

PIMA ASSOCIATION OF GOVERNMENTS



REGIONAL **ACTIVE** TRANSPORTATION PLAN



WORKING PAPER 1: VISION, GOALS, AND STRATEGIES

OCTOBER 2025





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Introduction



Introduction

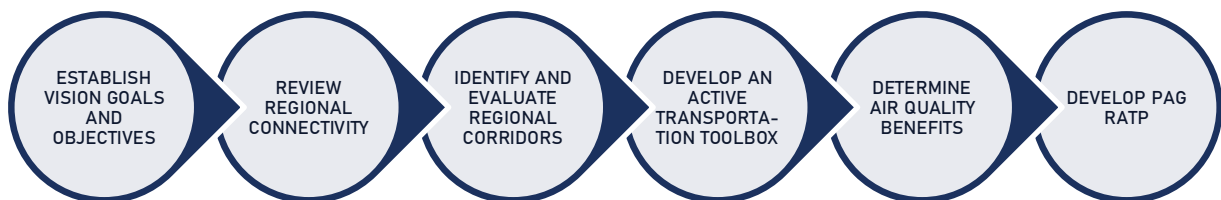
Pima Association of Governments (PAG) is the federally designated metropolitan planning organization (MPO) for the greater Tucson region and oversees regional transportation planning for all of Pima County. PAG is preparing this Regional Active Transportation Plan (RATP) by consolidating and updating the PAG Regional Bicycle Plan, completed in 2009, and the PAG Regional Pedestrian Plan, completed in 2014. The RATP will provide member agencies with a long-term vision, priorities, and implementation tools for active transportation improvements.

Planning Process

The planning process for the PAG RATP is shown in **Figure 1**. The Plan will:

- **Establish a Regional Active Transportation Vision.** The RATP will develop a vision statement, goals, and performance measures to reflect how the region aims to evolve its active transportation network and the tools to measure progress toward its goals.
- **Develop Comprehensive Existing Conditions Data.** Spatial data of existing transportation facilities and surrounding context maintained by local, regional, and state agencies will be reviewed to understand the existing regional connectivity. The RATP will develop consistent, regional data for PAG and its member agencies to use.
- **Prioritize Investments.** Regional corridors will be identified and analyzed to determine where investing in active transportation improvements will provide the most benefit to the region's residents and environment.
- **Build Momentum for Investing in Active Transportation.** The planning process will include a robust engagement process with the public and targeted stakeholders throughout its entirety. This will ensure that all recommended investments are supported by the public. The process should also build excitement for improving active transportation across Pima County.

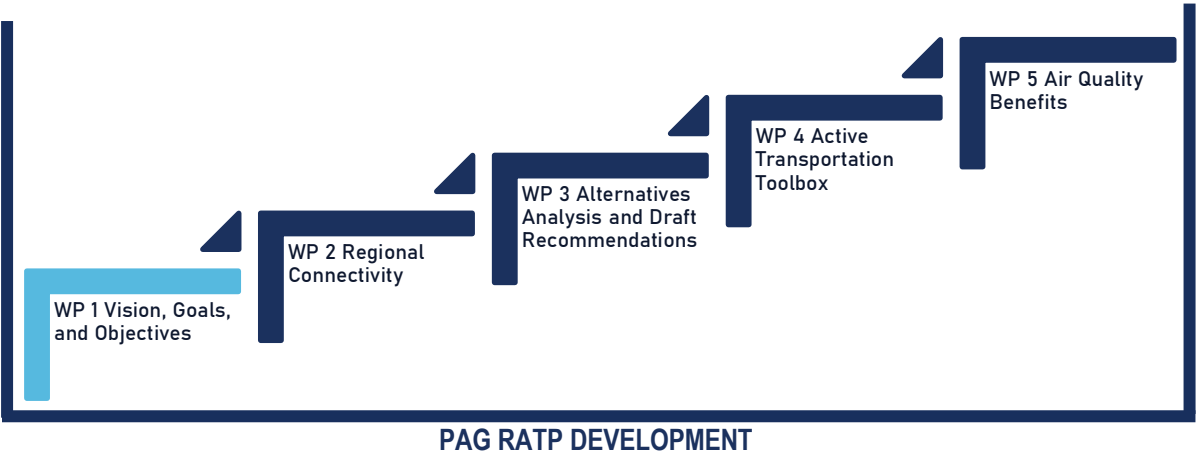
Figure 1. PAG RATP Planning Process



Working Paper Context

Working Paper 1: Vision, Goals, and Strategies (WP 1) is the first working paper of five in the development of the PAG RATP. WP 1 acts as a launching point to the RATP process, and includes goals and performance metrics from previous plans, a region-level safety and health overview, illustrative renderings of potential active transportation treatments, and the vision statement, goals, Strategies, and performance measures for the RATP. The WPs in the RATP development process is shown in **Figure 2**.

