



PUBLIC MEETING AGENDA

Transportation Commission

MEETING DATE

Tuesday, January 4, 2022 at 7:30 a.m.

MEETING LOCATIONS

Join Via Cisco Webex

<https://tempe.webex.com/tempe/onstage/g.php?MTID=e121f0516aef4e4429b2857623be6457d>

Event password: kDJMKH2p2W2

United States Toll+1-408-418-9388

Access Code/Event Number: 2489 809 7360

AND

In Person (face coverings required)

Tempe Transportation Center

Don Cassano Community Room

200 E. Fifth Street, 2nd floor

Tempe, Arizona, 85281

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances The Transportation Commission welcomes public comment for items listed on this agenda. There is a three-minute time limit per citizen.	JC Porter, Commission Chair	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the December 7, 2021 meeting.	JC Porter, Commission Chair	Action
3. Commission Business Welcome and introduce new commissioner Amanda Nelson.	JC Porter, Commission Chair	Information
4. Commission Business The Commission will be asked to elect a chair and vice chair for 2022 as well as reach consensus on meeting date and time.	JC Porter, Commission Chair	Action

5. Climate Action Plan Staff will present the draft Climate Action Plan for Commission consideration.	Braden Kay, Sustainability Office	Action
6. Tempe Adaptive Streets Implementation Design Guide Staff will present the draft Adaptive Streets Implementation Design Guide.	Bonnie Richardson, Engineering & Transportation Department	Information
7. Department & Regional Transportation Updates Staff and commission members will provide information on relevant meetings and events.	Engineering & Transportation Department Staff and Transportation Commissioners	Information
8. Future Agenda Items Commission may request future agenda items.	Commission Chair	Information

According to the Arizona Open Meeting Law, the Transportation Commission may only discuss matters listed on the agenda. The city of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-4311 (voice) or for Relay Users: 711 to request an accommodation to participate in a public meeting.



Minutes
City of Tempe Meeting of the Transportation Commission
December 7, 2021

Minutes of the meeting of Tempe Transportation Commission held on Tuesday, December 7, 7:30 a.m. via Cisco Webex and in the Don Cassano Community Room, 200 E. Fifth Street, Tempe , AZ 85281.

(MEMBERS) Present:

John Federico
Brian Fellows
Pam Goronkin
David Sokolowski
JC Porter
John Christoph

Peter Schelstraete
Bobbie Cassano
Paul Hubbell
Alice Bimrose
David A. King

(MEMBERS) Absent:

Susan Conklu
Dawn Hocking

Jeremy Browning
Alana Chavez Langdon

City Staff Present:

Abel Gunn, Transportation Financial Analyst
Laura Kajfez, Neighborhood Services Specialist
Eric Iwersen, Interim Deputy Engineering & Transportation Director
Cathy Hollow, Traffic Engineer
Julian Dresang, Deputy Engineering & Transportation Director
Lauren Kuby, Councilmember
Lyle Begiebing, Planner I/II
Marge Zylla, Government Relations Officer
Robert Yabes, Principal Planner
Jill Buschbacher, Economic Development Program Manager

Brenda Clark, Neighborhood Services Specialist
TaiAnna Yee, Public Information Officer
Sue Taaffe, Senior Management Assistant
Shauna Warner, Neighborhood Program Manager
Chase Walman, Senior Transportation Planner
Ambika Adhikari, Principal Planner
Ken Halloran, Senior Civil Engineer
Tony Belleau, Planner I/II
Alex Chin, City Council Aide

Guests Present:

Sasha Jovanovic
Shannon Scutari
Amy Moran
Miranda Sundblom

Chris Bongorno
Dan Martin
Michael LuBiarra

Commission Chair JC Porter called the meeting to order at 7:35 a.m.

Agenda Item 1 – Public Appearances

None

Agenda Item 2 – Minutes

JC Porter introduced the minutes of the October 12 meeting of the Transportation Commission and asked for a motion for approval.

Motion: Commissioner John Christoph

Second: Commissioner David King

Decision: Approved by Commissioners

John Federico
Brian Fellows
Pam Goronkin
David Sokolowski
JC Porter

Peter Schelstraete
Paul Hubbell
Alice Bimrose
David A. King
John Christoph

Agenda Item 3 - Commission Business

JC Porter acknowledged outgoing Commissioner John Federico and thanked him for his service on the Commission.

Agenda Item 4 - Transportation Demand Management Plan/Transportation Management Association/ Mobility Hubs

Robert Yabes and the consultant team presented an update on the Transportation Demand Management Plan/Transportation Management Association/ Mobility Hub project. Topics included:

- Tempe's vision
- Plans
- Project accomplishments
- Milestones
- Public meetings
- Survey responses
- Stakeholder interviews
- TMA definition, services, value and programs
- Mobility hubs definition and equity
- Schedule

Discussion included ride sharing versus taking the bus, biking and walking, how success of the program will be evaluated, extreme heat as a barrier to the program, and capitalizing on those who currently take alternative modes.

Agenda Item 5 - Smith Hub Infrastructure Study

Eric Iwersen, Jill Buschbacher and the consultant team presented an update on the Smith Hub Infrastructure Study. Topics included:

- Project location
- Purpose
- Public outreach
- Background
- Transportation overview
- Priorities
- Perry Lane

- Fifth Street
- Smith Road
- Streetscape summary
- Lighting
- Water and wastewater
- Long-term focus
- Bus shelters
- Pedestrian network
- Next steps

Discussion included zoning, minimizing truck traffic, deficiencies in current transit network in the area, aligning the plan with the Streetcar plan and challenges with the Smith and Rio Salado intersection.

Agenda Item 6 - Upcoming Transportation Public Meetings & Announcements

Eric Iwersen announced that following employees were recently hired in the Transportation Division: Karina Trejo, Lyle Begiebing, Tony Belleau and Ellie Volosin.

John Christoph informed the Commission that he attended the AZ Passenger Rail Conference and that there are opportunities for infrastructure funding. He will send additional information to staff.

Agenda Item 7 – Future Agenda Items

The following future agenda items have been previously identified by the Commission or staff:

- January 4
 - Commission Business
 - Tempe Adaptive Streets Implementation Design Guide
 - Climate Action Plan 2021 Update
 - STEP Manual Update
- February 8
 - Transit Program Update & Bus Service Governance Study / Security Update
 - MAG Prop 400
 - Personal Delivery Devices
 - Scottsdale Road Bike Lanes
- March 8
 - Mobility Hubs
 - Transportation Demand Management Plan/Transportation Management Association
 - Smith Innovation District Transportation Improvements
- April 12
 - All Aboard Arizona
 - Tempe Adaptive Streets Implementation Design Guide
 - North/South Rail Spur MUP
- May 10
 1. Bike Hero
 2. Crosswalk Signal Countdown & Signal Detection for Bicycles
 3. Ash/University Intersection & 1st/Ash/Rio Roundabout Traffic Data Counts Update
- June 14
- July 12
- August 9

- September 13
- October 11
 - Annual Report
- November 8
- December 13
- TBD: BRT Study – MAG
- TBD: Bike Bait (once program resumes)
- TBD: Commuter Rail Study/MAG Commuter Rail Plan – MAG
- TBD: AZ State Rail Plan/AZDOT Phoenix-Tucson Corridor Plan – ADOT

The next meeting is scheduled for January 4, 2022.

The meeting was adjourned 9:00 a.m.

Prepared by: Sue Taaffe
Reviewed by: Eric Iwersen

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Eric Iwersen, Interim Deputy Engineering & Transportation Director, 350-8810
DATE: January 4, 2022
SUBJECT: Commission Business
ITEM #: 4



PURPOSE:

To request that the Transportation Commission makes selections for the positions of chair and vice-chair as well as reach consensus on meeting date and time.

RECOMMENDATION OR DIRECTION REQUESTED:

This item is for action.

CITY COUNCIL STRATEGIC PRIORITY:

- N/a

BACKGROUND

At the January meeting of each year, the Commission addresses the following business:

- Chair and Vice-Chair. The Commission annually elects a Chair and Vice-Chair for the upcoming year per the Tempe City Code, Sec. 2-249 "The officers of the commission shall be selected by the commission members at the first meeting of the commission following the 31st day of December of each year and shall serve until the 31st day of December of the next succeeding year. No officer shall serve in the same capacity for more than two (2) consecutive one-year terms.
- Meeting Dates and Times. The Commission regularly scheduled meetings are the 2nd Tuesday of each month at 7:30 a.m.

As of January 4, 2022, the Commission has 15-member positions filled. Transportation Commission members are listed below.

1. JC Porter (Current Chair elected in Jan. 2020 and is eligible for reappointment)
2. David King (Current Vice Chair elected in Jan. 2020 and is eligible for reappointment)
3. Alice Bimrose
4. Jeremy Browning
5. Bobbie Cassano
6. Alana Chavez-Langdon
7. John Christoph
8. Susan Conklu
9. Brian Fellows
10. Pam Goronkin
11. Dawn Hocking
12. Paul Hubbell
13. Amanda Nelson
14. Peter Schelstraete
15. David Sokolowski

According to Chapter 2, Article V, Division 8, Section 2 181 through 183 of the Tempe City Code, all boards and commissions established by the City shall have the following powers and duties unless otherwise specified:

Sec. 2-181. - Powers and duties.

(a) All boards and commissions established by the City shall have the following powers and duties unless otherwise specified:

- (1) To act in an advisory capacity to the City Council for the purpose of making recommendations consistent with its duties;
- (2) To establish such rules and regulations as it deems necessary for its government and for the faithful performance of its duties; to set a time for regular meetings which shall be held at least once a month if there is business to transact; to establish the manner in which special meetings may be held and the notice to be given thereof; and to provide that a majority of the total number of members shall constitute a quorum. The affirmative vote of a majority of the members participating in the meeting shall be required for passage of any matter before the board;
- (3) To organize by electing one (1) of its members as Chairman of the Board and one (1) as Vice-Chairman. The city staff representative assigned to the board or commission shall act as Secretary but shall not be entitled to take part in any voting;
- (4) To require attendance of the members at regular meetings and provide that absence from three (3) consecutive regular meetings or six (6) meetings within any twelve (12) month time period without consent from the Chairman or Vice-Chairman if the Chairman is unavailable, shall be deemed to constitute a resignation and such position shall thereupon be deemed vacant;
- (5) To consult, through the Chairman of the Board, or the Vice-Chairman if the Chairman is unavailable, with the assigned city department on the items to be included on the agenda of the meetings prior to preparation and distribution of the agenda by the assigned city department; and
- (6) To review and approve the official minutes of the board or commission as prepared by the assigned city department no later than thirty (30) days after the meeting or Commission and if such minutes cannot be approved, for any reason, within such period of time, such minutes shall be transferred to the City Council without approval.

(b) All boards and commissions shall have the authority to create subcommittees, subject to the following restrictions:

- (1) Subcommittees shall be created upon written notice to the City Council. The request shall state in detail the purpose for its creation, the members of the board or commission who will comprise its membership and the anticipated additional resources needed to adequately staff the subcommittee;
- (2) All subcommittees shall sunset within one (1) year of creation, or until its intended purpose has been met. The City Council may dissolve a subcommittee at any time;
- (3) All members of subcommittees must be current members of originating board or commission;
- (4) No board or commission may have more than two (2) active subcommittees at the same time; and
- (5) Subcommittees must meet all requirements of state law, the City Charter and this Code.

Sec. 2-182. - Terms and removal.

(a) The Mayor, with the approval of the City Council, shall select for appointment and reappointment the members of each board and commission. Unless otherwise specified, the members of each board and commission shall be selected from residents of the City.

- (b) The term of office for each member of the board and commission shall be from the first of January of each year and end on the 31st day of December, three (3) years thereafter except if otherwise provided in this article.
- (c) Members of the board and commission may not serve more than three (3) total terms on any board or commission, and not more than two (2) complete consecutive terms.
- (d) Any vacancy shall be filled for the unexpired term of the member whose office is vacant in the same manner as such member received original appointment.
- (e) The Mayor, with the approval of the City Council, may for cause remove any member of the board or commission.

Sec. 2-183. - Compensation of members.

Members shall receive no compensation for their service.

