



## PUBLIC MEETING AGENDA

### Transportation Commission

#### MEETING DATE

Tuesday, May 8, 2018  
7:30 a.m.

#### MEETING LOCATION

Tempe Transportation Center, Don Cassano Room  
200 E. 5<sup>th</sup> Street, 2<sup>nd</sup> floor  
Tempe, Arizona

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
<b>1. Public Appearances</b> The Transportation Commission welcomes public comment for items listed on this agenda. There is a three-minute time limit per citizen.	Ryan Guzy, Commission Chair	Information
<b>2. Approval of Meeting Minutes</b> The Commission will be asked to review and approve meeting minutes from the April 10, 2018 meeting.	Ryan Guzy, Commission Chair	Action
<b>3. Autonomous Vehicles</b> Arizona State University and City staff will make a presentation regarding autonomous vehicles.	Thad Miller, Arizona State University and Rosa Inchausti, Strategic Management and Diversity Office	Information and Possible Action
<b>4. Autonomous Vehicles</b> Maricopa Association of Governments staff will make a presentation about autonomous vehicles.	Bob Hazlett, Maricopa Association of Governments	Information and Possible Action
<b>5. MAG Design Assistance Grants</b> Staff will provide information on possible projects that could receive funding through MAG design assistance grant opportunities.	Robert Yabes, Public Works	Action
<b>6. ADA Transition Plan</b> Staff will present an update on the City's ADA transition plan.	Michele Stokes, Strategic Management and Diversity Office	Information and Possible Action
<b>7. Fifth Street Streetscape</b> Staff will present an update on the Fifth Street Streetscape Project.	Tony Belleau, Public Works	Information and Possible Action
<b>8. Department &amp; Regional Transportation Updates</b> Staff will provide updates and current issues being discussed at regional transit agencies.	Public Works Staff	Information
<b>9. Future Agenda Items</b> Commission may request future agenda items.	Ryan Guzy, Commission Chair	Information and Possible Action

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 Transportation Commission April 10, 2018

Minutes of the Tempe Transportation Commission held on Tuesday, April 10, 2018, 7:30 a.m. at the Tempe Transportation Center, Don Cassano Community Room, 200 E. Fifth Street, Tempe, Arizona.

**(MEMBERS) Present:**

Ryan Guzy (Chair)	Brian Fellows
Paul Hubbell	Lloyd Thomas
Jeremy Browning	Charles Redman
Nigel A.L. Brooks	Bonnie Gerepka
Susan Conklu	Don Cassano
Kevin Olson	Shereen Lerner
Cyndi Streid (via phone)	

**(MEMBERS) Absent:**

Charles Huellmantel	Shana Ellis
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**City Staff Present:**

Eric Iwersen, Transit Manager	Chase Walman, Transportation Planner
Shelly Seyler, Deputy Public Works Director	Sue Taaffe, Public Works Supervisor
Tony Belleau, Streetcar Design & Construction Manager	Joe Clements, Transportation Financial Analyst
Laura Kajfez, Neighborhood Services Specialist	TaiAnna Yee, Public Information Officer
Jim Peterson, Lieutenant	Julian Dresang, City Traffic Engineer
Bill Amato, Police Legal Advisor	Amanda Nelson, Public Information Officer
Marilyn DeRosa, Deputy Public Works Director	Braden Kay, Sustainability Program Manager
Mike Pooley, Sergeant	

**Guests Present:**

John Federico, resident	JC Porter, ASU
Amy McNamara, resident	Jeff Titone, GRID Bikes
Melinda Alonzo, ASU	Julie Rees, Triadvocate/Lime Bikes
David Rice, resident	Chris Milner, TY Lin

Commission Chair Guzy called the meeting to order at 7:30 a.m.

**Agenda Item 1 – Public Appearances**

None

**Agenda Item 2 – Minutes**

Chair Guzy introduced the minutes of the March 13, 2018 meeting and asked for a motion. Commissioner Fellows requested that the spelling of Vision 0 be changed to Vision Zero. A motion was made to approve the minutes.

**Motion:** Commissioner Kevin Olson  
**Second:** Commissioner Paul Hubbel  
**Decision:** Approved

**Agenda Item 3 – Dockless Bicycle Right-of-Way Use License**

Shelly Seyler and Marilyn DeRosa made a presentation about the draft license for dockless bicycles in the right-of-way (ROW). Topics of the presentation included:

- Background
- Resident feedback
- Pros and cons
- Peer city permit elements
- ROW use license proposed requirements
- Peer city fees
- Vendor and stakeholder feedback
- Next steps and process
- Feedback requested of Commission

Discussion by the Commission included the following questions and comments:

- Is the restriction two bikes per bus stop per vendor? Yes
- Is the restriction 400 bikes per vendor? Yes
- There needs to be clear guidelines on the definition of impoundment. When will the city impound a bike? If the bike is a safety hazard the city will impound it. If it is a nuisance, the vendor has three days to move the bike before the city will likely impound it.
- Will bikes be allowed at Orbit stops? In neighborhoods, Orbit uses flag stops not designated bus stops like on arterials; therefore, bikes may only be staged at designated bus stops served by Orbit.
- The city should consider adding a bond element to the license agreement.
- How will parking be monitored? Staff will have access to real-time data.
- Did you remove the word nuisance from the draft license? Yes, it was difficult to define so it was removed.
- After stakeholder provided feedback, did staff incorporate their suggestions? Staff met and reviewed all the feedback and revised the license as staff deemed appropriate.
- Would attachment 8 be part of the user agreement? Yes
- A Commissioner stated that he is not in favor of including attachment 8 - user indemnification in the requirements. The cyclist should not have to waive their right to sue the city.
- What will the fees be used for? Those fees will aid in offsetting administering and monitoring the program.
- Will the city hire another staff person for this? Not at this time.
- A Commissioner requested that staff provide a report in the future as to the amount of actual staff time needed to manage the program.
- Does staff have an estimate for what a bond amount would be? Not at this time.
- Do we plan on prohibiting dockless bicycles from being taken on buses or light rail? Not at this time.
- The entire system should be restaged twice a day instead of once a day.
- The cap on the number of bicycles per vendor was appropriate.
- How did staff arrive at the fees? Staff conducted an analysis of anticipated staff time to administer and monitor the program.
- Do the vendors pay sales tax? Yes
- How much is it to ride one of these bikes? Typically, \$1 an hour or half hour.

- A Commissioner stated that people seem to like the bikes but he personally does not and that he is concerned about where the bikes are parked.
- The vendor should be required to educate the user on safety.
- Can we use the fees to educate riders on safety? Initially these costs will need to help offset staff time to administer and monitor the program.
- How and when will the fee be reviewed and should there be an incentive for vendors who comply with the terms and conditions more than other vendors? Staff must make sure to be equitable when it comes to charging fees for the same access to the right-of-way.
- Will the vendor be notified before the city impounds a bike? No. The vendor will have three days to move the bike before the city will likely impound it unless it's a safety hazard.
- Does staff install the bike racks that the \$2,500 fee covers? Yes
- Does staff have a plan for increasing the number of bikes for special events? Not at this time.
- Has staff considered having a tiered fee structure? Not at this time.
- How does this license affect electric bikes and scooters? Staff acknowledges that those will eventually be parked in city right-of-way but for the time being staff is focusing on getting this license implemented.

A motion was made to recommend the following to the City Council:

- Implement a fee to include performance incentives
- Consider adding a refundable bond element
- Allow staff to make the necessary adjustments to the license as needed
- Re-evaluate the user indemnification requirement

**Motion:** Commissioner Shereen Lerner

**Second:** Commissioner Don Cassano

**Decision:** Approved

#### **Agenda Item 4 – Ordinances Related to Bicycles and Pedestrians**

Julian Dresang made a presentation regarding Tempe's code provisions relating to bicycle crosswalks and street crossing policies, comparison to other Valley cities. Topics of the presentation included:

- State statutes
- Tempe bike ordinance
- Comparison of Tempe's ordinance to other valley cities

Discussion by the Commission included the following questions and comments:

- Are cyclists expected to walk their bikes across an intersection? Bicyclists can dismount the bike and walk through the intersection.
- City of Tempe bicycle ordinance, Sec. 7-52. - Riding on sidewalks or bicycle lanes as defines as "(d) Any person riding a bicycle, electric bicycle or light motorized vehicle on a bikeway, sidewalk or bicycle path that is about to enter or cross a roadway shall yield the right-of-way to all traffic on such roadway" needs rewritten. Can this be written? Yes, the language can be updated. The ordinance was written to protect bicyclists since the bicyclist has a better vantage point to see a car.
- We need to add crosswalk language to Tempe's ordinance.
- The Tempe ordinance should be consistent and provide for safe travel for all modes.

A motion was made to create a working group to make modifications to Section 7-52 of the city bike ordinance.

**Motion:** Commissioner Ryan Guzy

**Second:** Commissioner Susan Conklu

**Decision:** Approved

**Agenda Item 5 – Tempe Streetcar Project**

This agenda topic was not discussed.

**Agenda Item 6 – Setting Speed Limits**

Julian Dresang made a presentation about setting speed limits. Topics of the presentation included:

- Goal
- Background
- Study locations
- Proposed changes
- Process

Discussion by the Commission included the following questions and comments:

- It is confusing when speed limits change midblock.
- Will the speed limit signs near schools have a time of day listed or warning feature? That has not been determined. If it were to be a flashing sign then it would have to be included in the CIP.
- A Commissioner suggested adding a slide about severity of crashes as it relates to speeds to the presentation for Council.
- Was ASU involved in setting the speed limits around campus? Yes

A motion was made to support staff's recommended speed limit changes.

**Motion:** Commissioner Susan Conklu

**Second:** Commissioner Nigel A.L. Brooks

**Decision:** Approved

**Agenda Item 7 – Upstream Dam Bike/Ped Bridge**

Chase Walman and Chris Milner made a presentation about the upstream bicycle and pedestrian bridge project.

Topics of the presentation included:

- Feedback
- Design concepts
- Next steps

Discussion by the Commission included the following questions and comments:

- The center span may cause a visual barrier.
- Shade is a problem and there needs to be more shade.
- Can seating be added along the bridge? Yes.

**Agenda Item 8 – Department & Regional Transportation Updates**

None

**Agenda Item 9 - Future Agenda Items**

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

- May 8
  - MAG Design Assistance Grants

- Fifth Street Streetscape
- Bike Boulevards
- Bike Month Recap
- June 12
  - Streetcar
  - DTA Update
- July 10
- August 14
  - Transit Security Update
  - September 11
  - Annual Report
  - Alameda Drive Streetscape
  - North/South Railroad Spur MUP
- October 9
  - Annual Report
- November 13
  - Orbit Saturn
  - Transit Resident Survey Results
- December 11
- TBD: Vision Zero
- TBD: Bus system performance report
- TBD: Prop 500/BRT
- TBD: McClintock Drive Reconfiguration Data

Chair Guzy requested that the topic of “t intersections” be added to the agenda. The Bike Recap topic was removed as an agenda item and information will be sent to the Commissioners via email. Chair Guzy suggested and Commissioners agreed that all future meetings occur from 7:30 to 9:30 a.m. Staff will update the Outlook calendar invite to reflect that decision.

The next meeting is scheduled for May 8, 2018.

The meeting was adjourned at 9:12 a.m.

Prepared by: Sue Taaffe  
Reviewed by: Shelly Seyler

City of Tempe  
Office of Strategic Management & Diversity  
31 E. Fifth Street  
Second Floor  
Tempe, AZ 85281



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TO: Transportation Commission  
FROM: Rosa Inchausti, Director of Strategic Management and Diversity  
Braden Kay, Sustainability Manager  
Dr. Thad Miller, Assistant Professor, School of Innovation in Society  
DATE: May 8, 2018  
SUBJECT: Autonomous Vehicles

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## Introduction

In April of 2017, at the recommendation of Internal Services Director Renie Broderick, the City established a Technology and Innovation Steering Committee (TISC). The committee is made up of Directors and Deputy Directors from each department (or their designee) and includes both the COO and CFO from the City Manager's office. TISC is co-chaired by Dave Heck and Brenda Buren. The purpose of the committee is to ensure that our investment in technology and I.T. resources is collaborative, reflects a common vision of service delivery, and is operationally sustainable. The overarching objective of the committee is to advance the strategic priorities of the City through sustainable and innovative practices.

## TISC Subcommittees

The desire of the City is to continue to look towards innovation and open data, while enhancing service delivery through technology. For that reason, the group formed three subcommittees to help ensure that our approach is inclusive of developing strategies and long-term goals. The three subcommittees of TISC are *Data Governance*, *Innovation*, and *Project Prioritization*. Each of these subcommittees has its own workplan and provides a bimonthly status report to the steering committee.

**Data Governance:** This subcommittee oversees the implementation of the Open Data Program, including making policy decisions, prioritizing data publishing, resolving systemic issues, resolving conflicts in data categorizations between public and protected, and communicating success to the public and the city. The City's Open Data Portal and Performance Measures Dashboard are two examples of the work being done in this strategic area.



**Innovation**: The role of the Innovation subcommittee is to engage with our public and private partners on highly visible new technology and “smart city” initiatives that will influence Tempe’s future as a leader in innovation. The make-up of the subcommittee changes periodically depending on the focus of the group. Currently the subcommittee is focused on *Autonomous Vehicles*.

The Autonomous Vehicles (AVs) subcommittee was established in February 2018 to understand the current state of the use of AVs in Tempe and to investigate the impact AV technology will have on the community and City operations. The subcommittee is comprised of representatives from the Office of Strategic Management, the Office of Sustainability, the City Attorney’s Office, Police, Fire Medical Rescue, Community Development, Community Services, Communications and Media Relations, Government Relations and Public Works. The subcommittee is partnering with Arizona State University’s Center for Smart Cities and Regions led by Dr. Thad Miller to help facilitate conversations with AV companies, smart city experts, and the public. Dr. Miller led a class of students in the Fall of 2017 from the School for the Future of Innovation in Society that explored the potential future of AVs in Tempe and how AVs could support or provide challenges to achieving the Council’s strategic priorities especially in terms of public safety and our 20-minute city goal. The subcommittee has started meeting with Dr. Miller, and meetings with companies such as Waymo are being scheduled. The subcommittee will have a series of meetings with experts, other cities, and AV companies in order to produce a white paper for Council. This white paper will outline policy considerations and pilot projects that could further define what investments and ordinances may be necessary to ensure that AVs are appropriately and safely integrated into the city.

## **Conclusion**

Dr. Thad Miller and Rosa Inchausti will present to the Transportation Commission to get feedback on our approach to exploring the role of AVs in the City of Tempe. This process is at an early stage and in the interest of collaboration, we request that the Chair of the Transportation Commission, Ryan Guzy, serve on the Citywide Autonomous Vehicle subcommittee.

# Autonomous Vehicles in Tempe

**Thaddeus Miller, PhD**

Assistant Professor

8 May 2018

Prepared for City of Tempe Transportation Commission



# **AGENDA**

**Autonomous Vehicles (AVs) in Brief**

**Impacts of AVs**

**Policy Considerations for Tempe**

FIS 480: Innovation Studio Fall 2017

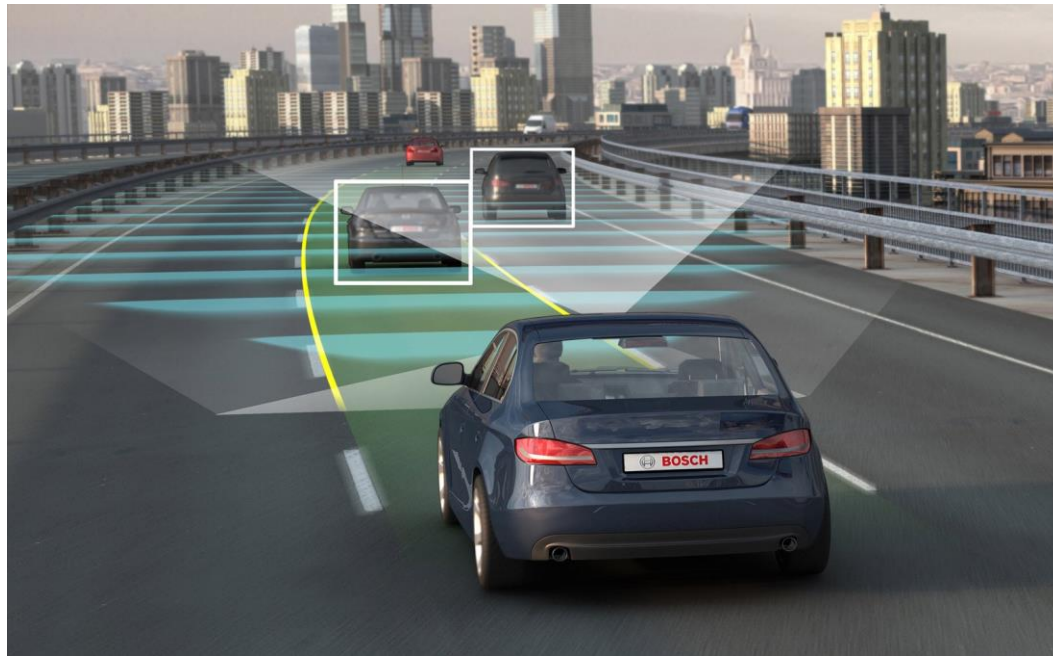
# Autonomous Vehicles in Tempe

Report prepared by Omar Al  
Ansari, Arizona Baskin, Jasmine  
Coffin, Josh Halas, Bryce  
LaCombe, Jordan Kari, Jaya  
Mannam Miller, John Nelson,  
Amelia Sodies, & Emily Whitlatch





**An opportunity for a mobility transition**



**Congestion solution**







A nighttime photograph of a cityscape. In the foreground, a bridge with a metal truss structure spans across the frame. Behind the bridge, several modern buildings are illuminated with lights, their reflections visible in a body of water in the lower half of the image. To the right, a large, dark mountain rises against the night sky, with a few lights visible on its peak. The overall scene is a mix of urban architecture and natural landscape.

