



**REVISED**

## **PUBLIC MEETING AGENDA**

### **Transportation Commission**

#### **MEETING DATE**

Tuesday, August 18, 2020 at 7:30 a.m.

#### **MEETING LOCATION**

Join Via Cisco Webex Meeting – link below

<https://tempe.webex.com/tempe/onstage/g.php?MTID=e35dc484e1d77171eb31a5b9a90c597fc>

Event password: 7CRmMWvHA83

United States Toll+1-408-418-9388

Access code: 146 409 0085

<b>AGENDA ITEM</b>	<b>PRESENTER</b>	<b>ACTION or INFORMATION</b>
<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.	Brian Fellows, Commission Chair	Information
<b>2. Approval of Meeting Minutes</b> The Commission will be asked to review and approve meeting minutes from the June 23, 2020 meeting.	Brian Fellows, Commission Chair	Action
<b>3. Operating Budget &amp; Capital Improvement Program (CIP) Budget Update.</b> Staff will provide an update on the Transit Fund and Highway User Revenue Fund.	Mark Day, Budget Office	Information and Possible Action
<b>4. Transit Shelter Design</b> Staff will present the proposed design concept for the new transit shelters.	Bonnie Richardson, Engineering & Transportation Department	Information and Possible Action
<b>5. Transit System Security Update</b> Staff will make a presentation about transit security including statistics from FY 19/20.	Department and Trent Luckow, Police Department	Information
<b>6. Union Pacific Railroad Bridge Impacts to Traffic/Alternative Modes</b> Staff will provide a verbal update on the impacts of the bridge collapse on vehicular traffic, bus detours and bike/peds.	Shelly Seyler, Engineering & Transportation Department	Information and Possible Action
<b>7. Department &amp; Regional Transportation Updates</b> Staff will provide updates and current issues being discussed at regional transportation and transit agencies.	Engineering & Transportation Department Staff	Information
<b>8. Future Agenda Items</b> Commission may request future agenda items.	Brian Fellows, 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 Meeting of the Transportation Commission**  
**June 23, 2020**

Minutes of the meeting of Tempe Transportation Commission held on Tuesday, June 23, 2020, 7:30 a.m. via Cisco Webex.

**(MEMBERS) Present:**

Susan Conklu  
JC Porter  
John Kissinger  
Ryan Guzy  
David A. King  
Paul Hubbell  
Christina Pucci

John Federico  
Peter Schelstraete  
Brian Fellows  
Jeremy Browning  
John Christoph  
Pam Goronkin

**(MEMBERS) Absent:**

Lloyd Thomas

Mary Harriman

**City Staff Present:**

Marilyn DeRosa, Engineering & Transportation Director  
Shelly Seyler, Deputy Engineering & Transportation Director  
Robert Yabes, Principal Planner  
Chase Walman, Planner II  
Joe Clements, Transportation Financial Analyst  
Vanessa Spartan, Planner II  
Julian Dresang, Deputy Engineering & Transportation Dir.

Sue Taaffe, Senior Management Assistant  
TaiAnna Yee, Public Information Officer  
Laura Kajfez, Neighborhood Services Specialist  
Amanda Nelson, Public Information Officer  
Bonnie Richardson, Principal Planner  
Cathy Hollow, Traffic Engineer  
Tony Belleau, Streetcar Project Manager

**Guests Present:**

Anita Johari

Joe Struttman

Commission Chair Brian Fellows called the meeting to order at 7:32 a.m.

**Agenda Item 1 – Public Appearances**

Joe Struttman spoke about the Priest Drive Bike & Pedestrian Improvements Project. Mr. Struttman stated that he was not in favor of Alternative 2, which includes off street facilities.

**Agenda Item 2 – Minutes**

Brian Fellows introduced the minutes of May 12, 2020 meeting of the Transportation Commission and asked for a motion for approval.

**Motion:** Commissioner Paul Hubbell

**Second:** Commissioner JC Porter

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**Decision:** Approved by Commissioners

Susan Conklu  
JC Porter  
John Kissinger  
Ryan Guzy  
David A. King  
Paul Hubbell  
Christina Pucci

John Federico  
Peter Schelstraete  
Brian Fellows  
Jeremy Browning  
John Christoph  
Pam Goronkin

Brian Fellows introduced the minutes of May 26, 2020 meeting of the Transportation Commission and asked for a motion for approval.

**Motion:** Commissioner JC Porter

**Second:** Commissioner David King

**Decision:** Approved by Commissioners

Susan Conklu  
JC Porter  
John Kissinger  
Ryan Guzy  
David A. King  
Paul Hubbell  
Christina Pucci

John Federico  
Peter Schelstraete  
Brian Fellows  
Jeremy Browning  
John Christoph  
Pam Goronkin

**Agenda Item 3 – Priest Drive Bike & Pedestrian Improvements**

Chase Walman and Anita Johari (Wood Consultants) presented information on the Priest Drive Bike & Pedestrian Improvements Project. Discussion topics included:

- Background
- Existing Conditions
- Traffic Volumes
- Crash Data
- Design Considerations/Alternatives
  - Widen Existing Roadway
  - 10-foot Multi-use Path
  - Reduce a Travel Lane Between Elliot to Warner roads
  - Knox Road Crossing
- Next Steps

Discussion included right-of-way constraints, wayfinding, Level of Service (LOS), pedestrian signals, adjacent multi-use paths, comfort level for users and traffic speeds.

**Agenda Item 4 – Open Streets**

Vanessa Spartan presented information on the Open Street concept. Discussion topics included:

- Overview
- Adjusting Traffic Signals

- Expanding Active transportation Opportunities
- Creating Room to Queue
- Coordination Needed

Discussion included automated pedestrian signals, timeline for implementing an Open Street concept in Tempe, community input and Tempe Block Party process. Brian Fellows requested that this topic be added to the September or October agenda for further discussion.

#### **Agenda Item 5 – Department & Regional Transportation Updates**

None

#### **Agenda Item 6 - Future Agenda Items**

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

- July 14 - CANCELED
- August 11
  - Special Revenue Fund Operating Budget & Capital Improvements Project Update
  - Transit Shelter Designs
  - Transit System and Security Update
  - Transit Service Reduction Plan
- September 8
  - Annual Report
  - Outreach Plan for I-10 Corridor Construction
  - Scottsdale Road Bike Lanes
  - Transportation Demand Management Association
  - Mobility Hubs
  - Bikeshare
- October 13
  - Annual Report
  - Priest Drive Bicycle & Pedestrian Improvements Project
  - Maricopa Association of Governments Bus Rapid Transit (BRT) Study
  - Ash and University Intersection Update
- November 10
  - Starship Project
  - Scottsdale Road Bike Lanes
  - Entitled Development Projects
  - Vision Zero Update
- December 8
- January 12
  - Transit Service Reduction Plan
  - Country Club Way Streetscape
  - Commission Business
- February 9
- March 9
- April 13
- May 11
  - Bike Hero
- TBD: North/South Rail Spur MUP Phase I

- TBD: Commuter Rail Study

The next meeting is scheduled for August 11, 2020.

The meeting was adjourned at 9:20 a.m.

Prepared by: Sue Taaffe

Reviewed by: Shelly Seyler

# MEMORANDUM



**TO:** Transportation Commission

**FROM:** Mark Day, Municipal Budget Director

**DATE:** August 18, 2020

**SUBJECT:** Operating Budget and Capital Improvement Program (CIP) Update

**AGENDA ITEM #:** 3

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## **BACKGROUND INFORMATION:**

The Municipal Budget Office will provide a brief update on FY 2020-21 operating and CIP budgets for the Transit Fund and the Highway User Revenue Fund (HURF) and describe the strategies and proposed budget adjustments to address the economic impacts of the COVID-19 pandemic.

## **ATTACHMENTS:**

PowerPoint Presentation

# **HURF and Transit Funds Budget Update Fiscal Year 2020-21**

**Transportation Commission  
August 18, 2020**







# Budget Overview

- Council formally adopted FY 2020-21 final operating and CIP budgets on June 11, 2020
- Established maximum spending authority for year
- Due to economic impacts of COVID-19 – final budget must be adjusted for General Fund + Special Revenue Funds
- Proposed budget adjustments presented to Council at August 20 Work Study Session



# HURF Fund Overview

- Distribution from State Highway User Revenue Fund
  - 98% of HURF Fund revenues
  - Distribution per statutory formula (population + county of origin of fuel sale)
  - Taxes on motor fuels
  - Variety of fees and charges to register/operate motor vehicles
- Revenues pay for both operating costs + CIP projects (cash funded)
- Forecast updated two times per year
- Adopted fund balance policy

# HURF Budget Adjustment Strategies



- Estimated 15% decline in HURF Revenues – FY21
- Spending curtailed in FY2019-20
- City Manager approval required for all hiring
- Identify budget reductions that do not require layoffs
- Initial budget adjustment target of 15% of operating budget





# Budget Adjustments – HURF Fund

- 3 budget adjustment proposals total \$1.4 million - 12% of HURF Fund operating budget
  - Freeze vacant Transportation Worker II+ position
  - Roadway Mill & Overlay CIP
  - Overtime & Various Base Budget Reductions
- Recommend adding 1 FTE – ITS Signal Technician (traffic mitigation)
- Gathered resident and employee feedback





# Budget Adjustments – HURF Fund

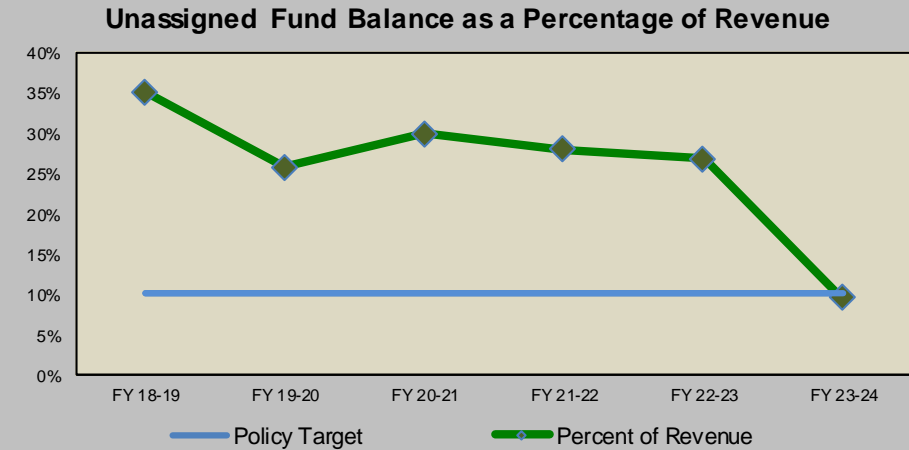
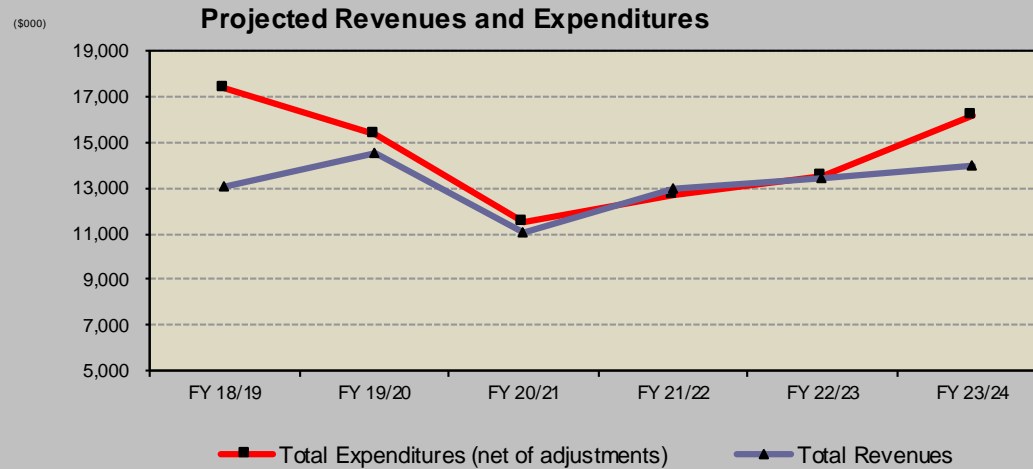
- Projected minimum \$470,000 additional reductions FY 2021-22
- Potential sources for FY22 budget reductions:
  - HURF operating budget (personnel, materials, etc.)
  - HURF funded CIP Projects
    - McClintock Dr Streetscape
    - Roadway Mill and Overlay
    - Other various CIP projects





# Budget Adjustments – HURF Fund

## Transportation (HURF) Fund Forecast - Proposed Adjustments



Expressed in thousands (\$000)	FY 18/19 Actual	FY 19/20 Projected	FY 20/21 Projected	FY 21/22 Projected	FY 22/23 Projected	FY 23/24 Projected
Total Revenues	13,048	14,511	11,051	13,018	13,467	13,964
Expenditures (prior to adjustments)	17,411	15,351	12,753	13,730	14,534	17,280
<b>Proposed Budget Adjustments</b>						
One-time Adjustments			(702)			
Recurring Adjustments			(660)	(660)	(660)	(660)
CIP Operating Impact			86	86	86	86
<b>Estimated Future Adjustments</b>				(470)	(470)	(470)
Total Expenditures (net of adjustments)	17,411	15,351	11,478	12,686	13,490	16,237
Surplus (Deficit)	(4,363)	(840)	(427)	332	(23)	(2,273)
Unassigned Fund Balance	4,567	3,727	3,300	3,632	3,608	1,335
% of Revenue	35%	26%	30%	28%	27%	10%



# Transit Fund Overview

- 60% - 65% annual revenues from Transit Tax (0.50%)
- Other major revenue sources
  - Public Transit Funds/Prop 400
  - Federal Grants
  - Fare Revenue
- Revenues pay for both operating costs + CIP projects (cash funded)
- Forecast updated two times per year
- Adopted fund balance policy



# Budget Adjustments – Transit Fund

- Estimated 15% decline in Transit Tax revenues – FY21
- Spending curtailed in FY 2019-20
- City Manager approval required for all hiring







# Budget Adjustments – Transit Fund

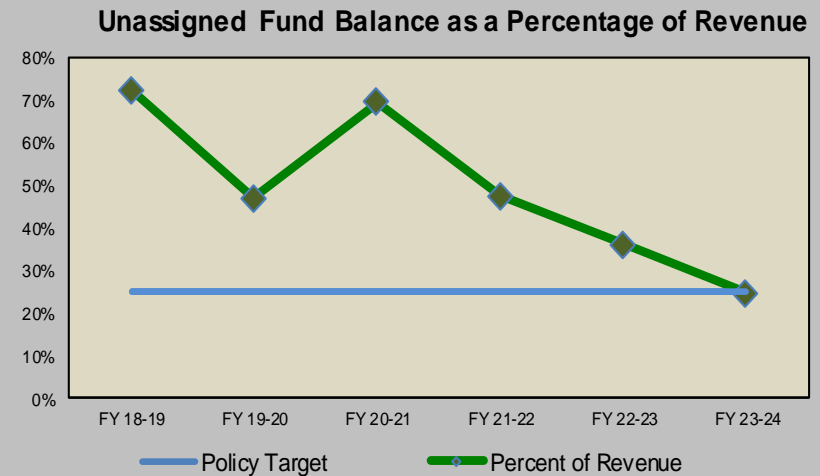
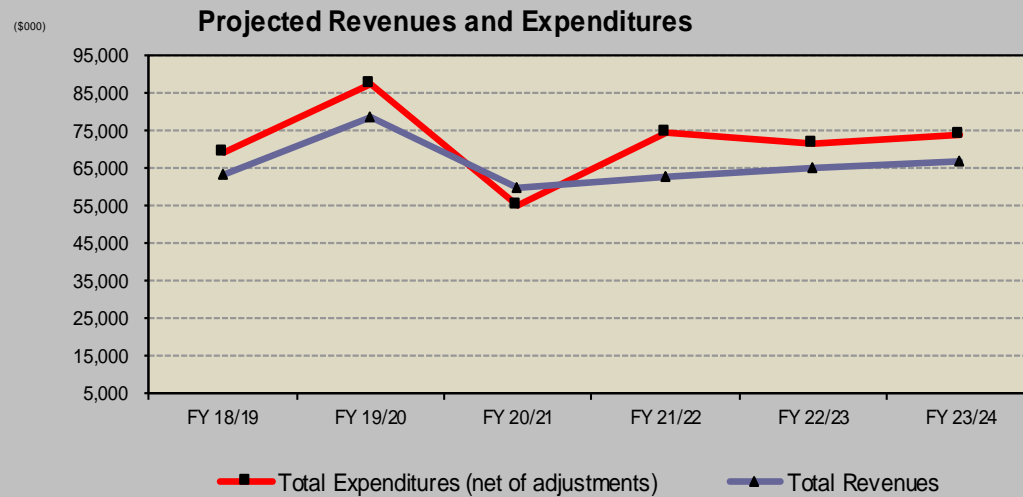
- \$21.5 Million in CARES Act Funds – offset FY21 rail and bus operating expenses and revenue shortfall
- Developing budget proposals to address long-term stability
  - Align with service route changes in Spring/Fall
  - Public participation/input process
  - Operating budget and service reductions
- Plan overview at September 17 WSS