According to Chapter 2, Article V, Division 8, Section 2-250 of the Tempe City Code, the Transportation Commission shall have the following powers and duties:

Sec. 2-250. - Powers and duties.

- (1) To suggest to the Mayor and City Council qualified and interested persons eligible for appointment for commission vacancies;
- (2) To consult, through the chairman of the commission, with the Engineering and Transportation Department, as to the items to be included on the agenda of meetings of the commission prior to the preparation and distribution of the agenda by the Engineering and Transportation Department;
- (3) To prepare and submit an annual report to the City Manager and City Council including applicable Council committees;
- (4) To advise and make recommendations to the City Council and to assist city departments and the City Manager to plan and implement a balanced transportation system within Tempe which incorporates all forms of transportation in a unified, interconnected manner and complements land use, making a positive environmental impact through reduction of energy consumption, air pollution and congestion, while promoting economic development and providing mobility for all persons, including elderly and disabled;
- (5) To advise and make recommendations to the City Council and to assist city departments and the City Manager on appropriate performance standards and benchmarks for use in evaluating the city's transportation system and program, based on nationally recognized guidelines and local priorities;
- (6) To advise and make recommendations to the City Council and to assist city departments and the City Manager on transportation plans, projects and ordinances, including but not limited to:
 - a. To recommend and review short and long-range plans and studies for the city's transportation system, including streets, transit, bicycling, pedestrians and demand management;
 - b. To periodically review and update the transportation elements of the city's general plan;
 - c. To provide input and review regional, state and federal transportation plans, projects and issues especially as provided by federal law; and
 - d. To promote and maintain bicycling as a safe and effective mode of travel for recreation, health and transportation.
- (7) To advise and recommend to the City Council and to assist city departments and the City Manager annually on the elements of prioritized, unified operating and capital improvement program budgets for transportation;
- (8) To provide a forum for public hearings and other public involvement mechanisms to assure community-based transportation plans, projects and issues, and to meet all federal and other guidelines for public involvement in transportation projects where applicable; and

(9) To take any such further actions as may be deemed necessary and appropriate to further the goals of the commission.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES: N/a

ATTACHMENTS: None

MEMORANDUM



TO: Transportation and Sustainability Commissions
FROM: Braden Kay, Sustainability Director
DATE: January 4, 2022
SUBJECT: Climate Action Plan 2021 Update

Background: In 2019, Mayor and Council adopted Tempe's First Climate Action Plan (CAP) which lays out two action areas for reducing Greenhouse Gas (GHG) emissions (Energy and Transportation) and an action area for Resilience to Extreme Heat. The Sustainability Commission selected four highlight actions that have been the focus of the city's climate action work: Resilient Energy Hubs, Transportation Demand Management, Green Infrastructure and Green Construction Code. The Climate Action Plan also included Tempe's first Greenhouse Gas emissions inventories for both municipal operations and the Tempe community as a whole. Mayor and Council supported updating the plan with 2020 Greenhouse Gas emissions data and with updates to the actions while considering the guiding principals of fiscal responsibility, equity, engagement, evidence and enterprise.

The Climate Action Plan Update is in line with the Sustainable Growth & Development Strategic Priority to implement sustainable growth and development strategies to improve Tempe's environment, quality of life and economic outcomes. This update achieves the following performance measures:

- Community Carbon Neutrality (4.18): Reduce community Greenhouse Gas (GHG) emissions by 80% of 2015 levels by 2050, and achieve community carbon neutrality by 2060.
- Municipal Operations Carbon Neutrality (4.19): Achieve the City Council goal of carbon neutrality in municipal operations by 2050 with a strategy of 100% renewable energy by 2035.

The Sustainability Office designed an update process to include a listening phase to determine what residents and businesses wanted from the process, a planning phase and a review and approval phase.

Climate Action Plan Update:

The Climate Action Update includes three components:

1. Updated Greenhouse Gas Inventory with an analysis of 2015 and 2020 data
2. Progress report and next steps on the existing highlight actions some of which have changed names: Resilient Energy Hubs (renamed Resilient Energy Hubs and Resilience Hubs), Transportation Demand Management (renamed Transportation Demand Management and Mobility Hubs), Green Infrastructure (renamed Green Stormwater Infrastructure), and Green Construction Code.
3. Climate Action Agendas: Four stakeholder-centered agendas that layout climate actions and specific perspectives: Business, Neighborhoods, Climate Justice and Youth

For the purposes of this memo and the presentation at the January 4th Transportation Commission, we will report out on the agendas, and will update Mayor and Council on the Greenhouse Gas Inventory and Highlight Actions in February. Sustainability Director, Braden Kay will provide an overview of the actions, partnerships and support for the highlight actions that are contained in each Agenda. The Tempe Chamber of Commerce created the Business Agenda with support from Local First Arizona. The Climate Justice Agenda was created by Unlimited Potential through grassroots community engagement they conducted in targeted neighborhoods experiencing extreme heat in Tempe. The presentation will include an overview of the stakeholder specific agendas:

- Business (Led by Tempe Chamber of Commerce and Local First Arizona)
- Youth (Led by Office of Sustainability)
- Climate Justice (Led by Unlimited Potential)
- Neighborhoods (Led by Office of Sustainability)

A draft of the layout version of the agendas is a part of your packet. This is still in draft form and subject to change.

Business Agenda

The Tempe Chamber of Commerce, Local First Arizona, and Tempe businesses created this agenda through conducting two forums this summer. This agenda aims to support businesses in adopting energy upgrades that save money and grow Arizona's clean energy economy. Tempe businesses are an integral part of the City's economic development and play a vital role in mitigating climate change and building a resilient and thriving community. It is important to have Tempe businesses and organizations collaborate with the City of Tempe on climate action.

Actions:

Energy Efficiency

Business leaders want more educational opportunities to learn about and share best practices on reducing their energy use. Businesses want to partner with SRP and APS on cost savings solutions that include rebate programs, retro-commissioning programs, small business programs training, and energy audits and assessments. These resources would help businesses save money and reduce Greenhouse Gas emissions.

Water Conservation

Business leaders want educational opportunities, resources, and information on water conservation and how to manage their water usage properly. Tempe businesses would like to utilize the resources the Tempe Municipal Utilities Department offers to businesses through their Water Utilities Divisions Commercial Industrial and Institutional (CII) Program for Businesses that offer best management practices, a WaterSmart water management tool, non-residential grants and rebates, and water efficiency audits (interior and exterior).

Partnerships:

City of Tempe, Local First Arizona, and Tempe Chamber of Commerce

Businesses need a support network and are asking for more educational opportunities, outreach, and informational on best practices. The City of Tempe, Tempe Chamber of Commerce, and Local First Arizona have several programs and opportunities to educate businesses on sustainable practices. The City of Tempe offers a Water Utilities Divisions Commercial Industrial and Institutional (CII) Program for Businesses. The Tempe Chamber of Commerce has the Pledge for a Sustainable Community Program, and Local First Arizona offers a Green Business Certification.

Highlight Action:

Mobility Hubs (Transportation Demand Management)

Mobility Hubs, a component of Transportation Demand Management, are places that combine the resources of multiple modes of transportation in one physical location, designed to help reduce the need for vehicle ownership. Businesses would like to collaborate with Tempe in increasing transportation options in the city to bring workers and residents to business locations in Tempe.

Youth Agenda

This agenda aims to provide space and empower young people to share their thoughts and advice with the City of Tempe. It was created by high school students, recent college graduates, and community members who work with Tempe youth who have advocated for climate action and have the ideas and perspectives to move climate action forward.

Actions:

Food Equity

Tempe youth believe there is an opportunity to improve food access and food entrepreneurship options while increasing green space, mitigating heat, and building community. Youth believe Tempe can find ways to improve food access by creating new programs. The types of food programs proposed were community programs that increase access to affordable healthy food and school programs that reduce food waste, build school food gardens, increase food access for students, and invest in the local food economy.

Transportation Equity

Youth ask the City of Tempe to continue to work on affordability and accessibility issues in public transit, as well as the health risks involved with using public transit due to extreme heat. Youth would like to see shading and water options across all transit centers and bus stops.

Partnerships:

School Boards and Leaders

Youth have expressed a desire for school boards and school leaders to take a leadership role in climate action. Youth would like to see schools pass Climate Action Resolutions that can help with fostering a stronger sense of community, encouraging hands-on learning, raising awareness of climate change among students, generating savings through energy efficiency and fostering more beautiful campuses. Youth would like to be involved and engaged in their schools' choices about climate action and would like to create school programs that bring climate change education into the classroom as part of the curriculum.

Highlight Action:***Green Stormwater Infrastructure (GSI)***

Green Stormwater Infrastructure ensures cities and developers consider stormwater and urban cooling when creating the landscape of new developments, parks, and streetscapes. Youth would like schools to adopt Green Stormwater Infrastructure designs to support urban cooling, provide shade, and conserve water. A program could be developed for Tempe Union and Tempe Elementary Schools to adopt Green Stormwater Infrastructure retrofits to use rain to grow cool and shaded campuses.

Climate Justice Agenda

Many Tempe residents advocated for an inclusive space to voice their concerns about climate injustices and the unequal effects of climate change. This agenda addresses those issues to ensure that the Climate Action Plan Update is centered around equity. This agenda was led by Unlimited Potential and target residents in the Escalante and Gilliland neighborhoods.

Actions:***Heat Awareness & Energy***

Extreme heat has an increasingly overwhelming impact on daily life in Tempe. Residents want to establish a minimum standard of living so that some individuals are not forced to pay for electricity over other necessities. Actions to improve the overall health of Tempe residents around heat and energy include upgrading existing living spaces, incentivizing the use of natural and clean energy, promoting water conservation, increasing native vegetation, working with utility companies on their electricity billing, mobilizing neighborhood action and supporting unsheltered persons in Tempe.

Land Stewardship

Residents want Tempe to increase transparency on development, address barriers to access for marginalized communities, and have more indigenous ownership of the land here in Arizona. Residents would like to see an increase of tree canopy, promotion of backyard gardens, regenerative agriculture and native vegetation.

Partnerships:***Community-based Organizations***

This group recommend that the City of Tempe works with community-based organizations that can facilitate the relationship between the city and residents by doing community engagement and outreach on behalf of the Tempe. Residents would like these partnerships to work on putting forth actions around affordable housing, walkable and safe roads, regenerative agriculture and support for the unsheltered.

Highlight Action:***EnVision Tempe (Resilient Energy Hub and Resilience Hub)***

EnVision Tempe provides a centralized location for economic, social, and housing services while also providing residents with AC, food, water, and ice during times of refuge like extreme heat days or blackouts. This new facility will serve the community by providing opportunities to improve economic situation, providing educational and skills training opportunities, improving access to healthcare resources, empowering community members through service opportunities, providing heat relief, and ensuring community wellbeing and emergency preparedness.

Neighborhood Agenda

Tempe residents understand the importance of climate action and, through lived experience, can advocate for the changes needed in neighborhoods and communities. This agenda aims to support residents in taking local climate action that increases livability and improves their neighborhoods. Tempe residents, made up of parents, business owners, ASU students and faculty, and City of Tempe staff created this agenda.

Actions:

Resilience to Extreme Heat

Tempe residents want the city to work on programs that address extreme heat. Residents would like to see shade at all bus shelters, more trees, permeable pavement and cooling centers and energy hubs that act as shelter during times of emergency. Residents want Tempe to address issues related to extreme heat that create immediate impact for everyone, especially vulnerable and marginalized groups like low-income families and unsheltered persons.

Partnerships:

Community-based Organizations

Tempe residents communicated that there is an opportunity for the city to develop partnerships with community-based organizations on a variety of topics. There is an opportunity for the city to contract with Community-based Organizations on transportation (to work with residents on bus frequency, increase connectivity and to ensure every child can walk or bike to school), heat relief (including cooling centers and worker safety) and green jobs (including growing the clean energy economy in an equitable way).

Highlight Action:

Resilient Energy Hubs and Resilience Hubs

Resilient Energy Hubs are community-serving facilities upgraded to support residents and coordinate resource distribution and services at times of emergency. This type of facility would help Tempe meet the power needs of the most vulnerable populations in case of emergency. Resilience hubs are community-serving facilities designed to support local empowerment through self-reliance in both normal times and in managing and recovering from hazard events. Benefits include fostering greater community connections, increasing the effectiveness of community-centered institutions and programs, improving access to health improvement initiatives, reducing the burden on municipal emergency response teams.