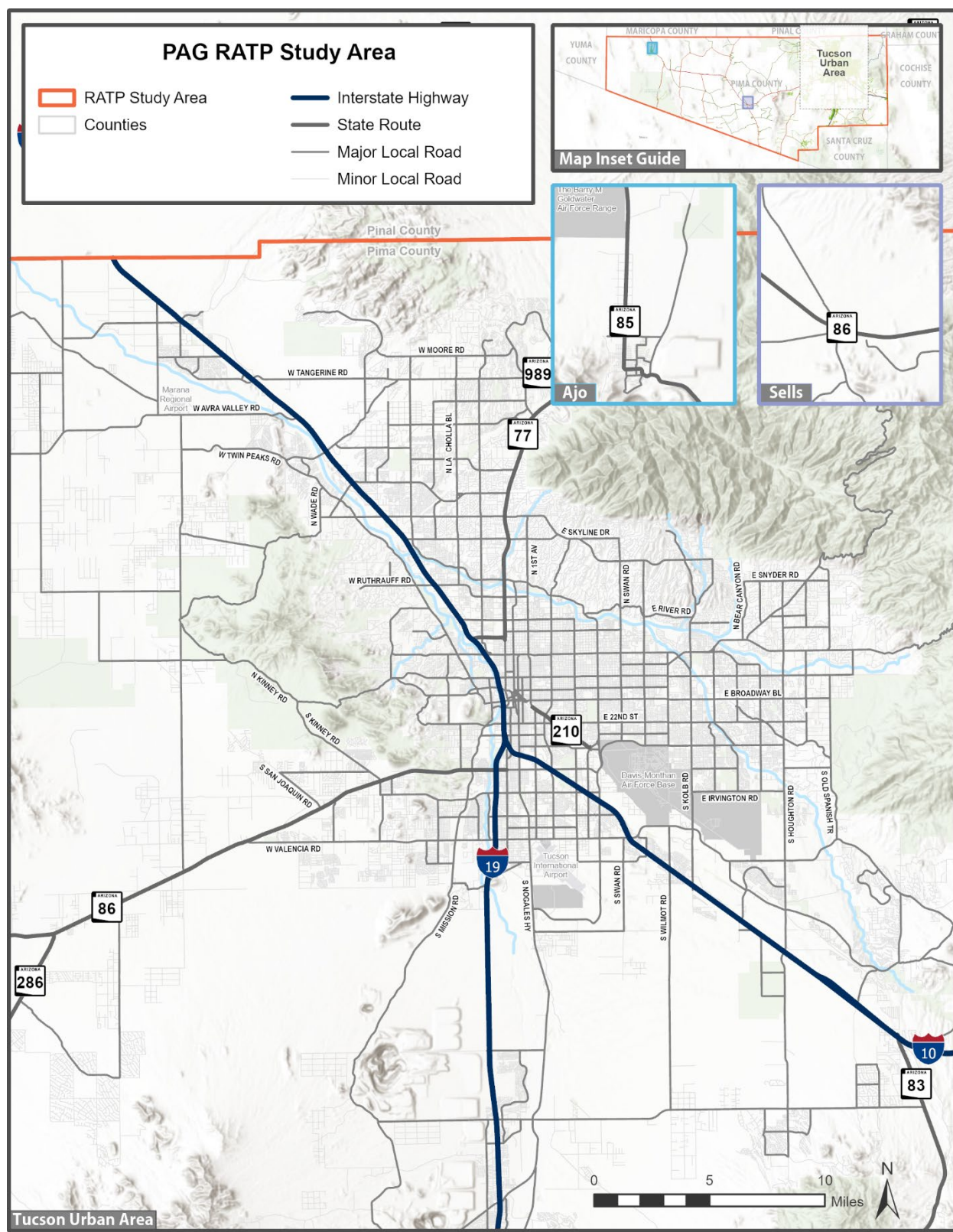
Figure 2. PAG RATP Development Process



Study Area

Figure 3 shows the PAG RATP study area. The study area includes all of Pima County, which encompasses PAG's member jurisdictions: Pima County, City of Tucson, City of South Tucson, Town of Marana, Town of Oro Valley, Town of Sahuarita, Pascua Yaqui Tribe, Tohono O'odham Nation, and the Arizona Department of Transportation (ADOT).

Figure 3. PAG RATP Study Area



Previous Plan Goals and Performance Metrics



Previous Plan Goals and Performance Metrics

Review of previous and ongoing planning efforts in the PAG region, statewide, and other peer regions provides a baseline understanding of the region's safety goals and performance. Understanding and incorporating common goals and performance measures into the PAG RATP will allow for consistent recommendations for PAG's member agencies and the transportation corridors that traverse their communities. The section below summarizes goals and performance measures for the reviewed planning efforts. Note that not all plans identified Strategies and performance metrics.

Aspire Sahuarita's General Plan (2022)

Long-term guide to the Town of Sahuarita's future. Sets forth a vision to aspire to and provides goals and policies to achieve it.

Active Transportation Goals

- **TRN-1.4.** Promote convenient multimodal access to public places having high concentrations of trips, such as employment and major activity centers, commercial core areas, and intermodal transportation facilities.
- **REC-3.1:** Incorporate multi-use paths along the Santa Cruz River and tributaries.
- **REC-3.2:** Integrate and connect neighborhood trails, sidewalks, and bike paths with the regional trail system.



Move Tucson (2021)

A transportation master plan, identifying a vision for Tucson's mobility future and a blueprint for how to get there.

Active Transportation Goals, Strategies, and Performance Measures

- **Connected.** Remove physical barriers to movement, such as unsafe intersections or network gaps, and find new ways to provide cultural and technological connections that improve residents' access to opportunity.
Strategy. How many modal networks can be improved or further supported.
 - **Performance Metric.** Segments will score points if there are opportunities to improve identified deficiencies in the bicycle, pedestrian, transit, or motor vehicle networks.
- **Optimized.** Make the roadway network available to more people, regardless of mode of travel, and will leverage new technology and tools to make the current system more efficient and effective.
Strategy. What opportunities are available to optimize the network so it can serve more people?
 - **Performance Metric.** Segments will score high for bicycle, pedestrian, and transit projects if there is major excess capacity.



PAG 2045 Regional Mobility and Accessibility Plan Update (2020)

A performance-based, long-range transportation plan for the PAG region with solutions to transportation needs and regional goals.

Active Transportation Goals

- **Maintenance.** Rehabilitate or maintain roadways, bike and pedestrian infrastructure, and transit systems.
- **Safety.** Safety and security for transportation users across the region
- **Multimodal Choices.** A variety of integrated, high-quality, accessible, and interconnected transportation choices to meet all mobility needs and preferences.
- **Performance.** Improved regional mobility and adding system capacity for all modes of transportation where necessary

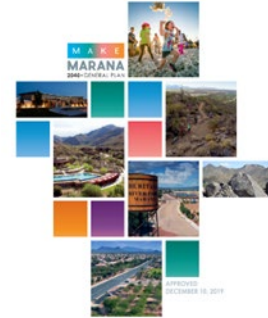


Make Marana 2040 General Plan (2019)

A comprehensive 20-year plan guiding a range of topics such as community growth and transportation in the Town of Marana.

Active Transportation Goals

- **BE 17-2.** Employ infill and redevelopment principals where appropriate to increase walking, bicycling, and transit opportunities.
- **BE 17-3.** Encourage mixed land uses that combine residential, commercial, and employment with access to transit, bicycle, and pedestrian improvements.
- **BE 25-2.** Fund, develop, adopt, and implement an Active Transportation Plan (ATP) providing for a convenient, connected, and safe bicycle and pedestrian network.
- **BE 25-2.** Through the ATP, identify gaps in the bicycle and pedestrian network and recommended improvements, such as bicycle lanes, multi-use lanes, paved shoulders, and shared use paths.
- **BE 25-3.** Identify federal, state, county, regional, local, and private funding sources to plan and implement a safe, connected bicycle and pedestrian network.
- **BE 25-4.** Coordinate with PAG, Regional Transportation Authority (RTA), Pima County, Pinal County, and other metropolitan jurisdictions for regional bicycle system planning, including funding and construction.
- **BE 25-5.** Provide Town representation with regional bicycle planning committees such as Platinum Challenge Task Force and the Tucson-Pima County Bicycle Advisory Committee (TPCBAC).
- **BE 25-6.** Recruit a resident to serve as a community representative on TPCBAC.
- **BE 25-7.** Create a program to disseminate bicycle safety information to all ages of the project.
- **BE 25-8.** Identify best practices for incentivizing the development community to construct and operate bicycle and pedestrian facilities.
- **BE 25-9.** Evaluate and implement amendments to the Town Code to require bicycle facilities, bicycle parking facilities, and other support facilities to the bicycle network.
- **BE 26-1.** Increase community awareness of bicycle safety through community education, including rules of the road and appropriate behavior to foster safer streets for all modes of travel.
- **BE 26-2.** Provide for enhanced bicycle features at major arterial streets and freeways, such as separating facilities from vehicular traffic, buffered bike lanes, signalized crossings, and median refuge areas.
- **BE 26-3.** Ensure that cross-sections for arterial roadways accommodate bike lanes (or paved shoulders as appropriate) or a single shared-use path providing the functions of a sidewalk.
- **BE 26-4.** Ensure cross-sections for collector roadways include bike lanes, multi-use lanes, or paved shoulders as appropriate.
- **BE 26-5.** Create bikeways that increase and enhance connectivity to neighboring jurisdictions.
- **BE 26-6.** Review development plans for access to schools in support of the Safe Routes to School initiative. Identify corridors and improvements to facilitate bicycle access to schools and expand the Safe Route to School initiative to reach every school in Marana.
- **BE 26-7.** Promote or recognize the Juan Batista de Anza National Historic Trail as a special asset, a tourism generator, and an important linear park to be connected to future trails.
- **BE 26-8.** Work with Pima County, the Anza Trail Coalition, the National Park Service, and other partners to identify funding mechanisms for the completion of the Juan Batista de Anza National Historic Trail.