# Budget Adjustments - Transit Fund

Transit Fund Forecast - Impact of CARES Act Adjustments + Future Adjustments



<i>Expressed in thousands (\$000)</i>	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
	Actual	Projected	Projected	Projected	Projected	Projected
Total Revenues	63,660	78,440	59,825	62,838	65,044	67,183
Expenditures (prior to adjustments)	69,206	87,686	76,422	80,187	80,970	83,481
<b>One-time CARES Act Adjustments</b>			(21,029)			
<b>Estimated Future Adjustments</b>			(500)	(5,700)	(9,500)	(9,500)
Total Expenditures (net of adjustments)	69,206	87,686	54,893	74,487	71,470	73,981
Surplus (Deficit)	(5,547)	(9,246)	4,932	(11,649)	(6,426)	(6,798)
Unassigned Fund Balance	45,922	36,676	41,420	29,771	23,345	16,547
% of Revenue	72%	47%	69%	47%	36%	25%



# Comments and Questions



# MEMORANDUM



**TO:** Transportation Commission

**THROUGH:** Steven Methvin, Deputy City Manager (480-350-8811)  
Marilyn DeRosa, Engineering & Transportation Director (480-350-8896)  
Shelly Seyler, Deputy Engineering and Transportation Director (480-350-8854)

**FROM:** Bonnie Richardson, Principal Planner (480-209-8990)  
Eric Iwersen, Transit Manager, (480-350-8628)

**DATE:** August 18, 2020

**SUBJECT:** Transit Shelter Design Project Update

**AGENDA ITEM #:** 4

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**PURPOSE:** To provide an update on the Transit Shelter Design Project, including proposed schedule, outreach and design process.

**RECOMMENDATION OR DIRECTION REQUESTED:**  
Discussion and feedback on refined conceptual designs and process.

**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 3.29 Achieve ratings of “Very Satisfied” or “Satisfied” with the “Overall Satisfaction with Transit System in Tempe” greater than or equal to 80% as measured by the City of Tempe Transit Survey.

**BACKGROUND INFORMATION:**

**HISTORY**

Tempe Transit has invested in expansions of bus, rail, and neighborhood circulator service since the passage of the 1996 Tempe Transit Tax. Today, the city has the highest ridership per capita in the state of Arizona. As part of the strong transit service system, having comfortable and accessible shelters for transit riders is critical to attracting and retaining users of the system. Tempe’s transit system is supported by over 800 transit stops, roughly 40 percent of which have shelters. The existing shelters were designed in the 1990’s and, while functional and part of the transit brand for Tempe, they are limited in their architectural compatibility with contemporary architecture and have somewhat restricted adaptability in some of the more urban and/or constrained spaces in Tempe.

**NEW TRANSIT SHELTER DESIGNS**

The City of Tempe is developing a new transit shelter design as an addition to the current shelter. The goal is to have shade at every stop, whether it is from a shelter, trees or adjacent building. The new shelter designs will enhance more transit stops city wide, focusing on passenger comfort and visibility while incorporating sustainable strategies and materials. The new designs will encourage increased ridership and provide a new iconic Tempe identity.

It is important that the new design maximizes shade for patrons that is appropriate to the solar orientation of sites. Early morning and late afternoon sun during summer months is particularly challenging. The design should be adaptable to compact sites, as well as the typical ROW sites. Importantly, the shelters should be sustainably designed, with consideration given to climate, materials, longevity, recycled content, recyclability and life cycle of products and manufacturing.

Most of the unshaded locations have challenging site conditions, making it difficult to install the current design in the existing Right of Way. Four different size options will be developed to accommodate a variety of sites and ridership capacity.

Consultants on the project are TYLIN International, J2 Engineering and Environmental Design, and Lee Engineering.

## **STEERING COMMITTEE**

In order to diversify our fact-gathering, a Steering Committee was established to inform the consultants and staff from a variety of experiences: bus patrons, bus drivers, students, sustainability experts, transit agencies (Valley Metro, ASU), planners, designers and residents. The first committee meeting was held on August 14, with good discussion about member experiences, the Tempe Transit and Valley Metro services, and new ideas. The second Steering Committee meeting, on November 12, included review of the initial 9 concept sketches and public input, with recommendation to further develop 3 of the designs. On February 3 the Steering Committee workgroup met regarding the research and grant opportunities for testing new cool roofing materials. The final online meeting on June 18 provided feedback on the consolidated concept designs and discussion of sustainability applications.

## **SUSTAINABILITY**

From inception, sustainability was a key goal in the shelter design. This includes consideration for local materials and fabrication, modular design, interchangeable parts for inventory control and reuse, durability, flexibility, recyclability, ease of assembly, long life, and life cycle analysis. In an attempt to gain maximum cooling, research was conducted on cool pavements and new products for cool roofing.

The Steering Committee was a sounding board for research into new sustainable materials. We have established a collaboration between the City of Tempe, ASU and 3M Corporation to test a new proprietary radiative film product on 3 of our existing shelters. David J Sailor, Director of the Urban Climate Research Center, ASU will be working with Professors Ariane Middel and Richard King to provide a thorough evaluation of the material performance, developing a full year of data testing for temperature & comfort. They received an internal funding grant from ASU to support this research. 3M is providing the film material and professional installation at no cost. Preliminary investigation suggests that radiative cooling could significantly reduce the temperature under the canopy and affect the surrounding area, while potentially extending the life and improving the performance of the roof mounted solar panels. Attached is a diagram of the radiative cooling process.

## **PRIORITIZATION STRATEGY**

All transit stops without shelters will be evaluated based on the availability of sufficient space, lack of shade by building or trees, and special site conditions. Existing ridership, population and employment density (within 1/4 mile), are used as prioritization data points. Additional equity considerations include poverty and minority populations and heat vulnerability. The attached chart provides details of the prioritization strategy. The existing shelters will be replaced based on condition and/or increases in ridership, which would likely include 20-25 sites over the next 5 years.

## **PROJECT STATUS**

- August 2019: Research; Steering Committee Meeting #1
- Sept. – Nov. 2019: Public Meetings #1 & 2; development of 9 initial concept sketches; Steering Committee Meeting #2
- Dec. 2019 – Feb. 2020: Outreach to user groups and commissions  
Design refinements producing 3 recommended alternatives

- Feb. 11, 2020 Public Meetings #3 & 4
- March – April 2020: Steering Committee Meeting #3
- April – May 2020: Design incorporation of preferred elements (with 4 size alternatives)
- June 18, 2020: Meetings postponed due to COVID-19
- July 21, 2020: Steering Committee Meeting #4
- Aug. 18, 2020: Public Meeting #5 via Webex
- August 20, 2020: Transportation Commission Meeting
- Sept. – Dec 2020.: City Council IRS Meeting
- Jan. – March 2021: Engineering plan development; cost analysis
- Spring 2021: Finalization of plans & details
- Summer 2021: Prototype fabrication for public review.
- Summer 2021: Begin installation in accordance with Budget & Prioritization Plan

## **PUBLIC MEETINGS**

- Initial public meetings, held on Sept. 21 and 25, 2019, included user experiences and identification of key attributes for the shelter designs. Meetings on Jan. 18 and 21, 2020, included discussion of concept options. Meetings originally scheduled for March were cancelled due to COVID-19 and rescheduled as a Webex meeting on July 21 to discuss consolidated concept and refinements.
- Surveys are available at all in-person public meetings and online, for two weeks following the meetings.
- A summary of all public responses and comments is attached.

## **FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:**

The goal for the new designs is to meet the needs of more transit riders by serving restricted sites with two new smaller scale shelters, at lesser cost than the full-sized installations. Funding for shelter designs, fabrication and installations are through the

- Tempe Transit Tax - annual bus stop improvements; and
- Private development community partnerships.

Cost analysis of each of the 4 shelters (micro, small, medium and large) will be provided during engineering plan development, at 30%, 60%, and 90% reviews. Similar structures in these sizes would range from \$15,000 – \$35,000. A fabricator will be working with the team to develop a prototype for public review.

## **ATTACHMENTS:**

1. PowerPoint
2. Prioritization Strategy
3. Public Outreach Summary
4. Steering Committee Membership
5. Public Involvement Plan
6. Radiative Cooling Process

# **Designing Tempe's New Transit Shelters**

**Transportation Commission  
August 18, 2020**



# City Council Strategic Priorities

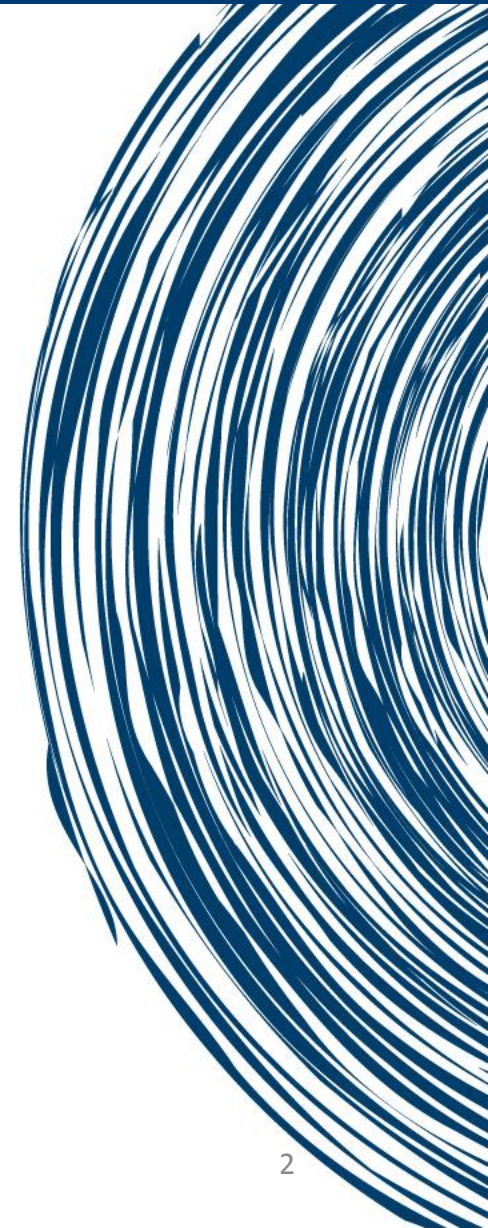


## Quality of Life 3.26

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 3.29

Achieve ratings of “Very Satisfied” or “Satisfied” with the “Overall Satisfaction with Transit System in Tempe” greater than or equal to 80% as measured by the City of Tempe Transit Survey.





# History & Purpose



## Tempe Transit:

- Dedicated Transit Tax funding
  - Annual Bus Stop Capital Maintenance
- City-wide transit service
- 27 bus, Orbit and rail routes
- 800+ bus stops, 360+- stops with shelters
- Highest per capita transit ridership/region

## Create a new transit shelter that:

- Enhances the rider experience for all
- Supports sustainability (cost & materials)
  - Smaller sizes less cost than current shelter
- Fits in all conditions & has variety of sizes
- Attracts new ridership
- Is a unique, iconic symbol of Tempe Transit



# Public Outreach & Steering Teams



## 5 Public Meetings

- September 2019; January 2020; July 21 Webex meeting

## 4 Steering Committee Meetings 2019, 2020

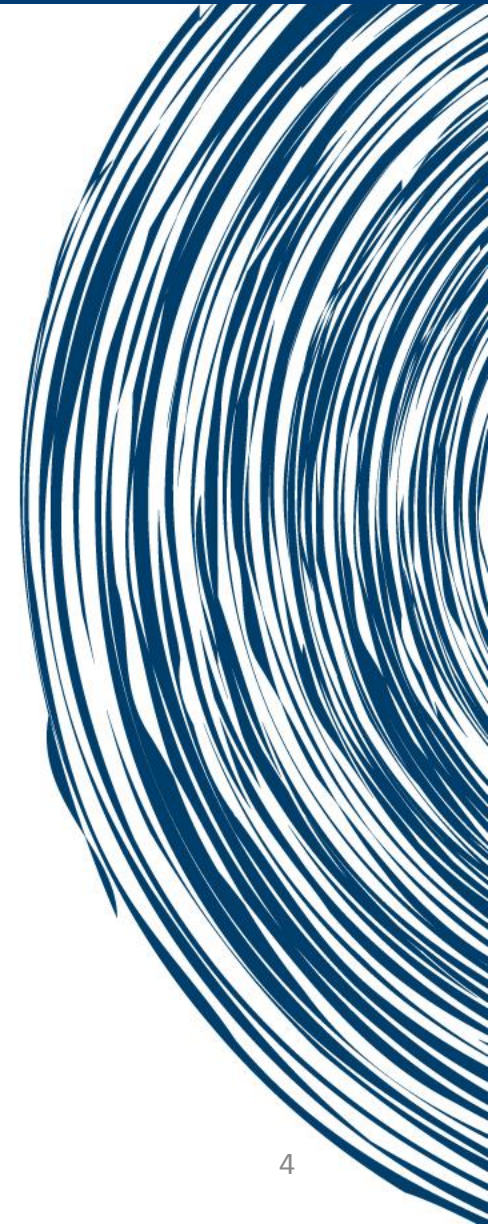
- ASU, Bus Operators, Riders, Students, Commissioners, Architects, Engineers

## Board, Commission & Stakeholder Meetings

- Broadway Apartments (ADA Community)
- Valley Metro Accessibility Advisory Group (VMAAG)
- Transportation, Sustainability, Development Review, Disability Concerns Commissions

Research Partnership w/David Sailor ASU Urban Climate Research Center & 3M

TY Lin International & J2 Engineering leading project with Staff Team





- Direct mailers
- Tempe Today newsletter
- Tempe 11
- Press releases
- Paid online advertising
- Signs on buses
- Project website
- Online comment forms
- Tempe Forum
- Surveys at bus stops

**Public Feedback 400+ Comments**

FACEBOOK

NEXTDOR

PRESS  
RELEASE

TWITTER

PANDORA



# Community Survey Results



## Ranking of Shelter Elements Based on Public Feedback From Initial Rounds of Public Meetings

1. Shade
2. Seating
3. Lighting
4. Route Info
5. Rain Protection
6. Visibility to Traffic/Oncoming Bus
7. Trash/Recycle Bins
8. ADA Accessibility
9. Use of Sustainable Materials
10. Vandalism-proofed
11. Bike Racks
12. Public Art
13. Scooter Parking



