



A SUSTAINABLE
Sonoran Desert:

PHOENIX'S POLICY PATH

VISIT
PHOENIX

SEPTEMBER 2024

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WELCOME

to the Visit Phoenix Sustainability Guide, a comprehensive resource addressing a range of critical destination topics that shape our vibrant city and region. In this guide, we embark on a journey to discover how Greater Phoenix is a shining example of sustainable and responsible tourism. With our unique blend of natural beauty, cultural richness and modern amenities, we offer an unparalleled backdrop for your events, and we are deeply committed to ensuring that your experiences here are not only memorable, but also have a positive, lasting impact on the environment and the community.

This guide is your gateway to a new era of tourism in Phoenix, one that prioritizes environmental stewardship, cultural appreciation and social responsibility – we will explore how Greater Phoenix is setting the standard for this new era, and how together, we will create a destination where events, meetings, conferences and mega-events are anchored in inspiration and connection, all while leaving a positive footprint for our beloved region.



KEY TAKEAWAYS





THE PHOENIX CONVENTION CENTER & PHOENIX SKY HARBOR INTERNATIONAL AIRPORT

The Phoenix Convention Center and Phoenix Sky Harbor International Airport remain vital to our industry, and they continue to establish themselves as stewards of sustainability. The Phoenix Convention Center holds itself to strict standards by focusing their efforts on an eight-pronged approach: Plant food, sustainable seating, heavyweight recycling, landfill friendly, low-impact public transportation, structural sustainability, LED technology and locally sourced food. Similarly, Sky Harbor's efforts are anchored in a seven-topic approach: Air quality, carbon emissions, energy efficiency, community outreach, policies and contracts, waste and recycling and water conservation. The Phoenix Convention Center was ranked a top 10 convention center in the country by the Wall Street Journal in 2023, in addition to winning Meetings Today's 2023 Best Convention Center Award as well as securing GBAC STAR accreditation in 2020. Sky Harbor has also garnered several accolades – most recently being named top airport in the nation among large airports by the Wall Street Journal, in addition to being recognized by the Airports Council International Airport Accreditation Program, receiving the Level 4 "Transformation Rating" (Phoenix Sky Harbor is currently only one of four airports in the U.S. to have achieved the Level 4 or 4+ rating tier).



2050 ENVIRONMENTAL SUSTAINABILITY GOALS

In 2016, Phoenix City Council adopted eight 2050 Environmental Sustainability Goals that articulate desired long-term environmental outcomes that would fulfill the General Plans of a Sustainable Desert City. The 2050 goals focus on water stewardship, transportation, waste, building and land use, clean air, parks/preserves/open spaces, and heat mitigation. Along with environmental metrics, additional social and economic goals are being considered that would best articulate the community's desired outcomes to become a socially, economically and environmentally resilient city.



2023 PHOENIX GO BOND PROGRAM

The \$500 million 2023 Phoenix GO Bond Program was approved by City Council in 2022, with voters approving the program in November of 2023. GO Bond programs help to fund critical infrastructure and rehabilitation needs of city facilities such as parks, libraries, fire and police stations, affordable housing, streets and storm drains. Of the \$500 million allocated, \$26 million is earmarked for environment and sustainability, specifically for energy and water efficiency and renewable upgrades at city facilities, heat resiliency, brownfield redevelopment for city-owned properties and city vehicle electrification stations.



WAYMO

Waymo continues to shine in Greater Phoenix, showing off their innovations in autonomous vehicle world while also providing a safe, efficient and sustainable ride-sharing service, Waymo One. With the influx of mega-events that continue to take place in the city and region, Waymo proves to be an immensely popular point of interest/experience for visitors from around the world. Through their technology, accessibility, and commitment to safety, sustainability and inclusivity, Waymo will continue to play a critical role in bringing the world to our doorstep.

A scenic view of Phoenix, Arizona, featuring a large, rugged mountain in the background under a sunset sky. The foreground shows a valley with green trees and a rocky hillside with cacti. A large, stylized, geometric logo is overlaid on the right side of the image.

PHOENIX
CONVENTION
CENTER
and
SKY HARBOR
INTERNATIONAL
AIRPORT

The Phoenix Convention Center and Sky Harbor International Airport are cornerstones of our tourism industry. Together, they create a symbiotic relationship that positions Phoenix as a premier destination; the convention center drawing visitors for events and conferences showcasing the city’s capacity for hosting diverse and impactful gatherings, and Sky Harbor facilitating the smooth and efficient movement of visitors from around the world ensuring the city is accessible and inviting. These two anchors of our city and region have played a major role in shaping our reputation as a dynamic and welcoming destination that contribute to our economic growth and cultural vibrancy, and more so, have an unwavering commitment to sustainability.

PHOENIX CONVENTION CENTER

The Phoenix Convention Center holds itself to the highest standard of sustainability. Why? Because the future of Phoenix depends on it. Through thoughtful, green thinking and design, they’ve achieved their goal of a premier meeting and event space that will withstand the environmental tests of the future.





PLANT FOOD

One of the biggest contributors to climate change is carbon released from wasted food. PCC’s catering partner, Aventura, participates in the Waste Not recycling program, which sends leftover food to food banks. This cuts down on carbon emissions and ensure that food goes to people who need it most.

Fun fact: Over 41 tons of PCC’s compost feeds plants in city parks.



SUSTAINABLE SEATING

Whenever possible, PCC chooses the most sustainable option for their purchases, and is dedicated to using environmentally friendly cleaning solutions and 90% of cleaning supplies purchased are sustainable.