Timeline

The Climate Action Plan Update will follow this timeline:

January: Virtual forum on the 26th and Open House on 29th

February: Update Greenhouse Gas emissions, municipal actions, and recommendations for infrastructure and operations funding

March: Opportunity for final approval

April: Review and consider proposed budget supplementals

Ongoing: Adopt policy, support programs, invest in infrastructure, and continued engagement

Conclusion and Next Steps

The Sustainability and Resilience Office looks forward to continued engagement on the Climate Action Plan Update. The Office will present at Council Work Study to Work Study Session to update Mayor and Council on Greenhouse Gas Emissions, Municipal Actions and recommendations for how the agendas turn into CIP investments and budget supplementals to the Operating Budget.

The Transportation Commission, Neighborhood Advisory Commission and the Sustainability and Resilience Commission all play an important role in shaping and building support for the investments in this plan. Please feel free to contact Chair Kendon Jung (kendon.jung@gmail.com) for more information on how to coordinate engagement and communications efforts.

The Sustainability Office is committed to developing climate action in a way that supports partnerships, new programs and increased infrastructure investment. The Office is deeply grateful for the work of Boards and Commissions, city staff, residents, businesses, non-profits, and partners for working together on supporting the climate action movement in Tempe. Please feel to contact Braden Kay at braden_kay@tempe.gov for additional information and context.




CLIMATE

ACTION PLAN UPDATE

CITY OF TEMPE 2021
tempe.gov/Sustainability




Tempe



CLIMATE
ACTION PLAN UPDATE

CITY OF TEMPE 2021
tempe.gov/Sustainability

Executive Summary

Introduce this CAP update
Summarize
5 Guiding Principles
Equity
Engagement
Effectiveness
Enterprise
Fiscal Responsibility
Introduction
Climate Change
Resilience to Extreme Heat
Decarbonization Update
GHG Inventory Update
Chart (Municipal/Community)
HA update
Energy
Transportation
Extreme heat
Action Overview
Agendas
Youth
Businesses
Neighborhoods
Climate Justice
Grants and Partnerships

Introduction

- Why Climate Action
- Why is climate change important to understand?
- Why now? Explain Urgency
- Effects of extreme heat
- Cost of inaction
- Resilience to Extreme Heat Update
- Heat system diagram (?)
- Decarbonization Update
- Update on energy and transportation efforts
- GHG Inventory Update
- Municipal GHG update
- Community GHG update
- Reasoning for this update
- Introduce 4 new agendas
- Action overview
- Timeline of update
- Project into future
- Heat relief plan
- Green infrastructure plan
- Transportation plan
- Equity
- Definition and importance
- EiA framework
- Energy equity
- Climate justice
- Unlimited potential as a partner
- Climate justice steering committee
- Engagement
- Definition and importance
- Engagement strategies used for this update

Community Actions

In addition to community actions, the city government has focused on actions it can perform to be sustainable and resilient. In 2015, Tempe collected data to form the city's first municipal GHG emissions inventory. A new inventory was completed in 2020, which showed a 2.5% decrease in overall municipal emissions. Emissions decreased in almost every sector over a 5-year period. This is a positive trend that the city hopes to reinforce through further action. Tempe set a goal of carbon neutrality in municipal operations by 2050 with a strategy of 100% renewable energy by 2035. The following sections provide strategies the city will employ to decrease GHG emissions in city operations.

Community Actions

Highlight Action Update

In 2019 the Sustainability Commission recommended four climate actions that the City should focus on to develop early wins and a culture of transformation. The following update shows what has been accomplished so far. The update uses examples from cities around the country and world to demonstrate how Tempe can lead in green buildings, green stormwater infrastructure, resilience hubs (including resilient energy hubs), and transportation demand management (including mobility hubs).

Green Codes and Standards (GSI and IgCC Adoption)

Tempe is pursuing Green Stormwater Infrastructure (GSI) and green codes like the International Green Construction Code (IgCC) to combat extreme heat. Extreme heat affects public health, air and water quality, vegetation, and more.

GSI is an approach to water management that aims to save money, save water, and keep Tempe cool by working with nature to reduce stormwater runoff. Tempe's GSI objective is to create a citywide plan (including identified infrastructure investments) with permanent funding for its operations and management.

The IgCC is a code that helps cool Tempe by guiding developers to make their buildings sustainable, resilient, and high performing. The goal for IgCC is to have a regional green building code that supports sustainability and urban cooling that is tailored to the desert Southwest.

Tempe's Progress

Through piloting green buildings on city property and considering a sustainable building policy for City buildings, Tempe is at the early stages of a long-term green building strategy.

Policy

- Considering City Sustainable Building Policy (IgCC)

Programs

- Funded full time employee in Community Development to begin program (IgCC)

Infrastructure

- Small pilot projects at Rio Salado and Hardy, EVBOM and Apache and Dorsey, 12th and Mill (GSI)
- LEED-certified city buildings (IgCC)



Volunteers plant native vegetation in a bioswale on city property.



Street view of the LEED-certified Tempe Transit Center.

Community Actions

Green Stormwater Infrastructure Roadmap

Tempe has the opportunity to follow Phoenix, Norfolk, Oakland and Tucson in developing policy and permanent funding for GSI.

NOVICE



Tempe, AZ

- Multiple GSI pilot projects
- Determining cost, practicality, and areas of improvement
- Do not involve private developments yet

Volunteers build a bioswale at Dorsey and Lemon.

BEGINNER



Phoenix, AZ

- Private-public partnership surrounding GSI
- Implementing GSI projects on city and private land
- No GSI requirements

Bioretention basin at the Cancer Center at 7th St and Fillmore in Phoenix, AZ.

INTERMEDIATE



Norfolk, VA

- Private-public partnership surrounding GSI
- Implementing GSI projects on city and private land
- No GSI requirements

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INTERMEDIATE



Oakland, CA

- Adopted citywide GSI plan in 2019
- Identifies GSI projects, measures progress, secures funding, etc.
- Lacks permanent funding source for GSI projects

Curb cuts and bioretention at the Rainbow Recreation Center, Oakland CA.

ADVANCED



Tucson, AZ

- Citywide Plan: Prioritized GSI investments
- Permanent funding: Utilities bill fee will provide ~\$3M per year
- Operations and Maintenance: Allows the city to install more, and maintain all, future GSI infrastructure

Curb cuts at Pima County Service Center 2019, Tucson AZ.

Community Actions

Green Stormwater Infrastructure Roadmap

Tempe is taking initial steps in green construction and can learn from Scottsdale, San Jose, and Israel's approaches to using building code to advance sustainability and urban cooling.

NOVICE



Tempe, AZ

- Testing pilot codes in city buildings
- Determining best city standards
- Not formally in building codes or ordinances

IgCC Fire Station 2 design.

BEGINNER



Scottsdale, AZ

- Adopted IgCC into green building codes and promotes private sector use
- Offers incentives for developers complying with IgCC
- Not a requirement in for all private development

Street view of IgCC-designed Optima Sonora Village.

INTERMEDIATE



San Jose, CA

- Building code requires LEED certification for large buildings
- Any major development must be constructed sustainably
- Building code limited to city and not county

IgCC-designed Immanuel-Sobrato Community apartments.

ADVANCED



Israel

- Regional: Green building code spans multiple cities
- Customized: Similar to LEED, the code applies to all types of buildings
- Mandatory: Code will become mandatory for all developments in 2022

Porter School of Environmental and Earth Sciences in Tel Aviv, Israel.

Community Actions

Highlight Action Update

Transportation Demand Management and Mobility Hubs

Tempe has upgraded its transportation sector by improving light rail, bike, pedestrian, and streetcar infrastructure. These changes reduce the use of single-occupancy vehicles and emissions, increase safety, and help make Tempe a 20-minute city.

Transportation Demand Management (TDM) provides alternative transportation options. A Transportation Management Association (TMA) is a public-private partnership that aims to reduce traffic congestion and carbon emissions.

Mobility Hubs (a TDM strategy) are sites that combine different modes of transportation in one location, helping reduce the need for vehicle ownership and single occupancy trips. Investment in mobility hubs will make trips safer, convenient, and more reliable. The goal for mobility hubs is to have policy and funding that supports a regional network of hubs that allow for safe and convenient low-carbon transportation.

Tempe's Progress

Through planning for mobility hubs and starting a Transportation Management Association (TMA), Tempe is advancing its approach to Transportation Demand Management.

Policy

- Developing a plan for mobility hubs

Programs

- Exploring opportunity to start transportation management association

Infrastructure

- Tempe Transit Center is mobility hub pilot



Aerial view of the Tempe Transit Center mobility hub pilot.

Community Actions

Green Stormwater Infrastructure Roadmap

Tempe has the opportunity to follow Phoenix, Norfolk, Oakland and Tucson in developing policy and permanent funding for GSI.

NOVICE



Tempe, AZ

- One major mobility hub with more in planning
- Current hub has access to light rail, busses, electric scooters and bikes
- Only one hub located in Downtown Tempe

Orbit bus stop at the Tempe Transit Center mobility hub pilot.

BEGINNER



Denver, CO

- Multiple mobility hubs with differing size, programming, and design
- Hubs are specialized depending on the context and function of each location
- Regional planning does not focus on mobility hubs

Passenger exiting a free ride share vehicle in Denver, CO.

INTERMEDIATE



Austin, TX

- Policy: Adopted policy to help the creation of mobility hubs
- Funding: Allocated funding for mobility hubs

Cyclist renting electric bicycle in Austin, TX.

INTERMEDIATE



San Diego, CA

- Regional: Mobility hubs are centered in regional plan
- Network: Plan proposes a network of thirty specialized mobility hubs

Aerial view of the San Ysidro Transit Center.

Community Actions

Highlight Action Update

Resilient Energy Hubs and Resilience Hubs

In Tempe, climate change has increased the risk and intensity of natural disasters and has worsened the heat crisis. If disaster strikes, residents must have safe and cool locations to find shelter. Tempe is constructing its first Resilience Hub; A community-serving facility upgraded to support residents and coordinate resource distribution and emergency services. This hub will eventually be equipped with solar power and energy storage, making it a Resilient Energy Hub. The goal of resilience hubs is to create a network of trusted spaces across the city containing important community services.

Tempe's Progress

Tempe's piloting of the Resilience Hub concept with EnVision Tempe is the beginning of creating a citywide network of Resilience Hubs and Resilient Energy Hubs.

Policy

- Exploring solar and battery (microgrid) opportunities with utilities

Programs

- Developing programs for EnVision Tempe
- Conducting neighborhood engagement and developing programs for EnVision Tempe

Infrastructure

- EnVision Tempe at Dorsey Lane and Apache Boulevard will open in 2022



City of Tempe employees speaking with community members about the EnVision Tempe, a resilience hub pilot project.

Community Actions

Resilience Hubs Roadmap

Tempe has the opportunity to follow Phoenix, Norfolk, Oakland and Tucson in developing policy and permanent funding for GSI.

NOVICE



Tempe, AZ

- First resilience hub will open in 2022
- Constructed to support workforce development and housing assistance during normal times and can act as an emergency cooling center

Community members outside EnVision Tempe, a resilience hub pilot.

BEGINNER



Orlando, FL

- Developing six resiliency hubs
- Hubs will provide services to lower-income communities after extreme weather events
- Will take time to develop

LEED-certified neighborhood center with rooftop solar array.

INTERMEDIATE



Austin, TX

- Creating two resiliency hubs by the end of 2023
- Engaging with community to create a people-centered resilience hub plan
- Granted \$3M from American Rescue Plan to build hubs

Mendez Middle School, a potential resilience hub in Austin, TX.

ADVANCED



Baltimore, MD

- Has twelve resilience hubs
- Placing hubs in different types of buildings, not just city buildings
- Provide food, education, health resources, and more

Fan and food distribution at a resilience hub in Baltimore, MD.

EXCEPTIONAL



Puerto Rico

- Network: Transformed seventeen local community centers to resilience hubs
- Multiple services: Hubs are equipped with combinations of solar energy, water storage, gardens, communications systems, emergency kits, and psychological services

Mercy Corps resilience hub including food, water and emergency preparedness solutions.