Tempe Transit Shelter

# Concept Development



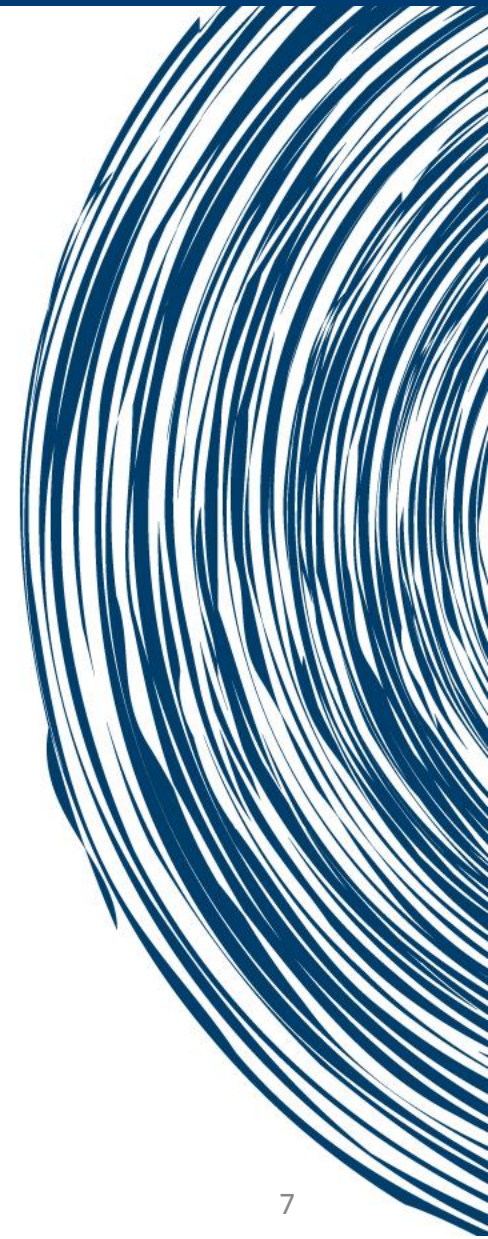
Concepts developed using transit & engineering criteria & requirements & public/stakeholder input with focus on:

**Form & function:** simplicity, adaptable to space constraints, meets all requirements (ADA, Engineering, etc.)

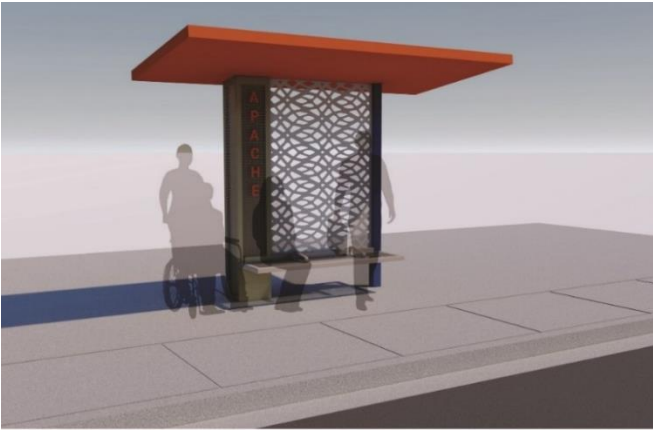
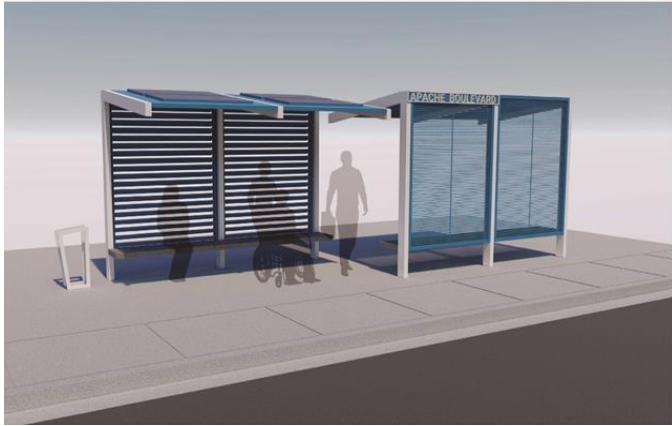
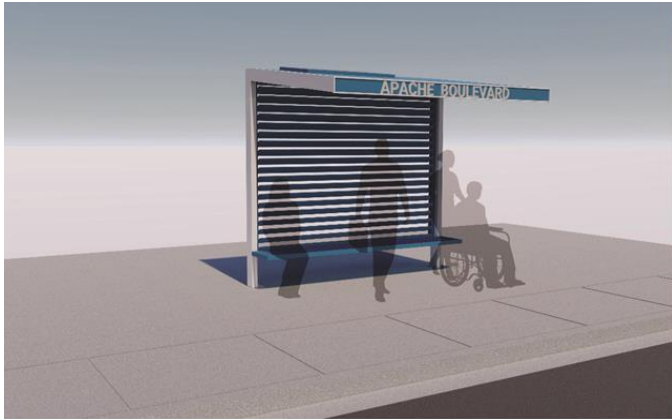
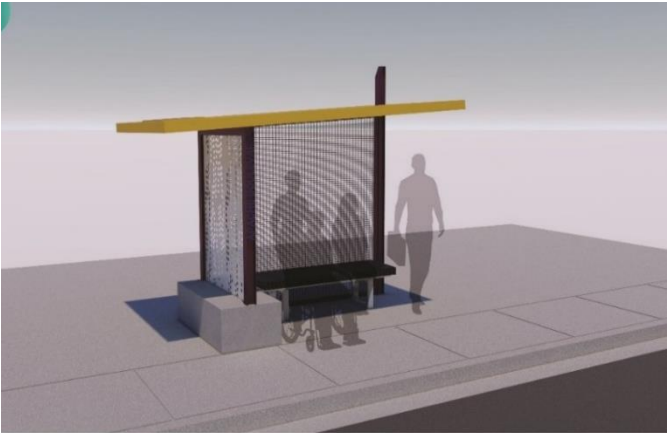
**Comfort & accessibility:** shade, seating

**Aesthetics:** colors, lighting, visual architectural interest

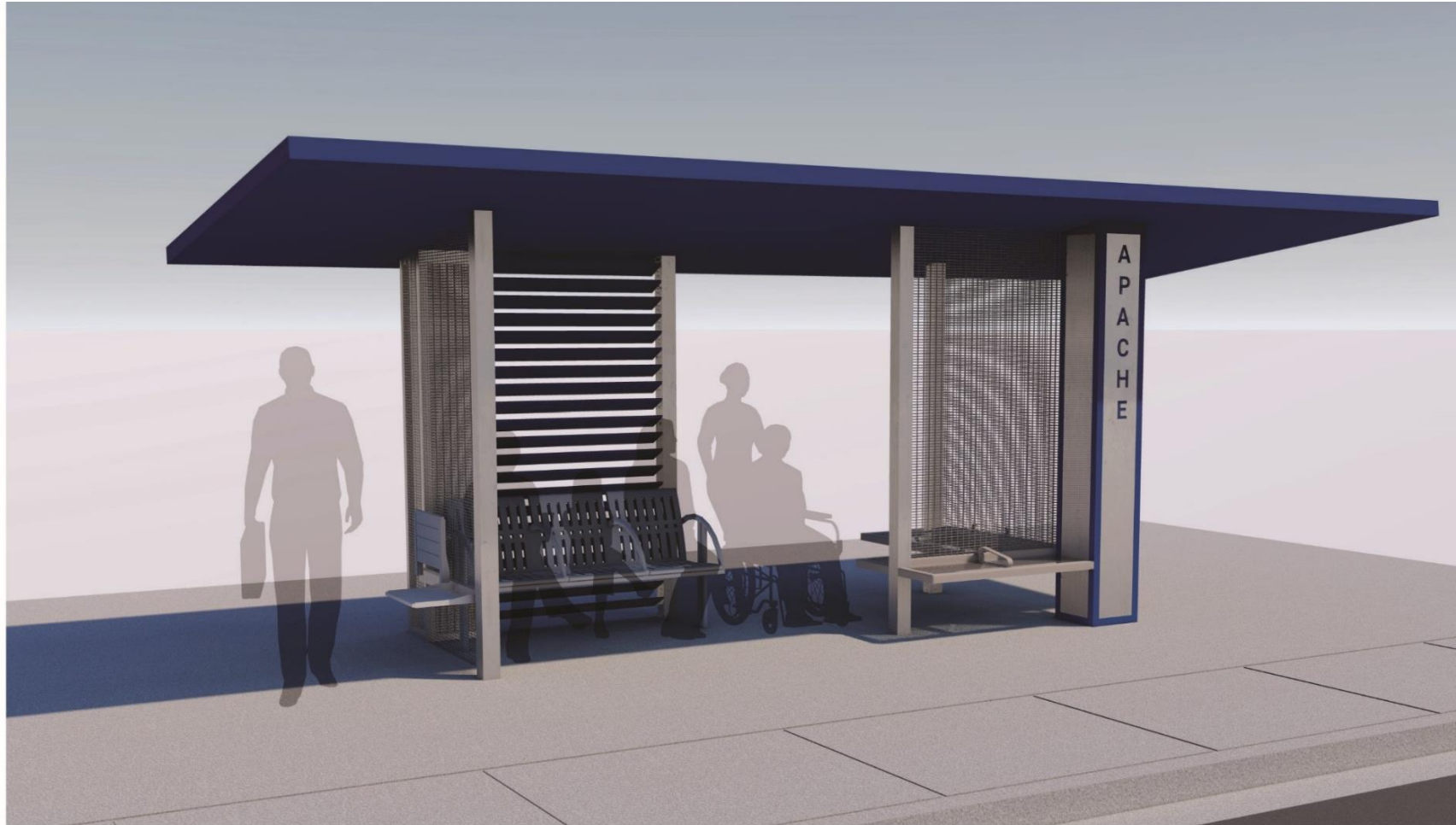
**Sustainability:** cooling, rider support, materials, life cycle costs, long-term ridership growth



# Early Concept Designs



# Consolidated Concept



Proposed Materials

**7' x 14' (Medium) Transit Shelter**  
Roof Canopy 9'11" x 25' ( 248 Sq. Ft.)

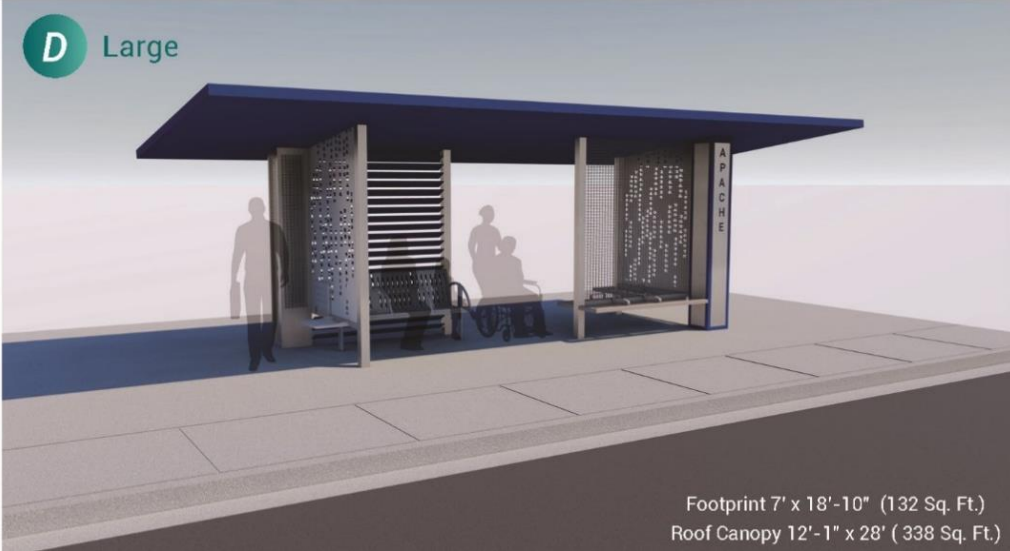
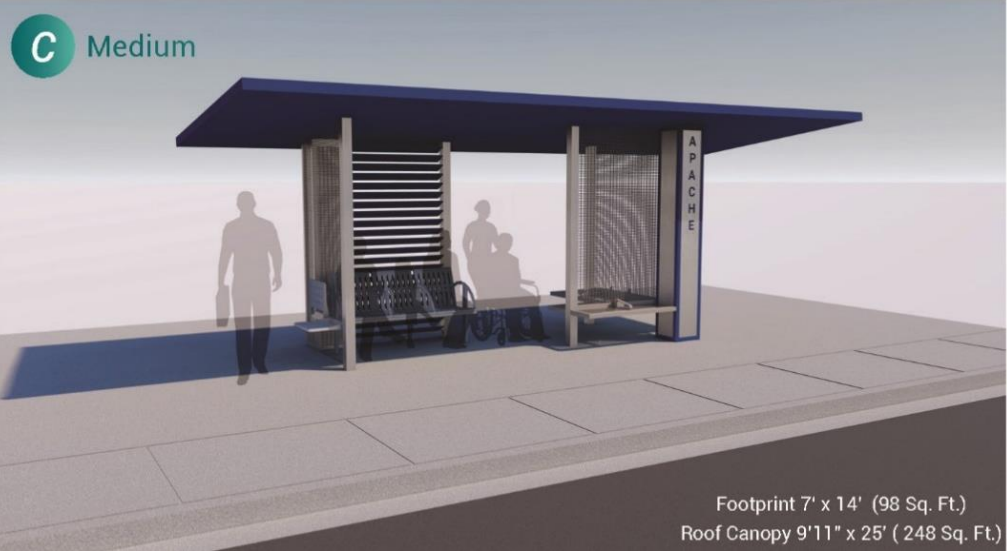
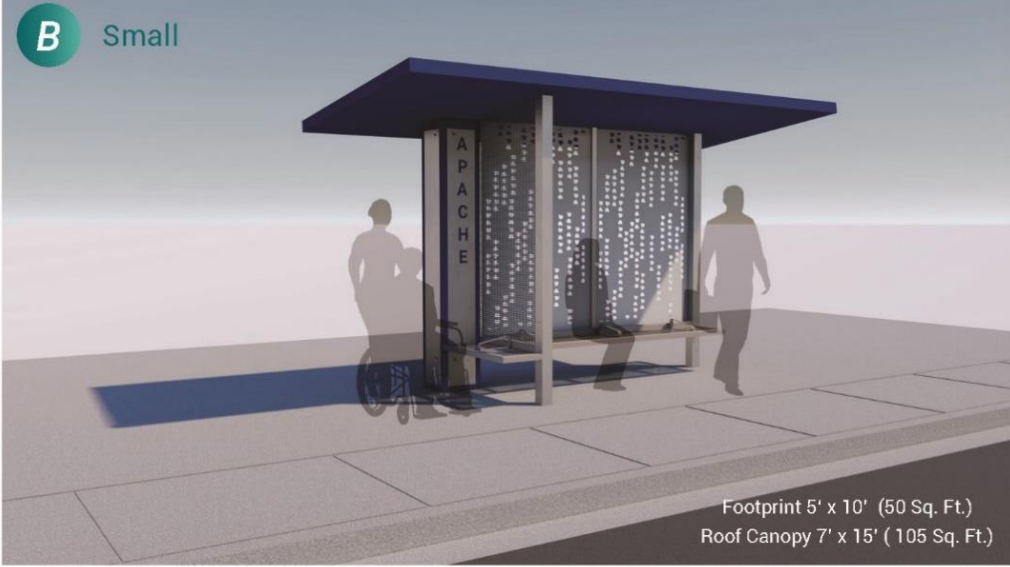
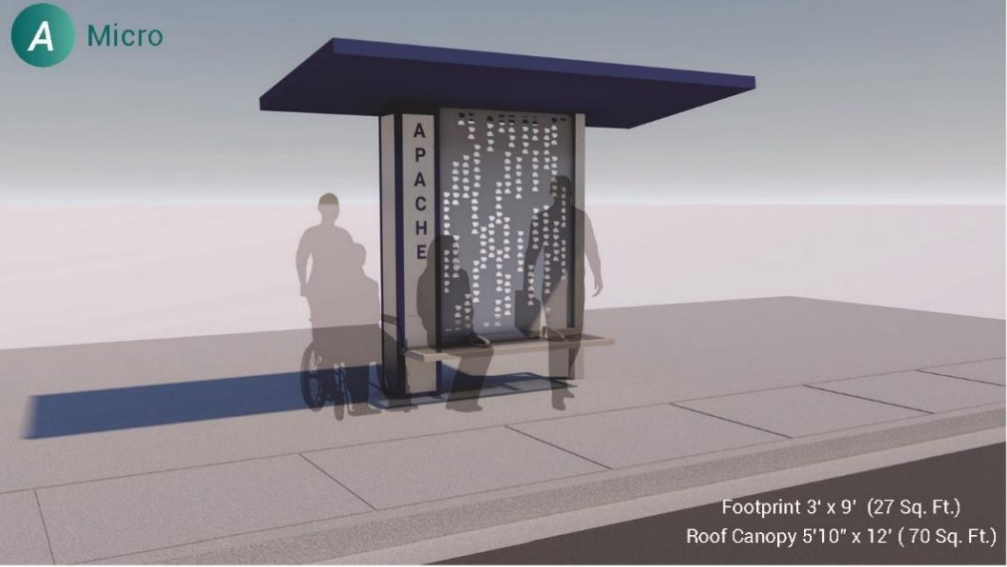
**Tempe Transit Shelter**