Arizona Strategic Traffic Safety Plan (2019)

A comprehensive plan with strategies and countermeasures to reduce serious injuries and deaths from motor vehicle crashes on all public roads in Arizona.

Active Transportation Goals and Performance Measures

- **Highway Safety Emphasis Area Goal.** Use enforcement, education, and awareness to create a culture of safety in which Arizona road users are always focused and alert.
 - **Performance Metric.** Promote jaywalking ordinances in jurisdictions statewide.
 - **Performance Metric.** Collaborate with state, local, and tribal law enforcement agencies to conduct targeted enforcement in high-pedestrian activity and high-crash areas.
 - **Performance Metric.** Collaborate with state, local, and tribal law enforcement agencies and public health agencies to conduct pedestrian safety education.
- **Pedestrians Emphasis Area Goal.** Create a safer Arizona for all pedestrians through targeted engineering, enforcement, education, and emergency response.
 - **Performance Metric.** Identify and prioritize intersections and segments of state and local roadways with the highest number of pedestrian crashes that can be addressed through infrastructure improvements. Conduct Road Safety Assessments at the locations to identify appropriate countermeasures. Develop and implement projects at the locations.
 - **Performance Metric.** Develop statewide systematic pedestrian safety improvements to identify and prioritize intersections and segments of State and local roadways with geometric and traffic conditions that contribute to pedestrian crashes that can be addressed through infrastructure improvements.
 - **Performance Metric.** Promote and implement processes, practices, and procedures within state and local agencies to incorporate pedestrian safety into roadway improvements funding prioritization processes.
 - **Performance Metric.** Promote requirements for pedestrian safety to be considered during development review processes.
 - **Performance Metric.** Identify and prioritize segments of road with highest number of pedestrian crashes.
 - **Performance Metric.** Develop statewide systemic pedestrian safety improvements program.
 - **Performance Metric.** Collaborate with state, local, and tribal law enforcement to identify high-pedestrian-activity and high-crash areas.
 - **Performance Metric.** Collaborate with state, local, and tribal law enforcement to establish Pedestrian Safety Task Force
 - **Performance Metric.** Establish and promote local and statewide “Pedestrian Safety Month.”
 - **Performance Metric.** Collaborate with state, local, and tribal health agencies to conduct pedestrian safety education programs.



Arizona Department of Transportation (ADOT) Bicyclist Safety Action Plan Update (2018)

A step-by-step plan to address bicycle safety throughout the state highway system.

Active Transportation Goals and Performance Measures

- **Goal.** Reduce annual average number of bicycle crashes.
 - **Performance Metric.** Reduce crashes by 20% by 2022.
 - **Performance Metric.** Fewer than 125 crashes per year, down from 156 per year actuals from 2012-2016



ADOT Pedestrian Safety Action Plan Update (2017)

A strategic plan that uses resources to effectively reduce severe injury and fatal pedestrian-motor vehicle crashes on the Arizona State Highway System.

Active Transportation Goals and Performance Measures

- **Goal 1.** Reduce the frequency of all pedestrian-involved crashes (including fatal, injury, and non-injury) on the SHS by 25% by the year 2025.
- **Goal 2.** Reduce the frequency of pedestrian fatal and incapacitating injury crashes on the state highway system by 25% by the year 2025.

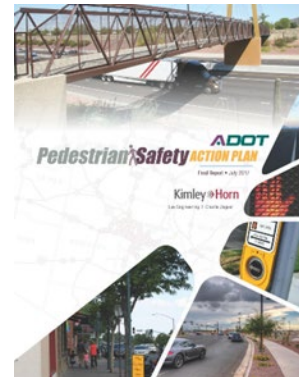
Strategy 1. Reduce crashes at high-crash locations

Strategy 2. Prevent crashes at high-risk crash locations as identified through the risk assessment process

Strategy 3. Reduce pedestrian crossing roadway crash types (vehicle turning and vehicle not turning)

Strategy 4. Reduce the number of pedestrian-involved crashes in which the pedestrian was 20-34 years of age.

Strategy 5. Reduce the number of crashes in dark-not lighted conditions.



Your Voice, Our Future General Plan for Town of Oro Valley (2016)

A plan to guide decisions, both immediate and future, about community improvements, land use, and services.

Active Transportation Goals

- **I.9.** Facilitate regional bikeway planning efforts to ensure that the Town's bikeway system is safe and connects with the neighboring communities and the regional bikeway system.
- **I.10.** Foster opportunities for walking, biking, and mass transit to places where people live, work, shop, and play.



Pima Prospers Comprehensive Plan (2015)

A 20-year comprehensive action plan that focuses on the service, people, and communities in the county, and their larger role in the region and Sun Corridor.

Active Transportation Goals

- **4.1.1.5.** Encourage bicycling and pedestrian safety through education, engineering, enforcement, and evaluation.

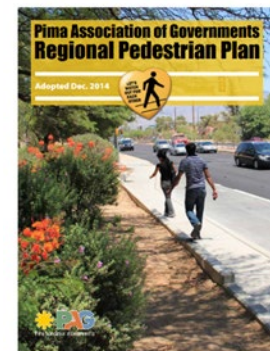


PAG Regional Pedestrian Plan (2014)

A framework to achieve a regional vision of making a safe and walkable region for people of all ages and abilities.

Active Transportation Goals and Performance Measures

- **Goal 1.** A safe region for walking
Strategy 1. Reducing the rate and number of pedestrian crashes, injuries, and casualties
- **Goal 2.** A region where people will choose to walk.
Strategy 1. Increase availability of accessible, compete and connected sidewalks and pedestrian walkways.
Strategy 2. Improve pedestrian comfort by providing more high-quality and attractive walking options.
- **Goal 3.** A well-funded pedestrian system
Strategy 1. Increase and maintain funding for pedestrian programs and projects.

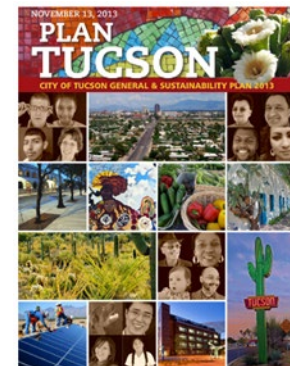


Plan Tucson General and Sustainability Plan (2013)

A long-term policy document intended to guide decisions that shape the city, jobs, land use, transportation, water, and energy resources.