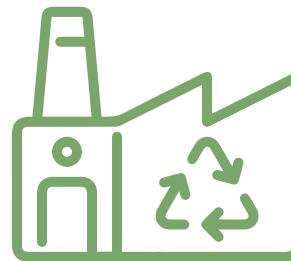
Fun fact: PCC purchased 31,000 chairs made from recycled car battery casings and seatbelts.



HEAVYWEIGHT RECYCLERS

PCC’s comprehensive recycling program provides recycling containers throughout the campus to collect paper, plastic, cardboard and glass.

Fun fact: The program also uses recycled and biodegradable materials in daily operations, and diverts more than 460 tons of waste from landfills every year.



LANDFILL FRIENDLY

Our catering partner takes great care to ensure that PCC creates as little reusable waste as possible.

Fun fact: In PCC’s daily operations, they utilize reusable China and silverware and 85% of all disposable dishware and cutlery are biodegradable.



TRAVEL LIGHT

Valley Metro Light Rail is the anchor of low-impact public transportation in Phoenix. The light rail line has a dedicated stop at the Phoenix Convention Center and is just a short walk to Phoenix's three main convention hotels.

Fun fact: The light rail provides access to and from Phoenix Sky Harbor International Airport, allowing visitors to skip renting a car, reducing the city's carbon footprint.



CERTIFIABLY GREEN

PCC took great care in ensuring that environmentally responsible materials were used in its construction. In addition, energy-star certified roofing materials along with the addition of underground parking have reduced PCCs impact on the urban heat island effect in Phoenix.

Fun fact: PCC received both an IACC Green Certification and LEED Silver Certification for environmentally friendly construction.



LED TECHNOLOGY

PCC conducted a complete lighting efficiency replacement project in the north and west buildings in 2023. This project entailed converting all existing lights to LED technology in the exhibit halls, ballrooms, meeting rooms and public spaces.

Fun fact: PCC's new LED technology is estimated to generate \$12.6 million in savings over the next 20 years.



HOME GROWN

Fresh, local food and produce is a huge part of PCC's sustainability efforts.

Fun fact: PCC's catering partner works with local growers to provide fresh, organic produce and free-range chicken to PCC visitors.

RESOURCES

[Phoenix Convention Center Articles and Awards](#)



PHOENIX SKY HARBOR INTERNATIONAL AIRPORT

The City of Phoenix Aviation Department is committed to ensuring the Phoenix airports are Future Friendly and enhance the communities we serve by placing a high emphasis on sustainability – an approach that balances economic vitality with environmental and social responsibility. The Aviation Department’s Sustainability Management Plan serves as the guiding document for incorporating sustainability in airport activities.

AIR QUALITY

Due to the region’s population, topography and meteorological conditions, dust and other air pollutants degrade air quality. Activities at an airport such as the use of fossil fuels in vehicles, can contribute to emissions. Improving air quality is a priority for the Aviation Department as demonstrated in the long history of voluntary actions. Many of these initiatives also support the Aviation Department’s focus to reduce carbon emissions.

- Emissions standards have been incorporated into ground transportation contracts since the 1990’s. Other opportunities to incorporate standards in contracts or in the Aviation Department’s vehicle or equipment upgrades are evaluated and implemented where feasible.
- The PHX Sky Train® has been expanded to the full extent of its service, from the Valley Metro Light Rail to all terminals to the Rental Car Center, replacing the use of fossil-fuel powered vehicles.
- Among City departments, the Aviation Department fleet uses the highest percentage of alternative fuels and is prepared to invest in electric vehicles as a next step.
- Electric charging stations continue to be installed. The Aviation Department has partnered with airlines to replace diesel-powered equipment and plans to continue to do so.
- The Trip Fee program imposes a charge on ground transportation providers accessing Sky Harbor, reducing airport roadway congestion and ground transportation vehicle “circling” while waiting for passenger pickups.

- Other best practices that reduce air contaminants by limiting vehicles accessing the airport are the use of passenger pick-up cell phone lots, free bus passes for the Aviation Department employees and some tenant employees, and Express Pay options in garages.
- To reduce aircraft emissions while on the ground, airline partners are encouraged to follow a single engine taxi practice. Sky Harbor also has ground power and air at passenger bridges in place of commonly used fuel-driven equipment.

CARBON EMISSIONS

The latest science indicates the global community must drastically reduce human-made carbon (i.e., greenhouse gas) emissions to avoid major negative climate impacts. Around airports, carbon emissions are produced primarily from the use of fossil fuels for electricity, vehicles and aircraft. Since 2014, energy and air quality-related initiatives have resulted in an annual reduction of over 30,000 tons of carbon emissions despite growth. The Aviation Department continues to take the responsibility of climate protection seriously by committing to achieve Net Zero Carbon by 2040.