**How can the City of Tempe leverage its position as an innovator to advance opportunities presented by autonomous vehicles?**

**How can the City of Tempe create anticipatory capacities to manage autonomous vehicles while such management is still possible?**

# AV Use Modes



Single occupancy vehicles



Public transit



Fleet & rideshare



Commercial fleets



Electric AVs



## Infrastructure

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VMT, congestion, &  
use pattern change

Roadway modification  
& investment

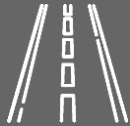


## Safe and Secure Communities

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Accident, injury, &  
death rates

Trolley problem &  
legal responsibility



### Infrastructure

VMT, congestion, & use pattern change

Roadway modification & investment

Public transit impact

Regulatory oversight

Last-mile problem



### Sustainable Growth & Development

**Transit economy change**

Local business impact

**Land use change**

Migration

**Labor market**

**City revenue change**



### Strong Community Connections

**Cost of travel**

**Disability access**

Travel coverage

Service allocation

Community identity

Socialization opportunity



### Safe and Secure Communities

Accident, injury, & death rates

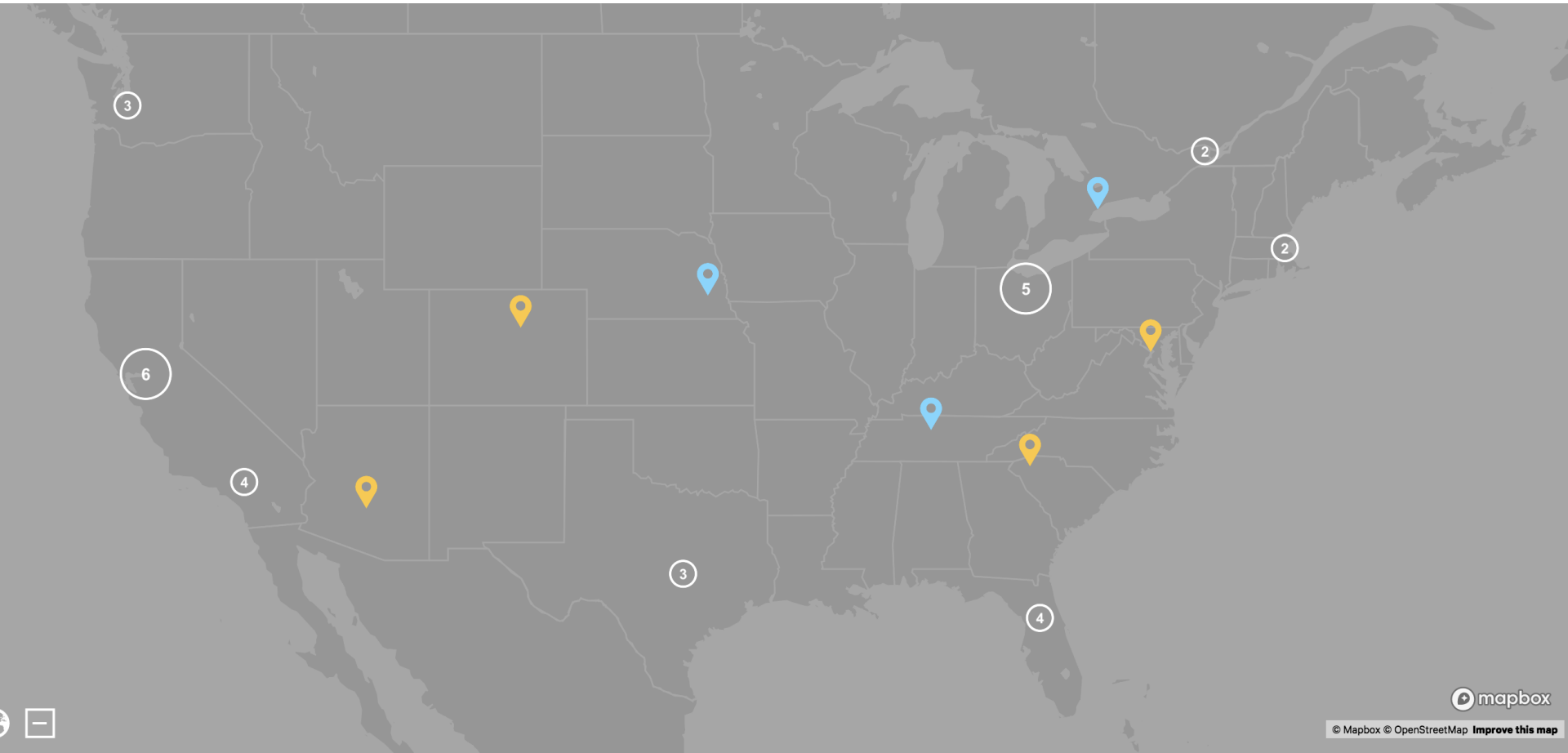
Pollution

Cybersecurity

Risk perception

Trolley problem & legal responsibility

# AV pilots and initiatives in US cities



Source: Bloomberg Philanthropies Initiative on Cities and Autonomous Vehicles



# AUTONOMOUS VEHICLES: BOSTON'S APPROACH



# Policy Considerations

## Technology and Innovation Subcommittee

- Public safety review
- Meetings with AV companies operating in Tempe
- Stakeholder workshops
- Policy review of other jurisdictions
- White paper to City Council Fall 2018

# Policy Considerations

## Technology and Innovation Subcommittee

### Community engagement

- What are hopes and expectations for self-driving cars?
- What are mobility needs of the community that could be met with AVs?



# Policy Considerations

Technology and Innovation Subcommittee

Community engagement

Public-private partnerships

- Opportunities for pilot programs
- Example: Connectivity to public transit investments

# Policy Considerations

Technology and Innovation Subcommittee

Community engagement

Public-private partnerships

ASU-Tempe partnership(s) for research and support

- Interdisciplinary network of researchers

# Policy Considerations

Technology and Innovation Subcommittee

Community engagement

Public-private partnerships

ASU-Tempe partnership(s) for research and support

Network of cities



## **Opportunity for innovation**

**Many possible ways AVs will impact Tempe's future – for better and worse**

**What actions can the City of Tempe take today that will leverage the ability of new technology to make our city and its communities safer, more economically competitive, more connected, and more livable and sustainable?**

# Thank you

Thad.Miller@asu.edu

@Thad\_Miller

## Questions & Discussion

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 4

**DATE**

May 8, 2018

**SUBJECT**

Autonomous Vehicles

**PURPOSE**

Bob Hazlett with Maricopa Association of Governments will make a presentation about autonomous vehicles.

**BACKGROUND**

None

**FISCAL IMPACT**

None

**RECOMMENDATION**

None

**CONTACT**

Shelly Seyler  
Deputy Public Works Director – Transportation  
480-350-8854  
[Shelly\\_seyler@tempe.gov](mailto:Shelly_seyler@tempe.gov)

**ATTACHMENTS**

PowerPoint

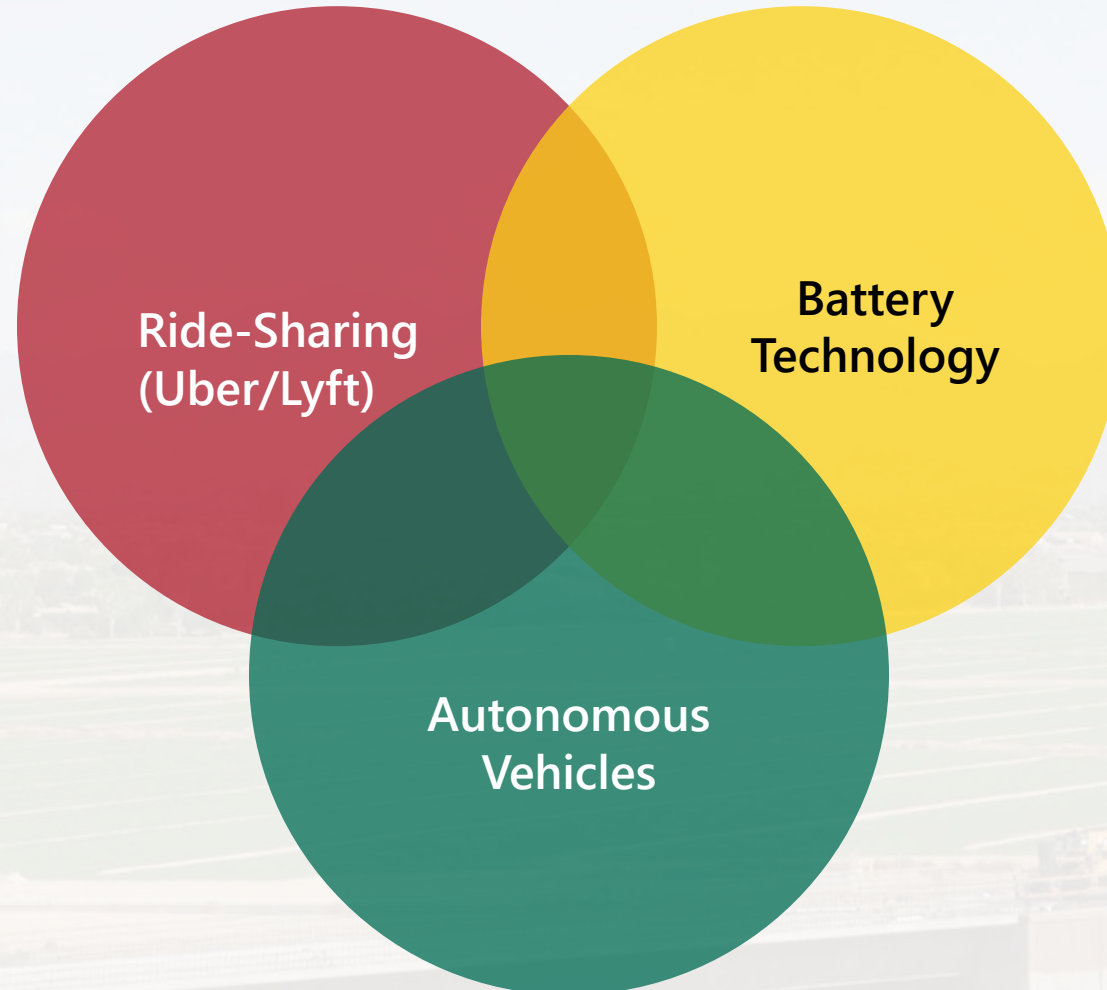


Photo courtesy  
Waymo, a self-driving technology company at Alphabet Inc.  
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# Planning for Autonomous Vehicles

Tempe Transportation Commission  
May 8, 2018

# Convergence of Three Game-Changing Trends





## SAFETY

**94**  
PERCENT  
of U.S. crashes involve  
human error. [1]

**1.2**  
MILLION  
deaths worldwide  
due to vehicle crashes  
in 2013. [2]

**37,461**  
ROAD DEATHS  
in the U.S. in 2016 and  
2.4 million injuries  
in 2015. [3]

**2**  
OUT OF 3  
people will be involved  
in a drunk driving crash  
in their lifetime. [4]

## SOCIETY

**\$594**  
BILLION  
in harm from loss of life and  
injury each year. [5]

**\$277**  
BILLION  
in annual economic costs. [6]

**\$160**  
BILLION  
in gas burned and  
time lost each year. [7]

## MOBILITY AND QUALITY OF LIFE

**3**  
MILLION  
Americans age 40 and older  
are blind or have low vision. [8]

**79**  
PERCENT  
of seniors age 65 and older  
living in car-dependent  
communities. [9]




















**42**  
HOURS  
wasted in traffic each year  
per person. [7]

# Important Facts About the Current State of Travel

Source: "On the Road to Fully Self Driving – Waymo Safety Report", Waymo, Inc., October 2017

For on-road vehicles

 Human driver
  Automated system

		Steering and acceleration/ deceleration	Monitoring of driving environment	Fallback when automation fails	Automated system is in control
Human driver monitors the road	<b>0</b> NO AUTOMATION				N/A
	<b>1</b> DRIVER ASSISTANCE				SOME DRIVING MODES
	<b>2</b> PARTIAL AUTOMATION				SOME DRIVING MODES
Automated driving system monitors the road	<b>3</b> CONDITIONAL AUTOMATION				SOME DRIVING MODES
	<b>4</b> HIGH AUTOMATION				SOME DRIVING MODES
	<b>5</b> FULL AUTOMATION				

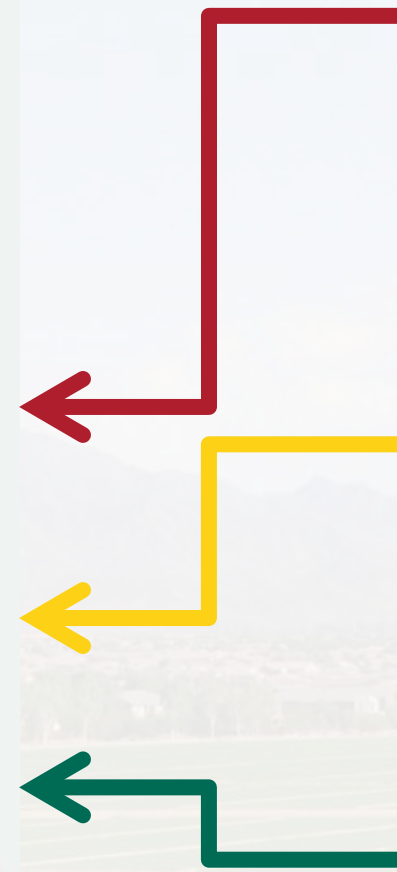
### GM "Super Cruise"