Consolidated Concepts | 7.21.20

TYLin | J2 Design



# Concept Sizes

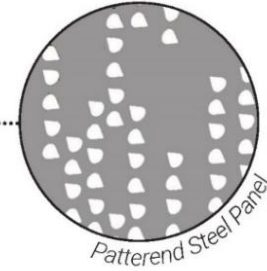




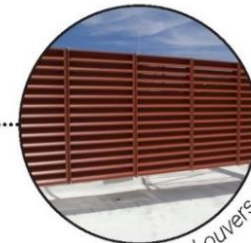
# Kit of Parts & Material Variation



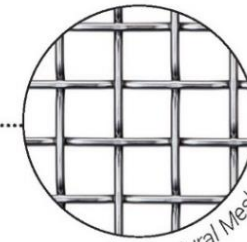
Acrylic Signage



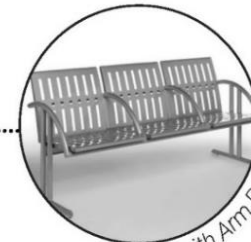
Patterned Steel Panel



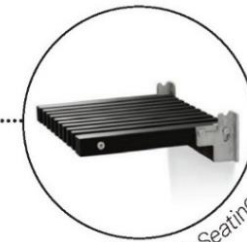
Aluminum Louvers



Architectural Mesh

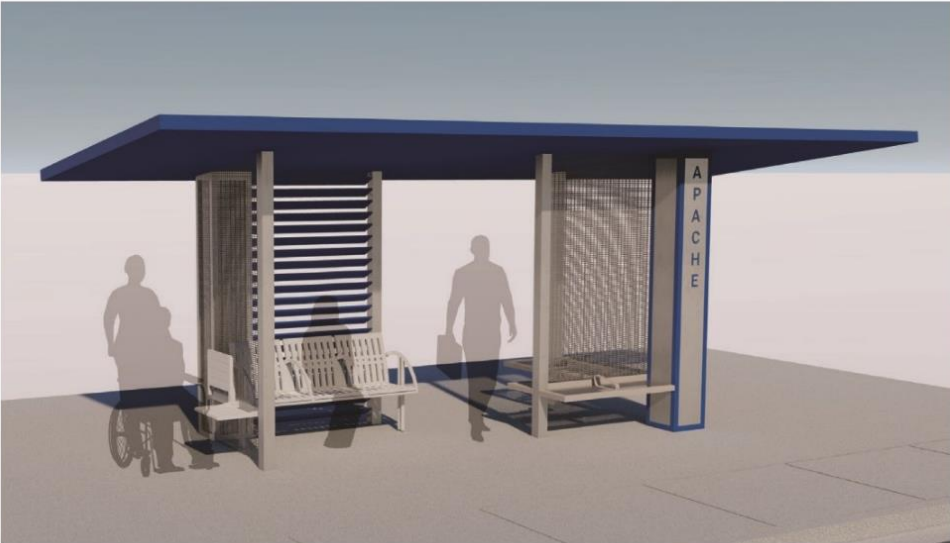
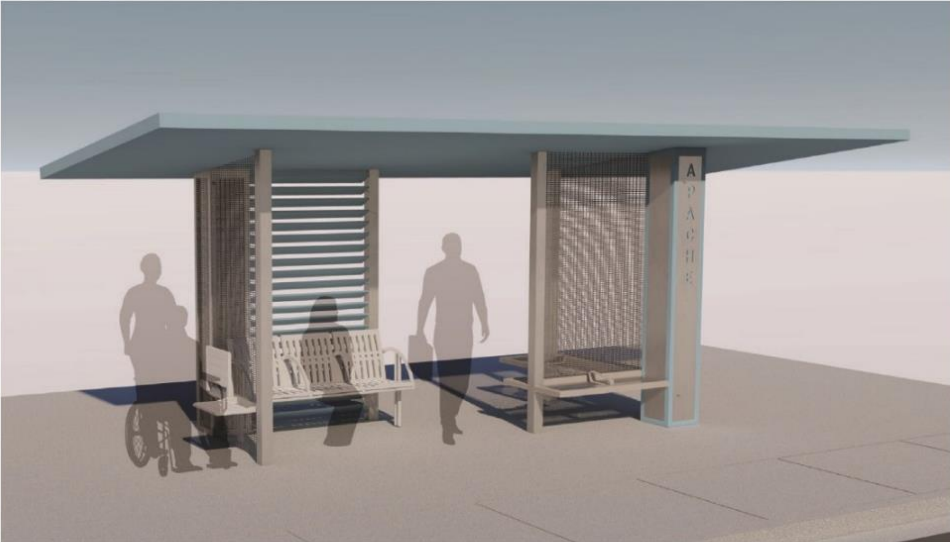


6' Bench with Arm Rests



Flip Down Seating

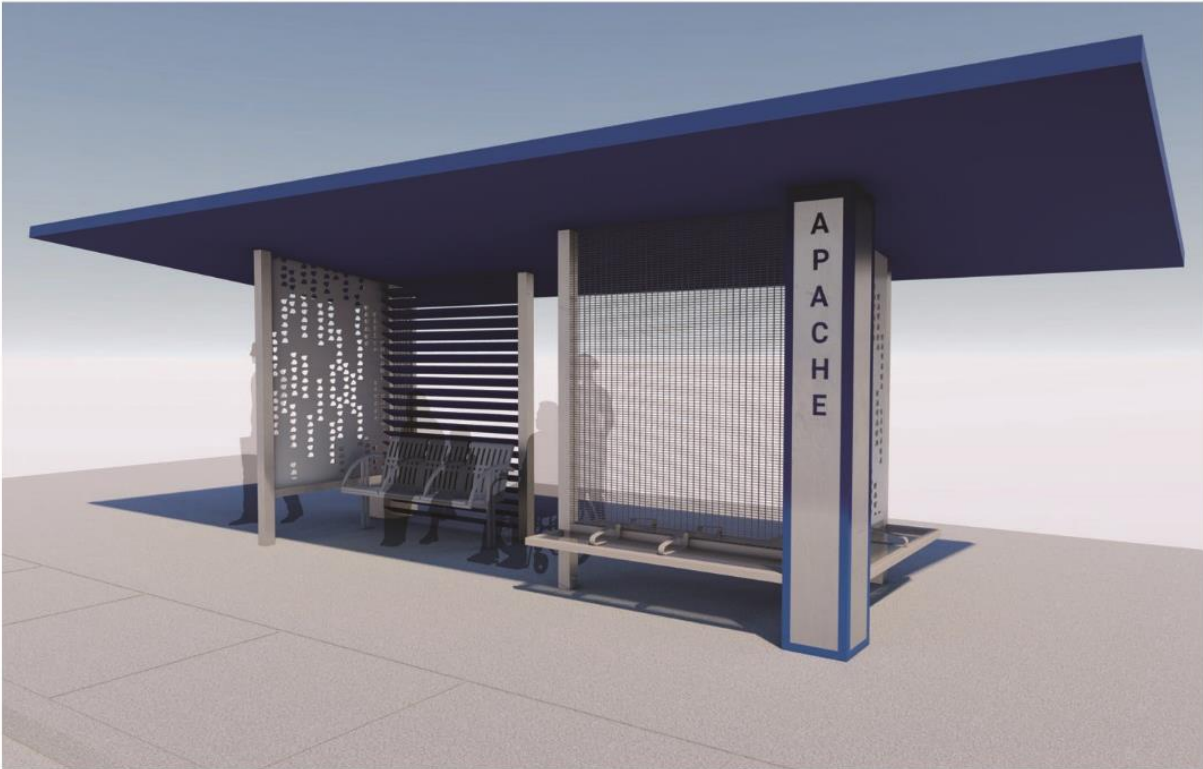
# Concept Color Options



# Concept Lighting



# Concept Additional Views



# Transit Shelter Prioritization



## Criteria for shelter placement & creating a list for implementation

### Transit Ridership

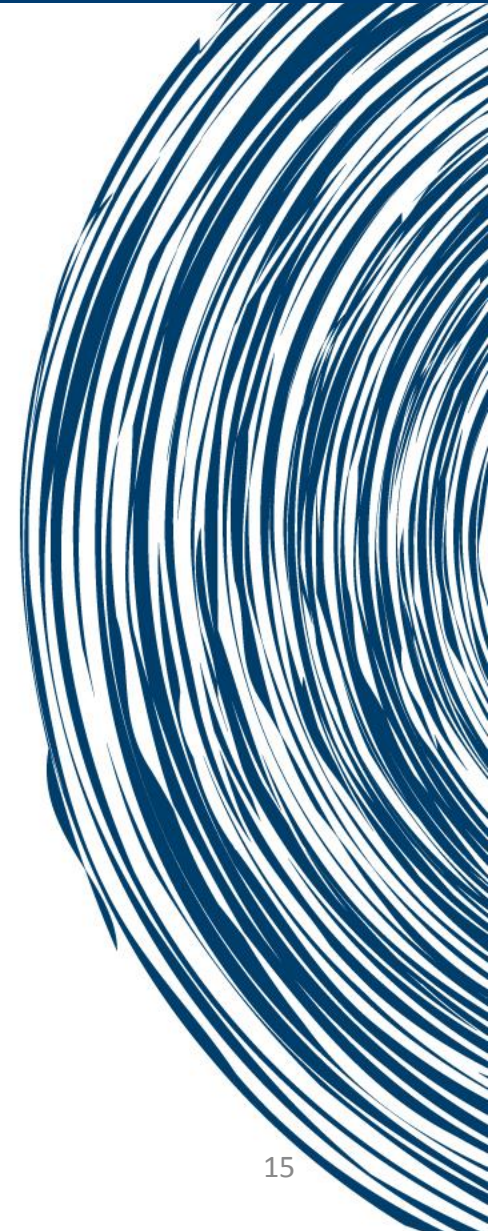
- Average weekly boardings

### Transit Demand

- Population
- Employment

### Equity

- Minority Population
- Households Below Poverty
- Heat Vulnerability



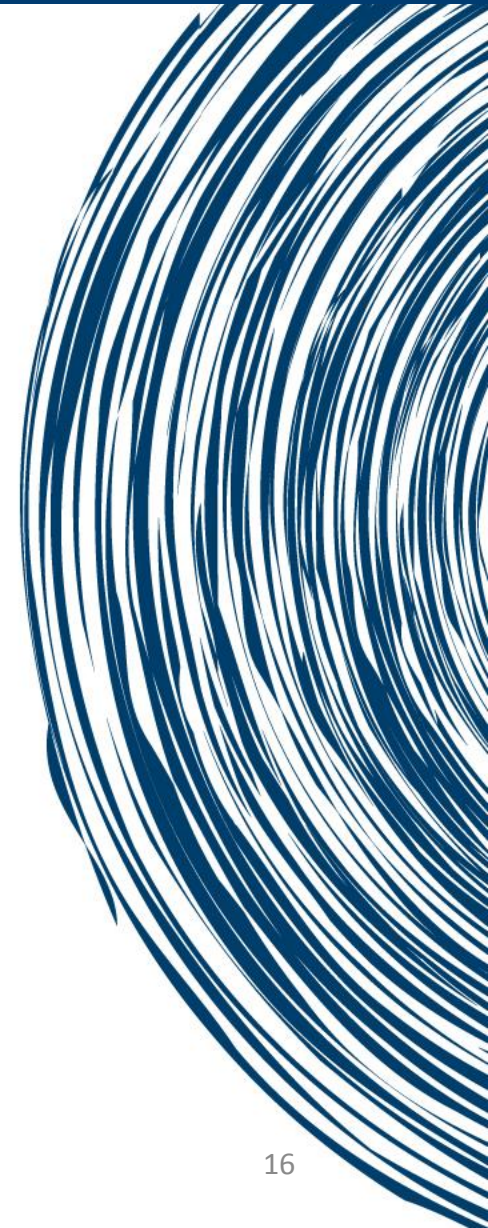
# Process, Refinement & Fabrication



## Engineering reviews at 30%, 60% & 90% completion

- constructability
  - flexibility, kit of parts
  - adaptability to site constraints
  - vandal-proof materials
- cost estimates & value engineering
- colors, seating

Work with fabricator to develop prototype for public view



# Next Steps & Comments



Public Engagement/Outreach As Needed

Finalize Design

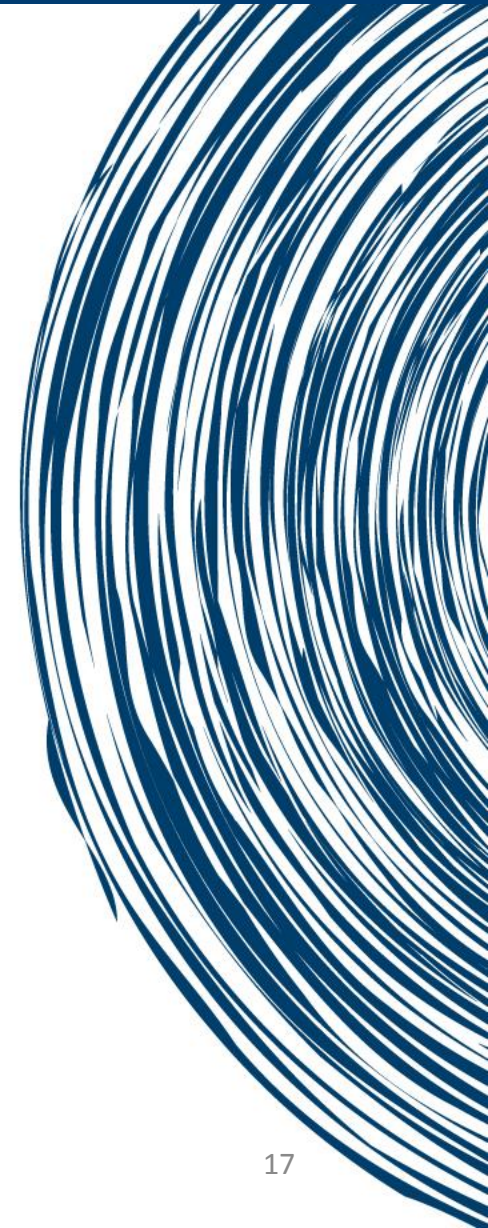
Fall 2020

Fabricate prototype for public review

Spring 2021

Initiate installations

2021/2022



## BUS STOP PRIORITIZATION DATA

Project Goal	Data Factors	Data Source	Classification Breaks	Points	Priority	Score
Transit Ridership	Average weekly boardings	Valley Metro Bus Ridership 2019	0 - 15	1	x .40	0.4
			16 - 50	2		0.8
			51 - 100	3		1.2
			101 - 200	4		1.6
			200+	5		2
Transit Demand	Population per Acre by Census Block Group	Valley Metro 1/4 mile -- American Community Survey -- US Census	2.1 - 15	1	x.05	0.05
			15.1 - 25	2		0.1
			greater than 25	3		0.15
	Employment per Acre by Census Block Group	Valley Metro 1/4 mile --Longitudinal Employer-Household Dynamics (LEHD) Program -- US Census	2.1 - 12	1	x .05	0.05
			12.1 - 20	2		0.1
			greater than 20	3		0.15
Equity	Percent Minority Population by Block Group (Total Population less White (Non-Hispanic))	Valley Metro 1/4 mile -- American Community Survey -- US Census	Community of Concern when Minority Population is 42.6% or higher.	2	x .15	0.3
	Percent of Households Living Below Poverty by Block Group	Valley Metro 1/4 mile -- American Community Survey -- US Census	Community of Concern when percent in Poverty is 16.4% or	2	x .15	0.3
	Heat Vulnerability	Heat Illness by hospitalizations	High	1	x .20	0.2
			Extreme	2		0.4





## Transit Shelter Design Project: Public Input Summary, October 2019

### I. Background

Tempe is working with a consultant team, guided by a Steering Committee, to develop new shelter designs that encourage increased ridership by improving the waiting environment and provide a new iconic Tempe identity for the transit system.

