other areas we reviewed including Dallas, Houston, Sacramento, San Diego, and Los Angeles.³

IMPACT OF PROP 400 PROJECTS

- A Prop 400 project completed in 2016 on the Loop 101 freeway segment between Loop 202 Red Mountain and Pima Road / 90th Street showed the best average speed between calendar year 2015 and 2019.

ACTIONS TO ADDRESS ISSUES

- To address congestion and delays, MAG and ADOT were working on planning studies to improve traffic flow on the I-10 between Loop 101 Agua Fria and I-17.

GENERAL MULTIMODAL STRATEGIES

- A corridor management study on the I-17 / Loop 101 to the I-17 / I-10 was completed to help MAG and ADOT find mobility and congestion solutions for this freeway segment.

² The 2005 Annual Report on the Status of the Implementation of Proposition 400 list of freeway improvements identified projects that had a combined total of 410 miles to be funded by Proposition 400, while the Prop 400 Ballot language referenced 344 miles.

³ We compared the Phoenix metropolitan statistical area with other comparable areas including Dallas-Fort Worth, Texas; Houston, Texas; Los Angeles, California; Sacramento, California; and San Diego, California. These areas were also used by MAG in its Strategic Safety Plan and 2020 Best Practices Study and by Valley Metro in its peer comparisons.

TRAVEL TIME



- Systemwide travel time worsened between calendar years 2015 and 2019.
- Travel time in the Phoenix area took 21 percent longer on average to move the same distance on freeways and arterial streets during peak periods of traffic.
- Yet, Phoenix travel times were lower than comparable other metropolitan areas we reviewed.

- MAG and ADOT developed technology solution strategies for reducing congestion included adding cameras to respond to traffic, synchronizing signal timing on arterials, and adding electronic messaging to inform travelers of changing road conditions to assist mobility.

Has Transit Contributed to Mobility and Congestion Relief in the MAG Region?



Yes—combined with its ability to move large numbers of people through an area, both bus and rail transit performed efficiently to help enhance mobility and relieve congestion. Additionally, transit experienced growing levels of rider satisfaction, even though ridership declined between fiscal year 2015 and 2020. Overall, bus and rail transit service had reliable on-time performance better than peers reviewed, generally declining bus and rail vehicle breakdowns, and higher levels of rider satisfaction—indicating transit was a strong alternative means of travel.

RIDERSHIP

- Overall, ridership decreased by 26 percent between fiscal years 2015 and 2020.
- Light rail ridership decreased 10 percent, while bus ridership dropped by 30 percent.
- Valley Metro increased marketing and security to encourage riders to use transit vehicles and service.

TRANSIT EFFICIENCY

- Both bus and rail outperformed peers in several operational metrics.
- Prop 400 increased service miles, although ridership was decreased over the period reviewed.
- Operating costs rose, but preventive maintenance on vehicles was enhanced.
- Valley Metro transit service was more efficient and its operating costs were still lower than peers' operation costs.

RELIABILITY (ON-TIME AND BREAKDOWNS)

- Bus service was on-time at least 89 percent of the time, which was generally higher than peer performance.
- Light rail service was on-time 98 percent of the time and far exceeded its peers.

RIDER SATISFACTION



- As of May 2018, approximately:
 - 82 percent of bus-only riders were satisfied in 2018, up from 68 percent satisfaction in 2014.
 - 77 percent of light rail-only riders were satisfied in 2018, which is a decrease from 88 percent satisfaction in 2016.
 - 81 percent of riders who used both bus and light rail were overall satisfied in 2018, which is an increase from 63 percent in 2014.
- Total bus complaints decreased over the audit period from approximately 8,500 to 6,700 between fiscal years 2016 and 2020. However, the rate of complaints per 100,000 riders increased from 53 to 64 between fiscal years 2016 and 2020.
- Light rail complaints generally decreased over the period from a total of 131 complaints in fiscal year 2016 to 94 complaints in fiscal year 2020—similarly, the rate of complaints per 100,000 riders also decreased from 0.84 complaints per 100,000 riders to 0.72 over the same period.
- Complaints primarily focused on vehicles not stopping to pick up passengers as well as late arrivals and bus driver attitude.

VALLEY METRO ACTIONS

- Valley Metro increased marketing and security activities—such as its Respect-the-Ride Program in 2018 focused on the transit experience—encouraging riders to take transit and restore confidence in light rail.

- Bus breakdowns decreased and were aided by Prop 400 purchase of vehicles.

- Actions taken to address complaints included validating complaints with video coverage, resolving issues directly with riders, and providing remedial education and behavior training for drivers.

AVAILABILITY & SERVICE COVERAGE

- Approximately 65 percent of people lived within half-mile of transit.
- Service coverage generally aligned with most peers reviewed.

How Safe are Roads and Transit Operations?



In the past five years, safety declined in the region with an overall nine percent increase in the number of fatalities reported between calendar years 2015 and 2019—with more fatal crashes on arterial streets than freeways. Results were similar to comparable entities reviewed.⁴ While various factors can contribute to these results, many incidents were attributed to driver behavior. To address these outcomes, MAG, ADOT, and Valley Metro developed strategic safety plans to address issues on freeways and arterial streets in addition to safety campaigns for bicyclists and pedestrians.

FREEWAY AND ARTERIAL STREET FATALITIES

- Fatality rates were increasing, but sharply declined in 2019.
- 83 percent of crashes happened on arterial streets, rather than freeways.
- Data suggested that approximately 33 percent of fatalities were due to speed and 44 percent were due to impaired driving—although those factors were not mutually exclusive.
- Trends generally aligned with other counties we reviewed including Dallas, Harris, Los Angeles, Sacramento, and San Diego counties.

TRANSIT PREVENTABLE ACCIDENTS

- Preventable accidents involving buses were relatively stable over the audit period and decreased to a low 0.70 accidents per 100,000 miles of service in fiscal year 2020.
- Rail preventable accidents varied a bit with a spike in fiscal year 2019, although the rate lowered to 0.19 per 100,000 miles of service by fiscal year 2020.

TRANSIT SECURITY

- Reportable security incidents requiring police dispatch increased between 2015 and 2019 from 0.16 per 100,000 boardings to 0.45 per 100,000 boardings—primarily attributed by Valley Metro to a change in reporting methodology.

BICYCLE FATALITIES

- Rate of fatalities was higher than peers with a 21 percent increase since 2015.
- MAG developed strategies to encourage local jurisdictions to implement specific safety solutions for bicyclists.

PEDESTRIAN FATALITIES

- After four years of steady increase, pedestrian fatalities dropped in 2019 decreasing 26 percent.
- Fatality rate aligned with others, although raw numbers grew more than peers to a total of 134 fatalities in 2019.

RTP PARTNER ACTIONS TO ADDRESS ISSUES

- Development of the MAG Strategic Transportation Safety Plan included 47 strategies focused on engineering solutions, education, enforcement, and technology.
- New Roadway Safety Program administered by MAG provided competitive grants to locals for more immediate short-term safety capital project improvements.
- As a regional agency, MAG designed and is implementing a broad educational campaign—called See Me AZ—in collaboration with local agencies. The campaign is focused on reducing bicyclist and pedestrian deaths as well as traffic crashes involving non-motorized modes of transportation.

⁴ We compared Maricopa County with other counties including Dallas County, Texas; Harris County, Texas; Los Angeles County, California; Sacramento County, California; and San Diego County, California. These areas were also used by MAG in its Strategic Safety Plan and 2020 Best Practices study and Valley Metro in its peer comparisons.