### Tesla Model S

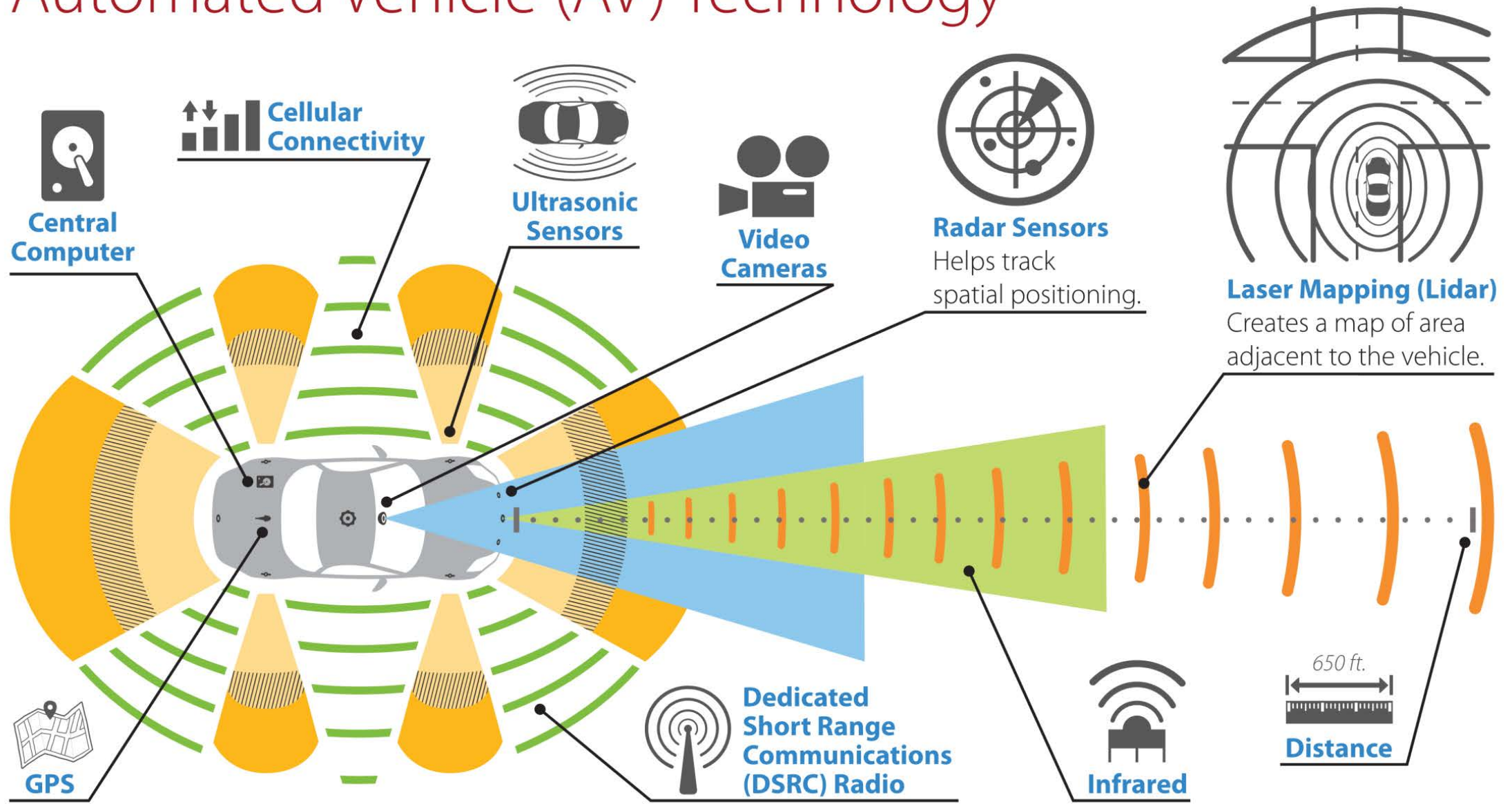


### Waymo (Google)

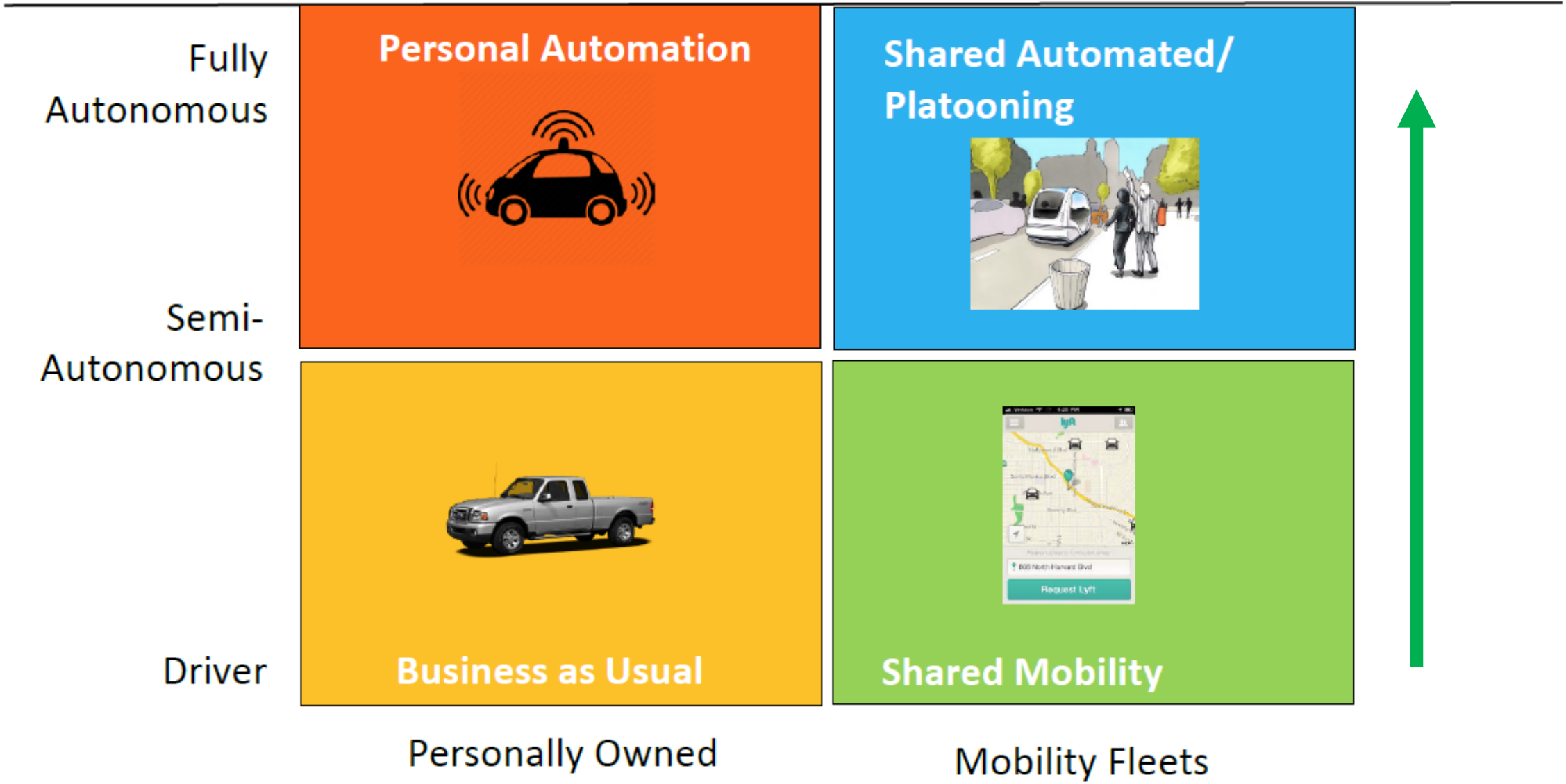


# Levels of Automation

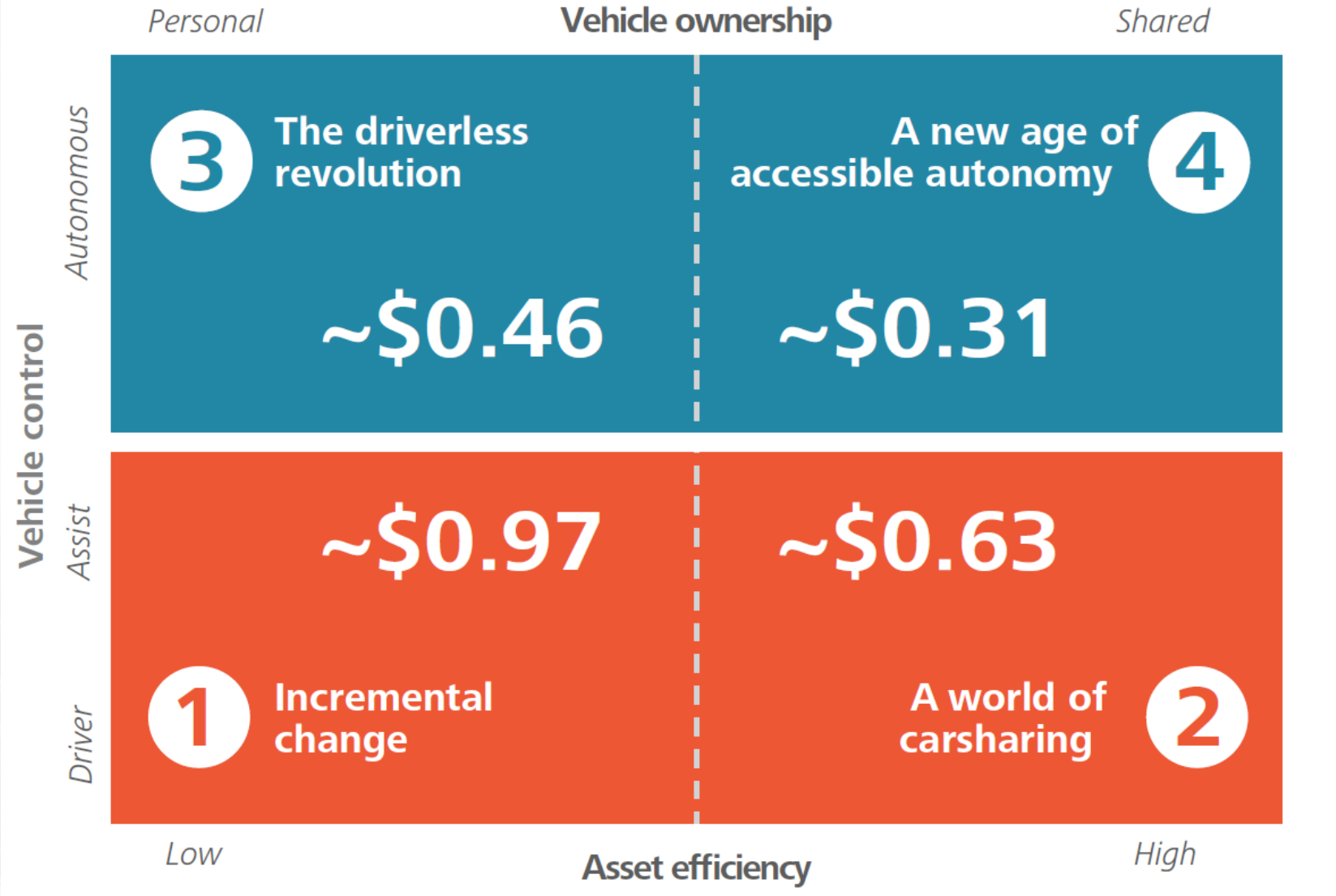
# Automated Vehicle (AV) Technology



# How will autonomous vehicles arrive?



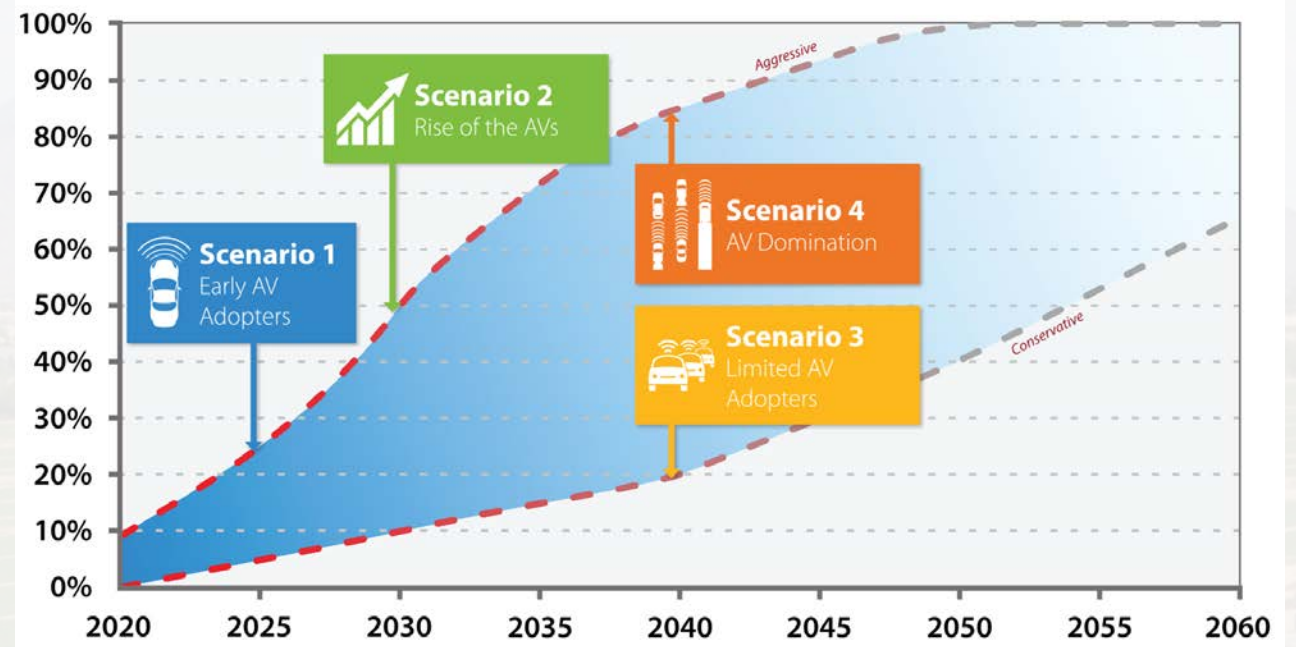
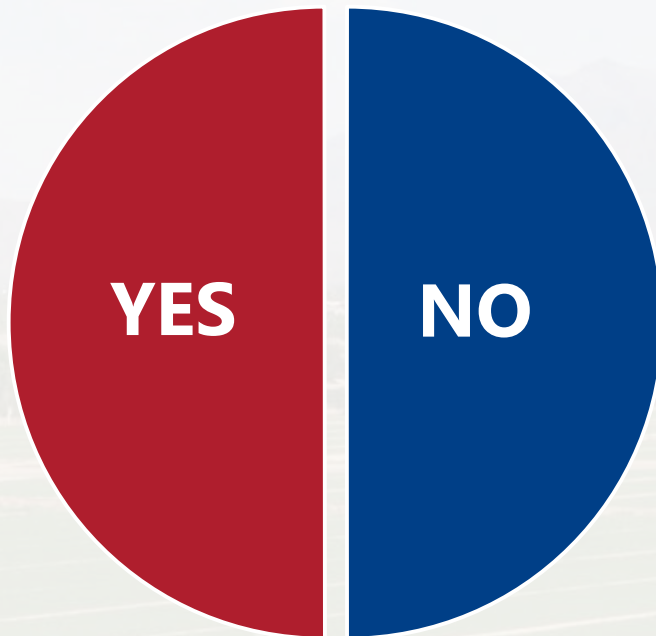
# Cost per mile, by future state



# Consumer Acceptance is Key

Is Self-Driving in your future?

50% Penetration for Partial AV by 2030 or Not



Sources: Left graphic: Texas Transportation Institute Survey, Austin, Texas, May 2015;  
Right graphic: HDR Engineering, Inc.



**Why does this  
matter?**

**How does this  
affect us?**

Ford Motor Company Photo  
Downloaded 10/16/2017



# Where Self-Driving Cars Go to Learn

Arizona's promise to keep the driverless car industry free of regulations has attracted dozens of companies, including Uber, Waymo and Lyft.