Currently, there are 806 transit stops in Tempe; 38% have shelters. Tempe is committed to working with all stakeholders to develop a new shelter that is sustainable, comfortable, and adapts to a variety of locations.

### II. Outreach

Postcards inviting the public to attend the meetings or to comment online were mailed to 3853 households. The mailing was targeted to households surrounding bus stops with the highest ridership. Public meetings were held on Sept. 21 (3 attendees) and Sept. 25, (8 attendees) 2019 and the topic was posted online from Sept. 21 – October 16, 2019 through Tempe Forum. A total of 124 unduplicated survey responses were received.

FACEBOOK	NEXTDOR	TWITTER	MEDIA
<p><b>9/5 – public meetings</b> Reach/Impressions: 939 Engagement: 36</p> <p><b>9/20 – public meeting reminder</b> Reach/Impressions: 1088 Engagement: 34</p> <p><b>10/13 – online input reminder</b> Reach/Impressions: 1964 Engagement: 161</p>	<p><b>9/5 – public meetings</b> Reach/Impressions: 3302 Engagement: 10</p>	<p><b>9/5 – public meetings</b> Reach/Impressions: 3462 Engagement: 12</p> <p><b>9/20 – public meeting reminder</b> Reach/Impressions: 5288 Engagement: 19</p> <p><b>10/13 – online input reminder</b> Reach/Impressions: 3822 Engagement: 27</p>	<p><b>Press release:</b> <b>9/5 – public meetings:</b> emails sent: 1319 open rate: 26.5%</p> <p><b>9/19 – Tempe this Week:</b> emails sent: 3672 open rate: 35.2%</p> <p><b>Pandora ads:</b> Impressions: 62,644 Click rate: .05%</p>

### III. Survey Results

Respondents were asked to report how important each of the elements are to a transit shelter and to rank them in order of importance. Below are the responses from the 124 people who took the survey.

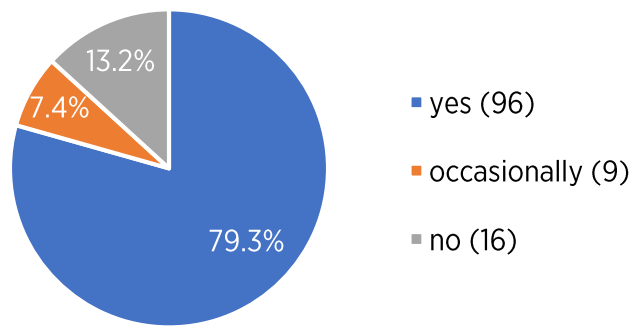
**Question1: How important are the following items at a bus stop? (124 responses)**

	Essential	Very important	Nice to have	Not important	Don't know	Your rank
Shade	87.8%	8.1%	1.6%	.8%		1
Protection from rain	38.2%	34.1%	22.8%	4.1%		5
Use of sustainable materials	25.2%	37.4%	26.8%	8.1%	1.6%	9
Seating	51.2%	30.1%	14.6%	3.3%		2
Bike racks	16.3%	29.3%	37.4%	11.4%	4.9%	11
Scooter parking	4.1%	14.6%	39%	33.3%	4.9%	13
Availability of route info	61%	24.4%	10.6%	1.6%	.8%	4
Resistance to vandalism	39%	31.7%	17.0%	5.7%	4.1%	10
Visibility of oncoming traffic	54.5%	26.8%	11.4%	2.4%	1.6%	6
Enhanced accessibility elements beyond required for ADA	54.5%	20.3%	13.8%	4.9%	4.9%	8
Availability of trash & recycling	47.2%	34.1%	13.8%	2.4%		7
Lighting	56.1%	32.5%	6.5%	3.3%		3
Public art incorporated	13%	27.6%	39.8%	16.3%	.8%	12

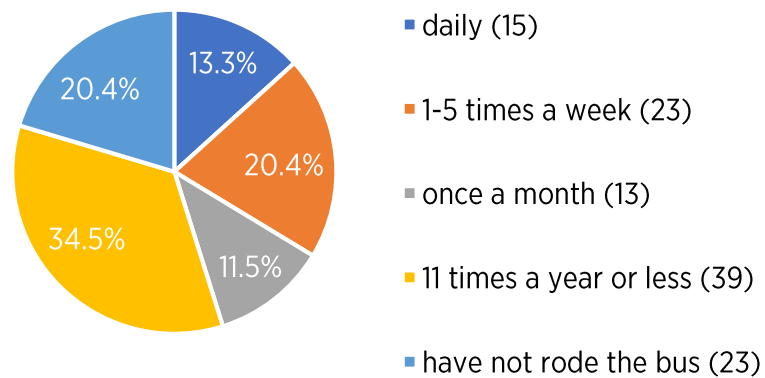
**Question 2: Please rank the above items based on your priorities for a transit shelter. (124 responses)**

1. Shade
2. Seating
3. Lighting
4. Availability of route info
5. Protection from the rain
6. Visibility of oncoming traffic
7. Availability of trash and recycling bins
8. Accessibility in addition to the ADA elements
9. Use of sustainable materials
10. Resistance to vandalism
11. Bike racks
12. Public art incorporated
13. Scooter parking

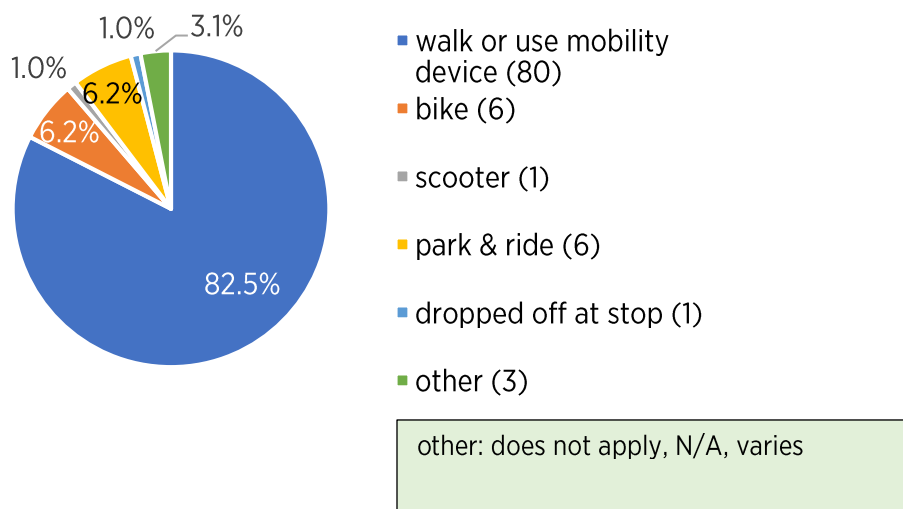
**Question 3: Do you own or have access to a vehicle? (121 responses)**



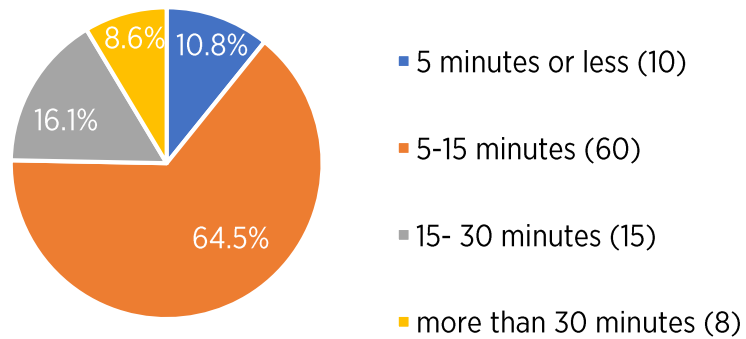
**Question 4: How often do you ride the bus? (113 responses)**



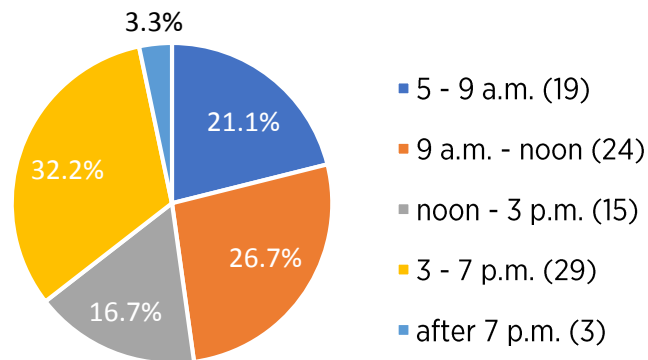
**Question 5: How do you typically get to the bus stop? (97 responses)**



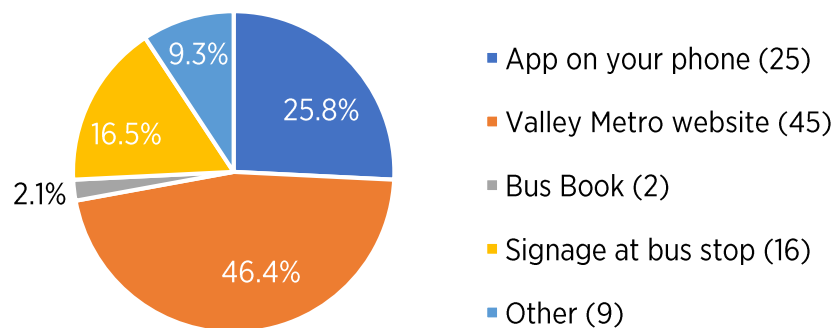
**Question 6: How much time do you typically spend at a bus stop? (93 responses)**



**Question 7: What time of day do you use the bus? (90 responses)**

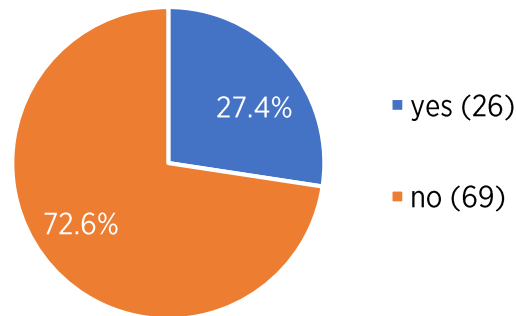


**Question 8: How do you get bus/transit information? (97 responses)**



Other: Google (2), both VM website & signage, pamphlet, I know schedule, all of the above, none, no need

**Question 9: Do you typically connect to another route? (95 responses)**



**Question 10: Please share any other thoughts you have related to the design of Tempe's Transit Shelters. (52 responses)**

1. fantasy mushrooms with seating around the stem and whimsical characters attached
2. I love that COT incorporates public art, and hope they will continue to do so. Using non-metallic materials for seating is appreciated so that sitting in the summer is possible. The bus stop I use has limited shade.
3. Cooling stations with fans/misters - similar to those sponsored by APS at the downtown light rail stations.
4. Use seat dividers so that people aren't sleeping on the seats. Make them uncomfortable enough so that people aren't camping out in these structures long term.
5. Some bus stops have turned into temporary homeless shelters, people sleeping in the ground and mountains of stuff everywhere. The bus stops smell like urine. I have stopped using the bus on southern avenue because of this. Its super frustrating to take an Uber when I could take a bus. But I don't feel safe at a bus stop that has been taken over by the homeless. I know this isn't PC, but it's the truth and a real problem.
6. Lighting/visibility to driver is extremely important to me as a person in a mobility device...more than one I have been driven past (especially if its' dark.) Available room at stop to deploy ramp...also more than once I have had to contend with plants, rocks, signage, or other items while trying to safely use the ramp to get on or off the bus. Depending on my schedule, I may need to ride the bus pretty much anytime of the day. However, I was not able to check as many as apply when trying to answer this question. I appreciate being able to use public transit and believe that there are many ways to improve the accessibility factor to make it safer and more efficient for both riders and drivers.
7. Shelters that face South or West should be provided with additional seating on the opposite side of the structure that would provide shade. In addition, automatic sensors should be incorporated to notify the transit driver that there is a rider awaiting without having to flag down the bus.
8. Solar roofs for bus stops to create shade and power lighting
9. Obviously there is not enough money for shelters at all bus stops. Therefore the bus stops with the highest usage/number of riders should be given the shelters. Shelters are less important in areas where the usage is low. More shelters are more important than public art. If public art means higher costs, I would use the money for public art to build shelters.

10. Artistic design makes the shelters desirable to be at.
11. Shade shade shade! No one especially in an aging world wants to be without shade. Great design should encourage use not just be a great photo in an architecture/urban planning book. Tempe and other cities thus far in metro Phoenix have done a poor job. Get it right this time please!
12. Please use established public artists to work with the community to come up with integrated artistic elements for the shelters, not architects or graphic designers (who may view art as simply a decorative element of the shelters).
13. Real trees, & plants are much better for shade than metal sculptures! We need to be planting trees for clean air anyway, so figuring out how to shade more transit stops is a cobenefit for all. Often built shade structures also emit additional heat. We need to focus on cool and shady both. I have had bikes stolen from transit stops, so don't prioritize them. Scooters are often left in ways that negatively impact ADA access.
14. I used to take the Orbit buses back when there actually was a way to get to my school/work via public transit. It was awesome, but because it was free it attracted a lot of homeless people and that deterred a lot of other people from using it. It is important that buses and bus stops are clean and feel secure for people to use them.
15. I want to see public drinking fountains established in Tempe, particularly where homeless people tend to congregate. Bus stops are an excellent first location for such life-giving facilities could be placed.
16. The form doesn't allow you to select multiple time periods for when you ride the bus. There will be data error in your survey results because of this.
17. I have actually liked the transit shelters that have been in use the last few years.
18. SHADE AND SAFETY ARE IMPORTANT
19. The stupid homeless bums should all be locked up and tossed in the desert. Please SHUT DOWN THE FREE BUSES IN AND AROUND TEMPE. WE HAVE A HUGE BUM PROBLEM. THEY ARE CRIMINALS. THEY WILL HURT YOU AND ROB YOU. I BLAME THE TEMPE GOVERNMENT FOR AIDING THEM THEY SHOULD ALL GO TO SOME OTHER STUPID CITY THAT HAS FREE BUSES LIKE THE ORBIT. SHUT DOWN SHUT DOWN SHUT DOWN THE ORBIT!!!
20. Please keep the indigent / homeless from sleeping in and using the shelters as temp homes. If you make them more comfortable, the more the indigent will use them and NO one will use the transit shelter for its intended purpose. I've seen 3-4 people standing out in the sun outside the shelter when 1 homeless person has their camp set up inside. This is becoming the norm and needs to stop.
21. The seats must not be made of a material that gets really hot in the summer. We are wearing shorts and the metal seats actually burn my legs. The main goal should be an effort for every shelter to be in the shade at all times. I know it is not possible, but you should really TRY to figure out how to do it. There is not much you can do about minor vandalism, so I wouldn't put much focus on it. People are going to write/paint junk on the shelters. Just try to remove the writing as often as we can afford.
22. Keeping scooters and other devices out of the wheelchair locations is critical.
23. Transit shelters are nice, but I don't think the city should spend large amounts of money on shelters. There are better things Tempe could spend its money on - like improving bus routes, or at long last extending orbit bus routes into south Tempe. on the whole, I think Tempe wastes a lot of money on transit, due to mismatched priorities. The city is always looking to be "iconic", but really should just be trying to improve transportation.
24. Please, do not damage the shade and seating functionality of the transit stop by installing or designing anti-homeless features. Homelessness is a temporary, economic policy driven problem separate from transit design and architecture. Permanently reducing the usefulness of transit stop features for the sole purpose of covering up poverty is detrimental to the fabric of civic life. In general, the more shade the better.