Active Transportation Goals

- **LT13.** Continue to explore and monitor opportunities to increase the use of transit, walking, and bicycles as choices for transportation on a regular basis.
- **LT14.** Create pedestrian and bicycle networks that are continuous and provide safe and convenient alternatives within neighborhoods and for getting to school, work, parks, shopping, services, and other destinations on a regular basis.
- **LT15.** Support the provision of secure storage and of showers and lockers for bicyclists and pedestrians.
- **LT16.** Reduce required motor vehicle parking areas with increased bike facilities for development providing direct access to shared use paths for pedestrians and bicycles.

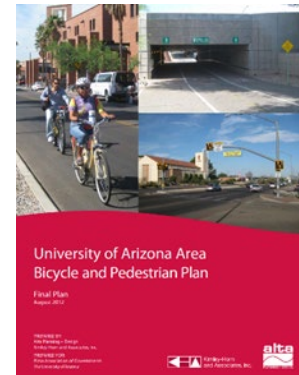


University of Arizona Area Bicycle and Pedestrian Plan (2012)

A plan that aims to improve existing and future bicycle and pedestrian conditions for students, faculty, staff, and visitors of the University of Arizona area.

Active Transportation Goals and Performance Metrics

- **Gap Closure.** Gaps in the bicycle network come in a variety of forms, ranging from a missing link on a roadway to larger geographic areas without bicycle facilities. Gaps in the bikeway network discourage bicycle use because they limit access to key destinations and land uses. Facilities that fill a gap in the existing and proposed bicycle network are of high priority.
 - **Performance Metric.** Fills a gap between two existing Facilities.
- **Connectivity to Existing Facilities.** Proposed bikeways and pedestrian improvements that connect to existing bicycle and pedestrian facilities in the study area increase the convenience of bicycling and walking. Proposed facilities that fit this criterion are of high importance.
 - **Performance Metric.** Provides direct access to an existing bicycle facility.
 - **Performance Metric.** Provides direct access to an existing pedestrian facility.
- **Connectivity to Activity Centers.** Activity centers include major commuter destinations, such as commercial and retail centers, schools, park, and downtown. These locations generate many trips which could be made my bicycling or walking if the proper facilities were available. Bicycle and pedestrian facilities on roadways that connect to activity centers are of priority.
 - **Performance Metric.** Provides direct access to a major trip-generating destination.
 - **Performance Metric.** Provides secondary connectivity to a major trip-generating destination.
- **Connectivity to Multimodal Transportation Centers.** Bicycle and pedestrian facilities that link to modes of public transportation increase the geographical distance that bicyclists and pedestrians are able to travel. Proposed bicycle and pedestrian facilities that connect to transit stops and center improve mobility and are key pieces of the network.
 - **Performance Metric.** Provides direct access to a multimodal transportation center.
- **Safety.** Bicycle and pedestrian facilities have the potential to increase safety by reducing the potential conflicts between bicyclists, pedestrians, and motorists that often result in collisions. Proposed facilities that are located on roadways with past bicycle-automobile or pedestrian-automobile collisions are important.
 - **Performance Metric.** Provides a bicycle facility on a road that experienced one or more bicycle collisions between 2007-2010
 - **Performance Metric.** Provides a pedestrian facility on a roadway that experienced one or more pedestrian collisions between 2007-2010
- **Public Input.** The University of Arizona and PAG solicited public input through a community workshop. Facilities that community members identified as desirable for future bicycle or pedestrian facilities are of priority to the network because they address the needs of the public.
 - **Performance Metric.** Roadway was identified by the public as a desirable for a future facility multiple time.
 - **Performance Metric.** Corridor was identified by the public as a desirable for a future facility multiple time.

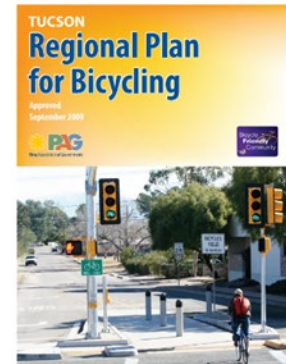


PAG Regional Plan for Bicycling (2009)

A plan to provide for and facilitate more and safer bicycle travel across the Tucson region.

Active Transportation Goals

- **Education.** Educate all road users, especially bicyclists and motorists, on legal, predictable, and safer behavior.
- **Enforcement.** Establish and implement targeted enforcement of specific traffic laws for bicyclists and motorists, based on the documented most frequent bicyclist-motorist crashes.
- **Engineering.** Plan, design, construct and maintain bicycle facilities that meet or exceed accepted standards and guidelines.
- **Encouragement.** Encourage increased use of bicycles for transportation and recreation support organized events that have substantive beneficial economic impacts.



Themes

The reviewed previous plans in and outside of the PAG region included common themes in the vision and goals identified for their active transportation networks, including:

- Collaboration with surrounding agencies to improve active transportation.
- Providing a continuous active transportation network that enhances access to major activity centers.
- Connecting the active transportation network to the transit system to promote use of alternative modes of transportation.
- Improving safety for pedestrian and bicyclists and reducing the number of serious injuries for all road users.

Region-Level Safety Overview



Region-Level Safety Overview

Five-Year Crash Trends

Historical statewide pedestrian and bicyclist-involved crash data was obtained through ADOT’s Arizona Crash Information System (ACIS) for the most recent five-year period (2018-2022). A crash is defined as an incident involving a motorized vehicle that results in either property damage or an injury. Active transportation crash trends were reviewed by time, conditions, and influence to provide a holistic understanding of safety indicators in the region. Safety trends are summarized below.

By Time

Figure 4 shows a total of 1,219 pedestrian crashes and 786 bicyclist crashes over the five-year period. **Figure 5** shows the annual active transportation crashes per year. Pedestrian and bicyclist crashes remained steady over the 5-year period, with both temporarily reducing in 2020, during the COVID-19 pandemic. Both pedestrian and bicyclist crashes increased again in 2021 and 2022. Pedestrian crashes peaked in 2019, reaching 260 crashes, while bicyclist crashes peaked in 2018, reaching 188 crashes.