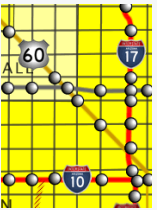
By CECILIA KANG NOV. 11, 2017



# A Unique Opportunity . . .



New Travel Choices  
Ridesharing  
Better Car Ownership Alternatives



Safer Streets  
Improved User Experience  
Efficient Network Management



Compliment to Public Transit  
Greater Transit Efficiency



Repurposed Parking  
Space for Housing  
Public Space

# ...but not without concerns.



Increased VMT  
Empty Vehicle Circulation  
Fight for the Market



Less Dense Urban Form  
Higher Road Congestion  
Longer Travel Times

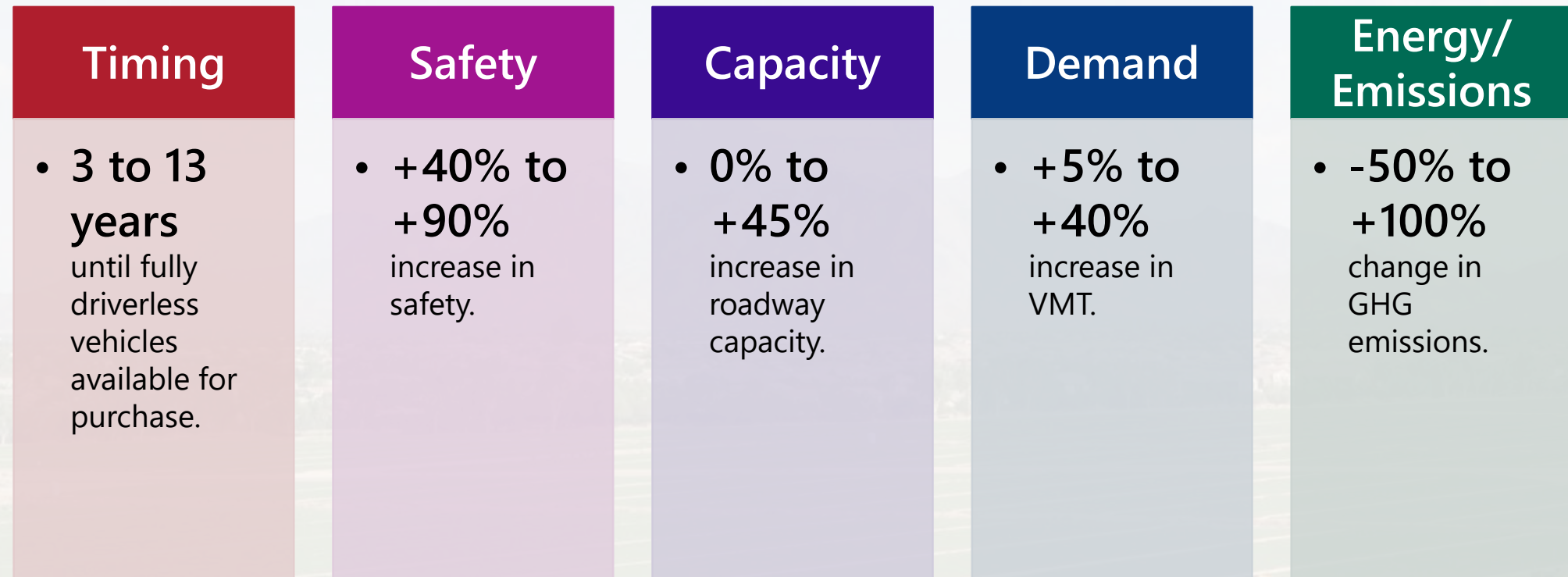


Decline in Local Transit Use  
Inequity



Cyber Attacks  
Privacy Concerns

# Literature Review Ranges for Key Variables

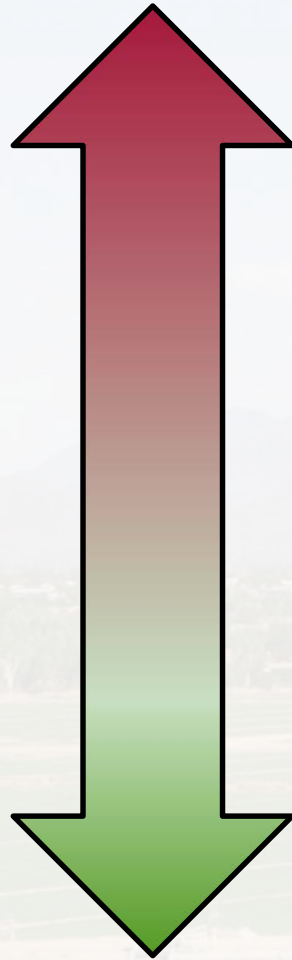


# Connected and Autonomous Vehicles



How will these vehicles affect our planning process?

# Real Estate Implications



Self-Storage

Billboards

Low-Quality Retail

Transit-Oriented

Industrial

CBD Office

High-Quality Malls



Photo courtesy of Gensler.

# Impact on Public Transportation

- Complementary Services
  - Circulator Shuttles.
  - First / Last mile transit connection.
  - Mobility Enhancement – paratransit and transit-on-demand.
  - Serve lower density areas.
  - Cannot replace rail's effective carrying capacity.



# Local Government Considerations Managing Curbside Real Estate

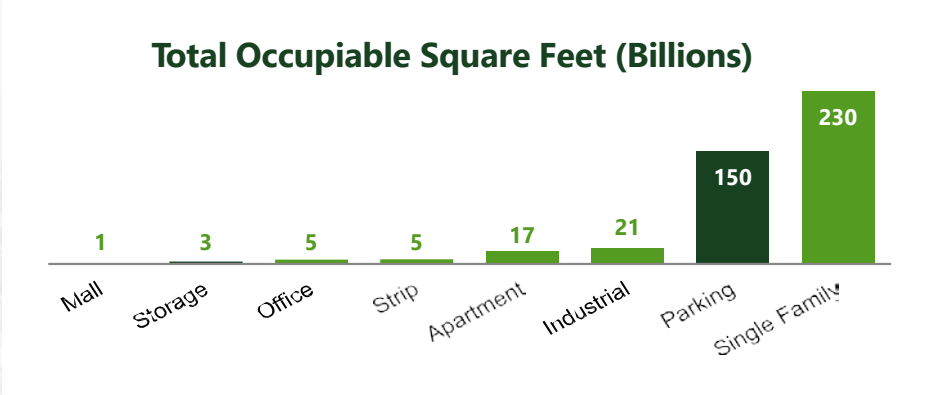
- Demand for pickup/drop-off locations.
- Use of active traffic lanes.
- Customer and pedestrian safety.
- Wait-time restrictions.



Photo courtesy of Gensler.

# Local Government Considerations Parking

**A 50% Reduction of Parking Needs is Possible**



**Surface  
Parking Lots**



**Structured**



**Subterranean  
Parking Garage**



Photo courtesy of Gensler.

# Local Government Considerations Parking

- Reduction in required parking spaces for commercial development.
- Reduction in parking revenues – city parking structures, meters, and fines.
- Reuse / partial reuse of parking structures.
- Impact on park and ride lot usage.
- Reduced demand for airport parking.

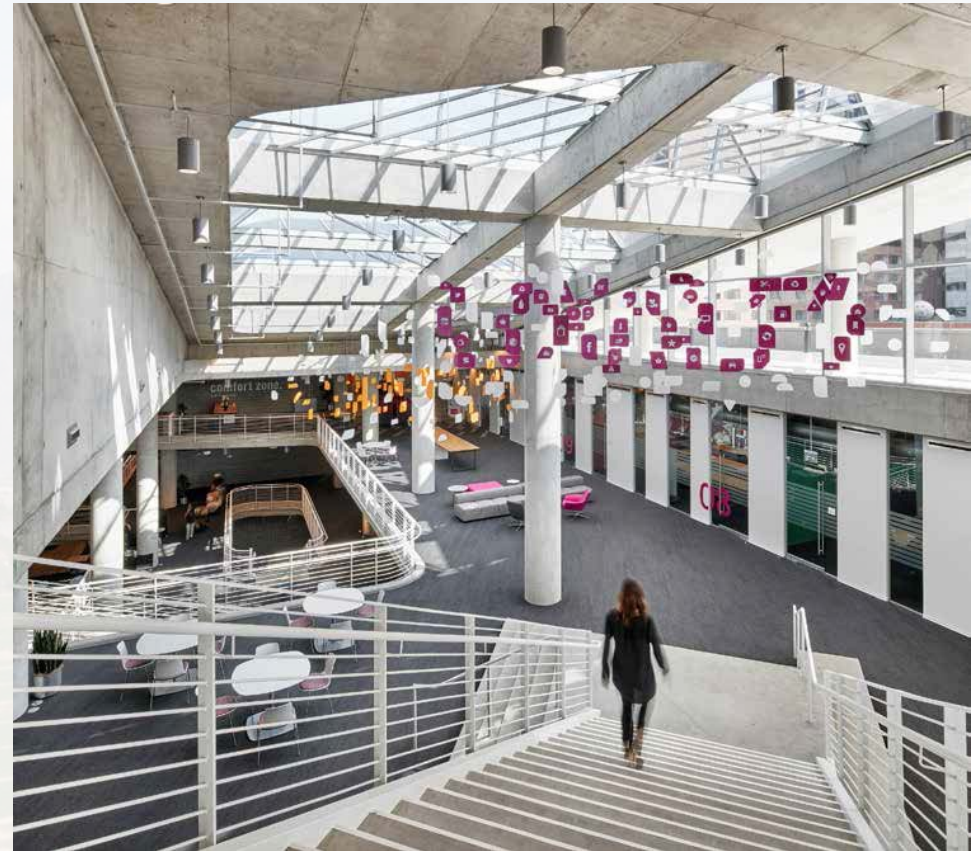


Photo courtesy of Gensler.



# Local Government Considerations Public Safety

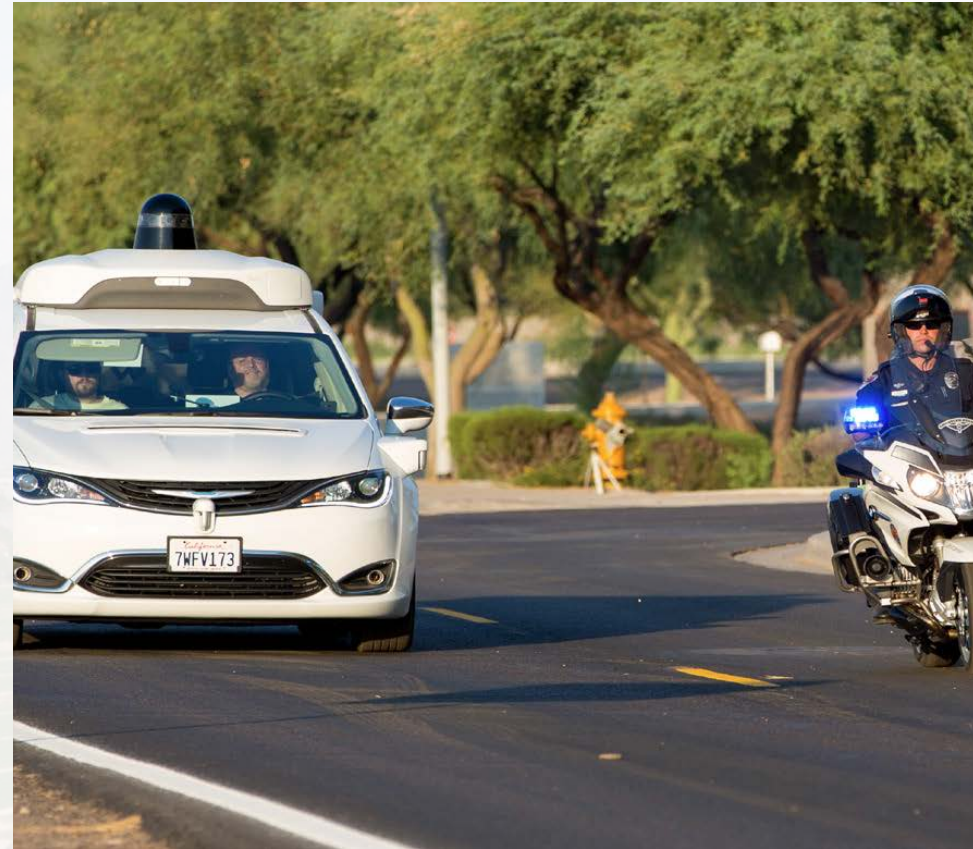




Photo courtesy  
Waymo, a self-driving technology company at Alphabet Inc.  
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# Planning for Autonomous Vehicles

Tempe Transportation Commission  
May 8, 2018

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 5

#### DATE

May 8, 2018

#### SUBJECT

Maricopa Association of Governments 2018 Pedestrian Design Assistance Grants

#### PURPOSE

The purpose of this memo is to provide the Commission with a review of the Maricopa Association of Governments (MAG) Pedestrian Design Assistance Grant Funding and recommend a project for the 2019 submittal.

#### BACKGROUND – DESIGN ASSISTANCE GRANTS

The Maricopa Association of Governments Pedestrian Design Assistance Program is an annual grant source specifically targeted at funding the first phase concept work of pedestrian-oriented projects in the region. The program has existed since 1996 and assists in getting projects started and positioning them for federal construction grants. The intent of the program is to stimulate integration of bicycle and pedestrian facilities into the regional transportation infrastructure. Tempe has successfully received design grants for ten projects since the program inception (the most of any city in the region). The deliverable work product from a successfully funded project is a concept detailed enough to use for pursuit of federal construction funds. Additionally, all environmental concerns or other project constraints would be identified in this phase.

The Tempe projects that have received past funding include:

- 1996: 5<sup>th</sup> Street Traffic Calming (Farmer – Priest)
- 1999: Mid-Block Crossing Study (which became the HAWK signals at the Western Canal Path)
- 2003: Rio Salado Pathway (Priest Drive - Phoenix border @ SR 143)
- 2011: Rio Salado Pathway (McClintock - Mesa border @ 101 & 202 ADOT Interchange)
- 2014: Highline Canal Path (Baseline – Chandler border)
- 2014: North South Rail Spur Path (Tempe Beach Park – Chandler border)
- 2015: Alameda Drive Bicycle Blvd & Streetscape (48<sup>th</sup> St – Rural Road)
- 2016: “The Missing Link” Brake BIKEiT Route (Western Canal – Highline Canal Path Connection)
- 2017: Country Club Way Streetscape, Bicycle and Pedestrian Facilities Improvement Project (seven miles from Warner Road- ASU Research Park to Tempe Marketplace generally along Country Club Way )
- 2018: “A Dam Great Regional Connection” – Upstream Dam Bike/Ped Bridge (connecting the north and south banks of the Rio Salado Path System on the east end of town lake.

Funding available for the region this year is \$500,000. Typically, cities can request up to a maximum of \$100,000, which is sufficient for concept design of a project, however, smaller funding requests are more common. Last year Tempe was awarded \$59,000 for the Upstream Dam Bike/Ped Bridge Project.

Consistent with City Administration and City Council Policy, projects are identified in concert with the Tempe Transportation Master Plan and the General Plan. Projects that are included in the City's Capital Improvement Program are also considered eligible for application.

Below are the five projects that Staff has identified for consideration for the MAG grant funding application:

- El Paso Multi-Use Path Extension (Country Club Way – Kenwood Lane)
  - Project involves completing the El Paso pathway from Price to McClintock.
  - Project links to 2 BIKEiT Blvd Routes (Spoke & Reflector) which lead to the regional Western Canal
- Tempe Canal Multi-Use Path from Union Pacific Railroad to US 60
  - Project involves completing the length of Tempe Canal in Tempe along the Mesa border.
  - Project links to existing completed path; University to Union Pacific Railroad.
  - Project connects three parks and Tempe neighborhoods.
- Dorsey (Chain BIKEiT route) Bicycle Pedestrian Improvements /Streetscape (nine miles La Vieve to McKellips)
  - Project involves creating a design for road and path improvements to connect the Dorsey Lane north/south alignment.
  - Project would be similar to Country Club Way, College Avenue, Alameda Drive streetscape improvement projects.
- North Bank - Grand Canal Connection
  - Project involves connecting the Rio Salado North Bank Path with the Grand Canal Path over the SR-202
  - Project is proposed to be a grade-separated crossing that also utilized Center Pkwy
- Farmer Ave Bike/Ped Bridge
  - Project involves connecting the future N/S Rail Spur MUP and Farmers Arts District with the Rio Salado South Bank Path and Beach Park.
  - The project is a proposed grade-separated crossing over Rio Salado Pkwy.

Staff will share project location photos to assist the Commission in selecting a project for submittal.

#### **FISCAL IMPACT**

Eventual project construction requests and federal grant applications are anticipated.

#### **RECOMMENDATION**

Identify priority project for staff to coordinate submittal by June 22, 2018. For information and action.