- **Roadmap to Zero Carbon**
 - The Aviation Department developed the Roadmap to Net Zero Carbon that identifies prioritized strategies for achieving the long-term carbon goal. The single most important strategy is the development of a carbon-free energy system in the short-term by reducing electricity demand through implementing high-impact energy conservation measures, developing additional on-site solar and financing renewable energy. In the mid-term, the Roadmap identifies addressing emission sources that are more difficult to decarbonize, such as airport-owned fleet vehicles, before pursuing carbon removal technologies for residual emissions. The Roadmap then includes maintaining the net zero carbon status long-term to ensure a sustained approach.
- **Airport Carbon Accreditation Program**
 - In 2016, Sky Harbor was one of the first airports in North America to join the voluntary Airport Carbon Accreditation Program – the only internationally-recognized carbon management certification program for airports. The program involves developing annual carbon footprint reports, setting carbon reduction targets, achieving annual emissions reductions for airport-controlled sources, partnering with third parties on carbon emission reduction initiatives and undergoing third-party verification of program requirements. Sky Harbor has advanced through the program to report at Level 4 – Transformation, which focuses on aligning carbon management ambition with global climate goals. Sky Harbor is one of only four airports in the United States to achieve this goal.

ENERGY

Energy is used extensively at an airport to power key equipment, lighting and cooling systems. Increasing the efficiency of these systems leads to decreased costs and associated carbon emissions from the generation source of energy purchased.

Since 2014, the Aviation Department has reduced the annual electricity consumption by over 16 million kwh despite growth. Plans focus on reducing energy demand and developing a carbon-free energy system as part of a comprehensive strategy identified in the Roadmap to Net Zero Carbon.



- **On-site Renewable Energy**
 - Solar photovoltaic arrays have been installed at the Rental Car Center and East Economy Parking Garages, as well as the Aviation Headquarters Building amounting to nearly 6 megawatts of on-site renewable energy, the equivalent of powering over 650 homes for a year. Additional arrays are planned for installation at all three City of Phoenix airports.
- **Building Energy Efficiency**
 - New and renovated Aviation Department facilities are certified to high energy efficiency rating systems certified by LEED, which is a globally recognized symbol of sustainability achievement and leadership. Recently the Sky Harbor Command Center achieved LEED Gold and the Terminal 3 Modernization achieved LEED Silver. The PHX Sky Train® expansion received LEED Silver and/or Envision certifications for each stage.

- **Mechanical Systems Improvements**

- The Aviation Department continues to make energy-efficient upgrades to the building automation controls, Variable Frequency Drives (VFDs), fault detection commissioning software and chiller plant optimization software. Making these upgrades helps reduce energy consumption and costs to the HVAC cooling system.

- **Lighting Replacement Program**

- Older lighting fixtures have been replaced with energy-efficient light-emitting diode (LED) fixtures and lighting control systems inside Terminal 4, Terminal 4 Garage, East Economy Garages and on the airfield. Annual energy savings of over one million dollars were achieved from the lighting conversions. The Rental Car Center is undergoing a new (LED) lighting conversion project to be completed by the end of 2023.

OUTREACH

Supporting passengers, employees, tenants and the local community is a key component of the Aviation Department's culture. Phoenix Sky Harbor is known as America's Friendliest Airport® and that motto guides the Aviation Department's efforts to enhance social sustainability.

- **Local Community**

- The Aviation Department plays a positive, active role in the Phoenix community. The Aviation Department provides aviation industry training for business leaders, conducts extensive noise mitigation outreach to neighborhoods around Phoenix Sky Harbor.

- **School Partnerships**
 - The Aviation Department works with local high schools to bring real-world airport applications of Science, Technology, Engineering, and Math (STEM) to students. STEM is a national education priority, and airports serve as examples of science and technology in action.
- **Business Partners**
 - The Aviation Department’s Sustainability Management Plan expands business partner outreach efforts to support the sustainability goals of its corporate partners to recycle waste, conserve water, improve energy efficiency, reduce carbon emissions and provide community service opportunities for their staff.

POLICIES AND CONTRACTS

Policies guide the Aviation Department’s business decisions while contracts are how those business decisions are implemented. Integrating sustainability into policies and contracts allows the Aviation Department to coordinate efforts with suppliers, tenants and other business partners.

- New and renovated Aviation Department facilities are certified to sustainability rating systems (i.e., LEED Silver and/or Envision certified).
- The Design and Construction Services Green Guide is implemented for applicable heavy civil projects.
- Emissions standards have been incorporated in ground transportation contracts since the 1990’s.
- The Trip Fee Program for ground transportation providers servicing airport passengers is now fully implemented. This results in reduced on-airport vehicle movement and gives a fee reduction for alternative fueled or electric vehicles.
- Sustainability is promoted during tenant construction projects via the Tenant Improvement Handbook.

WASTE AND RECYCLING

There is a lot that happens at an airport, much of which results in some sort of waste, whether it is from passengers grabbing a meal on the go, restaurants and shop owners maintaining inventories, cargo handlers moving goods, or aircraft food service.

With proper sorting and handling, some waste can be recycled or reused rather than being sent to landfills. This creates cost savings and is a way to minimize the impact of airport operations on the environment.

Inside the airport terminal, passengers have access to recycling bins in concourses, at security checkpoints, and in food court areas. Food and beverage and retail businesses recycle a wide range of pre-consumer materials, and airlines recycle deplaned waste. Our recycling program follows the City of Phoenix guidelines to keep our message consistent.

The Aviation Department has been able to almost double the rate of waste diverted from the landfill in the last 10 years. The Aviation Department plans to achieve Zero Waste by 2050 through emphasis on the circular economy focusing on the use of less raw material, reusing and repairing before recycling, and procuring for longevity.

Waste reduction and recycling programs provide outreach and coordination with airport staff, tenants, and business partners to reduce airport solid waste generation and minimize contributions to landfill. Inside the airport terminal, passengers have access to recycling bins in concourses, at security checkpoints, and in food court areas. Food and beverage and retail businesses recycle a wide range of pre-consumer materials, and airlines recycle deplaned waste.