25. Steel is highly recyclable[sustainable] but in summer, re-radiates heat, so thermal insulation of canopy should be added to roof deck, ideally. Humans just fry under steel constructions! Few transit shelter designs are site specific to solar orientation, in fact in summer when solar angles are high, so many shelter designs offer shade! Public art in bus shelters has shown to be problematic as few artists have any training in public realm design parameters of ADA, safety and welfare of humans, traffic sightlines; further, artists have no state license for such designs, so that are violating state law for the use of taxpayer monies! Essentially, using tax money to practice engineering and architecture with no liability insurance and no license to lose or be reprimanded! Not responsible to the public! The survey does not address the 'hot potato' of homelessness and loitering...a demanding design criteria to incorporate! Regionalism in design expression is not addressed in survey... the transit shelters in Old Town Downtown have done well over time in communicating the red brick theme of old town and standing seam metal roofs look good and wear well and harken to pre-statehood [territorial] building traditions of old town Tempe. Is there a civic theme that can be reinforcing of Tempe's unique character? demanding but worth aspiring to! No mention of solar panels...becoming a reality and yet..... almost always so poorly done!
26. I question whether this is or should be a priority for the city. Also, will this encourage more homelessness by accommodating the homeless? Bus stops seem to be a great place to congregate.
27. I have tried repeatedly to use public transit and not done so. The 6 mile route from house to work by pub.trans. took 3 changes of vehicle, walking at least 3/4 mi and over an hour of transit time one way. Biking was out of the question because there is no safe way to ride a bike in Tempe. I drive because it is faster and more convenient. This said, I've used public transit in other cities when it has been clean, reliable and fast and love it.
28. Bench seats with vegetative shade would be awesome on so many levels.
29. They should include water fountains. In addition to art, they can creatively suggest ways to support the Green movement - e.g. use your own water bottles, bring your own bags, turn off the lights, etc.
30. We need them moved from corners
31. FIRST priority is safety, we don't want to encourage vandalism. It should be closed on the sides but visible like a Plexiglas but resistance to carving onto it as I have seen this happen. Shelter should be easily washable for any tagging. Exceptional lighting.
32. We would like the city council members to drive around Tempe and look at bus stops in the north side and the south side. We live on the south side of Tempe and it is a very visual difference on what Tempe spends on the north side bus stops vs the south side. The south side in most cases gets a bench and a bus sign, while the north side has these elaborate art designed bus stops with plenty of shade and seating. I know Tempe members like to focus on the Mill Ave. and Town Lake area, but there is a whole city of Tempe not just the brightly polished areas. We pay taxes and vote on the south side and would appreciate more attention to detail when it comes to city projects. The amount of people taking the bus would increase if they had shade and a place to sit. We think if you spent the money wisely on more shade and more seating for all instead of art work that really makes more sense. Art is great, BUT when it's 115 degrees, shade and seating wins out every time. Lets work for all! Also safety is a great concern! We're big on helping the homeless, but we must think about the safety of our citizens that ride the bus and make riding the bus cost a few cents so you don't have homeless camping out in the buses. Safety, shade, and seating! The 3 "s" are what we are thinking about.
33. I don't have to take the bus, but I do when the weather is in the 80s or below. Even in pleasant weather, the sun is brutal. Shade with sun angles taken into account is essential.\*sidenote: your "when do you take the bus" button is only allowing one answer

34. Misters can be solar powered and set to activate when the outside temperature is over 100 degrees. If you expect to get people out of their air conditioned cars, you have to provide shade and misters. People will not wait in 110-degree heat without cooling of some kind, especially in dress clothes for work.
35. Orbit is my regular bus line. I would probably use it more often if there were more protection from the sun.
36. Add screens with current location data of the buses on that route.
37. It would be nice if more bus stops had shade. Maybe could incorporate other cooling techniques--like green walls and misters.
38. I think transit shelters should be an enclosed space for ticket holders. Such as ones for the new trolley system. There should be scanners that open once a valid ticket is scanned to make use of and waiting for the transit safer. I would use the transit system more often if they were free of loitering people.
39. It would be nice if each shelter were also aesthetically pleasing to enhance the appearance of our city. I would suggest giving each shelter a unique feature.
40. Shelters with solar panels for shade and to power the lights. Real time Gps updates of that particular bus' current arrival time at each stop (that would be so cool!) and also great for people who don't have smartphones with App access. Drinking fountains at some might be worth considering.
41. This seems like a huge waste of time and money. There isn't anything wrong with the existing design of transit stops in Tempe, there are simply not enough of them that are sheltered and provide seating, which are the two most essential things. And even if they did have seating and shade, none of the streets you need to walk on to get to the bus stop are shaded. That is one of the real obstacles to people using transit... not the fact that we do not have iconic bus shelters. Why doesn't the city spend taxpayer dollars on things that might actually make people ride transit more. More bus service, better routes, new Orbit buses, street shading, and seat + shade at bus stops that don't already have it.
42. A lot of them don't have enough shade and that can be lethal here. Also I want solar panels as shade if possible. And I am ashamed whenever I see something that looks like an anti-homeless measure, like benches with obnoxious dividers. The art at some stops is very nice, and makes the city seem more welcoming though.
43. Shelter from the elements, particularly the sun, is the most important, and while I appreciate the desire of having a "standard" transit shelter, I also think that it's important to have custom/unique elements as part of each structure - based on the nature, history or story of a particular area. This can be done through the design of the shelter itself, or by incorporating some form of Public Art to accomplish this.... It's another opportunity to keep the story of our community alive - for residents and visitors alike.
44. Can we just stop with the "art" requirement for anything new that is built? Tempe is sending a fortune on ugly garbage a toddler could make for free.
45. shade and water for everyday use; sustainability for our future - but need more PR on how Tempe builds sustainability e.g. solar panels - can they be installed on shade covers; can water fountains be installed in shade?,
46. Given the climate and heat, shade s/b a component of ADA. I chose ADA as first priority if I could choose two top, shade and ADA would be it. Art is important to character areas if the city, much time was spent on character areas - use that in guidance for art and make stops distinct. Incorporate water fountains and/or misting systems into shelters. With the climate we have, if you want to increase use, must cool down and offer relief to riders. Climate, Temperature, ADA, safety, clean with distinctive art that IDs character areas with route or street or stop.
47. Sustainable materials are nice, but I'm more interested in using renewable energy to power the lights, fans, or electric elements in a shelter. Please have a solar component to this design.

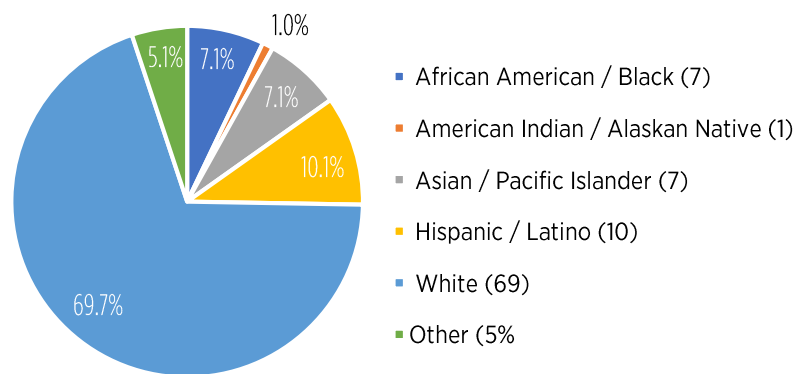


48. Made with recycled materials with the thought that they can be cleaned easily. Really homeless people sleep all over the benches and there aren't room for real people whom ride.
49. Consider the Ike's system (like Mill Ave District) at transit shelters. Provide live information on routes and other important message the City wants to convey
50. Maximize shade. And if utilities/energy/use of station allowed, a button push operated cooling station like the light rail stop in Downtown Phoenix in high traffic stops. If I could be a little more comfortable as I waited, I would use the bus more often.
51. The 'check all that apply' question is not set up to accept more than one check mark. I stopped taking the McClintock Dr. bus to down-town Tempe when the route was changed which meant I would have to transfer to arrive at my destination.
52. When I have out of town guests, they would likely use the bus. I would like for this to be an easy, clean, safe system.
53. I would like to ride the bus. Too far to walk to the bus line. I would like the Orbit to go down McKemy St. I would ride it a least 7 or 8 times a week. I am elderly and do not drive. I have to depend on Neighbor helping Neighbor or friends for rides.

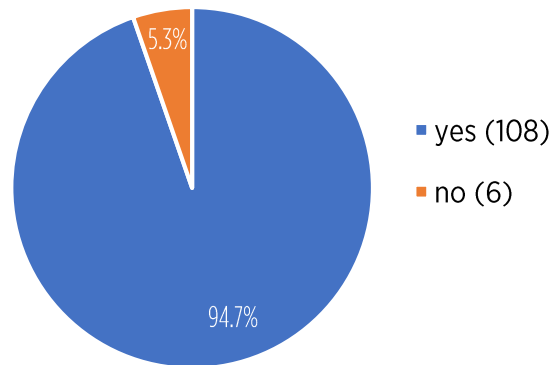
Emailed in separate from survey:

"I know I missed the dates to attend the public meetings about the design for the transit shelters, but may I say a couple of things here? 1. We live in Arizona, where it gets VERY hot, which isn't news to you! But the people who have to wait for a bus or train have to be out IN that heat, waiting for their transportation. Why can't you make them a cool place? My idea is to have a solar panel on the roof that operates a fan so at least they are getting a breeze - even if it's hot air - it's still air movement. 2. It would be nice and SAFE if a low-light came on when movement is detected when someone enters the shelter area. I am a single woman and safety is paramount! 3. As for materials, instead of using materials that are hot (metal, concrete) please help the planet and use recycled materials such as milk cartons (I've seen park benches in my home city of Portland, OR made from them!). 4. And finally, have LOTS of places to sit. No one likes to stand with small children, groceries, etc. and wait! Thank you so much!!!"

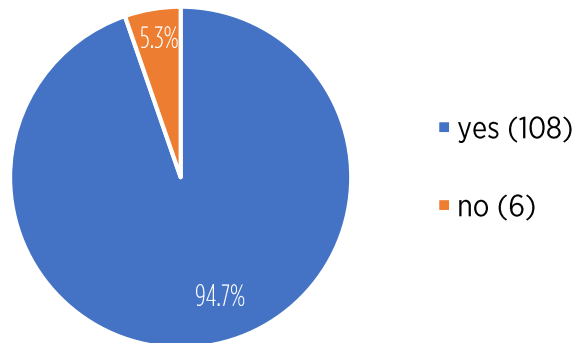
### Question 11: Race/ethnicity (103 responses)



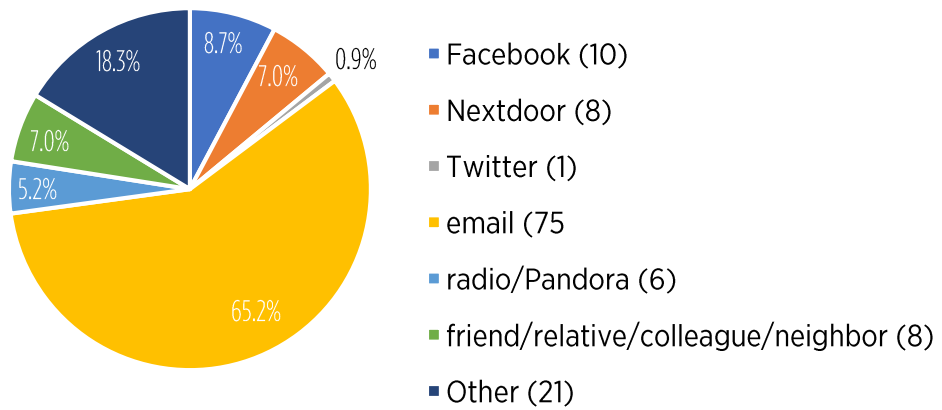
**Question 12: Do you own a smart phone? (114 responses)**



**Question 13: Do you have access to the internet at home? (114 responses)**



**Question 14: How did you find out about this project? (129 responses)**



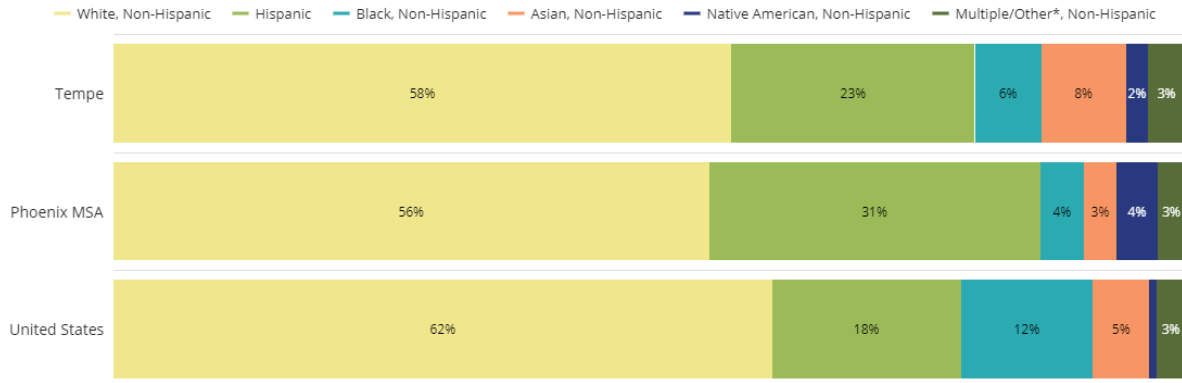
Other: surveyor /at bus stop (10), sign on bus (2), presentation at Disability Committee, mail, random search, 311, on Forum for another survey, tv, website

## IV. Demographic Information

Since Tempe has bus routes throughout the entire city, the project area is the city limits.

### Race and Ethnicity

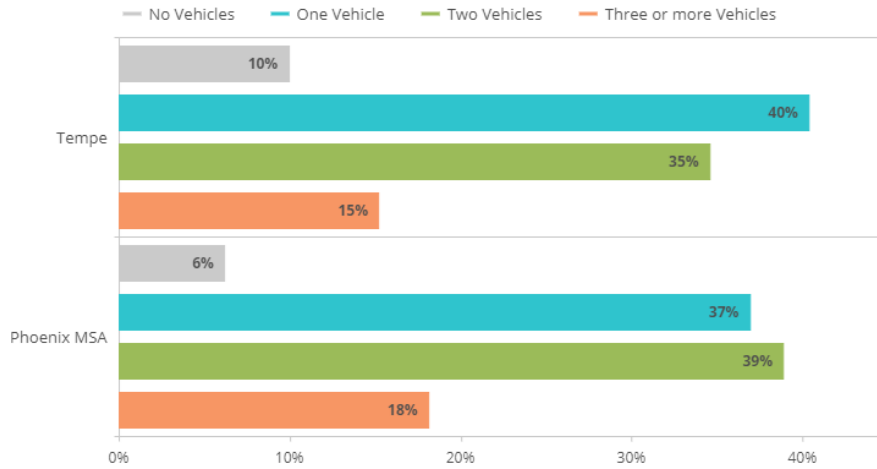
In Tempe, 42% of the population are part of a minority race or ethnic group.  
The largest percent of the population is **White (58%)**.