Youth Agenda

Tempe youth have advocated for climate action for years and have the ideas and perspectives necessary to move climate action forward in the City of Tempe. A virtual forum hosted by the City of Tempe's Sustainability Office in June, 2021, provided an opportunity for Tempe youth and students to engage with several topics that were highlighted as important in previous youth engagements. This included food access, equity, partnerships with school boards and leaders, and taking action on Green Stormwater Infrastructure. In attendance were Tempe High School students, recent college graduates, and engaged community members who work with Tempe Youth.



Students plant native vegetation at McClintock High School.

Actions

Food



Youths volunteer at Escalante Community Garden.

Tempe Youth believe that there is an opportunity to improve food access and food entrepreneurship options in the city, while increasing green space, mitigating heat, and building community. Youth see food as one of the major program actions Tempe can focus on today and in the future, especially in how food access impacts youth, students, and vulnerable communities directly.

Tempe currently has a number of programs and services targeted at increasing food access such as:

- Food Banks
- The Farm Express Bus
- Existing School Garden Initiatives
- Urban Agriculture and Community Gardens
- Farmers Markets
- Food Entrepreneurship Pilot Projects

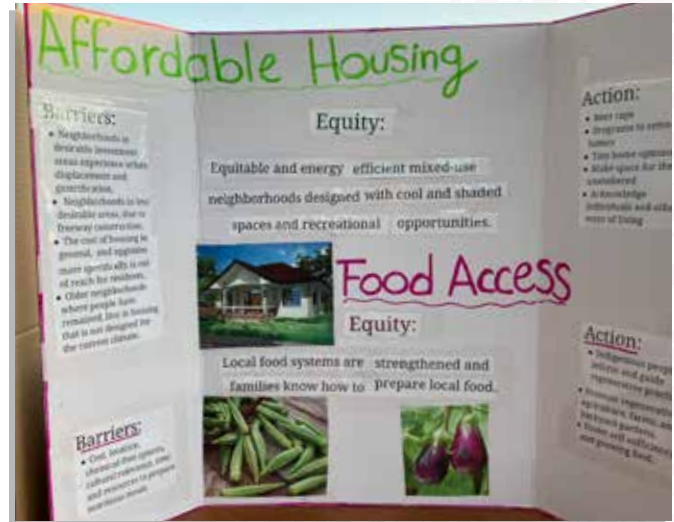
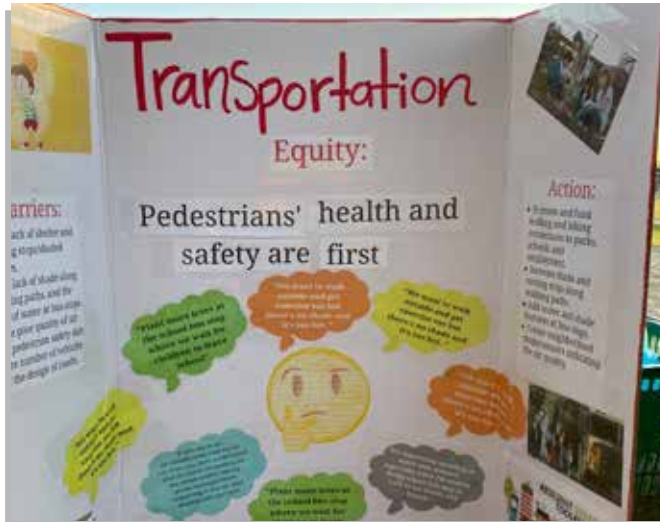
Youth believe that Tempe can increase the focus on food access through creating programs such as:

- Installing composting/Vermiculture at Schools
- Creating educational cooking programs that utilize wasted food ("Pickle Day")
- Implementing gardens at public schools subsidized by the City of Tempe
- Reducing or eliminating the cost of food in schools and communities

Youth ask that the City of Tempe create a plan and oversight committee to:

- Expand school gardens
- Empower youth and students interested in food entrepreneurship opportunities
- Invest in the local food economy
- Create affordable food access hubs at Tempe schools and community centers

Actions



Display boards at a neighborhood resiliency event at Escalante Park.

Equity

Youth demand that the City of Tempe do more to address equity and climate justice. While equity was mentioned in Tempe's previous Climate Action Plan, it was not a central focus.

Young people in Tempe echo the ideas and plans put forward in the Climate Justice agenda. The support for climate justice across communities makes clear the importance of these issues to Tempeans.

In order to more seriously focus on equity, Youth believe the City must:

- Ensure easier access to healthy food for residents of all income levels
- Remove/decrease the taxes on produce and other "healthy" foods
- Increase overall accessibility for people with physical and mental disabilities
- Implement free or affordable transportation options
- Provide free or affordable food and water options at transit centers and bus stops
- Increase tree canopy and overall shade availability in Tempe, especially at transportation centers

Youth Agenda

Partnership

School Boards and Leaders



McClintock High School teacher Tim Cornwell and students plant native vegetation.

With over 10,000 students enrolled in Tempe's public school system, students have the power to demand that school boards and leaders pass climate action legislation.

Students believe schools can benefit from Climate Action Resolutions by:

- Raising awareness of climate change and encourage hands-on learning
- Generating savings through energy efficiency and fostering more beautiful campuses
- Developing productive administration-student relationships

Youth believe the City of Tempe can partner with Schools and School Boards to implement programs that:

- Host sessions that empower students to change their schools, cities, counties and states
- Promote policy changes to bring climate change education into the classroom
- Focus on immediate and long-term changes that directly target climate

Highlight Action



Reilly Elementary School students examine Green Stormwater Infrastructure site plan.

Tempe youth were inspired by GSI work in Austin, Texas and believe that the city and local school districts can make similar investments.

Green Stormwater Infrastructure - Reilly Elementary School, Austin, Texas

Green Stormwater Infrastructure (GSI) ensures that cities and developers consider stormwater and urban cooling when creating the landscape of developments, parks, schools and more. In 2020, Reilly Elementary School in Austin, Texas celebrated the opening of its rain catching landscape.

Some benefits seen by Reilly Elementary School after implementing Green Infrastructure include:

- Beautification of the campus with flowering native plants and lush grasses
- Opportunities for outdoor and hands-on education through partnership with a local Community-Based Organization, Partners for Education, Agriculture, and Sustainability (PEAS)
- Collaboration between surrounding neighborhoods, the City, and the school
- Environmental protection including improving water quality in the nearby watershed and reducing erosion
- Raising awareness about how Green Infrastructure can help other communities throughout the City of Austin

Just like the City of Austin has benefited from Green Infrastructure being implemented at Reilly Elementary School, Tempeans can also benefit from schools implementing similar features on their campuses! Students believe their schools can benefit from Green Infrastructure implementation by increasing the number of native plants on their school grounds and promoting the implementation of greywater systems in their school facilities.

Champions

Tempe youth are making change happen across the city and the state. Elizabeth and Natalie are two inspiring local climate champions that are paving the way for more youth to make an impact in Tempe.



Elizabeth Hollmann

Elizabeth Hollmann is a resident of Tempe and an honor student at Tempe Preparatory Academy. She plans to earn a degree in Political Science with a concentration in Environmental Studies. Elizabeth became motivated to work on climate action after becoming engaged in intersectional work that allowed her to see how socioeconomic and racial disparities affect the quality of life among communities.

Elizabeth's is motivated by:

- Fridays For Future, an international movement of students demanding political leaders to take action against climate change
- The ability to take action in pressuring her local government to adopt actionable sustainability policies

Elizabeth contributes to climate action by:

- Participating in CHISPA River Clean-Ups
- Being a member of Tempe Preparatory Academy's Composting Crew
- Working with the City of Tempe on Dolores Huerta Day and Climate Action Plan Update Youth Forums

"I hope Tempe's future includes impactful climate action with funding from Tempe City Council and the state of Arizona. I hope that the City of Tempe continues to seek out and center voices from frontline communities and involve youth in the decisions that will impact long and short-term futures. I hope that we, especially those in my generation, have learned through Climate Action that progress is a never-ending effort that takes all of us."



Natalie Mendoza

Natalie Mendoza is a resident of Tempe and an honor student at Arizona State University Preparatory Digital. Natalie plans to attend the IRA Fulton Schools of Engineering at Arizona State University to earn a Master's degree in Environmental Engineering. Natalie became motivated to work on climate action after learning about the severity of climate change and the slow response among global leaders.

Natalie's is motivated by:

- The deterioration of the natural environment and the uncertain future that climate change has caused
- Natalie's connection to natural landscapes through outdoor activities and engaging with nature

Natalie contributes to climate action by:

- Aspiring to be an environmental engineer to innovate ideas that address environmental concerns and advocate for environmental legislative change
- Participating in Climate Action Plan Update Youth Forums and garbage cleanups

"I hope Tempe prioritizes climate action and finding long-term, innovative, and sustainable solutions to fight climate change and to take action to create a livable planet for generations to come. I hope my generation learns to consider the long-term future over the short-term costs when passing legislation and implementing solutions so that future generations do not face the same challenges we do. Young people can fight against climate change by learning the facts, brainstorming potential solutions, and advocating for policy change."

Business Agenda



ASU student rendering of a sustainability conscious development.

The over 17,000 businesses in Tempe make up a strong stakeholder group that play a vital role in mitigating climate change and building a resilient, vibrant, and thriving community. Many have already been implementing sustainable practices into their business operations.

Over the Summer of 2021, the City of Tempe's Office of Sustainability in partnership with the Tempe Chamber of Commerce and Local First Arizona's sustainability team, hosted two virtual forums for Tempe business leaders that resulted in the following actions.

Actions

Energy Efficiency



Energy efficient lighting at a Tempe small business.

In Arizona, a large percent of power comes from nonrenewable resources. Greenhouse gas emissions from these resources can cause detrimental problems such as poor air quality, temperature increases, urban heat island effect, and health complications. Businesses can work with their energy utility to save money, increase their energy efficiency, grow Arizona's clean energy economy, and become more sustainable and resilient to future disruptions.

Energy, SRP or APS, Utility Programs for Businesses

- Standard rebate programs: Replace units with energy efficient ones - lighting, refrigeration, HVAC controls, thermostats, building envelope, and appliances.
- Custom rebate programs: Relates to unique projects, items, and industrial processes. Fit to facility's needs.
- Retrocommissioning programs: Reprogramming control systems and bringing a building back into its original design state (increase efficiency, fix wear and tear, preserve existing building stock).

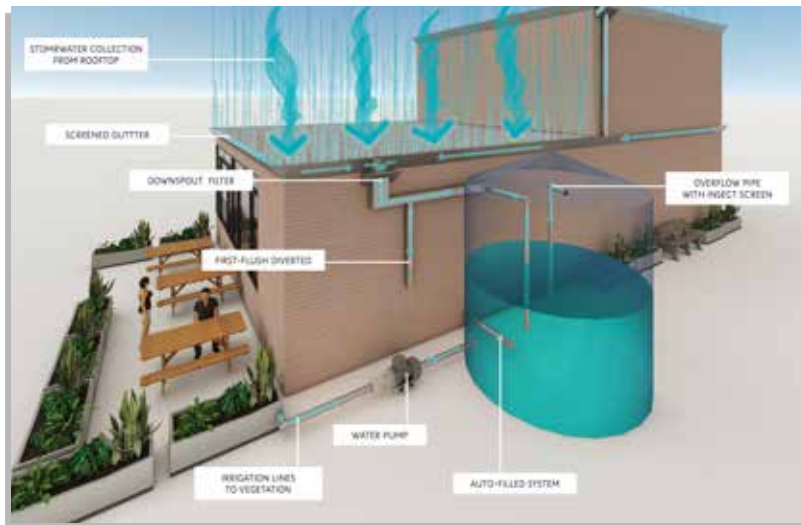
Energy Cost Saving Actions for Businesses

- Find the problem and start measuring: Post utility bills and track usage; empower employees to participate; have an energy audit performed.
- Prevent future problems: Maintain and clean equipment; rearrange for common-sense layouts ie. refrigerator away from oven; proper ventilation; increase awareness and education among staff.

Make a plan to right size your business with efficiency: Replace fluorescent and incandescent lights with LEDs, CFL, or daylighting; phase out old equipment and appliances with options that are "smart" or Energy-star related; seal building envelopes and replace inefficient windows and doors.