WATER CONSERVATION

The Phoenix region's arid, hot climate places a significant premium on water. Conserving water is essential for the long-term sustainability of the Phoenix metropolitan area. Most water consumption in this environment occurs because of irrigating landscape, circulating water for cooling, and daily use in restrooms and restaurants.

Since 2014, the Aviation Department has aggressively minimized water consumption, resulting in an annual reduction of over 50 million gallons. Guided by a Drought Management Plan, further reductions are planned, and water consumption is closely monitored.

- **Cooling Towers**
 - Installation of new water treatment technology in cooling towers have resulted in significant water savings as the technology halves the amount of cooling tower water used through recirculation and is also anticipated to prolong equipment life while reducing the use of chemical additives.
- **Xeriscape Landscape**
 - The transition from turf to xeriscape and desert vegetation was completed in 2019, saving labor and material costs and more than 5 million gallons of water annually. This project was the catalyst to transition to smart irrigation controllers which check soil moisture and only apply water as needed. The controllers also detect leaks, automatically shutting off and sending a notification.
- **Building Water Efficiency**
 - Buildings are designed in accordance with sustainability rating systems that prioritize water efficiency. Building restrooms are retrofitted with low-flow plumbing fixtures and automatic shutoff valves and procedures to keep these low-flow fixtures in good repair are provided to maintenance staff.

RESOURCES

[Press Release: Phoenix Sky Harbor Claims Top Honors](#)

[Press Release: Future Friendly Airport Achieves Level 4 Airport Carbon Accreditation and Releases Ambitious Roadmap to Net Zero Carbon](#)

[Press Release: Phoenix Sky Harbor's Future Friendly Sustainability Goals Hit High Marks](#)

2050 ENVIRONMENTAL SUSTAINABILITY GOALS



After an extensive community consultation process, on April 12, 2016, Phoenix City Council adopted eight 2050 Environmental Sustainability goals that articulate the community's desired long term environmental outcomes that would fulfill the General Plan aspirations of a Sustainable Desert City.

With these long-term desired outcomes defined, planning is underway to identify additional short and mid-term goals and metrics to be included in the next update to the General Plan for the community's and Council's consideration. Along with environmental metrics, additional social and economic goals are being considered that would best articulate the community's desired outcomes to become a socially, economically and environmentally Resilient City. The 2050 Environmental Sustainability goals focus on the following:

- Water Stewardship
- Transportation
- Waste
- Building and Land Use
- Clean Air
- Parks, Preserves and Open Spaces
- Heat Mitigation

Additionally, the City of Phoenix has implemented the [ESG Dashboard](#) to provide the public with comprehensive, easy-to-understand information about the Environmental, Social and Governance efforts of the city. ESG refers to three measurement areas representing both opportunities and potential risks to a community's sustainability and financial well-being. E represents exposure to climate risk and other environmental factors, S represents long-term social factors, and G represents governance related factors.

WATER STEWARDSHIP: MAINTAINING A CLEAN AND RELIABLE 100-YEAR SUPPLY OF WATER

The city of Phoenix provides drinking water to more than 1.6 million people within our 540 square-mile service area. Phoenix is committed to providing the highest quality drinking water and service to our customers. The 2050 goal, essentially a perpetual one, is to provide a clean and reliable 100-year supply of water. The City of Phoenix has been proactive over the last century building the necessary infrastructure and systems to provide a clean and reliable supply of water for the foreseeable future. Phoenix's water management is exemplified through its water conservation programs (in partnership with [Water, Use It Wisely](#)) and through three action areas of which it has been a long-established national leader:

Groundwater Management

Supported by the nation-leading Groundwater Management Act of 1980, Phoenix is a net-positive contributor to groundwater using only 2/3 of its allocation from the Colorado River and diverting the other 1/3 toward groundwater recharge.

Wastewater Management

Phoenix recycles an amazing 89% of its wastewater for uses, such as irrigation and cooling for the Palo Verde Nuclear Plant. Phoenix also captures methane emissions from wastewater treatment and is currently building a facility to generate renewable natural gas from the wastewater treatment for use in vehicles.

Water and Wastewater Innovation

Phoenix is an established leader in water innovation and was recognized recently for three innovative projects: the \$6 million annual Colorado Water Resiliency Fund, the "Tucson-Exchange" where Phoenix stores water resources underground in Tucson to be used during low water years, and the Tres Rios Wetlands--where treated wastewater undergoes a final polishing through a constructed wetlands creating a vibrant ecosystem.

Future innovation will focus on building additional storage capacity, upgrading infrastructure to improve resilience, and reducing system leakage by employing best practice tools for water management.

WHAT ARE WE DOING NOW?

The city, which produces about 110 billion gallons of water annually, tests it for nearly 200 substances and continuously monitors it to ensure that it meets the rigorous standards set by government regulators. Phoenix has exceeded the sustainability requirements of the State of Arizona. The city reduced its groundwater usage to a minimum and is planning for a sustainable yield, as well as its assured 100-year supply, under conditions of long-term drought and global climate change – not just under normal conditions.

WATER RESOURCES AND CONSERVATION

Phoenix has had an ample water supply for many years, but we encourage our users to conserve water every day. Over the past 20 years, Phoenix's per person water usage has dropped 20 percent. Total water use in Phoenix averages what it was 10 years ago. Water conservation is promoted as a lifestyle in Phoenix and we encourage customers to think about water every time they use it. Through these efforts and as we plan for the future, Phoenix water supplies continue to keep pace with demand.