#### **CONTACT**

Robert Yabes  
480-350-2734  
robert\_yabes@tempe.gov

# **2018 MAG Design Assistance Grant Call for Projects**

**Transportation Commission**


**May 8, 2018**



# Overview



- \$500,000 available for the region
- Application due to MAG June 22, 2018
- Past Awards:
  - 1996: 5th Street Traffic Calming (Farmer – Priest)
  - 1999: Mid-Block Crossing Study (which became the HAWK signals at the Western Canal Path)
  - 2003: Rio Salado Pathway (Priest Drive - Phoenix border @ SR 143)
  - 2011: Rio Salado Pathway (McClintock - Mesa border @ 101 & 202 ADOT Interchange)
  - 2014: Highline Canal Path (Baseline – Chandler border)
  - 2014: North South Rail Spur Path (Tempe Beach Park – Chandler border)
  - 2015: Alameda Drive Bicycle Blvd & Streetscape (48th St – Rural Road)
  - 2016: “The Missing Link” Brake BIKEiT Route (Western Canal – Highline Canal Path Connection)
  - 2017: Country Club Way Streetscape, Bicycle and Pedestrian Facilities Improvement Project
  - 2018: “A Dam Great Regional Connection” – Upstream Dam Bike/Ped Bridge

 **MAG Design Assistance Ranking Sheet**

Sponsor	Application Title	Cost	Committee Approved Reduction		Total Rank Sum	Number of Votes	Score	Rank
				8.5%				
Tempe	A Dam Great Regional Connection	\$ 64,500.00	\$	59,017.50	65	20	3.25	1.00
Guadalupe	Sidewalk and Bike lane Improvements on Avenida del Yaqui	\$ 80,000.00	\$	73,200.00	67	20	3.35	2.00
Phoenix	56th St, Camelback Rd. to Thomas Rd	\$ 80,000.00	\$	73,200.00	69	20	3.45	3.00
Phoenix	Colter St - 20th St, to 15th Ave	\$ 60,000.00	\$	54,900.00	78	20	3.90	4.00
Glendale	Maryland Ave. Bike Connection	\$ 47,890.00	\$	43,819.35	88	20	4.40	5.00
Gila Bend	State Route 85 Overpass	\$ 85,000.00	\$	77,775.00	97	20	4.85	6.00
Scottsdale	Bike Share Station Siting	\$ 64,000.00	\$	58,560.00	114	20	5.70	7.00
Peoria	Comprehensive Wayfinding and Sign Plan	\$ 65,000.00	\$	59,475.00	132	20	6.60	8.00



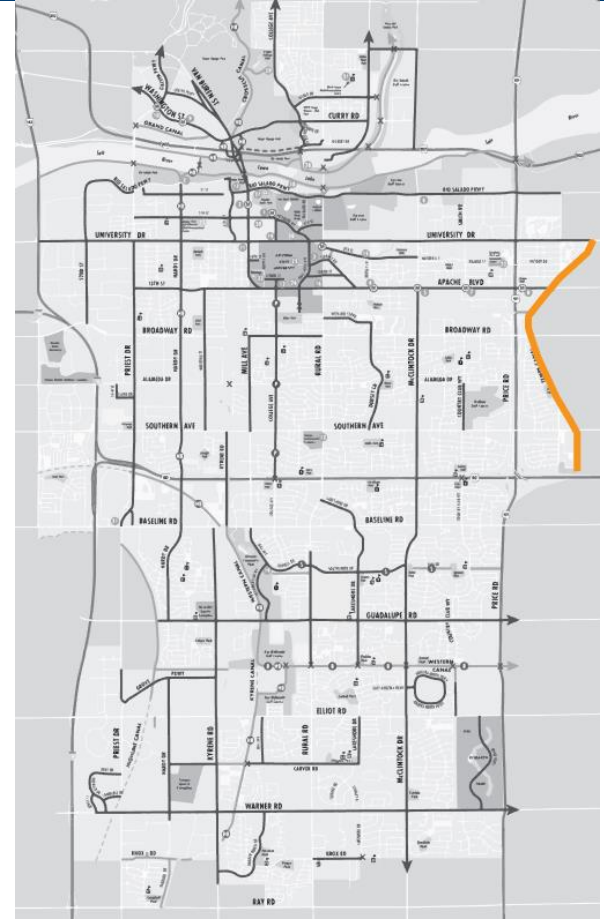


**Tempe Canal Multi-Use Path**  
**El Paso Multi-Use Path Extension**  
**Farmer Ave Bike/Ped Bridge**  
**Chain BIKEiT Blvd Route (Dorsey/Lakeshore)**  
**Rio North Bank/Grand Canal Connection**

# Tempe Canal Multi-Use Path



- Approximately 2.9 miles long (bordering Mesa) from US-60 to Union Pacific Rail
- Final canal path in Tempe left to be improved
- Directly connects to Ehrhardt, Daumler, and Victory Parks
- Multi-Use Path project
  - 10' min wide concrete path
  - Public art
  - Landscaping
  - Lighting
  - Rest Nodes/Amenities
  - Improved Street Crossings







# El Paso Multi-Use Path Extension



- Approximately 0.2- mile long, from Country Club Way to Kenwood Ln
- Gap in the El Paso Multi-Use Path system located at Fuller Elementary/Optimist Park
- Directly connects to Reflector and Spoke BIKEit Blvd Routes
- Multi-Use Path project
  - 10' min wide concrete path
  - Public art
  - Landscaping
  - Lighting
  - Rest Nodes/Amenities
  - Improved Street Crossings

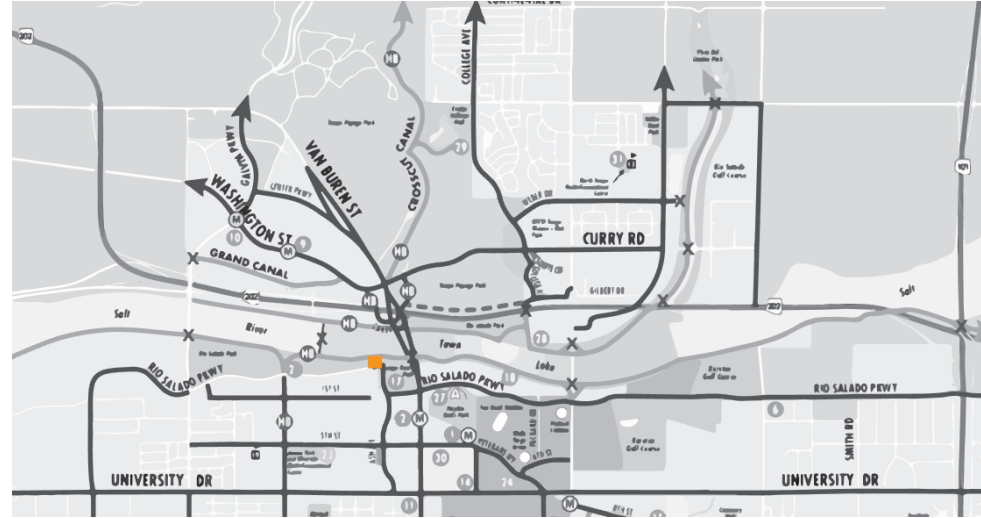




# Farmer Avenue Bike/Ped Bridge



- Directly connects the Farmer Ave Arts District & Future North/South Rail Spur MUP to Rio Salado South Bank Path and Beach Park
- Grade Separated Crossing
  - Direct/Off-Street connection over Rio Salado Pkwy
  - Public art
  - Landscaping
  - Lighting
  - Rest Nodes/Amenities





# Chain BIKEiT Blvd Route (Doresey/Lakeshore)



- Approximately 9 miles long (bordering Scottsdale & Chandler)
- Final N/S BIKEiT route, connecting Rio Salado and Western Canal Multi-Use Paths

- Streetscape project
  - Bike/Ped Improvements
  - Public art
  - Traffic calming
  - ADA improvements
  - Lighting
  - Landscaping
  - Grade Separated Crossings

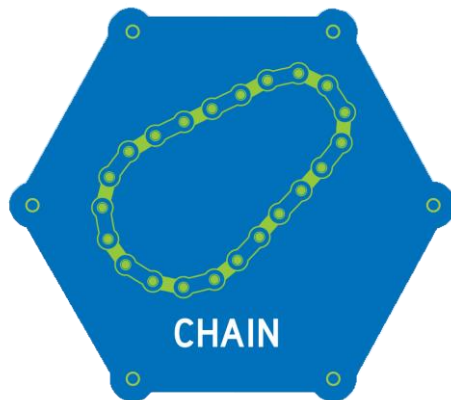
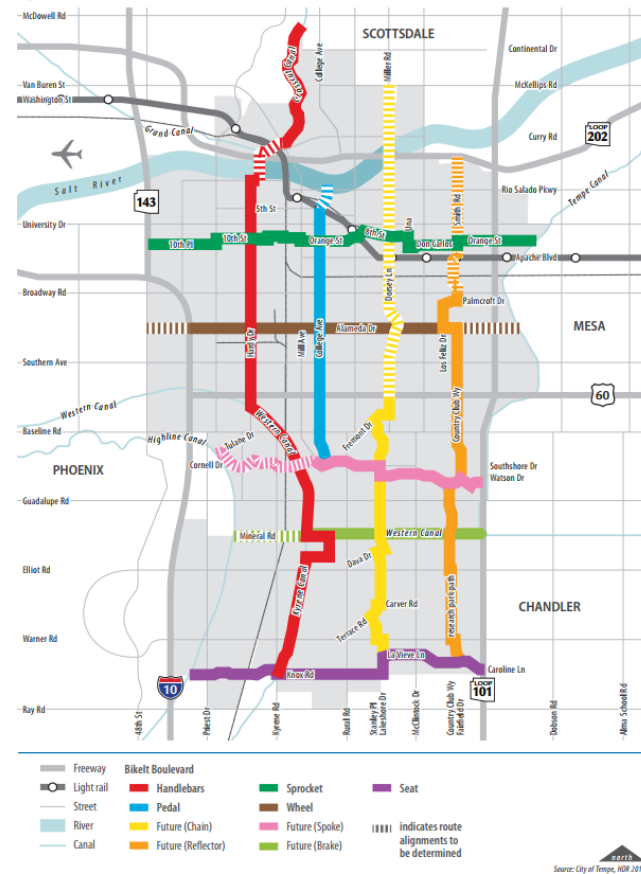


Figure 45: BIKEiT Routes

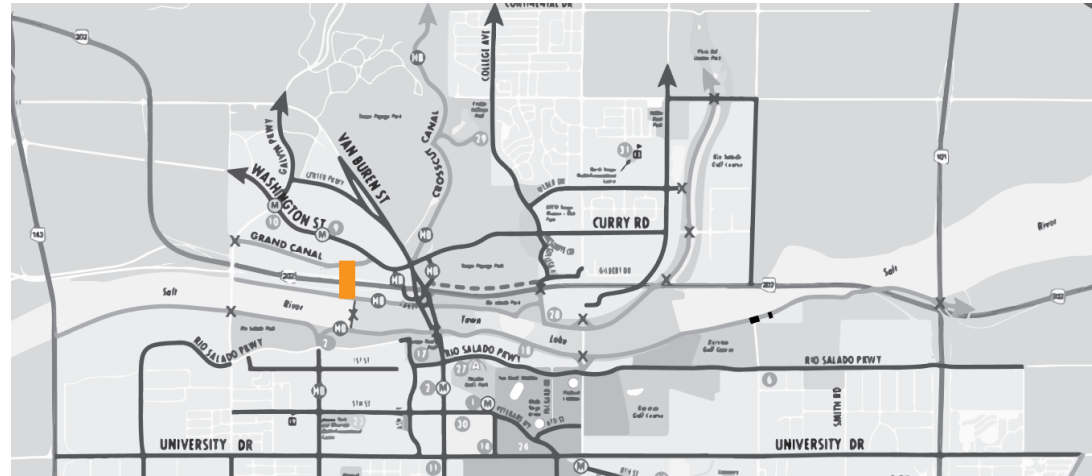




# Rio North Bank – Grand Canal Connection



- Directly connects the Grand Canal MUP to the Rio Salado North Bank Path
- Grade Separated Crossing
  - Direct/Off-Street connection over SR-202, utilizing Center Parkway
  - Public art
  - Lighting
  - Rest Nodes/Amenities







PROJECT

CENTER PKWY

GRAND CANAL

RIO NORTH BANK

SR-202

The background features a series of concentric, hand-drawn style circles in shades of blue and yellow, creating a tunnel-like effect that draws the eye towards the center. The circles are layered, with some appearing more prominent than others, giving a sense of depth and movement.

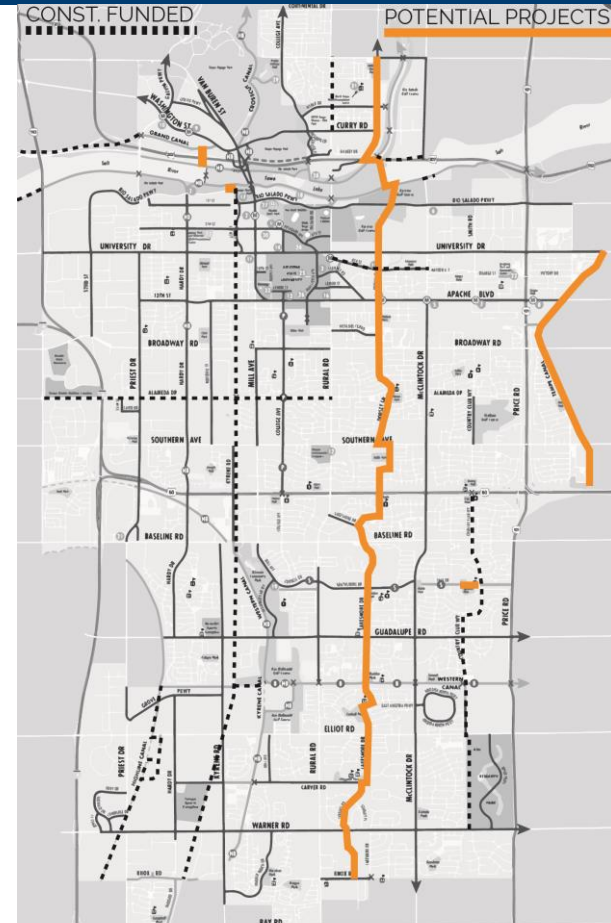
**Next Steps / Action**

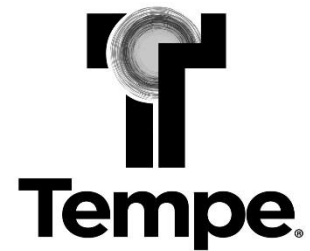
# Next Steps / Action



Identify priority project for June submittal:

- Tempe Canal Multi-Use Path
- El Paso Multi-Use Path Extension
- Farmer Ave Bike/Ped Bridge
- Chain BIKEit Blvd Route (Dorsey/Lakeshore)
- Rio North Bank/Grand Canal Connection





## AGENDA ITEM 6

To: Tempe Transportation Commission  
From: Michele Stokes, ADA Compliance Specialist (2704)  
Re: **Presentation - Tempe ADA Transition Plan, Phase II**  
Date: May 8, 2018

On March 13<sup>th</sup> the city held an ADA Transition Plan – Phase II Open House to kick off a six-week public involvement process which runs through May 31. The ADA Transition Plan background and a request to residents to provide information on what matters most regarding accessibility were presented. The presentation will be provided to boards and commissions, departments, and disability organizations and agencies.

### **The ADA Self Evaluation and Transition Plan provides:**

- Information on barriers to sidewalks, parking areas, bus stops, services, programs, communication, emergency management, facilities and parks;
- Estimated cost to remove those barriers;
- A timeline, through 2030, for removal of the barriers and the responsible parties.

The evaluation is taking place in three phases. We are currently in the second phase of the plan which covers streets and right of way north of Guadalupe, surrounding the Phase I downtown area. It consists of a comprehensive survey of major street corridors' public right-of-way, nine parks, and multi-use trails. Phase III will cover south Tempe. These include:

### **City Sidewalks within the boundary include these Major Corridors:**

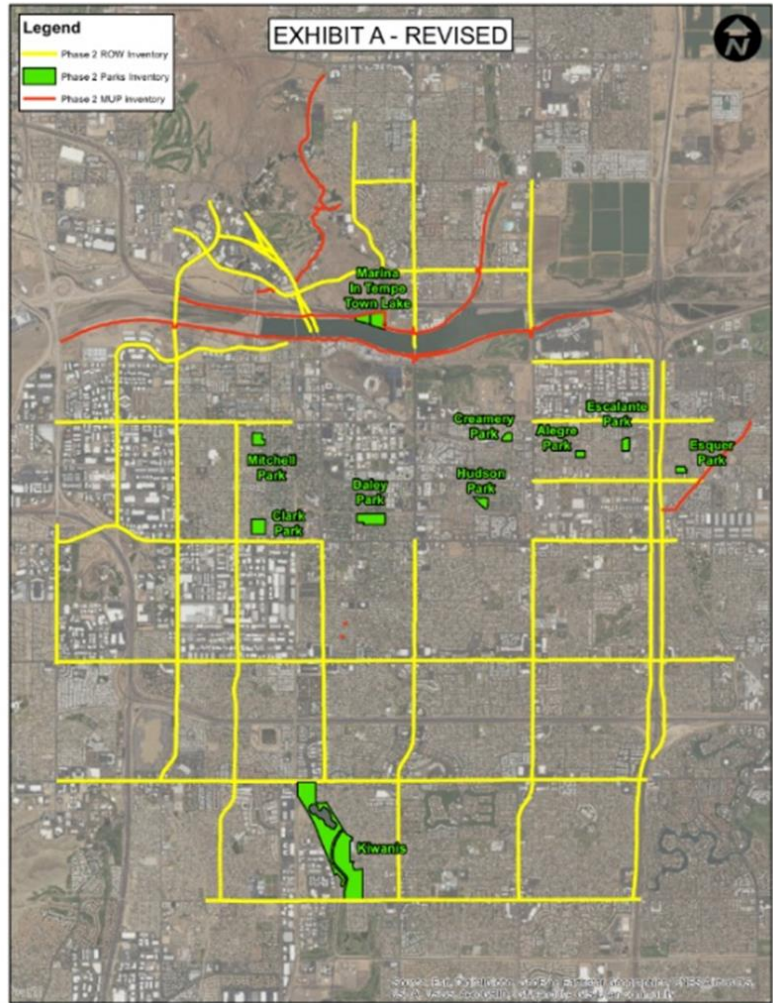
McClintock, Rural, College, Mill, Kyrene, Hardy, Priest, Guadalupe, Baseline, Southern, Broadway, Apache, University, Rio Salado, Curry, McKellips

### **Multi-Use Paths included within the boundary include:**

Rio Salado                  Tempe Canal                  Crosscut Canal

**City Parks include:**

Hudson      Escalante      Kiwanis      Mitchell      Daley      Clark  
Esquer      Creamery      Tempe Town Lake Boat Launch & Marina



Map shows ADA boundaries for public rights of way, multi-use paths and 9 parks surveyed in Phase II.