Business Agenda

Water Conservation



ASU student rendering of water conservation measures.



Water audit with DTA businesses.

Water is a precious resource that must be managed properly in our desert climate, as Arizona's water supply has grown increasingly uncertain. Businesses can partner with the City to learn how to better manage water use, save money, and conserve water to maintain the vibrancy of Tempe and ensure water security for future generations.

Water Utilities Division Commercial Industrial and Institutional (CII) Program for Businesses

- Best management practices
 - Landscape consultations and water budgets
 - Water efficiency audits
 - Customer high water use inquiry and notification
- WaterSmart Portal
 - Water management tool
- Non-residential Grants and Rebates
 - Turf Replacement rebate: convert grass to desert landscaping
 - Indoor fixtures rebate: upgrade fixtures to high-efficiency models
- Industrial Grant
 - Commercial and industrial users
 - Target savings areas: industrial/commercial processes, landscaping, and cooling systems
- Water Efficiency Audits (Interior and Exterior)

Water Conservation Actions for Businesses

- **Measure what you want to change:** Track water usage and utility bills; establish a green team to monitor water use; have a water audit performed.
- **Establish a plan and communicate water conservation and efficiency goals with team:** Promote awareness and conservation with a written policy; check for and fix leaks once a month; improve efficiency through retrofits.
- **Identify opportunities that further support your efforts:** Take advantage of the City of Tempe Commercial Water Rebate Program to offset costs for improvements; support other businesses who are prioritizing sustainability and water conservation; participate in the Arizona Green Business Program for consultation and promotion of your business's efforts.

Business Agenda

Partnerships

Business leaders at the Summer 2021 forums expressed that the best way to involve their businesses in climate action planning was to provide more educational opportunities, outreach, and information on best practices, including:

Barriers to Participating

- Lack of relationships, knowledge, and capital

Partnerships Provide

- **Access accountability structure and support**

Partnership Benefits

- Access to experts, information and best practice webinars

The City of Tempe, Tempe Chamber of Commerce, and Local First Arizona each have several programs and opportunities to educate businesses on sustainable practices to overcome current barriers and challenges.



City of Tempe

- Climate Action Plan 2021 Update
- Municipal Utilities Department Water Utilities Division CII Program



Tempe Chamber of Commerce

- Directory of sustainability-minded businesses
- Basic, intermediate, and advanced actions businesses can take



Local First Arizona

- Green Business Certification
- Scale-Up Program
- One-on-one work with businesses to help adopt cost savings solutions

Highlight Action

Tempe businesses are excited that there is a business that sees investment in mobility hubs as central to their economic model.



Rendering of Culdesac Tempe development on Apache Boulevard.

Mobility hubs are infrastructure solutions that provide transportation options to bring workers and residents to business locations in Tempe, while supporting clean transportation. One example of a mobility hub being implemented in Tempe is Culdesac, the first car-free neighborhood in the United States. Culdesac is currently in development on a 17-acre lot in the city. The area will be made up of residential and retail space, co-working space, and an outdoor pedestrian area - all car free. Utilizing the mobility hub concept allows Culdesac to do just that by providing a variety of transportation solutions such as e-bikes, e-scooters, rideshare, bike parking, and on-site light rail.

Walkable and bikeable neighborhoods and cities will provide economic benefit for businesses by:

- Reducing traffic congestion in the area
- Increasing foot traffic in the area
- Attracting workers and customers

“Mobility hubs help our residents and the surrounding community live affordably and sustainably.” - Lavanya Sunder, General Manager Culdesac Tempe

Champions

Tempe businesses are proving that climate action can save money and be good for business.



Sole Sports Running Zone

Sole Sports Running Zone is a running and walking store in Tempe that specializes in shoes, running products, and athletic apparel. While they work to curate a fantastic customer experience, they also prioritize sustainability in their business and community engagement.

Sole Sports has taken measures to reduce water, energy, and waste:

- Retrofitted store with LED lighting and exit signs and double-pane windows
- Installed dual-flush toilets and a water-refill station to eliminate waste
- Reusing packaging materials and recycling
- Offering store credit to customers who donate shoes

“We think contributing to a culture of sustainability and the stewardship of our resources is a basic responsibility of our being in business, and as a running shop, we want to support the efforts to keep our outdoors clean, run-able, and healthy.”

- Holly Amend, Manager & Apparel Buyer at Sole Sports.



Downtown Tempe Authority (DTA)

Downtown Tempe Authority (DTA) is a non-profit organization working in partnership with the City of Tempe to increase the value of Downtown Tempe through safety, promotion of the district as a destination, event production, and parking management. DTA is working to establish sustainable and resilient water stewardship practices in the district through a water retrofit and efficiency pilot in collaboration with Mill Avenue Shops and Caffe Boa.

Pilot and Outcome:

- Comprehensive water audit of 12+ businesses
- Projected efficiency savings of 20-75% through fixture retrofits
- Opportunity for district businesses to take advantage of the City's Commercial Indoor Efficiency Fixture Rebate
- Serve as example for other downtown centers to support businesses in adopting sustainable practices

“We are interested in water conservation and want to look at it in terms of the district we manage, which includes the space in the public right of way, how we clean and take care of it, how we manage parking lots and garages, as well be mindful of planters and landscape around downtown ... We want to cultivate water saving success stories from businesses and property owners and share with the public and encourage others to do the same.”

- Lori Foster, Chief Strategy Officer at DTA

Climate Justice Agenda



Councilwoman Doreen Garlid discusses a climate justice issue at an EnVision Tempe event.

The Office of Sustainability hired community-based organization, Unlimited Potential, to connect with vulnerable residents of target neighborhoods most affected by climate change. A series of engagement sessions were held to discuss energy equity and extreme heat, community health and resilience, and the EnVision Tempe center. Tempe residents assisted in building a climate action plan that addressed the inequitable and unjust effects of climate change.

Actions

Extreme Heat and Energy Equity

Residents want to live comfortably in a cool, walkable Tempe with adequate living standards that conserve energy. Unfortunately, some disadvantaged residents have to choose between paying for electricity and other necessities because the cost of cooling their homes is too expensive. Unsheltered residents, who use the least energy, are the most at risk from extreme heat.

The overall health and well-being of Tempe residents can improve with the following processes and policies:

- **Unsheltered Population:** support and respect unsheltered persons
- **Neighborhood Funding:** mobilize neighborhoods as a collective energy action
- **Green Stormwater Infrastructure (GSI):** promote water conservation and increase native vegetation
- **Energy Savings:** set an allotted amount of energy at no cost; lower-income residents would benefit the most
- **Property Renovations:** weatherize and update existing living spaces
- **Energy Efficiency:** incentivize the use of natural and clean energy resources

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Climate Justice Agenda

Land Stewardship



ASU student rendering of a reimagined sustainable landscape for Indian Bend Wash.

Due to the colonization and commercialization of the environment over the last couple of centuries which has reduced the area's land, water, and food quality, Tempe needs to develop land practices that improve living standards for the most affected.

The relationship between the land and its people can improve through the following:

- **Indigenization of Tempe:** acknowledge colonization and integrate Indigenous knowledge
- **Regenerative landscaping:** promote regenerative agriculture, farms, and backyard gardens
- **Connectivity:** use tree canopies along bike and walking paths
- **Resilient landscape:** plant native vegetation to increase urban cooling and water conservation
- **Indigenous ownership:** historical unceded land is given back to Indigenous communities

Climate Justice Agenda

Partnership

Community-Based Organizations



Residents of the Escalante neighborhood attend a neighborhood resiliency event co-hosted by Unlimited Potential and the Sustainability and Resilience Office.

Some residents do not feel safe navigating the city system. Hiring a community-based organization to facilitate City-resident relationships gives residents an opportunity to voice their concerns on important issues addressed. Community-Based Organizations can work on responding to climate change and climate justice inequities through:

- **Outreach:** increasing partnerships between City and community-based organizations to carry out planning and implementation
- **Education:** producing training to support residents' energy and resilience needs
- **Equity:** responding to community inequities and ensuring collective well-being across Tempe

Highlight Action



Community member discusses potential support services that could be offered at EnVision Tempe.

The EnVision Tempe facility provides a centralized location for residents to practice community resilience, self-sufficiency, and offer shelter during an emergency. The facility offers additional access to economic, social, housing services, and helps improve residents' emergency management and response skills.

EnVision Tempe was created out of two existing frameworks that address community resilience, wellbeing, and self-reliance

- **Resilience Hubs:** Community-based facilities that promote local empowerment through self-reliance by creating a local approach to emergency preparedness
- **EnVision Centers:** Government facilities that act as a one-stop shop for social and healthcare programs

EnVision Tempe will serve nearby communities through the following pillars:

- **Economic Empowerment:** Opportunities to improve economic sustainability
- **Educational Advancement:** Educational and skills training opportunities
- **Health and Wellness:** Improving access to better health outcomes
- **Character and Leadership:** Providing service opportunities for community members to encourage civic engagement
- **Resilience to Extreme Heat:** Providing immediate and long-term heat relief Community Resilience: Ensuring community wellbeing and self-reliant emergency preparedness

Climate Justice Agenda

Champions

Tempe residents want all community voices to be heard at the City level. Karla and Mariela are two women of color who are poised to improve their neighborhoods and have their voices heard.



Karla M. Paez

Karla M. Paez is a Latina mother of four and a Tempe resident. She and her family use the Escalante Community Center to learn about environmental justice through workshops offered by Unlimited Potential.

Climate Action Work: Karla is motivated by the belief that present and future generations deserve clean air to breathe and clean parks to play in. She teaches her children to care for the environment by not littering and picking up after others' litter.

Karla advocates for environmental justice because she believes that every community member, regardless of where they live, should have green and beautiful natural spaces. She also supports her community's efforts to gain equal rights for a more dignified life, a better future for children, and to address the violence and oppression of women.

"All of us as a community have the right to benefit from green and beautiful spaces and we should join together to preserve nature for all of us. I hope the future of Tempe is greener and less extreme. Tempe residents should get informed, get involved, understand their rights, and advocate for the rights of everyone to live in a clean and healthy city."



Mariela Acosta

Mariela Acosta is a Latina mother of four children and a Tempe resident. She supports local farmers by purchasing their produce and learns about environmental justice through workshops at the Escalante Community Center.

Climate Action Work: Mariela advocates for environmental justice because she sees her community struggle each day for sustenance. She believes in a better world with clean air and a clean economy. Mariela leads by example, encouraging her family to use less energy, conserve water, and avoid purchasing plastic and disposable products.

"I hope Tempe will lower energy costs and mitigate extreme heat. Human beings need to take better care of the environment for themselves and their families. If nothing is done, heat will become worse for people and their work conditions."

Neighborhoods Agenda



University Heights residents working with Watershed Management Group (WGM) and Four Peaks Brewery on a neighborhood Green Stormwater

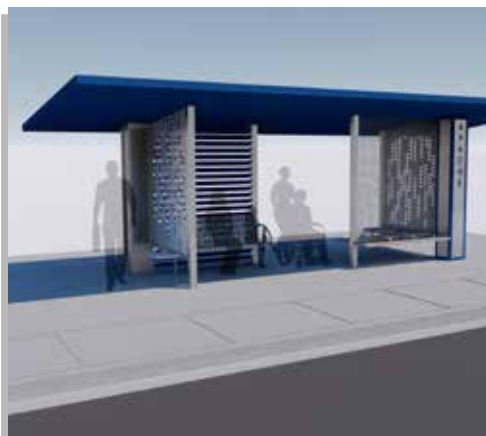
Tempe residents understand the importance of climate action and through lived experience are able to advocate for what changes are needed in our neighborhoods and communities. A virtual forum hosted by the City of Tempe's Sustainability Office in June, 2021 provided an opportunity for Tempe residents to engage with several topics that were highlighted as important by residents in previous engagements. This included resilience to extreme heat, partnerships with community-based organizations around equity, and Highlight Actions regarding Resilient Energy Hubs and Mobility Hubs. In attendance were Tempe parents, business owners, ASU students and faculty, City of Tempe staff, organization leaders, renters, homeowners, and more.