### Transportation in Tempe

#### Vehicles Available

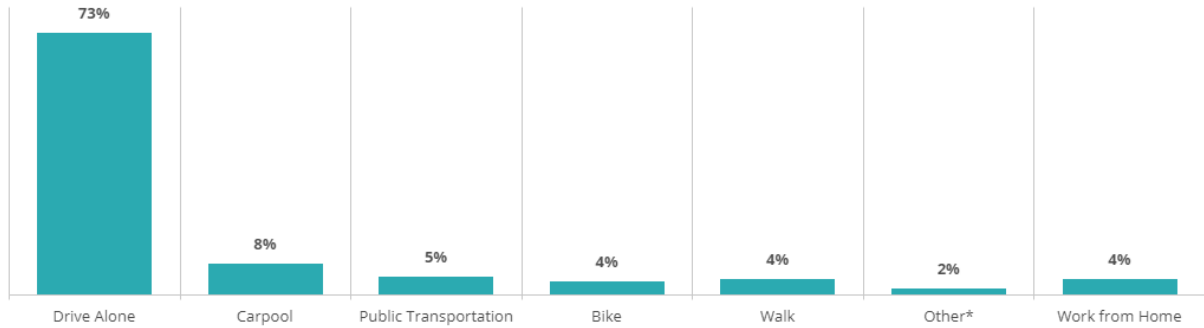
Universe: Total Occupied Housing Units





## Means of Transportation to Work

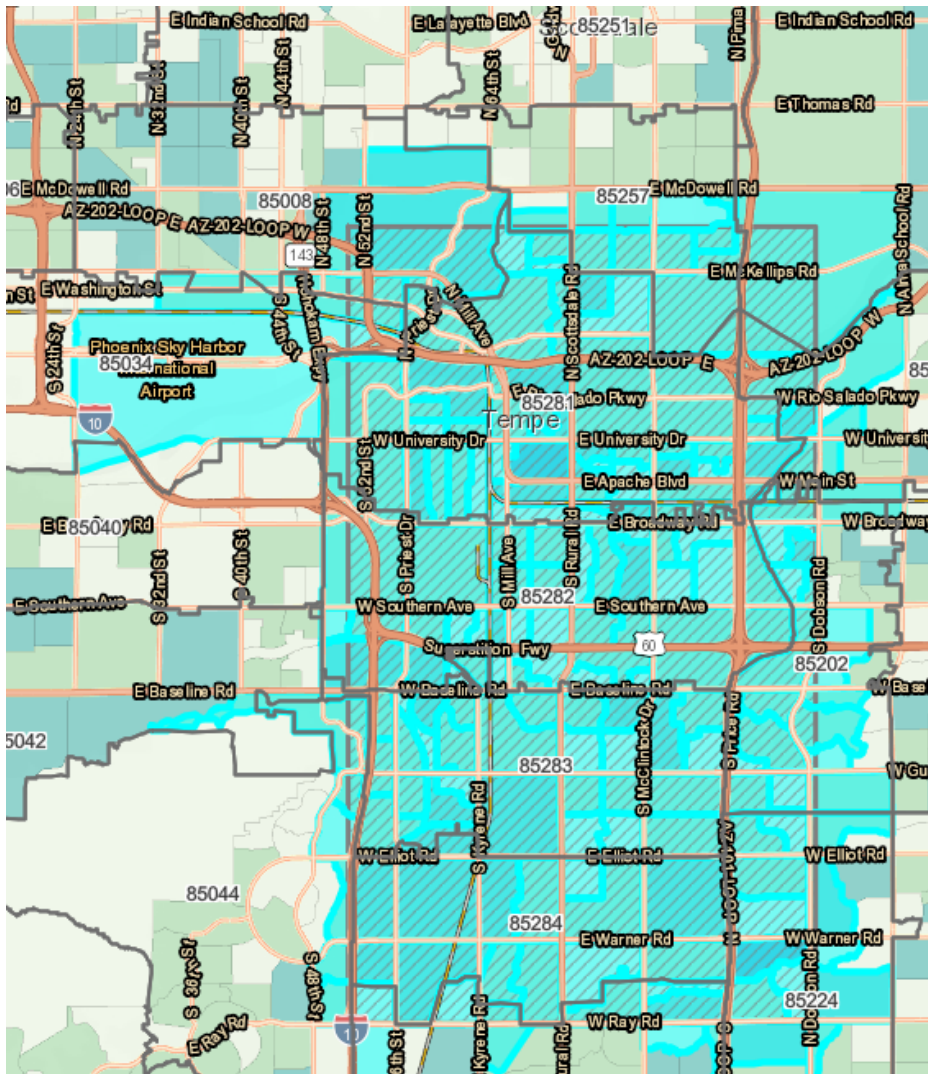
Universe: Total Workers, Age 16+



\*Other\* includes Taxicab and Motorcycle

Source: U.S. Census Bureau, 2017 American Community Survey (ACS) 5-Year Estimates

The data that follows is based on census tract data that includes the area in turquoise below.



Selected Block Groups ACS 2012-2016 ACS 5-Year Estimates

Topic	Estimate	Percent
<b>Total Population</b>		<b>45,191</b>
<b>Race and Ethnicity</b>		
Hispanic	9,169	20.3%
<b>Non-Hispanic</b>		
White, Non-Hispanic	27,256	60.3%
Black, Non-Hispanic	3,189	7.1%
Native American, Non-Hispanic	1,127	2.5%
Asian, Non-Hispanic	2,602	5.8%
Pacific Islander, Non-Hispanic	451	1.0%
Other, Non-Hispanic	22	0.0%
Two or More, Non-Hispanic	1,375	3.0%
Minority (1)	17,935	39.7%
<b>Ability to Speak English</b>		
<b>Population 5 years and over</b>	<b>42,869</b>	<b>-</b>
Speak Only English	33,072	77.1%
Speak Other Languages	9,797	22.9%
Speak English "very well"	7,198	-
Persons with Limited English Proficiency (LEP)	2,599	-
Speak English "well"	1,716	-
Speak English "not well"	725	-
Speak English "not at all"	158	-
<b>Households</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Family Households (Families)	8,430	46.8%
Married-couple family	4,997	-
Female householder, no husband present	2,138	-
with own children under 18 years	906	-
Nonfamily Households	9,591	53.2%
Householder living alone	5,919	-
<b>Household Income (in 2016 inflation-adjusted dollars)</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Less than \$10,000	2,041	11.3%
\$10,000 to \$14,999	1,104	6.1%
\$15,000 to \$24,999	1,990	11.0%
\$25,000 to \$34,999	1,811	10.0%
\$35,000 to 49,999	2,701	15.0%
\$50,000 to \$74,999	2,851	15.8%
\$75,000 to \$99,999	2,652	14.7%
\$100,000 to \$149,999	1,800	10.0%
\$150,000 to \$199,999	638	3.5%
\$200,000 or more	433	2.4%
with related children under 18 years	101	-
Female householder, no husband present	671	-
with related children under 18 years	612	-
Male householder, no wife present	206	-
with related children under 18 years	145	-
<b>Commuting to Work</b>		
<b>Workers 16 years and over</b>	<b>25,946</b>	<b>-</b>
Car or Truck - drive alone	18,570	71.6%
Car or Truck - carpool	2,381	9.2%
Public Transportation	1,227	4.7%
Bicycle	1,543	5.9%
Walked	545	2.1%
Other means (taxicab, motorcycle, etc.)	619	2.4%
Work at home	1,061	4.1%
<b>Vehicles Available</b>		
<b>Occupied Housing Units</b>	<b>18,021</b>	<b>-</b>
No vehicle available	1,946	10.8%
1 vehicle available	7,362	40.9%
2 vehicles available	6,100	33.8%
3 or more vehicles available	2,613	14.5%
<b>Area</b>		
Total Area in Acres	6,816.2	-
Total Area in Square Miles	10.7	-

Source: United States Census Bureau, American Community Survey 2012-2016 5yr Estimates

Source: U.S. Census Bureau, 2012-2016 American Community Survey (ACS) 5-Year Estimates. ACS data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate is represented through the use of a margin of error (MOE). In addition to sampling variability, the ACS estimates are subject to nonsampling error. The MOE and effect of nonsampling error is not represented in these tables. Supporting documentation on subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Data and Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Methodology section. The MOE for individual data elements can be found on the American FactFinder website ([factfinder2.census.gov](http://factfinder2.census.gov)). Note: Although the ACS produces population, demographic and housing unit estimates, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. Prepared by: Maricopa Association of Governments, [www.azmag.gov](http://www.azmag.gov), (602) 254-6300



## Transit Shelter Design Project: Public Input Summary, January/February 2020

### I. Background

Tempe is working with a consultant team, guided by a Steering Committee, to develop new shelter designs that encourage increased ridership by improving the waiting environment and provide a new iconic Tempe identity for the transit system.

Currently, there are approximately 800 transit stops in Tempe; 40% have shelters. Tempe is committed to working with all stakeholders to develop a new shelter that is sustainable, comfortable, and adapts to a variety of locations.

### II. Outreach

Postcards inviting the public to attend the meetings or to comment online were mailed to 3853 households. The mailing was targeted to households surrounding bus stops with the highest ridership. Public meetings were held:

- Jan. 18, 2020 (7 attendees)
- Jan. 21, 2020 (4 attendees)

The topic was **posted online** from Jan. 18 – Feb. 18, 2020 through Tempe Forum.

An **additional meeting** was held at Broadway Apartments (February 10, 2020 – 7 attendees) since a significant number of residents with disabilities that use transit reside at the complex.

Staff surveyed transit users at bus stops on four separate days (February 11-14, 2020).

**Presentations** were also made to:

- Commission on Disability Concerns: December 2, 2019
- Sustainability Commission: January 13, 2020
- Transportation Commission: January 14, 2020
- Neighborhood Advisory Commission: February 5, 2020
- Residents of the Broadway Apartments: February 10, 2020
- Development Review Commission: February 25, 2020
- Valley Metro Accessibility Advisory Group: February 27, 2020

Below is a summary of additional **outreach tools** that were used to provide information to the public regarding the meetings, project, and opportunities for input:

#### FACEBOOK

1/3/20 – public meetings. Reach/Impressions: 1980 | Engagement: 227

1/16/20 – public meeting reminder. Reach/Impressions: 2130 | Engagement: 684

2/12/20 – online input reminder. Reach/Impressions: 1328 | Engagement: 141

## TWITTER

1/3/20 – public meetings. Reach/Impressions: 4373 | Engagement: 36

1/16/20 – public meeting reminder. Reach/Impressions: 2535 | Engagement: 97

2/12/20 – online input reminder. Reach/Impressions: 1662 | Engagement: 24

## NEXTDOOR

1/3/20 – public meetings. Reach/Impressions: 3109 | Engagement: 2

2/12/20 – online input reminder. Reach/Impressions: 2557 | Engagement: 9

## PANDORA

1/15 – 1/21/20 – public meetings. Reach/Impressions: 89,092 | Engagement: 28

1/22- 1/31/20 – online input. Reach/Impressions: 32,259 | Engagement: 15

2/1 – 2/19/20 – online input reminder. Reach/Impressions: xx | Engagement: xx

## DIGITAL DISPLAY

1/15 – 1/21/20 – public meetings. Reach/Impressions: 184,461 | Engagement: 254

1/22- 1/31/20 – online input. Reach/Impressions: 34,092 | Engagement: 53

2/1 – 2/18/20 – online input reminder. Reach/Impressions: xx | Engagement: xx

## PRESS RELEASE

1/3/20 – public meetings. 1397 emails sent | 26.1% open rate

1/24/20 – “Tempe This Week.” 3769 emails sent | 34.1% open rate

### III. Survey Results

A total of 163 unduplicated survey responses were received.

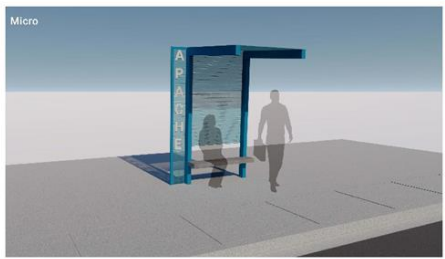
Respondents were asked to rate each concept on a scale of 1 to 10 (with one being poor design and 10 being an excellent design). The following are the average scores.



**Concept A**  
**Score: 7.33**



**Concept B**  
**Score: 7.03**



**Concept C**  
**Score: 4.94**



Respondents were then asked to comment on what he or she would change relative to each concept to make it score higher. Comments below.

## Concept A: 80 responses

Seven respondents replied “nothing”

Twenty comments were related to shade:

1. Make sure that it is shaded at all times of day/year.
2. put a side shade overhang on micro and compact
3. More overhead shelter from the sun and would have shade available during the day. Drinking fountains.
4. more shade
5. More shade from the front
6. Shade from both directions as sun crosses sky.
7. I would include some type of screen/shade wall on a portion of the front facing the street.
8. If I knew that the second roof angle would be adjusted to maximize the amount of shade, then I would give A the highest rating.
9. Better shade coverage
10. Does not seem to be enough shade. The colors scheme is bad -- maroon and yellow... seems like someone was trying too hard to make ASU feel important. The green wall elements in the larger two versions are nice.
11. Make sure that the design delivers maximum shade and safety. Color is important too.
12. I would like concept A to have a bit more shade for the micro transit shelter
13. Very pretty but no functionality. Shade needs to work for low sun times especially pm west-facing, am. east-facing. Curve the roof or extend it.
14. even the largest bus stop leaves passengers exposed to the sun, especially at south facing locations. at least partial shade should be used to help provide relief and protection from the sun. this design seems to have the fewest seats and a moderate amount of shade.
15. Love the extra shade panel. Two bottom pictures. The more shade the better.
16. add shade panels where needed to provide east/west shade
17. add shade panels where needed to provide east/west shade
18. Maximize the shade, tiltable shade screens on all. Love the greenery on the side for shade
19. more shade
20. Looks like it provide the most shade with seats facing towards street. Plants seem impractical and the large seems a little visually busy.
21. More shade. Does not need the fancy design on sidewalk to save money. It'll just get very dirty and require more upkeep

Nine comments were related to the color

1. Change the color scheme and make it less bulky.
2. Probably the color scheme. It reminds me of ASU and I think the city of Tempe should set itself apart
3. Probably the color scheme. It reminds me of ASU and I think the city of Tempe should set itself apart
4. change the color scheme to something more similar to Concept B
5. Prefer a cool color scheme
6. I would use the color scheme in Concept C, Perhaps add climbing vines to the back and top to increase light / heat protection (depending on watering needs) , Add water fountains

7. Make the color all teal!!! Like the concept though
8. I like the pop of yellow color, the prominent signage (where you are) the roofs
9. Looks retro 80's. Would either take some of the angles out or make the color scheme more modern.