[More on Water Resources and Conservation](#)



WATER RESOURCE PLANNING

Phoenix's diverse water supply portfolio, greater conservation and efficient management of supplies combine to minimize the impact of drought on customers. However, with a growing population and the possibility of impacts from climate change, facing the droughts of the future could be a tough challenge. The 2011 Water Resources Plan looks ahead and addresses the risks and potential challenges the city may face in the coming decades. The city continues to be a leader in water management with innovative, proactive efforts to ensure Phoenix's water supply is sustainable and resilient in the face of drought with the establishment of the Colorado River Resiliency Fund and a regional partnership with Tucson for water storage.

COLORADO RIVER RESILIENCY FUND

A Colorado River Resiliency Fund was established in 2014 with an average of about \$5.5 million a year. The fund will allow the city to, among other things; take part in sharing wells with local water utility partners and to store the city's unused Colorado River water in underground recharge facilities. The city also could use the fund for shortage-year lease options with users who hold higher-priority waters rights on the Colorado River, as well as for future expansion of the Colorado River System Conservation Program. The new resiliency fund will act as a kind of insurance policy against shortages.

PHOENIX-TUCSON WATER STORAGE REGIONAL PARTNERSHIP

Phoenix entered into unprecedented agreements with the City of Tucson and the Metropolitan Domestic Water Improvement District in Tucson to store some of its unused Colorado River water in Tucson aquifers – water that Phoenix would otherwise lose and see go to another water user. Under the agreements, during future shortages on the Colorado, the City of Tucson and Metro Water will pump the stored water out of their aquifers and deliver it to their customers. In exchange, both Tucson water providers will order a portion of their Colorado River water for delivery to Phoenix water treatment plants, and ultimately, Phoenix customers. The regional partnership aims to increase the reliability of Phoenix's Colorado River water supply over the long term, while providing near-term benefits to aquifers in Pima County by increasing their groundwater levels

LAKE PLEASANT WATER TREATMENT PLANT

The city also incorporates other sustainability best practices into its operations and recently installed a 7.5 megawatt solar voltaic system at the Lake Pleasant Water Treatment Plant. The facility generates 70 percent of the plant's electrical needs.

[Learn more about the 2021 Water Resource Plan](#)

TRANSPORTATION: MAKE WALKING, CYCLING AND TRANSIT COMMONLY USED AND ENJOYED IN EVERY PHOENIX NEIGHBORHOOD

Our goal by 2050 is to make walking, cycling, and transit commonly used and enjoyed in every Phoenix neighborhood. This goal will result in 90% of the population living within one-half mile of transit and 40% of the population choosing to commute by walking, biking, or transit.

Currently, 86% of the population lives with one-half mile of transit, while less than 10% of the population currently commutes by walking, biking or transit.

The desired outcome of a sustainable transportation system includes making walking, cycling, and transit commonly used and enjoyed in every Phoenix neighborhood. This will be accomplished through two key actions:



- **Implementing the Transportation 2050 Plan which includes:**
 - Tripling the amount of light rail miles to 60
 - Allowing 90% of the population to be a 10-minute walk from transit through the expansion of routes and service frequency (and shaded bus stops)
 - Creating 300 miles of walkable bike paths, greenways and vibrant urban canal paths
 - Encouraging walking and biking, and expanding the bike share system
- **Lowering the carbon intensity of the current transportation system by 80% by:**
 - Developing 15 vibrant compact complete centers throughout the city to provide the majority of services residents need within their local community
 - Encouraging environmentally friendly transportation modes and providing infrastructure for electric vehicles and low carbon fuel vehicles.

WHAT ARE WE DOING NOW?

On Aug. 25, 2015, Phoenix voters approved [Transportation 2050](#) and made a strong statement about the importance of expanding investment in Phoenix for bus service, light rail construction and street improvements. The previous transit plan, known as T2000, was a voter-approved tax that primarily funded transit service in Phoenix. Now broader and more comprehensive, the Transportation 2050 plan places additional emphasis on street needs including; street maintenance, new pavement, bike lanes, sidewalks and ADA accessibility which will all compliment the increase in transit services.

The Transportation 2050 plan was developed by a citizen-led committee of transportation experts and community advocates and addresses a wide array of concerns expressed by residents who drive, bike, walk and ride transit service. The 35-year citywide street and transit improvement plan, which became effective Jan. 1, 2016, will triple the number of light rail miles in Phoenix by adding 42 miles of across the city, provide late night bus and Dial-a-Ride service citywide, and will directly and indirectly benefit every street in Phoenix.

Street Maintenance

Through Transportation 2050, Phoenix's arterial street maintenance cycle will be cut nearly in half, from 65 years to 33 years. The use of Transportation 2050 funds to implement these roadway improvements will also

enable the leveraging of current resources to perform additional pavement maintenance on collector and local streets. Visit the [Pavement Preservation Program page](#) for more information about paving schedules, prioritization and techniques.

Mobility Improvements Program

Due to the significant commitment to construct new bicycle and pedestrian facilities in the T2050 Plan, **135 miles of new sidewalks and 1,080 miles of new bike lanes**, a separate T2050 Mobility Improvements Program was established to implement additional projects that increase Americans with Disabilities Act (ADA) accessibility and mobility through construction of new sidewalks and multi-modal connectivity through provision of new bicycle facilities.