Figure 4. Active Transportation Crashes by User Type (2018-2022) Figure 5. Active Transportation Crashes by Year (2018-2022)

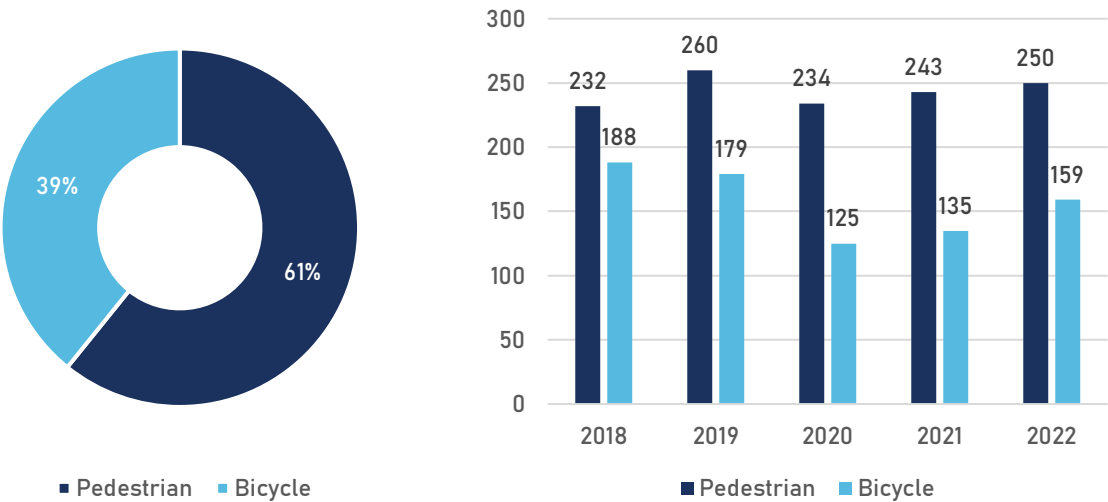


Figure 6 shows the total pedestrian and bicyclist crashes by month for the observed five-year period. Active transportation crashes are more common in the fall and winter months, peaking in October and November. This trend is likely due to decreased outdoor activity during summer months because of high daily temperatures.

Figure 6. Active Transportation Crashes by Month and User Type (2018-2022)

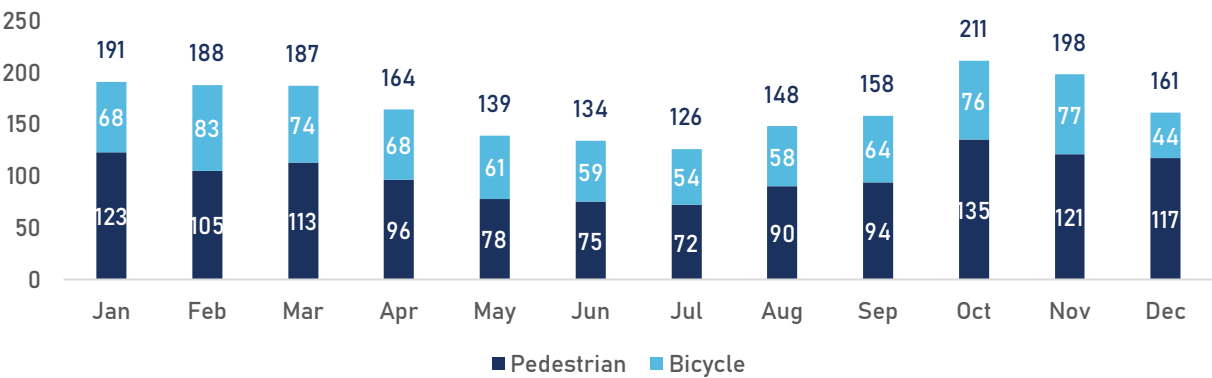
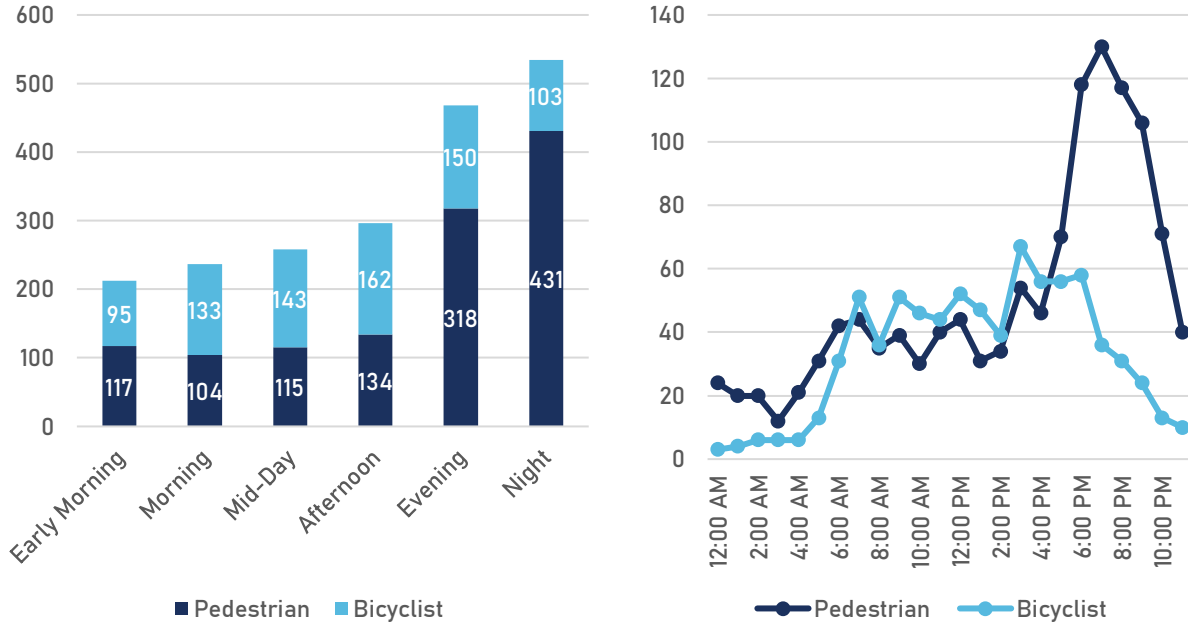


Figure 7 shows pedestrian and bicyclist crashes by time of day. Bicyclist crashes peak from mid-day to evening, with an hourly peak at 3:00 PM. Alternatively, pedestrian crashes most often occur in the evening or overnight, with crashes peaking at 7:00 PM.

Figure 7. Active Transportation Crashes by Time of Day (2018-2022)



By Condition

Figure 8 shows crashes by weather condition for active transportation involved crashes. More than 85% of active transportation crashes occur in clear weather conditions. **Figure 9** shows crashes by lighting condition for pedestrians and bicyclists. Approximately 40% of pedestrian crashes occur in daylight conditions and 38% occur after dark with lighting facilities. Nearly three-quarters of bicyclist crashes occur in the daylight. Bicyclists are nearly twice as likely as a pedestrian to be involved in a crash in the daylight, while pedestrians are nearly three times as likely as bicyclists to be involved in a crash in nighttime conditions.