Action

Resilience to Extreme Heat



ASU student rendering of a cool landscape outside the Tempe Library which could function as resilience



A final design for future Tempe transit shelters using shade and cool materials.

Heat poses issues for residents in Tempe more extremely than any other city in the country. Tempe residents understand this and continue to ask the city to address these issues. The City of Tempe's Sustainability and Resilience Office is working on several programs to address extreme heat, including the Cool Kids program, but residents know that there is much more that must be done. Extreme heat is not only a health and safety issue, but a climate justice and equity issue. It is imperative that Tempe address issues related to extreme heat and work on transformative actions that create immediate impact for our communities, especially the most vulnerable.

Tempe residents would like to see additional programs to address extreme heat such as:

- Bus shelters at every bus stop
- Community Cooling Centers including Resilient Energy Hubs
- Increased tree canopy across the city
- Implementation of cool pavement and cool materials

To address equity regarding extreme heat in Tempe, residents believe that the city must:

- Create policies to make electricity more affordable for all homeowners and renters, including expanding energy assistance and energy equity programs
- Implement programs that ensure energy is always available for all residents
- Provide rebates and incentives for solar panel implementation
- Hold utilities accountable for a transition to renewable energy
- Build social capital and focus on community-led solutions to extreme heat
- Provide services for people experiencing homelessness to seek shelter in times of extreme heat

Neighborhoods Agenda

Partnership

Community-Based Organizations and Equity



City employees and Unlimited Potential employees celebrating Tempe outreach event.

While equity was mentioned in Tempe's previous Climate Action Plan, it was not a central focus. Residents demand that the City of Tempe address equity and climate justice. In order to fully embrace a climate justice approach that centers equity, the City of Tempe can partner with community-based organizations on projects that address the following issues:

- **Transportation**
 - Ensure that every child can safely walk or bike to school and increase connectivity across Tempe
 - Invest more in equitable transportation infrastructure improvements including increasing accessibility for people with physical and mental disabilities
 - Address health concerns associated with long waits for transit
 - Focus on infrastructure improvements for public transportation including implementing buttons for emergency services and on-demand transportation
- **Water and Energy**
 - Address energy and water equity through reducing or completely eliminating the cost of water and electricity
 - Address health concerns associated with indoor extreme heat including lack of air conditioning
- **Vitality and Community Resilience**
 - Increase economic opportunities in target neighborhoods
 - Design programs that disseminate emergency packs (including water, food, and other necessities), to communities and individuals in need

Highlight Action



Mercy Corps resilience hub in Puerto Rico.

Tempe neighborhoods can increase connections and community resilience through strategic investment in resilience energy hubs and resilience hubs that follows the example of work in Puerto Rico.

Best Practice: Resilience Hubs - Puerto Rico Mercy Corps Re

Resilience Hubs are community-oriented facilities that provide a place for residents to seek shelter during times of emergency. Mercy Corps, a nonprofit organization that focuses on helping communities prosper in the "face of disaster, poverty, and the impacts of climate change," manages 17 Resilience Hub locations around Puerto Rico. Some of the main features of Mercy Corps resilience hubs include:

- Community gardens
- Internet connectivity
- Disaster risk reduction and education workshops
- Off-grid solar energy (Resilient Energy Hub)
- Potable water
- Storage and distribution of emergency non-food items

Resilience hubs are essential in providing year-round services to vulnerable communities and in supporting all community members in preparing for disaster. Having a resilience hub in a community provides a sense of security with the knowledge that shelter, food, water, electricity and more can be found during a crisis.

Neighborhoods Agenda

Champions

Tempe residents are making their neighborhoods more resilient and sustainable. Gretchen, Raul, Joel and his neighbors are examples of residents working to transform Tempe.



Joel Cornejo

Joel Cornejo is a resident of Tempe. He began volunteering as a youth for community organizations Puente Human Rights and Mijente. Joel is the founder of Semillas Arizona, a nonprofit organization that organizes BIPOC to defend themselves from laws and institutions that target their communities.

Semillas Arizona: Joel was motivated to start Semillas Arizona in 2019 after the death of Antonio Arce and his own experience seeing his community targeted by police and ICE.

Semillas Arizona is in the process of creating the base for its newly formed Environmental Justice Coalition. The organization has also created a new initiative, the People's Budget that engages the community to participate in the City of Tempe budget process around:

- Increasing tree canopy in target neighborhoods
- Addressing environmental injustices
- Creating cooling centers for unsheltered people
- Increasing afterschool programs
- Making public transportation free

"Semillas stands for seeds, we believe in planting the fire for liberation into future generations. Who we must protect. Putting more cops with guns won't do that. The Barrio needs trees and plants. The Barrio deserves justice and that includes our environment."

- Joel Cornejo

Gretchen Reinhardt and Raul Puente-Martinez

Gretchen Reinhardt and Raul Puente-Martinez are Tempe residents. Gretchen and Raul have advanced climate action in Tempe through their professional careers and personal time. Both have worked to increase shade and mitigate heat through a neighborhood grant by planting trees and shrubs at Thew Elementary and the Escalante and Alegre neighborhoods. They are involved in climate action through several organizations.

Gretchen:

- City of Tempe Sustainability and Resilience Commission
 - Recommends sustainability solutions to the City of Tempe
 - Supports council and citizens in understanding climate impacts
- Citizens' Climate Lobby East Valley chapter
 - Advocates for putting a price on carbon through the passage of the Carbon Fee and Dividend
- Arizona Faith Network
 - Helped establish cooling centers at places of worship across Maricopa County

Raul

- Curator of Living Collections and Research Botanist for the Desert Botanical Garden
 - Educates visitors about the advantages of the collection's plants for water conservation and to help with cooling the landscape
 - Involved with watershed management groups in creating gardens for rainwater harvesting
 - Researches how climate changes impact native vegetation
- Citizens' Climate Lobby Far East Valley chapter
 - Volunteers for the advocacy organization

"The most important part of a local climate action plan can't actually be in the plan...because it is us. All of us. As a community. It's our commitment to make decisions and provide funding based on a livable future for all. It's investments like a city-wide 1/4-mile school-safe bicycle grid, codes that understand tree needs and life-spans, and its funding resilience. We need to keep learning from our best-of-intentioned mistakes. It's a process, and each of us has a role to play." - Gretchen Reinhardt and Raul Puente-Martinez

Municipal Actions

In addition to community actions, the city government has focused on actions it can perform to be sustainable and resilient. In 2015, Tempe collected data to form the city's first municipal GHG emissions inventory. A new inventory was completed in 2020, which showed a 2.5% decrease in overall municipal emissions. Emissions decreased in almost every sector over a 5-year period. This is a positive trend that the city hopes to reinforce through further action. Tempe set a goal of carbon neutrality in municipal operations by 2050 with a strategy of 100% renewable energy by 2035. The following sections provide strategies the city will employ to decrease GHG emissions in city operations.



Municipal GHG Inventory

In 2020, the total municipal emissions were 39,657 MT of CO₂e. Approximately 75% of the city's GHG emissions were from electricity production, while 24% of total emissions came from the transportation sector. Tempe owns 120 buildings, which account for 30% of the city's electricity consumption and GHG emissions. Outdoor lighting, which includes 17,000 streetlights, park lights, and traffic signals, accounts for 18% of total emissions. The City of Tempe manages two drinking water treatment plants that consume approximately 22 million kWh of electricity per year, or 27% of the municipal GHG emissions. Tempe's municipal and transit fleets account for 22% of total emissions. Solid waste is transported to neighboring cities, specifically Phoenix, for disposal, and accounts for less than 1% of total emissions.

Municipal GHG

Total Emissions: 40,666 MT CO₂e

	2015	SECTOR	2020
	30%	BUILDINGS AND FACILITIES	30%
	20%	OUTDOOR LIGHTING	18%
	20%	WATER INFRASTRUCTURE	27%
	29%	MUNICIPAL AND TRANSIT FLEET	24%
	1%	OTHER	1%

Overall decrease: 2.5%

Mayor Corey D. Woods

Municipal Actions

City Buildings

Completed Actions



Kiwanis Recreation Center

- Assessments:
 - Annual assessments of city buildings are conducted to determine energy efficiency upgrades for lighting and electrical equipment.
- Retro-commissioning:
 - A retro-commissioning study was conducted at the Tempe Library and History Museum to improve efficiency.
- Plans:
 - A first draft of the Facilities Sustainability Plan has been completed.
- Public/Private Partnerships:
 - Solar panels have been installed at six city facilities to power buildings with renewable energy. The city will continue to make clean energy investments through partnerships with APS and SRP.
 - Tempe participated in a demand response program with APS and SRP to help the utilities

Next Actions



Fire Station No. 2

- reduce peak demand.
- Assessments:
 - Tempe is working with energy management consultants to perform assessments and determine appropriate building efficiency upgrades.
- Energy Retrofits:
 - Installation of 'cool roofs' on some city buildings is being assessed.
 - Tempe will retrofit the Library and Fire Stations with LED lights.

Municipal Actions

Outdoor Lighting

Completed Actions



Hanger Park

- Parks/Area Lighting:
 - 90% of area lighting at city parks has been upgraded to efficient LEDs.
 - Installed 643 new LED area lights in parks in 2020.
- Street Lighting:
 - Began conversion of street lights from induction lights to LED lights.
 - Priest Drive and Rural Road have been fully converted to LEDs.
 - 4,000 residential and 1,000 arterial street lights have been converted.

Next Actions



University Road

- Street Lights:
 - All lights will likely be completed by 2025.
- Park Lights:
 - The city will work to convert the remaining 10% of unconverted park lights to LEDs in 2021.
- Facility Lights:
 - The city will continue to upgrade exterior lighting to LEDs.

Municipal Actions

Water Infrastructure

Completed Actions



Municipal Utilities water well

- Assessments:
 - Tempe has completed an efficiency study to assess the city's water treatment plants, wells, and pumps to determine how to optimize water and energy use.
- Facility Lights:
 - The outdoor lighting at all 3 city water treatment plants has been fully converted to LEDs

Next Actions



Municipal Utilities water pumps

- Renewable Energy:
 - Tempe will install solar panels on the carports at our water plants.
- Energy Retrofits:
 - The possibility of 'right-sizing' pumps to make them more efficient is being examined.
 - The city will implement the recommendations from the efficiency study.

Municipal Actions

Municipal Fleet and Transit Fleet

Completed Actions



Municipal Utilities water well

- Electric Vehicles:
 - Added 20 Electric Vehicles to the municipal fleet to reduce fossil fuel use.
 - Installed 35 Electric Vehicle charging stations at city facilities to encourage accessible access to Electric Vehicle infrastructure.
- Busses:
 - All busses have been converted from unleaded diesel to hybrids or alternative fuels.
- Studies:
 - An Electric Vehicle feasibility report has been completed, which will further help the city implement Electric Vehicle infrastructure.

Next Actions



Municipal Utilities water pumps

- Municipal Fleet Upgrades:
 - Tempe will convert all light duty vehicles to Electric Vehicles by 2035.
- Transit fleet upgrades
 - Tempe's Orbit and Flash buses are switching to alternate fuels instead of using diesel gasoline.
 - A pilot program with 8 buses will be test the feasibility of fully-electric busses in Tempe.

Municipal Actions

Upcoming Investments

City Buildings



Completed Actions

Tempe continues to work with local utilities to improve efficiency and demand response through yearly assessments which highlight buildings that can be retro-commissioned to improve energy efficiency.

Future Actions

Further building assessments, retrofits and retro-commissioning projects will take place as opportunities arise.

Outdoor Lighting



Completed Actions

90% of park area lights and 25% of street lights have been converted to LED lights; improving efficiency, visibility, and safety throughout the city.

Future Actions

The remaining 10% of park lights and 75% of street lights will be converted to LED's.

Water Infrastructure



Completed Actions

Efficiency studies have been conducted at Tempe's water treatment facilities.

Future Actions

Tempe will continue to examine ways to increase efficiency and decrease energy use at its water facilities. This includes 'right-sizing' pumps and installing LED lights at water facilities.

Municipal Fleet and Transit



Completed Actions

Tempe has added 20 electric vehicles to its fleet and installed 35 EV chargers around the city. All city buses have been converted to either hybrids or alternative fuels.