Unlike other T2050 projects and programs focused specifically on major streets (arterials and major collectors), Mobility Improvements Program funding will be used for mobility projects on all streets (arterial, collector and local), with a particular emphasis on improving connectivity and access to major transportation and transit corridors. Visit the [Mobility Improvements Program page](#) for more information on the status of the program.

New and Expanded Major Streets Program

Transportation 2050 will provide an estimated \$240 million for major street improvement projects, such as new bridges and new roads, to help connect and complete the city's roadway network. Visit the [New and Expanded Major Streets Program page](#) for information.

Light Rail

Transit improvements entail tripling the number of light rail miles in Phoenix by adding 42 miles of high capacity corridors across the city. Connections to educational institutions are a key element of Transportation 2050. Light rail corridors will provide service to Grand Canyon University and ASU West, linking ASU and U of A campuses in downtown Phoenix to the Valley's current 20-mile light rail line.

New Bus Service

In addition to new light rail corridors, Transportation 2050 will build out the majority of the city's bus service network including longer hours of operation and introduce Bus Rapid Transit (BRT). The initial BRT corridor was approved in 2022. Learn about the BRT latest at phoenix.gov/BRT. Also, check out the current news about the Phoenix Neighborhood Transit Study at phoenix.gov/NeighborhoodTransit.

Technology Amenities

Another key aspect of the plan is funding for infrastructure that improves the passenger experience, whether related to better technology such as reloadable fare cards, Wi-Fi technology on transit vehicles, and real-time trip planning to shade structures at all bus stops citywide.

WASTE: CREATE ZERO WASTE THROUGH PARTICIPATION IN THE CIRCULAR ECONOMY

Over one million tons of solid waste is taken to the city's SR85 Landfill each year.

Approximately half is from residences and the other half from commercial entities like schools, apartments, factories, stores and offices.

This total amount and volume of material could fill Chase Field top to bottom at least seven times each year!

It is also equal to about one ton of garbage per resident per year or 28 full garbage curbside containers per year.



In 2050, Phoenix will create ZERO WASTE through participation in the "Circular Economy." In the short term, we will proceed on the target to divert 40% of waste by 2020. Everything is technically recyclable, but the cost is prohibitive for many products used today. To move toward Zero Waste by 2050, three key actions are needed:

- Expanding the current recycling program to remove commonly recycled products from the waste stream (and reducing the number of non-recyclable products from the recycle bins) through public education and awareness campaigns and new programs that increase access to recycling services for residents and businesses.
- Increasing the number of products recyclable by incubating local businesses to capture new products from the waste stream. The City of Phoenix has established the Resource Innovation Campus at the 91 Ave Waste Transfer Station to supporting new businesses, and is also constructing a new Compost Facility for the processing of green waste and organics.
- Supporting the transition to a Circular Economy and encouraging the retail industry to provide products that are either 100% recyclable or able to be repurposed at end of life.

WHAT ARE WE DOING NOW?

[The Zero Waste Team](#) is an exceptional source of recycling education and information for residents, businesses and visitors.

BUILDINGS AND LAND USE: REDUCE COMMUNITY CARBON EMISSIONS BY 80-90% WITH THE LONGER TERM 2060 GOAL OF BECOMING A CARBON-NEUTRAL CITY

All new buildings will be "net-positive" in terms of energy and materials, meaning they will produce more energy than they consume. This can be accomplished through employing passive design principles, such as highly insulated wall assemblies and on-site renewable energy. This goal will apply to all new construction after 2050. Buildings exist today that already meet this standard, like those that meet the Living Building Challenge 3.0.

At the community scale, the goal will be to establish fifteen vibrant compact complete centers where the majority of services needed by each community are provided locally; residents will be able to live, work, and play all within walking distance.

Learn more about our commitment to carbon-neutrality in our [Walkable Urban \(WU\) Code](#).

PARKS, PRESERVES, AND OPEN SPACES: ALL RESIDENTS LIVE WITHIN A FIVE-MINUTE WALK OF A PARK OR OPEN SPACE

More than many cities, Phoenix residents have a strong connection to the natural eco-system around them; most identify strongly with living in a desert. The 2050 goal of having all residents within a five-minute walk of a park or open space is enhanced through two complementary actions:

- Adding 150 miles of paths, greenways, and bikeways throughout the city, and transforming an additional 150 miles of canals into vibrant public space. Phoenix has more canals than Venice, but significant upgrades are needed to make them widely used and enjoyed.
- Reducing urban heat-island through green-infrastructure (such as "cool roofs", permeable pavement, and stormwater capture) as well as doubling the current tree and shade canopy to 25% by 2030. Structured shade and trees facilitate increased walking and biking, increase property values, and, most importantly, can be used to create great public gathering spaces in communities.

The city is currently exploring ways to plant more trees--particularly in areas with reduced tree canopy where additional shade is needed near transportation corridors to facilitate access to public transit.

CLEAN AIR: ACHIEVE A LEVEL OF AIR QUALITY THAT IS HEALTHY FOR ALL RESIDENTS AND THE NATURAL ENVIRONMENT

By 2050, Phoenix will achieve a level of air quality that is healthy for humans and the natural environment. This includes out performing all federal standards and achieving a visibility index of good or excellent on 90% of days or more. (Depending on the year, Phoenix currently achieves this good or excellent visibility rating on 70%-80 of days.)

WHAT ARE WE DOING NOW?

The City of Phoenix is strongly committed to reducing air pollution and protecting public health. The city implements a wide range of air quality programs to reduce ozone and particulate pollution (dust and smoke).