Figure 8. Active Transportation Crashes by Weather Condition (2018-2022)

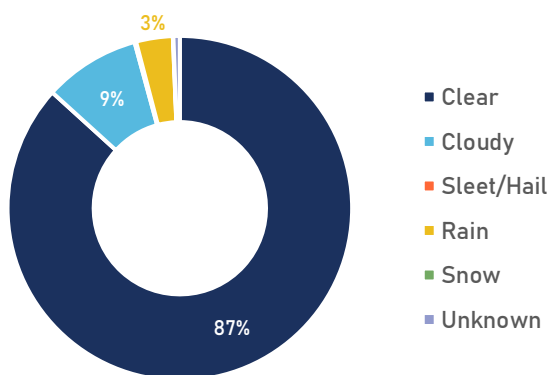
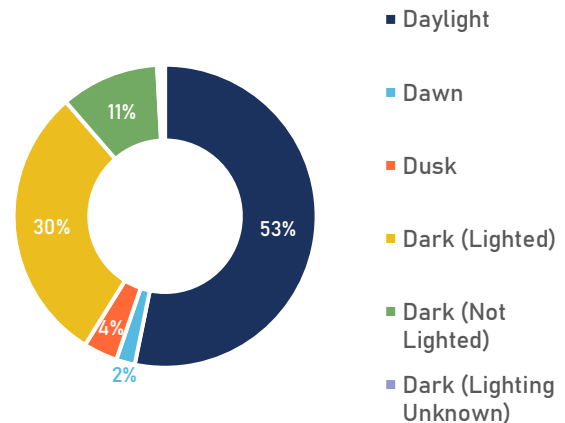
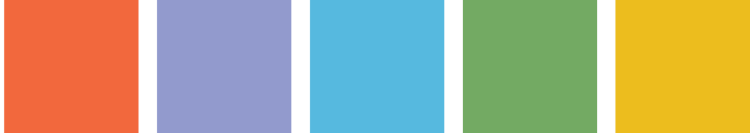


Figure 9. Active Transportation Crashes by Lighting Condition (2018-2022)

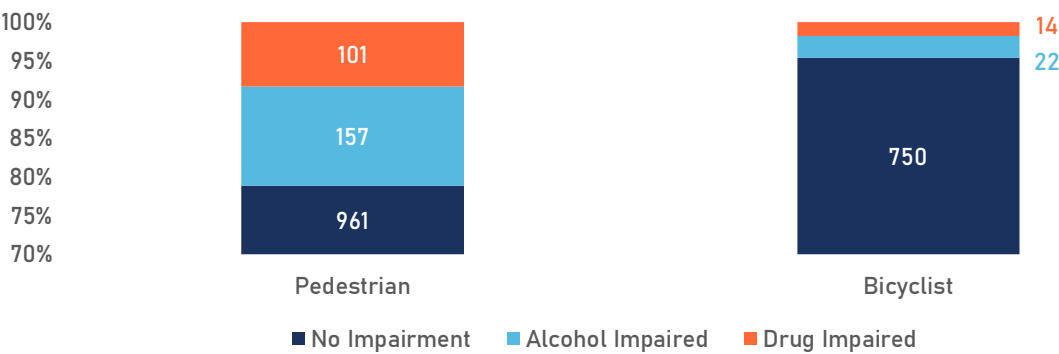




By Influence

Of bicyclist-involved crashes, 81% of bicyclists did not wear a helmet. **Figure 10** shows impairment presence by impairment type for active transportation crashes. Impaired parties in the reviewed data can include pedestrians, bicyclists, or motor vehicle drivers who are under the influence of alcohol or drugs. Of pedestrian-involved crashes 21% of crashes involved an impaired party. Of pedestrian-involved crashes with impairment involved, alcohol impairment was more common than drug impairment. Of bicyclist-involved crashes, 5% of crashes involved an impaired party, with alcohol impairment being more common. All but two bicyclists involved crashes that were drug impairment involved resulted in a serious or fatal injury.

Figure 10. Active Transportation Crashes by Impairment (2018-2022)

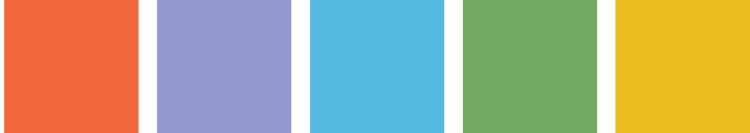


Vulnerable Road User Safety Assessment Key Takeaways

The ADOT Vulnerable Road User Safety Assessment (VRUSA) is a statewide initiative to improve safety for vulnerable road users (VRUs) in Arizona. VRUs include non-motorists, including pedestrians, cyclists, and roadway workers. The ADOT VRUSA considers pedestrians to also include those reliant on personal mobility devices. The assessment evaluates historical crashes involving VRUs, VRU activity levels, locations of underserved populations, and stakeholder consultation to develop strategies and programs to improve VRU safety. Quantitative analysis was performed to identify Safety Improvement Areas (SIAs) in Arizona. SIAs are locations that are likely to require more attention and resources for safety enhancements to improve safety for VRUs than others. SIAs were ranked based on their resulting SIA score, where the higher score represents a greater need for safety enhancements. Safety countermeasures identified for the highest-ranked SIAs are expected to also be applicable statewide as a guide for all communities. Of the 10 identified SIAs, two are in the PAG region, Tucson, and Catalina. Each SIA and its score and rank in the VRUSA is shown in **Table 1**.

Table 1. VRUSA SIAs in the PAG Region

SIA	SIA SCORE	SIA RANK
Tucson	30	4
Catalina	27	9



State Highway Safety Plan Key Takeaways

The 2024 Arizona Strategic Highway Safety Plan (SHSP) is a statewide coordinated plan aimed at reducing fatalities and serious injury crashes on all public roads. The effort requires cooperation from ADOT, local, regional, state, federal, Tribal, non-profit, and private-sector stakeholders. The data-driven plan establishes a statewide vision and goal, informed by five key emphasis areas, all of which impact the PAG region. The defined vision and goal for the SHSP are shown below, and the emphasis areas are shown in **Figure 11**.

VISION: Creating shared responsibility so everyone arrives safely home

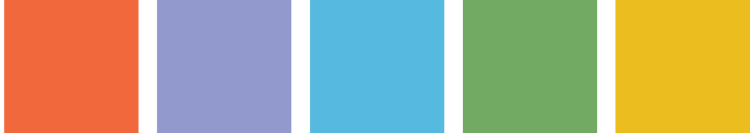
GOAL: Reduce life-altering traffic crashes by 20% by 2030

Figure 11. 2024 SHSP Emphasis Areas

Emphasis Area	Components	% of Statewide Fatalities
Human Behavior	- Alcohol/Drug/Impaired - Distracted/Sleepy - Speeding/Aggressive Driving - No Helmet/No Restraint	74%
Vulnerable Road Users	- Pedestrians - Bicyclists - Worker in Work Zone	25%
Intersections	- Junction-Related - Railroad Crossings	28%
Lane Departure	- Ran Off Road/Overtaken - Environmental (animal, weather)	50%
Tribal Lands		10%

**The sum of percentages exceeds 100% because a crash can pertain to more than one emphasis area*

A suite of strategies and countermeasures for each Emphasis Area were developed to aid jurisdictions in implementing campaigns and improvements to improve transportation safety. The strategies identified in the Vulnerable Road Users Emphasis Area include educational, enforcement, and infrastructure improvements that can improve safety for pedestrians and bicyclists.



Active Transportation Safety Action Plan Key Takeaways

The 2024 ADOT Arizona Active Transportation Safety Action Plan (ATSAP) is a statewide initiative to improve safety for active transportation users throughout the state. The ATSAP applies to the state highway system, which are roads owned or operated by ADOT. The plan establishes goals and recommendations aimed at increasing safety for pedestrians and bicyclists, while also identifying 26 priority locations and countermeasures based on total fatal and serious injury crashes, risk of potential future crashes, and public and stakeholder involvement. Crash data assessed in the ATSAP included active transportation involved crashes on the state highway system from 2013 to 2022. Two of the priority locations are within the PAG region and are summarized in **Table 2**.