**The ADA is one of America's most comprehensive pieces of civil rights legislation** that prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone: to enjoy employment opportunities, to purchase goods and services, and to participate in government programs and services. Modeled after the Civil Rights Act of 1964, which prohibits discrimination based on race, color, religion, sex, or national origin – and Section 504 of the Rehabilitation Act of 1973 -- the ADA is an "equal opportunity" law for people with disabilities.

**Information on the public involvement process, surveys and more are available at [www.tempe.gov/ADA](http://www.tempe.gov/ADA).**



**CITY OF TEMPE**  
**ADA Self-Evaluation & Transition Plan**  
**Phase II**  
**– *Public Involvement* –**

**cole**<sup>®</sup>



# Introduction



## Presenter:

- **Michele Stokes**, ADA Compliance Specialist - City of Tempe/Office of Strategic Management and Diversity

Email: [michele\\_stokes@tempe.gov](mailto:michele_stokes@tempe.gov).

Phone: 480-350-2704

Relay Users: 7-1-1

# Introduction

**The City of Tempe is committed to accessibility:**

- Mayor's Commission on Disability Concerns
- Past & current accessibility improvements
- Updated Self-Evaluation & Transition Plan
  - Phase I was completed in 2017
  - Phase II is being presented today
  - Phase III will be 2019-20



# Today's Discussion

- **ADA Self-Evaluation & Transition Plan**
  - Purpose, Approach & Process
- **Present an Overview of Phase II Findings**
  - Transit Stops
  - Pedestrian Access
  - Parks Elements
- **Summary of Findings Document**
  - Importance of Public Involvement and Survey
- **Next Steps / Questions & Answers**



# Purpose



## ADA Self Evaluation & Transition Plan

### ➤ What is it?

- **Self Evaluation** - a review of city policies, programs, services, facilities, parks, communications and pedestrian access (sidewalks, curb ramps, bus stops, traffic signals) to identify barriers that people with disabilities may encounter in order to remove them
- **Transition Plan** - an action plan that includes the responsible party and an estimate of time and cost to remove barriers to city programs and services



# Purpose



## ADA Self Evaluation & Transition Plan

- **Three-year evaluation began in 2015**
- **Phase I:** Evaluation of ramps, sidewalks, signals, bus stops, parking within the downtown Tempe areas and 10 parks
- **Phase II:** Evaluation of ramps, sidewalks, signals, bus stops north of Guadalupe, surrounding the Phase I area, 9 parks and multi-use trails
- **Phase III** will include remaining sidewalks, bus stops, parks and trails, on-line communications, service accommodations, all public facilities, park restrooms, and emergency management operations and emergency shelter

# > Purpose

**Our goal is to receive your information on:**

- Your highest priorities
- If we are accessible to you
- Where we can improve
- What we are missing
- What agencies to include



## > Technology for Collection & Tracking

- Tempe has taken a progressive technological approach to reviewing accessibility
- Surveyors are skilled in assessing compliance
- Pedestrian Access (sidewalks, ramps, bus stops, shade and signals) and Multi-Use Trails – by **Cole**
- Parks – by **Accessology**

## > 2 Technologies for Collection & Tracking

**IPads and customized forms to input ADA compliance issues**

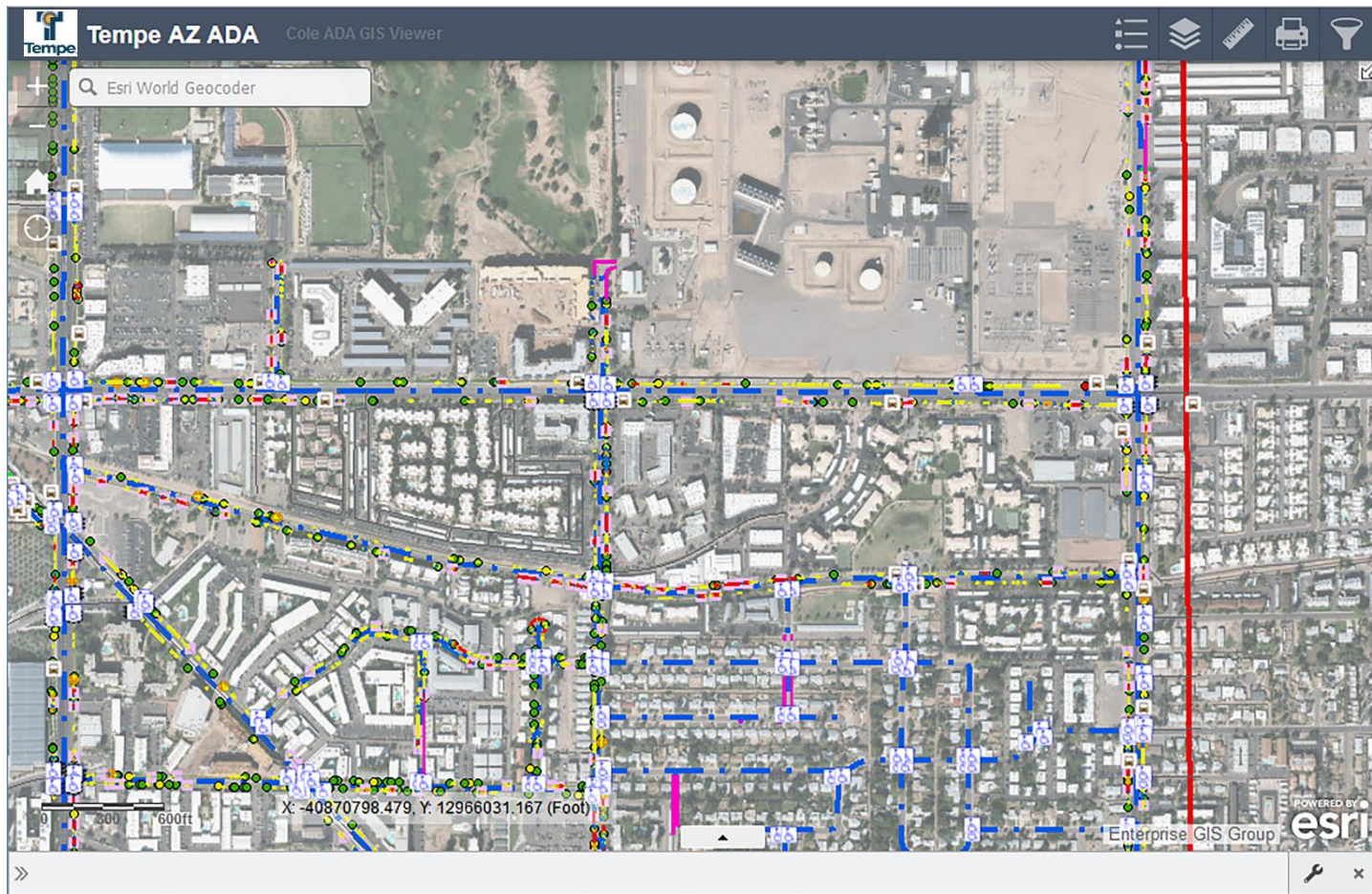


**ULIP-ADA: Ultra Light Inertial Profiler attached to a Segway to collect features of sidewalk compliance**



# Technology for Collection & Tracking

**GIS: We integrate all information in Tempe's Geographic Information System for better planning and tracking**

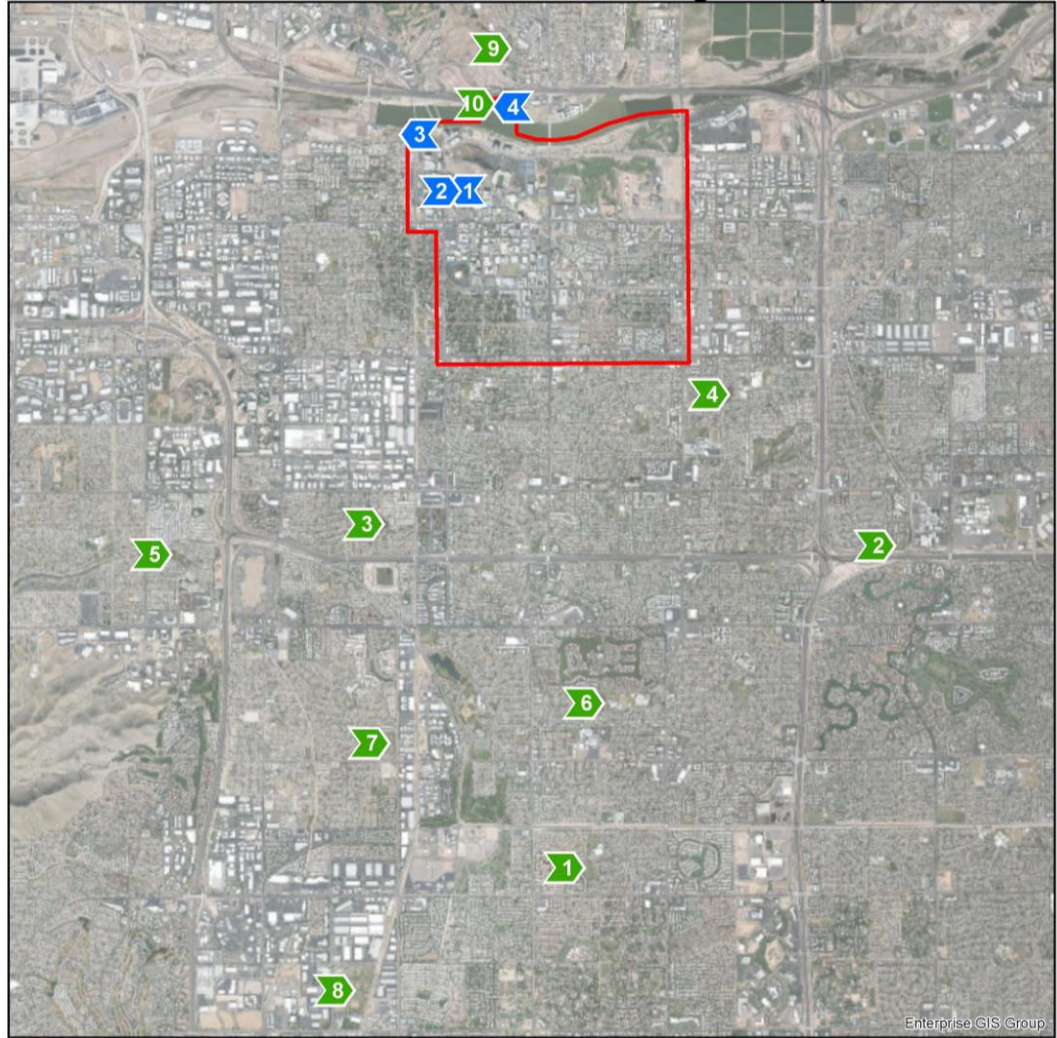




# Boundaries of Assessment Phase I



Parks and Parking - Tempe, AZ : Exhibit A



### LEGEND

Phase 1 Right of Way Survey Limits

#### Parking Lot Name

- City Hall Parking Garage
- City Hall West Lot
- Tempe Beach Park Lot
- Tempe Town Lake Lot

#### Park Name

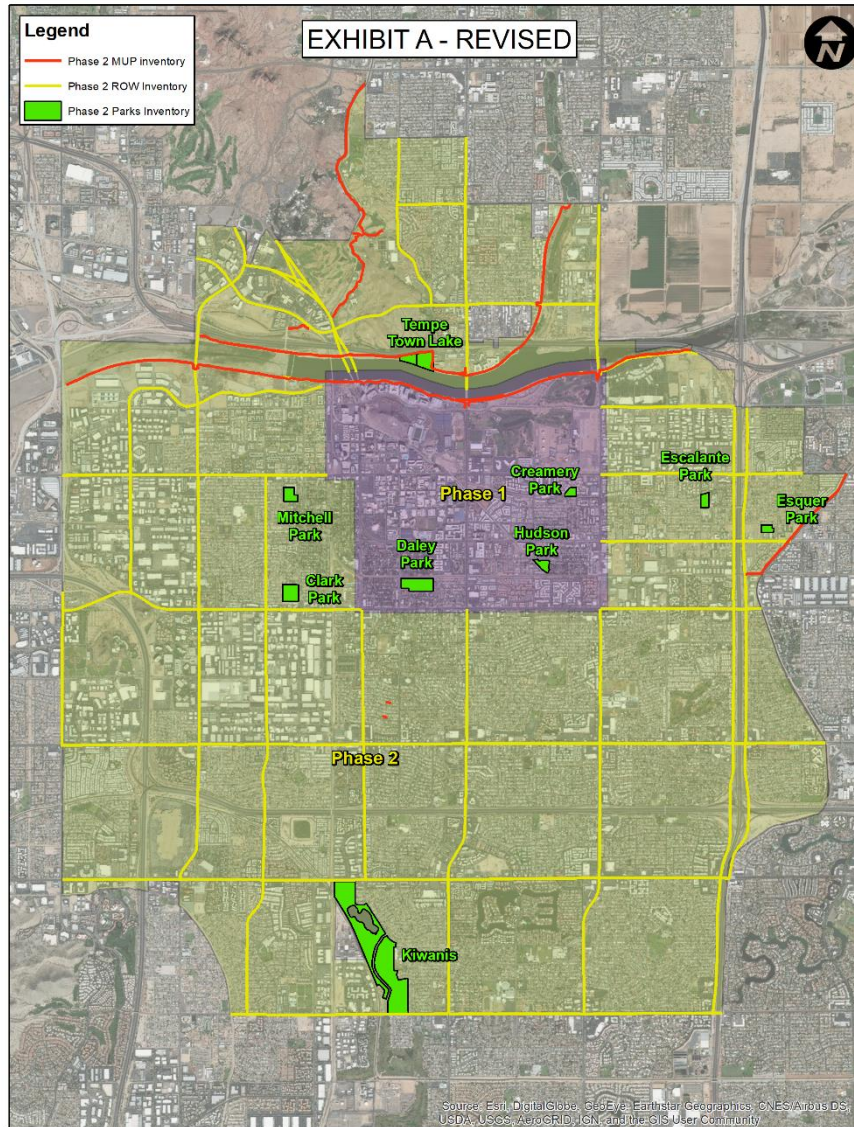
- Corbell Park
- Ehrhardt Park
- Dwight Park
- Selleh Park
- Svob Park
- Scudder Park
- Benedict Field
- Tempe Sports Complex
- Papago Park
- Tempe Town Lake Park

Enterprise GIS Group





# Boundaries of Assessment Phase II



# > Assessment - Phase II

## Street Corridors included:

- › Sidewalks
- › Curb Ramps
- › Signals (at roadway intersections)
- › Bus Stops and Shade

## Major Corridors included:

- McClintock
- Rural
- College
- Mill
- Kyrene
- Hardy
- Priest
- Guadalupe
- Baseline
- Southern
- Broadway
- Apache
- University
- Rio Salado
- Curry
- McKellips



# > Assessment - Phase II

## City Parks:

- Hudson
- Kiwanis
- Clark
- Creamery
- Daley
- Escalante
- Mitchell
- Esquer
- Tempe Town Lake Boat Launch & Marina



*Pictures of Clark Park  
Sand volleyball pit  
and playground areas*



# Findings – Phase II Total Costs

Facility Type	Evaluated	Non-compliant	Percentage Non-compliant	Cost
Sidewalk miles	104	42.9	41 %	\$30,040,350
Curb ramps	1,690	1,567	93 %	\$4,472,195
Pedestrian Signals	157	151	96%	\$487,100
Transit Stops *	386	325	84%	\$359,500
Transit Stop Shade*	386	148	38%	NA
Parks** *	9	9	100%	\$779,750
Trail miles	13.4	4.7	35%	\$1,994,575
<b>Total</b>	-	-	-	<b>\$38,133,470</b>

\* Signal pushbuttons have minor clear floor space slopes and distance from pushbutton to pedestrian crossing is too long.