Future Actions

All light-duty vehicles will be converted to electric vehicles by 2035. Orbit and Flash buses will continue to be converted to hybrid and alternative fuels. A pilot program for fully electric buses will be put in place.

Grants and Partnerships

Grants allow Tempe to expand and create programs that serve community needs. Partnerships introduce knowledge, resources, and best practices, which move collaboration and climate action forward in Tempe.

NEA Our Town Grant



Centering Indigenous design principles and concepts of resilience in future of Tempe.

Funder: National Endowment for the Arts (NEA)

City Partners: City of Tempe: Sustainability Office, Arts & Culture Division, Community Development, Parks & Recreation, Strategic Management and Diversity Office

Community Partners: Indigenous Design Collaborative (IDC)

Budget: \$100,000

Project Timeline: 2021-2023

Objective: To bring indigenous voices and perspectives to the forefront of city planning and take an active role in designing the future of Tempe.

Outcome: For Tempe consider adopting Indigenous design principles and processes as expressed by artists and members of adjacent tribal communities.

The City of Tempe has partnered with the Indigenous Design Collaborative (IDC) to support projects that integrate Indigenous arts, culture, and design activities across Tempe. IDC will support creative engagements with three tribal communities: Salt River Pima-Maricopa Indian Community, Gila River Indian Community, and the Pascua Yaqui of Guadalupe. IDC will build connections with Indigenous community members, elevate Indigenous cultural identity, and reimagine city-making processes by leading with Indigenous cultural values. This project is an example of how local government can support and adopt sustainability and resilience principles, center the voices, and hear perspectives of Indigenous communities in municipal design and urban development.

Policy, program and infrastructure recommendation coming out of this work will include:

- Indigenization of Tempe
- Arts and Culture programming
- Community Development and Planning
- Resilience to Extreme Heat



Energy Equity and Climate Justice Training and Engagement



Supporting residents in saving money and staying cool

Funder: City of Tempe through CARES Act funding

City Partners: Human Services, Community Development, Neighborhood Services, Communications and Media Relations, Engineering and Transportation

Community Partners: Unlimited Potential

Budget: \$32,000

Project Timeline: March 2021 to December 2021

Objective: To recruit and train Tempe residents in energy and climate issues and prepare residents to read their energy bills, understand their energy use, prepare for extreme heat in the summer and advocate for policy changes to support energy and resilience to extreme heat policy.

Outcome: Recruitment efforts will result in establishing a Climate Justice Advisory Group of 5-10 Tempe residents, from diverse backgrounds, to advise the Sustainability Commission on energy equity and climate justice.

Unlimited Potential has partnered with the City of Tempe to recruit and train Tempe residents in energy and climate issues and prepare residents to engage with city staff, the Mayor, and City Council. Unlimited Potential is a 35-year-old organization with expertise in community organization and resident advocacy. Unlimited Potential works in English and Spanish to assist residents who traditionally do not engage with local governments. This cross-sector collaboration will directly respond to community inequities and ensure that Tempe's climate policy, programs and infrastructure centers the voices of BIPOC* residents.

Policy, program and infrastructure recommendations coming out of this work will include:

- Clean and affordable energy (Collaboration with APS and SRP)
- Energy efficiency (Housing retrofits)
- Sustainable transportation
- Resilience to extreme heat

Climate-Sensitive Urban Forestry



Co-creating landscapes for a hotter future

Funder: Salt River Pima Indian Community (SRPMIC) Gaming Grant

City Partners: Community Services, Engineering and Transportation, Municipal Utilities, and Community Development

External Partners: SRPMIC, Trees Matter, Tempe Union High School District, Tempe Elementary District, Arizona Sustainability Alliance and Keep Tempe Beautiful

Budget: \$67,500

Project Timeline: 2021-2022

Objective: To mitigate the negative effects of extreme heat through climate-sensitive urban forestry.

Outcome: To develop pilot projects on city property and local schools that demonstrate the benefits of native pollinator gardens, desert-adapted trees and green stormwater infrastructure while working to achieve a citywide 25% tree and shade canopy by 2040.

This initiative aims to contribute to urban cooling by planting native vegetation around Tempe. Increased vegetation cools surface temperatures and absorbs runoff water from rain and irrigation. This project funds the installation and maintenance of native vegetation, which requires less water and is drought tolerant, helping them survive in extreme heat.

The grant is funding a native pollinator forest at 12th Street and Mill Avenue and demonstration projects at Thew Elementary, Tempe High School and McClintock High School. Funding is paired with additional resources from grants and donations from the city, APS, SRP and Trees Matter. Additional demonstration sites at schools and on city property will be added as funding allows.

Policy, program and infrastructure recommendations coming out of this work will include:

- Increase investment in urban forest
- Increase investment in green stormwater infrastructure
- Water conservation
- Resilience to extreme heat

Cool Kids, Cool Places, Cool Futures (Neighborhood Justice)



Youth-led Climate Action leading to citywide and regional equitable cooling solutions.

Funder: Robert Wood Johnson Foundation

Partners (Internal): Community Services, Human Services, Fire Medical Rescue

Partners (External): Arizona State University, Tempe Union High School District

Budget: \$590,000

Project Timeline: 2021- 2023

Objective: Support students in advancing resilience to extreme in the Escalante and Gilliland neighborhoods, Tempe, and Maricopa County through art, policy and cooling projects.

Outcome: Use the transformation of Tempe schools and neighborhoods to inspire a regional cooling authority or utility to design, fund and implement cooling infrastructure and programs throughout Maricopa County.

Cool Kids, Cool Places, Cool Futures is a project that aims to organize youth across the City of Tempe to take action on resilience to extreme heat. This opportunity shifts power and gives voice to the next generation of Tempe leaders. Cool Kids is organized by two youth councils of ten to fifteen core students that focus on advancing resilience to extreme heat efforts in the Escalante and Gilliland neighborhoods, two communities most impacted by heat-related issues. The students refer to the project as Neighborhood Justice. Youth council members will be supported by ASU researchers, City of Tempe staff, artists, local teachers, and social workers to give guidance on completing various community projects that address climate, health, and equity. Cool Kids draws inspiration from three global ideas:

1. New Zealand's implementation of a community-based emergency management plan that enables communities to self-organize in the event of an emergency
2. Morocco's youth coalitions that organized their art skills into collective action on infrastructure
3. Medellin, Colombia's district-based participation process that helped local agencies address the trade-offs and financing of new public utilities

Cool Kids (Neighborhood Justice) combines these global ideas with existing Tempe and regional assets including the Mayor's Youth Advisory Council, Community Arts program, Tempe's urban forestry program, Tempe's emergency management program, and resilience to extreme heat expertise and indigenous concepts of resilience. The intention is for the change the students create at the school and neighborhood level to influence the city and the region to adopt a new approach to equitable cooling.

Policy, program and infrastructure recommendation coming out of this work will include:

- Resilience to extreme heat
- Green Stormwater Infrastructure
- Urban Forestry Master Plan
- Emergency Management and Community Resilience programs

Partnerships

Local Partnerships



Tempe Chamber of Commerce	
Description	Tempe Chamber of Commerce provides a unified voice for businesses, supports initiatives in public policy and education, workforce and business development.
Mission	To sustain Tempe's quality of life and keep the community and economy vibrant.
Participants	Community champions, businesses and individual members
Core Sustainability Work	Tempe Chamber of Commerce created the Sustainability Pledge Program for businesses that want to reduce their environmental impact. Each year businesses set goals and targets and evaluate their progress. The program offers tips, resources, and examples for businesses to implement at a low cost. Businesses are encouraged to develop a mission statement and a plan and create a "green team" to establish sustainability in the work environment.
Collaboration with Tempe	City of Tempe sits on the Chamber's Sustainability Committee. The Chamber co-led the creation of Tempe's Business Agenda in the Climate Action Plan Update.



Downtown Tempe Authority	
Description	Since 1993, the award-winning Downtown Tempe Authority has been the private, non-profit organization that works in partnership with the City of Tempe to increase the value of Downtown Tempe through enhanced management, safety, marketing and promotional services on behalf of DTA members and other downtown stakeholders.
Mission	The DTA shall act as a vehicle to positively impact and drive the future of our city's urban center and be a steward of the existing assets and resources. Downtown Tempe will be a vibrant, livable, walk-able community that is the preferred destination of employers, employees, residents and visitors for working, shopping, dining, events, culture and leisure.
Participants	Board of Directors, Board Members, City of Tempe
Core Sustainability Work	Downtown Tempe Authority is committed to being environmentally aware, to actively support programs that reduce our organization's environmental impact and to continually improve our environmental performance as an integral part of our business strategy and operating procedures. We seek to understand the effects our business activities have on the environment by supporting initiatives such as: <ul style="list-style-type: none"> • Reduction of material, water and energy consumption • Waste minimization • Recycling of resources
Collaboration with Tempe	City of Tempe works with the DTA on sustainability practices for businesses within their districts, including a recent effort for improving water efficiency, the Tempe Grease Cooperative, stormwater awareness and collaboration with the Transportation Management Association (Tempe).

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Bonnie Richardson, Principal Planner, Transportation
480-350-8628
DATE: January 4, 2022
SUBJECT: Tempe Adaptive Streets Implementation Design Guide
ITEM #: 6



PURPOSE:

To provide the Commission with an update on the Adaptive Streets Implementation Design Guide.

RECOMMENDATION OR DIRECTION REQUESTED:

For information.

CITY COUNCIL STRATEGIC PRIORITY:

- Quality of Life - 3.26: Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.
- Quality of Life 3.34: Community health and well-being.
- Safe & Secure Communities – 1.08: Achieve a reduction in the number of fatal and serious injury crashes to zero.

BACKGROUND INFORMATION:

The City of Tempe is pursuing the development of an Adaptive Streets Implementation Design Guide to identify strategies that allow for flexibility and adjustments, and ensure safe movements of all users, within the public rights of way.

Originally staff provided the Commission (June 23, 2020) with a presentation and memo on Open Streets: Approaches to Social Distancing. While originally intended to identify rapid solutions to address challenges resulting from the COVID-19 pandemic, the project is currently focused on a more long-term approach, creating a tool to support City-identified context-specific strategies and design features that respond to opportunities and needs in the right of way. This includes providing additional space for active transportation users (pedestrians, bicyclists, people accessing transit, micro-mobility users), near-term and low-cost improvements, and other strategies.

The Adaptive Streets Implementation Design Guide will complement and will be coordinated with the variety of recent and ongoing City efforts and projects that relate to transportation mobility, livability, and placemaking in the City. This includes supporting and contributing to the City's initiatives around Vision Zero, Age Friendly City and the Climate Action Plan. Staff will coordinate with other City projects that are currently ongoing, including, but not limited to, Traffic Calming, Mobility Hubs, Innovation Hubs, and the Transportation Demand Management/Transportation Management Associations (TDM/TMA) projects.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:

The cost of the project is \$95,000. Tempe is required as part of the Maricopa Association of Governments (MAG) Design Assistance Grant to pay 5.7% (in local funding) of the total cost of the project. The 5.7% match is \$5,415, bringing the total cost for the project to \$95,000. The breakdown below indicates the financial participation of this Agreement:

Maricopa Association of Governments	\$ 89,585	94.3%
Tempe match	\$ 5,415	5.7%
Total	\$ 95,000	100%

Sufficient budget for Tempe's portion of the project has been appropriated in Transit Fund cost center 3923.