Table 2. 2024 ATSAP Priority Locations

Priority Location	Route Number	Route Name	Mile Post Start	Mile Post End	Segment Length	Countermeasure Planning-Level Cost Estimate
PL-1	SR 77	Oracle Rd	69.5	77	7.5	\$2,103,000
PL-8	SR 86	Ajo Way	168	171.63	3.63	\$687,000

Priority Location 1 (SR 77)

Oracle Road, from Miracle Mile (MP 69.5) to Hardy Road (MP 77), has the following safety challenges:



28 pedestrian fatal and serious injury crashes



11 bicyclist serious injury crashes



Most VRU crashes occur at night



50% of pedestrian crashes occur while crossing mid-block

Potential countermeasures identified include:

- High-visibility crosswalks at mid-block locations
- Install sidewalks
- Install lighting
- Reduce curb radii at signalized intersections
- Install leading pedestrian intervals

Priority Location 8 (SR 86)

Ajo Way from just east of Soledad Avenue, at MP 168, to 16th Avenue (MP 171.63), has the following safety challenges:



8 pedestrian fatal and serious injury crashes



5 bicyclist serious injury crashes



Most VRU crashes occur during dusk



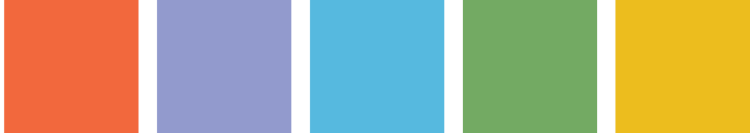
Majority of crashes are not intersection-related

Potential countermeasures identified include:

- Install lighting
- Reduce curb radii at signalized intersections
- Install leading pedestrian intervals

Region-Level Health Overview





Region-Level Health Overview

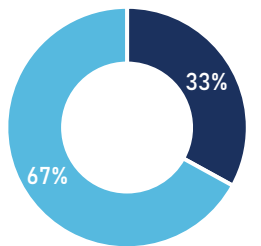
Active transportation provides an opportunity to enhance public health; indexing health outcomes provides a means of targeting investments in areas that stand to benefit most. The health analysis is broken down by variable and Centers for Disease Control (CDC) datasets with those variables:

VARIABLE	DATASET
Obesity	Obesity among adults aged ≥ 18 years (crude prevalence)
Asthma	Asthma among adults aged ≥ 18 years (crude prevalence)
Diabetes	Diabetes among adults aged ≥ 18 years (crude prevalence)
Mental Health	Frequent mental health distress among adults aged ≥ 18 years (crude prevalence) Depression among adults aged ≥ 18 years (crude prevalence)
Cardiovascular Health	High blood pressure among adults aged ≥ 18 years (crude prevalence) Coronary heart disease among adults aged ≥ 18 years (crude prevalence)

In Pima County, the most significant health issues for the region are obesity, depression, and high blood pressure.

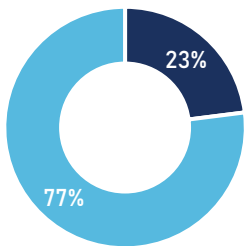
Figure 12, Figure 13, and Figure 14 shows the most significant health issues in the region. Other health measures included in the analysis represented less than 20% of the adult population, including 10.7% of the adult population has asthma, 9.8% of the adult population has diabetes, 17.6% of the adult population experiences frequent mental health distress, and 5.8% of the adult population has coronary heart disease.

Figure 12. Obesity in Pima County



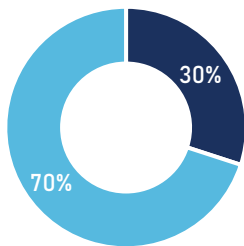
- Considered Obese
- Not Considered Obese

Figure 13. Depression in Pima County



- Experiencing Depression
- Not Experiencing Depression

Figure 14. High Blood Pressure in Pima County



- High Blood Pressure
- Normal Blood Pressure

Stakeholder Engagement





Stakeholder Engagement

The stakeholder engagement process ensures that key partners are involved in the PAG RATP development process. Stakeholder engagement efforts were comprised of engaging the Technical Working Group (TWG) and PAG committees.

Technical Working Group

PAG established a Technical Working Group to guide the development of the RATP, made up of staff from PAG's member agencies. The TWG will assist in reviewing key deliverables, provide advice at key points during the planning process, and coordinate with their respective agencies to provide project updates and advertise public engagement activities. The TWG is comprised of representatives from the following agencies:

- PAG
- Pima County
- City of Tucson
- City of South Tucson
- Town of Marana
- Town of Oro Valley
- Town of Sahuarita
- University of Arizona
- Pascua Yaqui Tribe
- Tohono O'odham Nation
- ADOT

The first of four TWG meetings was held during the development of the vision, goals, and strategies to ensure the resulting statements aligned with not only PAG, but key stakeholders. The meeting was held on April 23rd, 2024, and provided an overview of the project, expectations of the TWG, an in-depth discussion of the draft vision statement, goals, strategies, and performance metrics, and a preview of the illustrative renderings. During the meeting, PAG and the TWG worked through the draft goals, strategies, and performance measures to obtain support from each TWG member. The meeting was recorded and sent to members unable to attend for opportunity to provide comments on the meeting discussion.

PAG Committee Updates

Similar to the TWG, the PAG Transportation Planning Committee (TPC), Management Committee, and Regional Council will be updated throughout the project development process. The first PAG committee update was provided to TPC on September 18, 2024, and introduced the project to the committees and presented key takeaways on the vision, goals, and strategies, illustrative renderings, and public engagement results.

Vision Statement, Goals, and Performance Metrics



Vision Statement, Goals, and Performance Metrics

Based on a review of previous planning efforts, safety trends, health trends, and public feedback, a vision statement, goals, and performance metrics were developed for the PAG RATP. The identified vision, goals, and performance metrics are summarized below.

The greater Tucson region will develop and maintain an active transportation network that is safe, accessible, comfortable, convenient, and desirable for all ages and abilities.



GOAL 1. Promote safe, cohesive, context-appropriate active transportation infrastructure across jurisdictional boundaries.

Strategy 1. Support member agencies in their efforts to incorporate best practice principles into their general plans, development workflows, and other relevant processes.

Strategy 2. Identify locations where improvements can be made to the transition between facilities.

Strategy 3. Support member agencies in their efforts to reduce the frequency and severity of crashes.

Performance Metric. Reduce the rate of active transportation fatalities and serious injuries in the PAG region by 15% by 2030 and 70% by 2055.



GOAL 2. Promote well-maintained active transportation facilities across jurisdictional boundaries and improve the physical condition of these facilities.

Strategy 1. Maintain pavement condition datasets that are accessible to all jurisdictions.

Strategy 2. Periodically review pavement condition data on active transportation facilities.

Strategy 3. Utilize orthophoto, lidar, or other readily available sensor data to measure and track the physical condition of active transportation facilities.