Transit, light rail, bikeways, and pedestrian-friendly development reduce vehicle emissions and promote land use planning and urban designs for a more sustainable environment.

The city's dust control program includes asphalt treatments for roads, shoulders, alleys and city-owned parking lots. Trespass prevention and dust controls for undeveloped parks and other vacant land reduce dust emissions. In addition, more than 200 city staff are trained each year in dust control methods for city operations to meet stringent rules adopted by the Maricopa County Air Quality Department.

[Learn more about Phoenix's Climate Action Programs](#)

HEAT MITIGATION

Phoenix's Office of Heat Response and Mitigation (OHRM or HeatReadyPHX) is leading the efforts of the hottest large city in the United States to fight the growing hazard of urban heat. OHRM focuses on both heat response (helping people cope with hot weather) and heat mitigation (cooling the city and making it more comfortable).

During all seasons of the year, HeatReadyPHX coordinates programs and policies to help lower urban temperatures and protect public health. It also tracks trends, collects data, and collaborates with other governments and organizations to share ideas and solutions when it comes to dealing with heat.

[Learn more about Office of Heat Response and Mitigation resources](#)



2023 PHOENIX GO BOND PROGRAM

On November 7, 2023 Phoenix voters passed the City Council approved \$500 million General Obligation (GO) Bond Program. GO Bond programs help to fund critical infrastructure and rehabilitation needs of City facilities such as parks, libraries, fire and police stations, affordable housing, streets and storm drains.

A General Obligation (GO) Bond is a form of debt obligation that, when issued, provides a local government with funds to finance large capital improvements. A GO Bond Program includes both the authority to issue GO bonds and a listing of the purposes for which the funds may be used. GO bond programs require voter approval.

Phoenix City Council approved a proposed \$500 million General Obligation (GO) Bond Program on December 13, 2022. Voters approved the GO Bond Program November 7, 2023. For more information on the City Council approved GO Bond Program, visit our website at phoenix.gov/bond. Below is the City Council approved GO Bond Program Summary Allocation:



- Arts & Culture - \$50,385,000
- Economic Development & Education - \$38,000,000
- **Environment & Sustainability - \$26,000,000**
- Housing, Human Services & Homelessness - \$63,000,000
- Neighborhoods & City Services - \$44,615,000
- Parks & Recreation - \$64,000,000
- Public Safety - \$132,500,000
- Streets & Storm Drainage - \$81,500,000

Environment and Sustainability Projects:

1. Energy and Water Efficiency and Renewable Energy Upgrades at City Facilities - \$14,000,000
2. Heat Resiliency - \$7,700,000
3. Brownfields Redevelopment Program for City-Owned Properties - \$3,000,000
4. City Facility Vehicle Electrification Stations - \$1,300,000

ENERGY AND WATER EFFICIENCY & RENEWABLE ENERGY UPGRADES AT CITY FACILITIES

Scope

Install energy efficient HVAC equipment or other climate control systems to reduce energy consumption and greenhouse gas emissions from city facilities. Facility Condition Assessments identified the need to replace aging and inefficient HVAC systems at many facilities including city-operated community and recreation centers, arts and cultural facilities, and administrative buildings. Additionally, implement renewable energy solutions, such as solar, where appropriate.

Benefit

Avoid service disruptions that may result from unplanned equipment and/or systems failures. Reduce operating expenses of certain city facilities by integrated the best available technologies. Reduce greenhouse gas emissions and other climate impacts caused by city operations.

HEAT RESILIENCY

Scope

Expand the city's tree planting, green infrastructure, cool roofs, cool corridors and cool pavements programs. Implement other emerging ideas to address heat resiliency within city facilities, infrastructure, land or rights-of-way.

Benefit

Reduce the impacts of climate change and urban heat on resident and visitor health. This program will be most impactful in locations where residents tend to have limited access to vehicles, and must walk or bike to their destinations with greater frequency. This program can help to address historical equity issues in parts of the city where residents are more vulnerable to heat-related hazards.

BROWNFIELDS REDEVELOPMENT PROGRAM FOR CITY-OWNED PROPERTIES

Scope

Funding to assist city departments with pre-development costs associated with environmentally contaminated properties. Preference would be given to projects located within the following targeted areas: Rio Reimagined Project Area, West Phoenix Revitalization Area, Infill Incentive Area, Transit-Oriented Development Areas, Downtown Development Area, Designated Redevelopment Areas and Neighborhood Initiative Areas.

Benefit

Mayor and Council approved the Phoenix Climate Action Plan (PCAP) in 2021. This program supports the PCAP by addressing public health and environmental hazards, expanding green space, and creating sustainability opportunities (e.g. green buildings and infrastructure). Without the funding source, contaminated properties may remain blighted, undeveloped, and a burden to the local community.

CITY FACILITY VEHICLE ELECTRIFICATION STATIONS

Scope

Provide electrification infrastructure at city facilities to support the city's fleet, residents and employees. The number and type of installations funded by this item are driven by capital needs identified by an ongoing fleet electrification study.

Benefit

Mayor and Council approved the Phoenix Climate Action Plan (PCAP) in 2021. This program supports the PCAP by reducing aggregate greenhouse gas emissions related to automobile activity. Not funding this program could delay the availability of charging infrastructure.