TIMELINE/NEXT STEPS:

- January 19, 2022 Public Outreach Meeting (WebEx)
- January 29 Transportation Open House (Tempe Public Library, SE Parking Lot)
- April 12 Transportation Commission
- April 21 Council Work Study Session
- April/May Public Outreach Meetings
- May Assemble Draft Adaptive Streets Implementation Design Guide

ATTACHMENTS:

1. PowerPoint

Tempe Adaptive Streets Implementation Design Guide

Transportation Commission

January 4, 2022



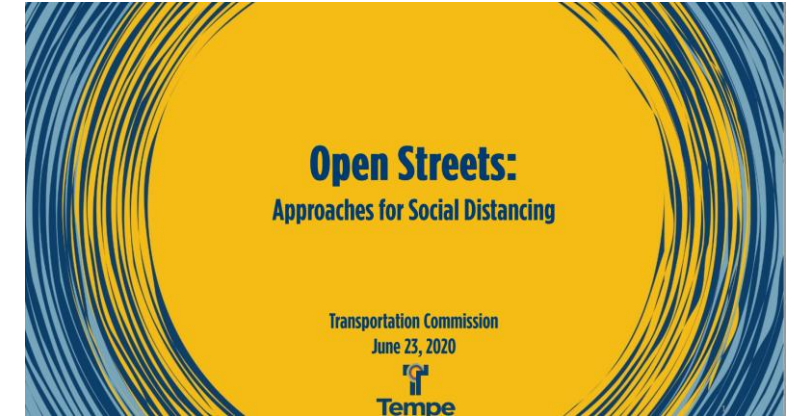
Tempe Adaptive Streets Implementation Design Guide

Presentation Outline

- Project Purpose
 - *Background and why this project is being pursued*
- What are Adaptive Streets?
 - *Definition and Use Cases*
- Project Process and Activities
 - *Activities completed and in process*
 - *Public Engagement #1 – January 2022*
- Questions and Next Steps

Background – ‘Open Streets’

June 2020 Commission Meeting – Open Streets as approaches for social distancing in response to COVID-19



- ◆ Created a shift in what the community wanted/needed
- ◆ Provided Local Governments a Chance to Respond . . . in a short period of time



The Community needed . . .

- More room to walk and bike
- Safer streets
- More room to dine and gather
- Placemaking

Photos from NACTO

Project Purpose

Create a guidebook of low-cost strategies that change the use/allocation of the public right-of-way (ROW) to accommodate new/different demands

- Design guide
- Internal (City) and external (public) processes



Adaptive Streets Definition for Tempe

An adaptive street application is a change to the public right of way (sidewalk, curb space, roadway, median) that:

- Is implemented temporarily
- Includes a new feature in the ROW that changes how some/all of the ROW is used
- Is implemented at a specific location in response to a community need

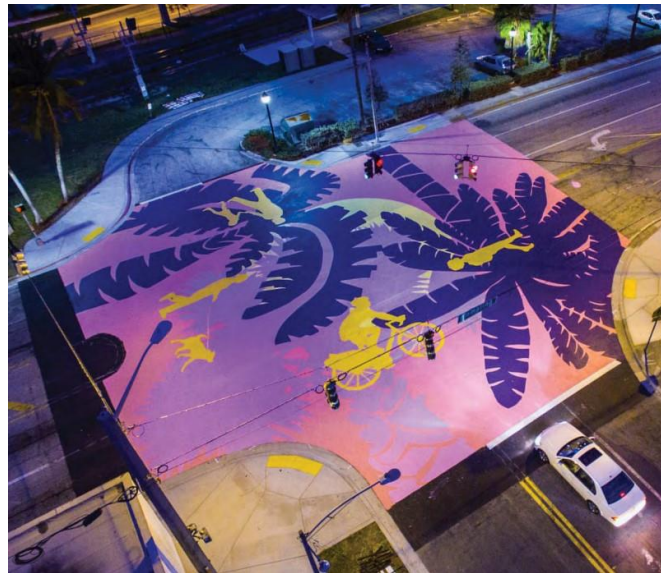
Potential Opportunity for Adaptive Streets

- Bring attention to a feature or configuration at an intersection to improve safety



Potential Opportunity for Adaptive Streets

- Support implementation of changes to circulation/mobility or community character resulting from an adopted plan or CIP project

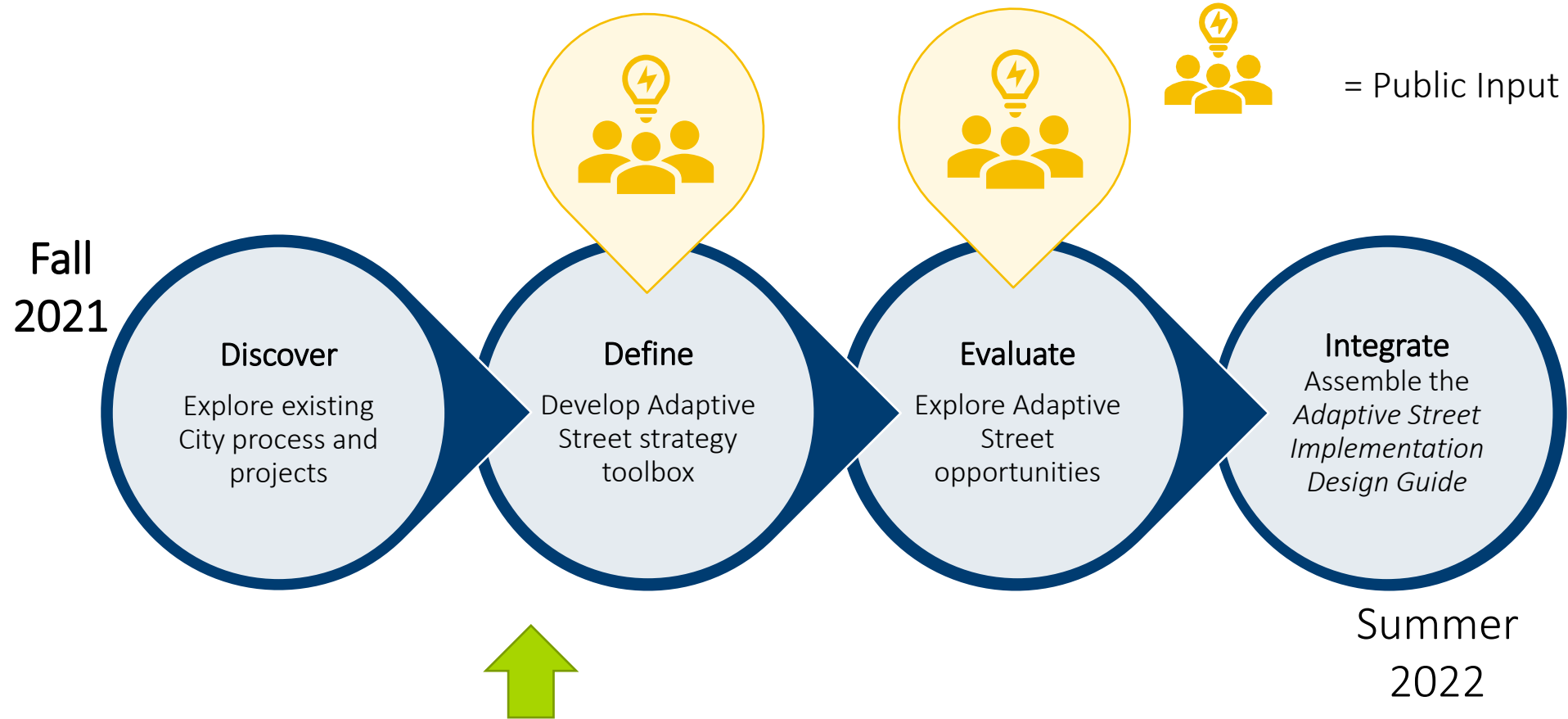


Potential Opportunity for Adaptive Streets

- Support temporary/seasonal needs for travelers and community members



Project Process



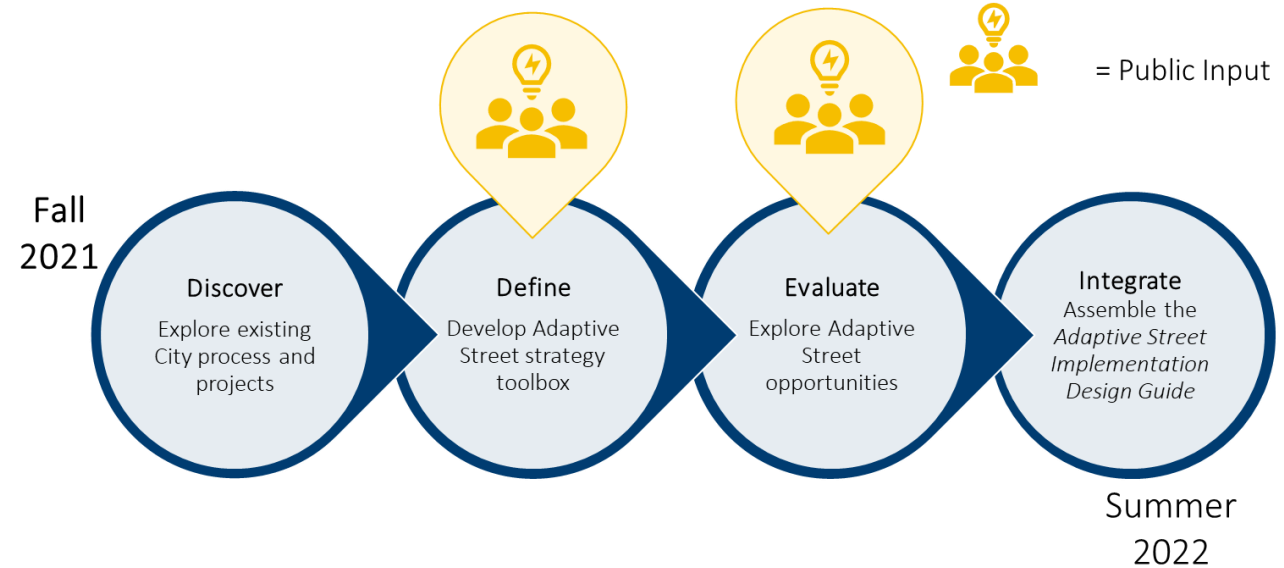
We are here

Tempe Adaptive Street Implementation

DESIGN GUIDE



Project Activities



Discover:

- Completed a review of City Plans, Initiatives, and Processes to identify connections or opportunities for Adaptive Streets
- Completed two Focus Groups – 1. Internal City Staff; 2. Business and Resident Representatives

Define:

- City project team is refining definition and use cases for adaptive streets
- Beginning discussions around developing internal process for doing adaptive streets



Public Engagement #1

- Online Public Meeting – Wednesday, January 19, 2022; 12pm
- In-Person Public Open House – Saturday, January 29, 2022; 9am
- Online Digital Engagement Activity – active January 19 – February 13, 2022

Inform:

- Project Purpose and Background
- Project Timeline and Activities
- Concept/Definition of Adaptive Streets

Engage:

- Is the **definition** of Adaptive Streets understandable and clear?
- What are the **top priority** needs for modifying the operations of the street right of way?
- Which strategies are **suitable in Tempe**?
- **Where** could you see this application happening?

Next Steps

- January 2022 Public Outreach and Engagement #1
- February/March 2022 Assemble Tempe's Adaptive Street Toolbox
- March/April 2022 – Define Adaptive Street Processes
- April/May 2022 – Public Outreach Engagement #2
Transportation Commission Meeting
Council Issue Review Session
- May 2022 Assemble Draft Adaptive Streets Implementation Design Guide



Questions?



Thank you!

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Eileen Yazzie
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MEMORANDUM

TO: Tempe Transportation Commission
FROM: Eric Iwersen, Interim Deputy Engineering & Transportation Director
DATE: January 4, 2022
SUBJECT: Future Agenda Items
ITEM #: 8



PURPOSE:

The Chair will request future agenda items from the Commission members.

RECOMMENDATION OR DIRECTION REQUESTED:

This item is for information only.

- February 8
 - Transit Program Update & Bus Service Governance Study / Security Update
 - MAG Prop 400e
 - Scottsdale Road Bike Lanes
 - STEP Manual
- March 8
 - Mobility Hubs/Transportation Demand Management Plan/Transportation Management Association
 - Vision Zero/Speed Limits
- April 12
 - Tempe Adaptive Streets Implementation Design Guide
 - North/South Rail Spur MUP
 - Bike Hero
- May 10
 - Crosswalk Signal Countdown & Signal Detection for Bicycles
 - Ash/University Intersection & 1st/Ash/Rio Roundabout Traffic Data Counts Update
- June 14
- July 12
- August 9
- September 13
- October 11
 - Annual Report
- November 8
- December 13
- TBD: Bus Rapid Transit Study
- TBD: Bike Bait Program (once program resumes)
- TBD: Commuter Rail Study/MAG Commuter Rail Plan
- TBD: AZ State Rail Plan/AZDOT Phoenix-Tucson Corridor Plan
- TBD: Personal Delivery Devices
- TBD: All Aboard Arizona