Strategy 4. Develop or utilize existing tools to identify locations in the active transportation network that are vulnerable to flooding.

Performance Metric. Reduce the amount of poor condition pavement to below 20% on the active transportation network by 2055.



GOAL 3. Continually collect and track active transportation data to support data-driven decision making.

Strategy 1. Create a tool to process sensor and crowdsourced data to track and model active transportation travel behavior.

Strategy 2. Leverage each jurisdiction's data collection efforts to share datasets whenever practical.

Strategy 3. Develop regional tools to track safety trends by location and gaps in active transportation facilities.

Strategy 4. Reduce the impacts of heat on users of the active transportation network.

Performance Metric. Increase the miles of pedestrian facilities to 1,500 by 2055.

Performance Metric. Increase the miles of bicycle facilities to 2,000 by 2055.

Performance Metric. Increase the walk and bike mode share by 10% by 2055.

Performance Metric. Establish baseline data and reduce the distance gaps in the active transportation network without shade or a heat refuge to a quarter mile or less in public areas, particularly in areas that experience disproportionate heat impacts.



GOAL 4. Prioritize active transportation infrastructure that provides connections between residential areas, transit facilities, and activity centers. This will provide first- and last-mile walking and biking connections to transit and expand the reach of the active transportation network.

Strategy 1. Support member agencies in increasing the number of housing units served by active transportation facilities.

Strategy 2. Support member agencies in increasing the number of activity centers served by active transportation facilities.

Strategy 3. Support member agencies in increasing the percentage of transit facilities that are served by active transportation facilities.

Strategy 4. Support member agencies in converting short car trips to activity centers to active transportation trips.

***Performance Metric.** Establish baseline data and track the percentage of housing units that are served by (within a quarter mile) an active transportation facility and report to member agencies in conjunction with TIP and RMAP development.*

***Performance Metric.** Establish baseline data and track the percentage of local activity centers that are directly served by active transportation facilities and report to member agencies in conjunction with TIP and RMAP development.*

***Performance Metric.** Establish baseline data and increase the percentage of transit facilities (such as bus stops and transit centers) served directly by sidewalk and bicycle facilities.*

***Performance Metric.** Establish baseline data and track the percentage of trips under 3 miles made with vehicles to activity centers and report to member agencies in conjunction with TIP and RMAP development.*



GOAL 5. Promote an active transportation network that supports mobility, access, health and improved air quality.

Strategy 1. Invest active transportation resources to address network gaps in underserved communities.

Strategy 2. Support jurisdictional partners in their efforts to identify projects which protect vulnerable road users.

Strategy 3. Track data related to heat vulnerability and prioritized improvements in areas with poor health outcomes.

Strategy 4. Ensure users can access healthcare facilities via an active transportation network.

Strategy 5. Promote the use of active transportation to help improve air quality.

***Performance Metric.** Establish baseline data for the mileage of network gaps and reduce these gaps within the preferred RATP high-priority network, particularly in areas with dense populations of vulnerable users.*

***Performance Metric.** Establish baseline data and increase the number of regional projects that serve vulnerable road users identified through either a PAG in-house tool or other sources of data.*

***Performance Metric.** All active transportation projects incorporate heat mitigation measures in areas with identified heat mitigation needs. Establish baseline data where heat mitigation needs exist and report to member agencies in conjunction with TIP and RMAP development to assist with prioritizing projects.*

***Performance Metric.** Establish baseline data and track the number of healthcare facilities directly served by active transportation facilities and report to member agencies in conjunction with RMAP and TIP development.*

***Performance Metric.** Meet the air quality targets identified in the most current approved RMAP.*



GOAL 6. Identify funding opportunities through coordination with member agencies to implement RATP recommendations during the RMAP and TIP development process.

Strategy 1. Support member jurisdictions in their efforts to identify eligible local, regional, state and federal funding sources for high priority projects during the RMAP and TIP development process.

***Performance Metric.** All high-priority RATP projects have at least one potential funding source identified.*

Illustrative Renderings





Illustrative Renderings

To communicate potential types of active transportation facilities that may be used around the PAG region to the public and key stakeholders, illustrative renderings of various active transportation facility types and transformational change renderings were developed.

Facility Type Renderings

Facility type renderings were created for:

- Buffered bike lane (**Figure 15**)
- Parking protected bike lane (**Figure 16**)
- Physically protected bike lane (**Figure 17**)
- Shared-use path (**Figure 18**)
- Raised crosswalk with rectangular rapid flashing beacon (RRFB) (**Figure 19**)
- Two-stage crossing with high-intensity activated crosswalk (HAWK) signal (**Figure 20**)

Figure 15. Buffered Bike Lane Illustrative Rendering





Figure 16. Parking Protected Bike Lane Illustrative Rendering



Figure 17. Physically Protected Bike Lane Illustrative Rendering





Figure 18. Shared-Use Path Illustrative Rendering



Figure 19. Raised Crosswalk with RRFB Illustrative Rendering



Figure 20. Two-Stage Crossing with HAWK Signal Illustrative Rendering



Transformational Change Renderings

Two locations in the PAG region were selected to illustrate what transformational changes to the transportation system could look like through investing in high-quality active transportation infrastructure:

- **Typical suburban arterial-arterial intersection** with wide lanes, multiple turning lanes in each direction, and little in the way of pedestrian or bicycle amenities. The intersection chosen for this intersection type is Swan Road and Sunrise Drive in unincorporated Pima County. The transformational changes made include applying a protected intersection for bicycles, channelized right-turn islands with raised crosswalks to make pedestrians and cyclists more visible and reduce crossing distances at the intersection, medians that serve as pedestrian refuges, and protected bicycle lanes at sidewalk height to increase separation from vehicles. The current condition of the intersection is shown in **Figure 21** and the transformational change is shown in **Figure 22**.
- **Typical urban arterial-collector intersection** with older designs for pedestrian and bicycle facilities, turn lanes or channelized turns for some movements, more travel lanes than are necessary, and unregulated parking that impact the sidewalks. The intersection chosen for this intersection type is 12th Avenue and 44th Street in the City of Tucson. The transformational changes made include applying textured pavement to highlight where pedestrians will be in the intersection, protected bicycle facilities in place of excess vehicular travel lanes, a raised crosswalk in the channelized right-turn lane to slow vehicles and make pedestrians more visible, a median with pedestrian refuge to replace an excess left-turn lane, narrowed curb radii to reduce turning speeds, and public art incorporated into the design to increase the sense of place. The current condition of the intersection is shown in **Figure 23** and the transformational change is shown in **Figure 24**.

The renderings below are for illustrative purposes only. Improvements are not planned, funded, or reviewed for compliance with jurisdictional requirements.



Figure 21. Typical Suburban Arterial-Arterial Intersection Current Conditions



Figure 22. Typical Suburban Arterial-Arterial Intersection Transformational Change Illustrative Rendering





Figure 23. Typical Urban Arterial-Collector Intersection Current Conditions



Figure 24. Typical Urban Arterial-Collector Intersection Transformational Change Illustrative Rendering



REGIONAL ACTIVE TRANSPORTATION PLAN