See below for the GO Bond Program Recommendations and Project Details in their entirety:

[2023 GO Bond Program – Executive Committee Recommendations to City Council/Project Details](#)





WAYMO

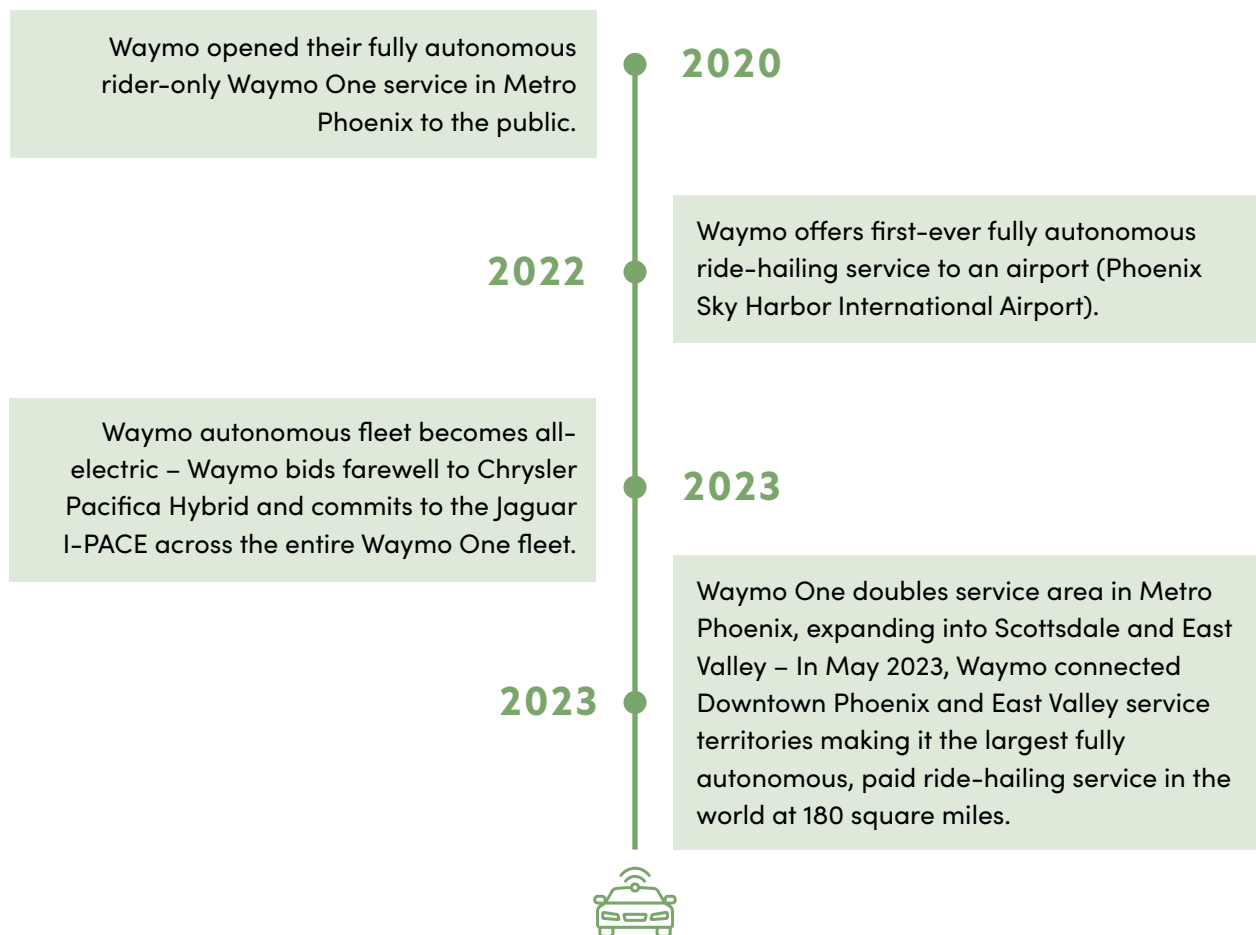
WAYMO

Waymo is a pioneering company at the forefront of autonomous vehicle technology. Established in 2009 as the Google Self-Driving Car Project, Waymo has evolved into a leading force in the development of self-driving technology. The company's primary objective is to revolutionize transportation by creating a safer, more efficient, and accessible mobility solution through autonomous vehicles.

One of Waymo's key aims is to positively impact communities by providing a transformative mode of transportation. Autonomous vehicles have the potential to enhance mobility for individuals who are unable to drive due to age, disability, or other reasons, thereby increasing accessibility and inclusivity. Moreover, Waymo envisions a future where its autonomous technology contributes to the reduction of traffic accidents caused by human error, making roads safer for everyone. By focusing on developing self-driving technology, Waymo aims to create a transportation ecosystem that is not only efficient but also addresses broader societal needs. In terms of sustainability, Waymo is committed to environmental responsibility by exploring how autonomous driving can contribute to a more eco-friendly transportation landscape.

Through the optimization of routes, reduction of traffic congestion, and the potential for electric or hybrid vehicle fleets, Waymo aims to play a role in minimizing the environmental impact of transportation. By promoting shared mobility and efficient use of resources, Waymo envisions a more sustainable and greener future for urban transportation.

Waymo is not just a tech company working on autonomous vehicles; it is a catalyst for positive change in communities and a champion for sustainability in the transportation sector. Through its innovative technology and commitment to safety, accessibility, and environmental responsibility, Waymo strives to shape a future where mobility is safer, more inclusive, and environmentally sustainable. See below for recent Waymo milestones in Greater Phoenix:





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