\*\* Transit Stop Shade is not required by ADA or other laws but is preferred by the City of Tempe.

\*\*\* Parks are broken down by numerous features – not all features were non-compliant.

# Findings – Pedestrian Access Routes

**We evaluated using 2010 ADA Standards and the 2011 Public Rights-of-Way Accessibility Guidelines Criteria, the following:**

- › Cross slopes and running slopes
- › Driveway crossings slope
- › Heaves in concrete
- › Gaps in connectivity
- › Obstructions
- › Curb ramp elements
- › Clear floor space at bus stops
- › Detectable Warnings (truncated domes) at curb ramps
- › Communication features at signalized intersections, such as audible tones, vibro-tactile & push buttons locations.

# Findings – Pedestrian Access Routes

## General Findings

- Newly constructed facilities tend to comply with 2011 Public Rights-of-Way Accessibility Guidelines (PROWAG)
- Pedestrian facilities constructed before 2013 have a higher propensity of minor access issues
- Construction Standard Details were updated in 2017 to increase accessibility

# Findings – Pedestrian Access Routes

## Sidewalks and common issues:

- 104 miles of sidewalks were evaluated
  - 61.1 miles were compliant and 42.9 miles have cross slopes that exceed the 2% maximum
  - Driveway cross slope crossings were a common issues, often exceeding the 2% slope limit

- Changes in level or sidewalk joint displacement. There are 65 locations of 1 inch or higher.

Sidewalk Corridor Cross Slope	Miles	Status
0% to 2%	61.1	Compliant
2% to 3%	25.8	Non-compliant
3% to 4%	7.7	Non-compliant
4% to 5%	2.5	Non-compliant
5%+	6.9	Non-compliant



# Findings – Pedestrian Access Routes

## Sidewalks, common findings:



*accessible  
path behind  
driveway*



# Findings – Pedestrian Access Routes

## Trails/Multi-Use Paths:

- 26.7 miles of accessible path were evaluated on 13.4 miles of trail (note that more than one pass is made to assess the path)
- 22 miles found compliant



*Multi-use Tempe Town Lake Trail*

Trails/Multi-use Path Cross Slope	Miles	Status
0% to 2%	22.0	Compliant
2% to 3%	3.2	Non-compliant
3% to 4%	1.0	Non-compliant
4% to 5%	0.4	Non-compliant
5%+	0.1	Non-compliant

# Findings – Pedestrian Access Routes

## Curb Ramps, common issues:

- 1,690 curb ramps were evaluated
  - Documented the presence of and type of curb ramp
  - 235 locations had missing curb ramps

- Evaluated elements such as running slope, cross slope, side flares, landings, detectable warning truncated domes and transitions from ramp to pavement

Curb Ramp Type	Total	Compliant	Non-Compliant
Perpendicular	1,152	80	1,072
Parallel	141	33	106
Directional	92	2	90
Combination	39	2	37
Blended	31	4	27
No Ramp	235	0	235
Total	1,690	121	1,567

- The City intends to remove and replace all Diagonal Curb Ramps as part of their program.

# > Findings – Pedestrian Access Routes

## **Curb Ramps, common issues:**

- Most new curb ramps comply with 2011 PROWAG
- Of non-compliant curb ramps, the most common issues:
  - Non-compliant or missing landings
  - Missing detectable warning truncated domes
  - Missing curb ramp where one needs to be installed

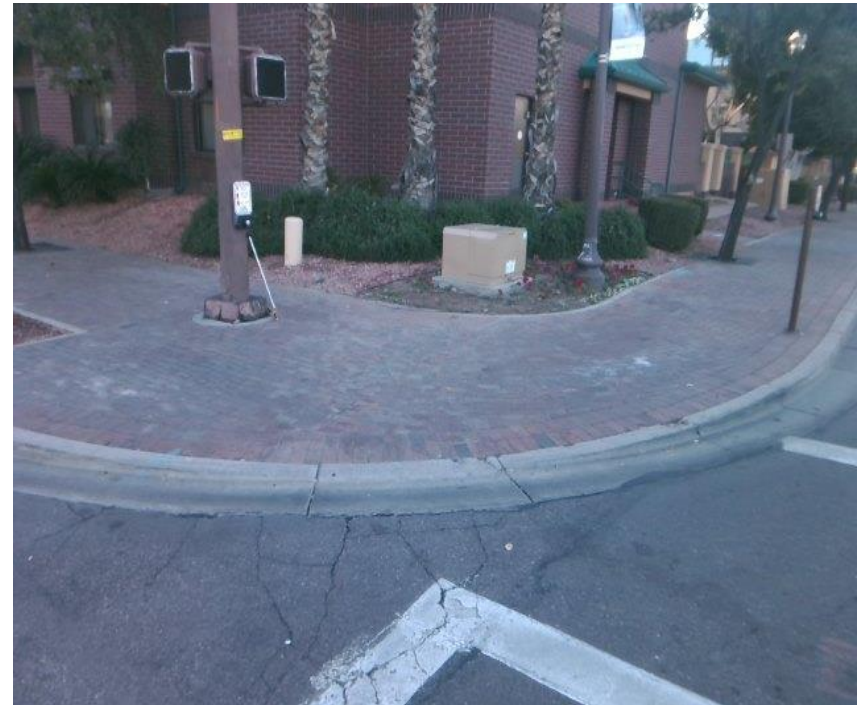


# Findings – Pedestrian Access Routes

## Curb Ramps, common issues:



*Compliant Perpendicular Ramp*



*Missing Curb Ramp*



# Findings – Pedestrian Access Routes



## Signals at Intersections, common issues:

- 157 pedestrian signalized intersections were evaluated
  - Some signalized intersections do have complete APS (Accessible Pedestrian Signals) features and the majority are compliant
  - Documented if street crossing signal controls existed
  - Evaluated using 2011 PROWAG and 2009 MUTCD standards. All standards, such as proximity of pushbutton to street crossing and duration of timing, were evaluated

## > Findings – Pedestrian Access Routes

### **Signals at Intersections, common issues:**

- Of the non-compliant signals, the most common issues:
  - Pushbutton locations had clear floor space that was not flat, with slopes that exceeded 2% grade
  - Some pushbutton locations were located too far away from the curb and crosswalk

# > Findings – Pedestrian Access Routes

## Signals at Intersections, common issues:



*Pedestrian Push Button*



# Findings – Pedestrian Access Routes



## **Bus Stops, common issues:**

- 386 bus stops
  - Evaluated for access to the stop, the landing, boarding areas, clear floor space next to seating area, and signage
  - 62% of bus stops were found to be in full compliance



# > Findings – Pedestrian Access Routes



## Bus Stops, common issues:

- Of the non-compliant bus stops, common issues:
  - Landing pads adjacent to the curb were either too small or had cross slope issues
  - Clear floor space: the area adjacent to seating was not available or the space was insufficient

*The assessment included shade; however, this is not a requirement of the ADA or other laws.*

Transit Stops - Shade	Total	Percentage
Full Shade	185	48%
Partial Shade	53	14%
No Shade	148	38%
<b>Total</b>	<b>386</b>	<b>100%</b>

# > Findings – Pedestrian Access Routes

## Bus Stops, common issues:



*Compliant Transit Stop*



*Expand Bus Pad Landing*



# Cost Estimate by Category – Phase II



## Public Rights of Way & Trails

Total Cost	Sidewalks	Trails	Curb Ramps	Signals	Transit Stops
\$37,353,720	\$30,040,350	\$1,994,575	\$4,472,195	\$487,100	\$359,500

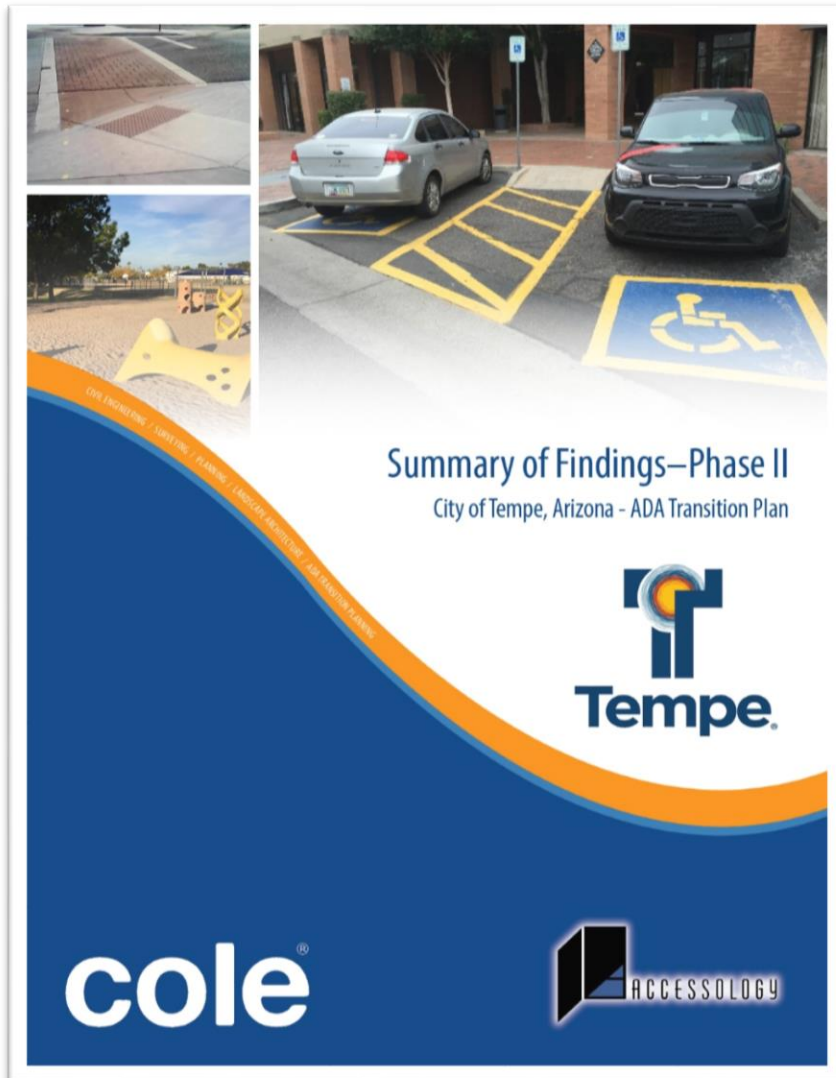
## Parks

Total Cost	Parking	Path of Travel	Playground	Restrooms	Picnic/Grills	Sports	Misc.
\$779,750	\$122,000	\$256,350	\$214,000	\$61,200	\$32,800	\$42,400	\$51,000

# Summary of Findings

Summary of Findings document available to the public for review.

[www.tempe.gov/ADA](http://www.tempe.gov/ADA)



# Community Input/Survey



*Survey document available to the public for input on accessibility priorities.*

[www.tempe.gov/ADA](http://www.tempe.gov/ADA)

## Is Tempe accessible to you?

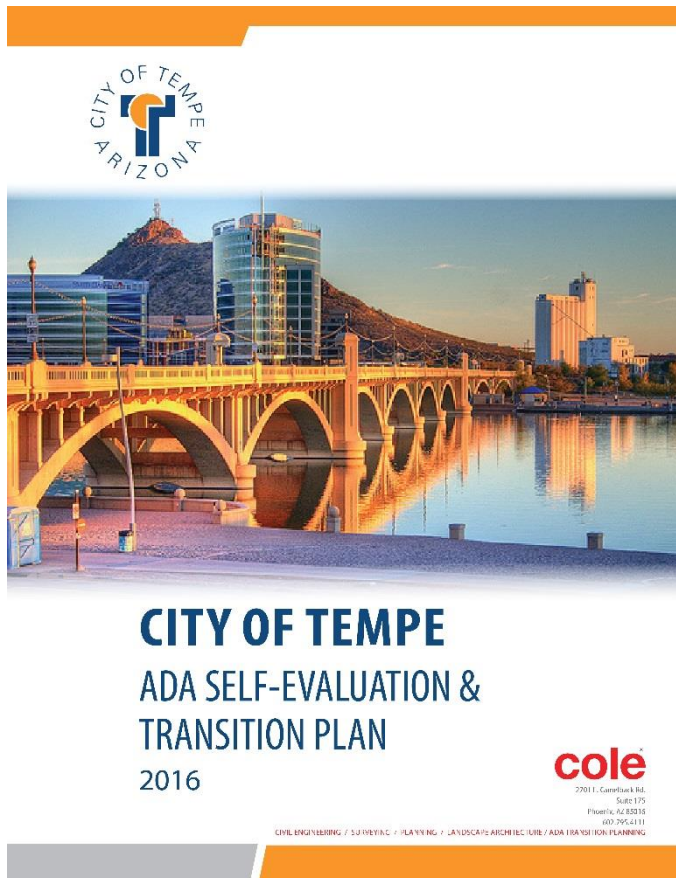
The City of Tempe is conducting an **Americans with Disabilities Act Self Evaluation and Transition Plan** to determine steps to take to ensure inclusion and access for people with disabilities. In the second phase we are surveying Tempe residents and others about the city's sidewalks, curb ramps, street crossings, parks and multi-use trails. Subsequent surveys will look at additional sidewalks, parks and facilities as well as programs, services, activities, events, policies, emergency management, training, general inclusion efforts and communications.

**Tempe would like YOUR help to determine what is most important to you! You may also take the survey on-line at [www.tempe.gov/ada](http://www.tempe.gov/ada).**

**The following nine demographic questions are optional. If you choose to respond, please mark all that apply:**

1. I am a Tempe resident, attend events, go to school, shop, and visit or work in Tempe.
  - Yes
  - No
2. I am a family member, caregiver, employer of, or individual that has functional needs or disabilities affecting: (mark all that apply)
  - Vision
  - Hearing
  - Thinking
  - Breathing

# Next Steps



- 6 week public involvement with on-line survey and presentations
- Transition Plan will be updated using public involvement info
- Transition Plan includes cost, time line and responsible parties for barrier removal
- Transition Plan approved by City Council
- City of Tempe will implement the Plan over a number of years

*City of Tempe's approved ADA Self Evaluation & Transition Plan Phase I*

# > Question & Answer





## Next Steps





# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 7

#### DATE

May 1, 2018

#### SUBJECT

Fifth Street Streetscape Project

#### PURPOSE

The purpose of this memo is to provide the Commission with an update on the Fifth Street Streetscape Project.

#### COUNCIL STRATEGIC PRIORITIES

The strategic priorities related to the Fifth Street Streetscape project include, among others:

- 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.
- Achieve or exceed Council adopted standards for improved access and usability as documented in the "Above and Beyond ADA" plan.
- Achieve accessible sidewalks, curb ramps, and crosswalks in all city rights-of-way as outlined in the Tempe ADA Transition Plan.
- Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

**Background:** This streetscape project includes a half-mile stretch between Farmer and College avenues along Fifth Street, a signature collector street that connects important civic, neighborhood, education and business entities, including: City Hall, Police/Courts, Mill Avenue, ASU, Sun Devil Stadium, Transportation Center, light rail, transit service, mixed-use development, multi-family housing, hotels, Hayden Butte, historic and redeveloping neighborhoods.

**Project History:** The project was first identified through a 2015 Downtown Tempe parking study that encouraged the city to look for opportunities to maximize on-street parking availability and reconfigure the street to be more multi-modal. A design team was hired in 2016 to develop and design construction documents for a buildable project that strives to enhance landscaping, increase and improve bicycle, pedestrian and transit access, improve parking availability, preserve vehicular access and ensure optimal ADA design.

**Design Goals:** The goals for the streetscape design identified by project staff, design team, stakeholders and the public include:

- Providing mobility for all
- Increasing on-street, short-term parking
- Preserving utility operations & allowing for future growth
- Balancing design with cost control and long-term maintenance
- Connecting to and protecting neighborhoods while creating gateways
- Creating an innovative, sustainable, iconic street
- Expanding landscaping & shade – 25% canopy goal
- Utilizing sustainable techniques (water harvesting, solar) – 100% rainfall capture goal

**Community Outreach & Public Feedback:** The first public meeting was held in October 2016 to introduce the project and get public feedback on its direction. Along with data supporting current and projected (2040) traffic volumes, that feedback informed development of a preliminary design concept that was presented to the public in April 2017 for feedback through a variety of means, including: public meeting (April 4), City Council presentation (April 6), boards and commissions (Sustainability, Transportation, Disability Concerns, Parks/Rec/Golf, Historic Preservation, Development Review, Municipal Arts), web page and online comment form. In addition, staff met with more than a dozen individual stakeholders, including: ASU, SRP, Tempe Mission Palms, DTA, Architekton, Studios 5c/Gammage & Burnham, Yam, Cousins, other business and property owners, and neighbors. The preliminary design was then refined based on public feedback, with a staff-conducted, two-week test of the proposed lane configuration changes in September 2017. During this time, extensive outreach was conducted to collect public feedback, which was presented to City Council in January as part of a request for design direction.

**Design Direction:** At the Jan. 11 Issue Review Session, staff presented design options for each intersection and key mid-block segments of the street, seeking City Council direction at each location to determine appropriate treatments based vehicular capacity (now and into 2040), parking and landscaping. (selected design options included in attached PowerPoint.) With City Council selections, the design has been advanced to the 60% level (delivered on April 27), and is undergoing review by city staff and stakeholders. The project is on target to have completed plans by October.

Overall design maintains the goals of the project:

- Increasing on-street, short-term parking new parking spaces
- Maintaining east/west vehicle capacity
- Creating civic center raised block at City Hall
- Adding public restrooms in 'Tempe Green' public space
- Enhancing pedestrian spaces
- Improving ADA accessibility
- Creating a more attractive, flexible street for events
- Identifying public art opportunities
- Creating a sustainability demonstration street
- Providing 100% rainfall capture
- Increasing tree canopy coverage from 8% to upwards of 25%

**Construction Deferment:** To maintain city expenditures within the bonding authority, several projects have undergone a programmed delay in execution. The construction of the Fifth Street Streetscape project has been deferred, while the work to complete design will proceed towards construction plans in October. Additionally, the 'Tempe Green' segment of the project is anticipated to independently advance to construction, with the installation of public restrooms and a public space adjacent to City Hall. Future construction for the project will be coordinated with existing and incoming developments to utilize planned improvements.

**NEXT STEPS**

Next steps include: Reviewing the 60% design package, updating the CIP, advancing the 'Tempe Green' segment, continuing coordination with stakeholders.

**FISCAL IMPACT**

Design and construction document creation is funded through the Downtown Parking Fund. Staff will review a variety of potential sources for construction funding, including Highway User Revenue Funds, parking revenues, pavement management funds, utility partnerships, private development partnerships and transit tax funds.

**CONTACT**

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**ATTACHMENTS**

- PowerPoint

# **Fifth Street Streetscape**

**Transportation Commission  
May 8, 2018**





- Approximately ½ mile segment of signature downtown collector street; a critical pedestrian corridor
- Connects City Hall, Police/Courts, Mill Ave, ASU, Sun Devil Stadium, Transportation Center, Light Rail, Transit Service, Mixed-Use Development, Multi-Family Housing, Hotels, Hayden Butte/A Mountain, Sixth Street Park, Historic and Redeveloping Neighborhoods

# Project History



- 2015 - Downtown Parking Study
- 2016 - Design team CollectiV hired
  - Oct 19 public meeting
- 2017 - Preliminary design concept
  - April 4 public meeting
  - April 6 City Council meeting
  - Character Area 3 public meetings
  - September test phase
  - Design modifications
  - Traffic model/long term projected growth
  - Small Area Transportation Study
- 2018 - Council Design Direction

## DESIGN PARTNERSHIPS & CONSTRUCTION UPDATE

Project partnership with Sustainability & Transportation Commissions

Streetscape construction deferred

'Tempe Green' (restrooms & public space) adjacent to City Hall moving forward

# Community Outreach 2017



- Public Meetings (Oct '16 & April '17)
- Boards, Commissions & Character Area 3 (Sustainability, Transportation, Disability Concerns, Parks, Historic Preservation, Development Review)
  - 3 presentations to each commission
- City Departments Online comments
- Postcard notification of public meetings & test phase
- April 2017 City Council
- Test phase - Sept
- Community / Stakeholders
  - ASU
  - SRP
  - Tempe Mission Palms
  - DTA
  - Architekton
  - Studios 5c / Gammage & Burnham
  - Yam
  - Cousins
  - Businesses & Property Owners
  - Neighbors

# Design Goals / Public Feedback



- Provide mobility for all
- Increase on-street, short-term parking
- Preserve utility operations & allow for future growth
- Balance design with cost control & long term maintenance
- Connect to and protect neighborhoods, while creating gateways
- Create innovative, sustainable, iconic street
- Expand landscaping & shade
  - 25% tree canopy goal
- Utilize sustainable techniques (water harvesting)
  - 100% rainfall capture goal



# Design Treatments



# Design Direction / Traffic Capacity



## Character Totals

- A= (Preliminary Design)
  - 288 trees
  - 68 parking stalls
  - highest tree canopy coverage, parking & pedestrian space
  - Some dedicated left turn removals at minor streets
- B= retains all dedicated left turn pockets
  - 275 trees
  - 55 parking stalls
  - Most closely matches today's street capacity
- C= retains all left turn pockets & adds capacity/right turn pockets (where available)
  - 239 trees
  - 49 parking stalls
  - Highest future traffic capacity
- Traffic model shows future capacity needs accommodated with A,B & C
  - Same model as Small Area Transportation Study
- All options increase tree canopy coverage, parking & pedestrian space & achieve project goals
  - Increase is achieved through center turn lane removal between some blocks
  - Maintains General Plan 2040 goals while being sensitive about traffic capacity
  - 78 trees & 41 parking stalls today



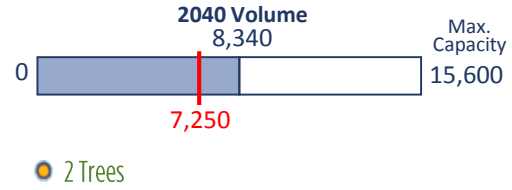


# FARMER AVENUE

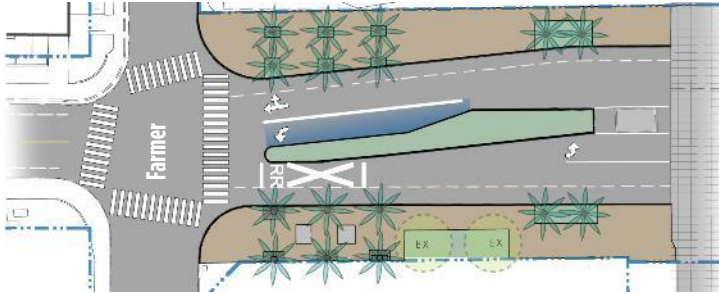
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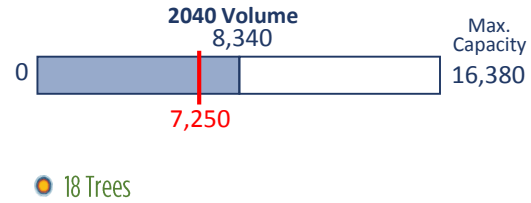
*EB / WB Lane*



B



*EB Lane / WB Lane + Dedicated Left*

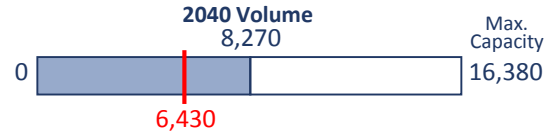




# ASH AVENUE



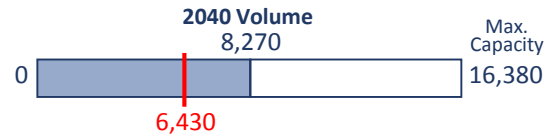
*EB & WB Lane + Dedicated Left Turns*



● 4 Trees



*EB & WB Lane + Dedicated Left Turns*

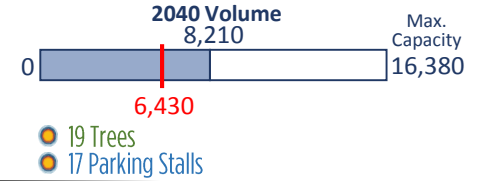


● 15 Trees

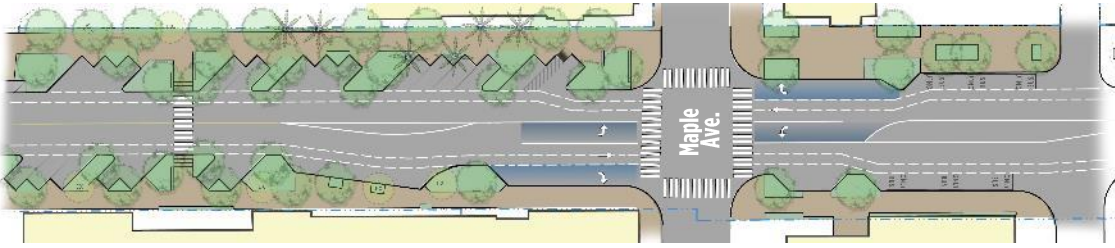
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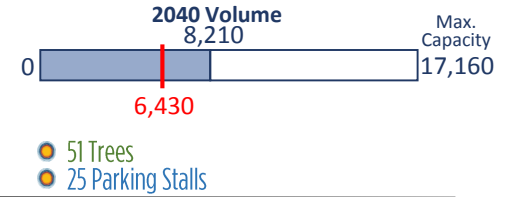
*EB / WB Lane + Center Turn Lane*



C



*EB / WB Lane + Dedicated Left & Right Turn Pockets*

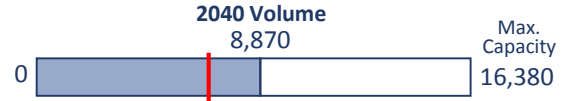




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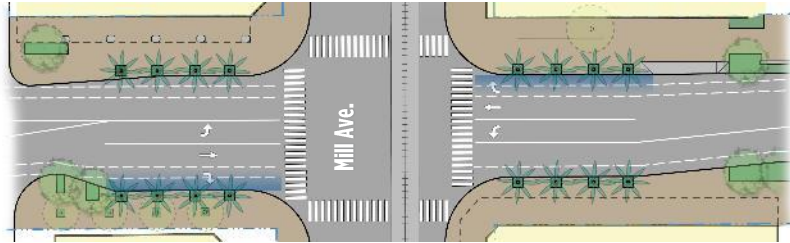


*EB & WB Lane + Left Turn Pockets + EB Right Turn Lane*

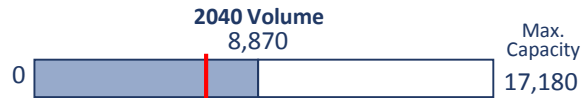


- 14 Trees
- 3 Parking Stalls

B



*EB & WB Lane + Left & Right Turn Pockets*



- 27 Trees

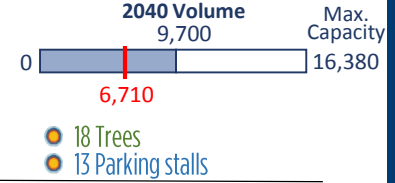


# CITY HALL PLAZA

E  
X



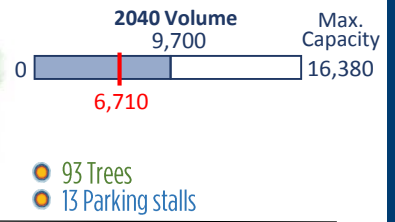
*EB / WB Lane + Center Turn Lane*



B



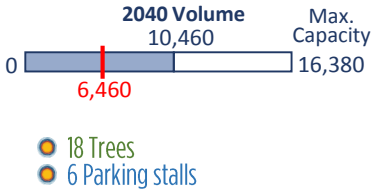
*EB / WB Lane + Center Turn Lane*



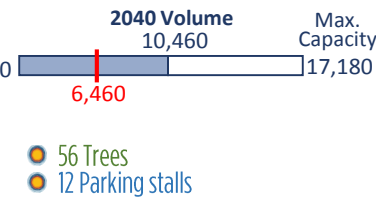
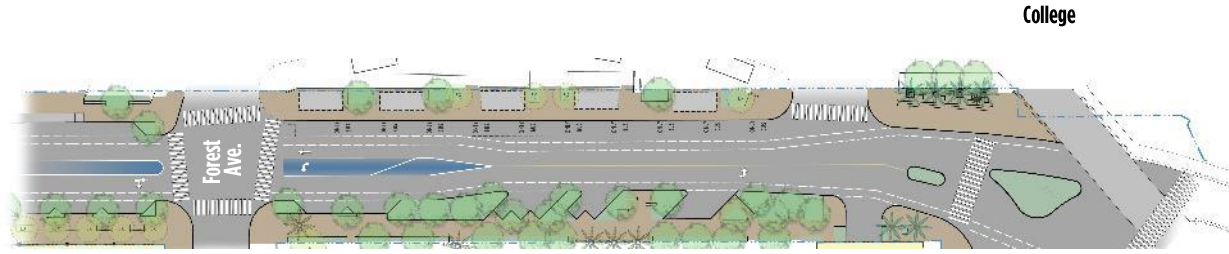
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*EB / WB Lane + Center Turn Lane*



B

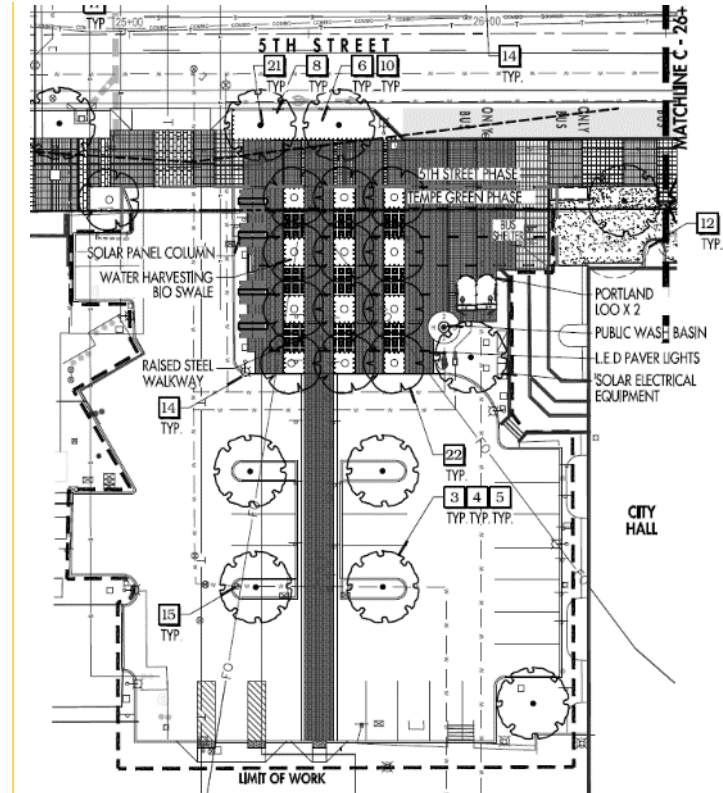




# Next Steps



- Advance selected configuration to final design documents (Oct 2018)
- Advance Tempe Green segment
- Refine costs & update CIP
- Coordinate with funded partnership projects:
  - Streetcar
  - Parking
  - Waterline
  - ADA Transition Plan & Implementation
  - Pavement resurfacing
- Continued public outreach & stakeholder coordination



# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 9

#### DATE

May 8, 2018

#### SUBJECT

Future Agenda Items

#### PURPOSE

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

#### BACKGROUND

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

- June 12
  - Streetcar
  - DTA Update
  - Bike Boulevards
  - Rio Salado + Beach Park Master Plan
- July 10
- August 14
  - Bus System Performance Update
  - Transit Security Update
  - T Intersections
- September 11
  - Annual Report
  - Alameda Drive Streetscape
  - North/South Railroad Spur MUP
- October 9
  - Annual Report
  - Orbit Saturn
- November 13
  - Transit Resident Survey Results
  - Vision Zero
- December 11
- January 8
  - Commission Business
- February 12
  - Paid Media Plan
- March 12
  - McClintock Drive Reconfiguration Data
  - Capital Improvements Project Update

- TBD: Prop 500/BRT
- TBD: Ordinances Related to Bicycles and Pedestrians

**RECOMMENDATION**

This item is for information only.

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