Seven comments were related to seating:

1. Remove the seat dividers.
2. Have to make sure homeless cannot sleep on benches.
3. add more seating, water fountain
4. To me, A is the prettiest, but looks quite comfortable to lay down and sleep in.
5. more seats
6. more seats
7. seats instead of stool

Remaining comments:

1. too busy looking
2. Cool shade, trash bin, security bike storage, rest rooms, pet friendly water fountain.
3. In these examples, I don't like the asymmetrical design. They don't provide enough protection from the elements.
4. this is the best choice
5. It looks like it will become dated, although the slanted top allows for heat escape.
6. Not sure
7. It is highest
8. Too extravagant a design. No need to waste money.
9. Adding in some art-like design elements. Overall I like this design best though.
10. Get rid of all plants. Extra work to maintain. Larger coverings for sun/rain protection. Regular size design is preferred.
11. If vines actually did grow on one of the sides (and it's not clear to me how they would; since that would require water to the stops) they would obscure the view in one direction. I think just a screen would make it better. You want to be able to see the bus, traffic, and people coming while still having shade. I would also remove the dividers in the seating areas on the Regular & Large versions.
12. Remove the foliage as it will require water to maintain its appearance. Given that water is such an issue of concern in Arizona, I don't think transit stops should require water to maintain foliage for aesthetic purposes. It looks nice, but it's too much maintenance.
13. I think every shelter, whether micro or large, should include a trash can.
14. Simplify or eliminate the green wall.
15. I don't understand at all what the thing hanging in the air is for the Regular and Large shelters. It appears that a plant is located at the side of the regular and large shelters, which I think adds unnecessarily to the cost of the shelter without adding much value.
16. Lights, more renewable energy
17. I like this concept the best for its simplicity and architectural design. Expands nicely while maintaining the same configuration and adds sunshield.
18. I don't like the solid screening on the side or the posts going through the roof line.
19. Bike rack at all. Trash can at all. East AND west shading on all.
20. Eliminate the right side vine as it is another thing for landscape to need to take care of and it is a potential blind area for people sitting and waiting -

- potential safety issue. It could be replaced with a shade screen if that was the purpose of the vine.
21. Extra angled panel for micro and compact
  22. the roof protrusions are a bit much. I like this but it's rather busy. If that is steel, the sidewalk will get all rusty like on Hardy Dr.
  23. As many plants as possible & drinking fountains and solar for lighting
  24. Panels on the sides with vines or art. This would give you more shelter from sun and wind.
  25. Well personally I'd say to NOT make them any larger than to enclose 3 to 5 people (in Tempe) but that's only my input
  26. visually impaired person
  27. I'd add more art components to all examples of them
  28. bike station needs to be more secure if done correctly bikes will not be able to be stolen when left buy only removing to or one bolts with a wrench need to be safety bolts like on the post office boxes
  29. make it look better for cooling options
  30. I would add a wall or barrier in the other direction to allow for variations in the wind. This is my favorite of the 3 and I am a regular bus rider with a lot of complaints, especially about the stop I use at Broadway and Country Club Way.
  31. Looks expensive. Shelter may prevent bus drivers visibility to see passengers at night
  32. Maybe do solar on too
  33. I like the sizing of it
  34. I would change the railings
  35. I would put lights along the pillars or roof
  36. I would put lights along the pillars or roof

## Concept B: 80 responses

Six respondents replied "nothing" /no change/not sure:

1. It's already a 10.
2. It's good. I liked A better due to the angled roof, so it may provide more shade area
3. Not sure
4. Nothing -2
5. it looks awesome

Twenty-one comments were related to shade:

1. Make sure that it is shaded at all times of day/year.
2. More shade coverage and drinking fountains. Assume these all have garbage containers?
3. Cool shade, trash bin, security bike storage, rest rooms, pet friendly water fountain..
4. put a side shade on micro and some greenery like in A
5. side shading on the micro shelter
6. Include a real-time transit signage/ screen to publicize the wait time. This can be done by using vehicle location data (similar to what Uber and Lyft uses). Also, include some desert trees like Palo Verde to help with the shade and highlight our unique desert plants
7. Shade from both directions as sun crosses sky.
8. From the concept drawing it doesn't look like the Micro and Compact versions would actually provide much shade with the roof angled up, unless the angles are site-specific. Not sure what kind of revision could fix that though.

9. More shading for when the sun is pointing at the person sitting in the shelter.
10. The two small ones don't really seem like they would provide that much shade during the summer... I like how seating faces multiple ways so you can probably sit in shade at any time of day. But visibility by bus drivers might be an issue? The color could be better. Maybe a nice blue.
11. Concept B needs better signage and more shade. Functionality. This shade roof works great for 12:00 noon on June 21 only. Add a solar-powered fan and curve the roof down on all sides except north.
12. I think concept B has the best combination providing full shade and a significant amount of space for sitting. the compact's L shape gives this design an advantage in shade over the others. the regular and the large are the only bus stop designs that provide full shade during all times and at all locations.
13. Clean-looking- needs shaded side panels. Make sure the seating is not hot. The lighting is awesome- and solar- yes! Love the (\_\_\_?\_\_\_) look.
14. Side shading on the smaller structures
15. Panels on both sides would give more protection from sun and wind- rain. Concrete might be cold in winter
16. Tiltable shade screens- boring
17. more shade, make bigger
18. More shade. Does not need the fancy design on sidewalk to save money. It'll just get very dirty and require more upkeep.
19. shade both directions
20. has more shade in summer (2)

Six comments were related to seating:

1. Have to make sure homeless cannot sleep on benches.
2. Individual seating instead of flat bench. Make roof lines more funky and modern
3. The seat surfaces look very thick. Without knowing what the materials are, I would guess that those thick seat slabs will store heat and stay warm/hot long after the sun has moved off of them
4. To me, B still allows for complete recline sleeping, but it additionally has more escape routes if transit shelter visitors become menacing.
5. more seats (2)

Five comments were related to color:

1. Make it in different blue tones like Concept C. Tempe Town Lake is surrounded by buildings that are blue in tone to reflect the lake. Tempe should run with that idea and incorporate the same color motif in the rest of the city designs.
2. change color to cooler green or blue, add water fountain
3. Make the color all teal!!! Like the concept though.
4. Alter so none of the seats are facing away from street on large shelters. Really enjoy color scheme. Simple and sleek
5. Maybe make it more natural in color to native flora and minerals. I.e. agave green instead of teal. Copper or stone colors instead of the pink and bare concrete.

Remaining comments:

1. I like the clean lines
2. I think the regular and large give the most protection from heat, cold and rain the others don't provide. I like it.
3. Add potential for greenery on side.
4. The enclosed design. Those get hot in summer and vandalized and
5. More style
6. Looks very functional, but a bit boring when compared to A.

7. Add live greenery, like Concept A has. Also, replace the poles with something more visually appealing.
8. I like it. Simple, easily built, and expandable.
9. Incorporate native plants somehow
10. I don't like that the top overhangs the sides, and I just think the design is more basic than concept A.
11. "For regular size design change from concrete seating to metal mesh (Thermoplastic coated)
12. Attach 2ft metal mesh hanging down from all edges of roof. (extra protection from sun)
13. Other size designs are either too small or too large."
14. For the micro stop, have a side bar/wall
15. I like Concept B the most out of the three. I am from Chicago and used public transit to get around almost everywhere. The focus in Chicago was more on shelters providing warmth during the frigid winter months. Here in Tempe, the focus needs to be on shelter from the extreme heat of the summer months and this concept seems to provide the best shade of the three designs. I like the trash cans off to the side and agree with another commenter that a water fountain, if possible, would be a very welcome addition to refill your water bottle while waiting for a bus.
16. Some greenery would make it more inviting.
17. The visibility of the bus by the rider is impeded by the structure. It needs to have the screen removed or raised to allow unimpeded visibility. I also don't like the way the riders are somewhat hidden inside of the screened in structures.
18. I really like the screen with the plants growing on it in Concept A. I would like Concept B more if it had a plant wall.
19. More plants, more renewable energy
20. It seems to be boxy and straight.
21. Side panel to micro
22. This one is easy to expand however the larger version seems entrapping. I could imagine someone in a corner being panhandled and feeling compelled to give.
23. Side walls to block wind
24. Needs more interest in all aspects.
25. Break up the feeling that you're sitting in a box.
26. Bike rack at all. Trash can at all. East AND west shading on all. Live plants.
27. Make the signage larger like Concept A. I like the openness of the design with the middle area. Add a shade screen for the West side sun.
28. Interchangeable perforated screen designs.
29. Too low to the ground. Paper and trash would collect under elevated concrete. Looks good, but looks costly. Needs side shade on micro.
30. Functional but (??) at boxing. Doesn't have the site /depth for signage.
31. fans, bollards to protect riders from car crashes
32. I would make them all totally enclosed for security purposes.
33. protect riders with bollards. fans
34. This design looks less disabled friendly to me
35. visually impaired person
36. I would add a live plant feature to Concept B.
37. They look plain on contrast with concept A
38. bike station needs to be more secure same as above comment
39. It is actually pretty good and way better than the stop I use which has no shelter period. I would just make sure that there was ample protection from extreme weather.
40. this shelter clusters body stench in the summer can be very unappealing
41. Be more eco friendly with plants.
42. I like how there's more space if there's multiple people
43. it doesn't strike my interest

## Concept C: 78 responses

Twenty-three comments related to shade:

1. side shades on all and some more design, seems very plain
2. Cool shade, trash bin, security bike storage, rest rooms, pet friendly water fountain.
3. more shade (3)
4. Add live greenery, like Concept A has. Add more awnings or roof cover for better sun and rain protection.
5. Too bare bones. Does not provide enough shade.
6. More shade, incorporate native plants
7. Larger roof coverings for sun/rain protection for the regular design. Larger size design is not needed. Micro & Compact sizes are too small.
8. Add another shade wall or two to the sides. I actually like this best visibility-wise, but not shade wise.
9. Bike rack at all. Trash can at all. East AND west shading on all. More seating. Live plants.
10. Curve the roof down for shade or lower it for better coverage. A new roof design could maximize shade potential (extend or widen it)
11. concept C provides the least protection and the roof should be solid to protect passengers from rain. it's too easy for the sun to penetrate this bus stop and at best can only provide partial shade at any point in the day. while the large ranks highest in the amount of seating, the amount of shade is a disqualifying factor.
12. Side shade with angled side panel.
13. Doesn't offer enough shade which is why we are putting up transit shelters, right? Love the color. Needs more bench seating.
14. Side shading, more overhead shading, more use of color
15. Tiltable shade screens, maximize shade
16. I would make the shade more substantial, the feeling more cozy, the design more interesting.
17. More shade. Does not need the fancy design on sidewalk to save money. It'll just get very dirty and require more upkeep.
18. lots of shade
19. too much sun
20. more sunblocking walls

Ten comments related to color:

1. I don't like the double sided screens. I love how light weight it looks and the colors used.
2. color, paving, and layout of the large shelter to look more like A or B
3. Maybe the colors. I like it as well, but the lines of concept A I like better.
4. I don't like the color scheme, I think it looks too simple and outdated in style.
5. This minimalist approach does not seem to fit with other infrastructures in Tempe. The color is too bold and so are the letters.
6. I don't like the split up sections of Concept C. Especially the split roof.
7. It would be better if you added a side wall with plants growing on it, like in Concept A. I do like the blue color.
8. The color seems a little too industrial.
9. I would give it a 10 plus if you guys use either A or B w/ all the teal.
10. Color options and public art additions

Five comments related to seating:

1. More seating. More overhead shade
2. Add more seating area

3. Alter so none of the seats are facing away from buses on large shelters. Add visual flair. Feels like the budget option.
4. More seats (2)
5. Limited visibility from bus driver. Metal Bars can create uncomfortable seating. Attracts the homeless

Remaining comments:

1. I don't think the interior of the bus stop should be hidden or covered from street view.
2. I don't care for this one
3. Start over, really don't like the simplicity, blah nothingness.
4. Not sure. It looks a bit skeleton
5. It's too open.
6. Change the whole look.
7. style, creativity
8. Not attractive.
9. More style
10. Just too boring - Tempe is a fun city ;)
11. Side bars/walls, not a fan of the metal mesh
12. It's not very attractive. If it was redesigned to something more like Concept B, it would look much nicer.
13. Add more art
14. Similar to Concept B, I don't like having the screens street side. I feel that it could make it less safe for a rider as the visibility of passing cars is impeded by the screens.
15. Same as B
16. Shelter looks flimsy.
17. More plants, more renewable energy
18. Side panels
19. I like the openness and low mass of C. I would not change it.
20. This one does the job with simplicity but is rather stark.
21. Side wind block
22. The large two versions seem to have a much larger footprint than the two large versions of the other designs. The new bus stations shouldn't stand out too much... only enough that people see that its a bus station and that its well designed.
23. I don't understand the roof, but I'm not an engineer. It does, however, look like it's got the best way for riders to be most separated from transit shelter residents.
24. Only total redesign would improve this barebones approach.
25. Make it Concept A
26. very simple, which is ok but would be hot sitting on one side or the other with it split, signage could be better.
27. Concept C needs more vegetation
28. More interesting screens, less blocky.
29. The top two are ok, the bottom two not so much.
30. Not very nice looking. Needs more side protection from sun, rain, wind
31. the lower right bus stop is far too long and the top two are pretty much the right size
32. Looks confusing and not disabled person friendly
33. put a trash can near it
34. Looks like a cage. Not sure it can be fixed.
35. i like this one it seems the bikes can be hooked up more to shelter than off to the side.
36. I don't really care for the open air concept, but it is spacious for an area where there are a lot of people who also use bikes or have wheelchairs.
37. Have more plants.
38. remove all the extra spaces

39. it's very familiar
40. I would change the walls

**2. Please share any comments you have related to the design of Tempe's transit shelters.**

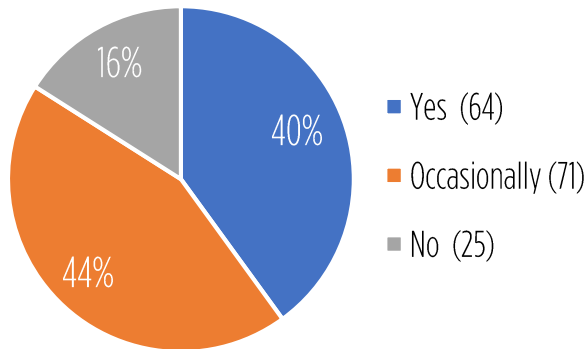
1. I really like concept A. It looks like they have like greenery on 2 versions for shade. Without the seat dividers this would be my first choice.
2. Water fountains, natural shade (greenery), bike racks and garbage cans would be great
3. It would be nice to have digital reader boards that will give you the time of the next bus.
4. Cool shade, trash bin, security bike storage, rest rooms, pet friendly water fountain.
5. Make sure they provide shade from the sun and are well lit at night. Put trash cans at every stop.
6. The integration of vegetation looks nice
7. Whichever concept you choose, I think it is important to incorporate a real-time transit data system. The biggest hurdle to get people to take public transit is the convenience factor and real-time transit data can combat this challenge. Riders will know in real time when the Orbit will pass and they can make plans to leave home/work at a specific time and not have to wait not knowing when the shuttle will pass by.
8. I have clients that use transit daily. I am concerned for their safety and exposure to weather.
9. Will they have lighting? If so, solar powered?
10. Good idea - we need shading; add water fountain
11. They are needed
12. Chance to have style in public makes @A
13. The more steel the better it will look.
14. Good job providing 3 viable candidates for us to consider.
15. The regular size designs are more appropriate. No concrete benches to with metal mesh covered with thermoplastic. No plants, (too much upkeep to make them practical).
16. Great work, love the signage additions.
17. I like the idea of the stops being labeled, but they should be labeled with the cross streets, not (presumably) the main street of the route. Also it would be helpful as a rider to be able to see those as you are coming down the street on the bus so you can tell if it's your stop or not ahead of time. The label designs included all seem to mostly be visible once you are already at the stop. If water is going to be at the stops, drinking fountains should be included too. Plus trash cans.
18. It should be aesthetically pleasing but practical in providing necessary shade. I feel that Concept B provides both far better than the other two concepts.
19. I feel that the shelters should have open visibility to the cars passing by to make them safer for the riders. I felt that Concept A really nailed the combination of shade and rider safety.
20. Individual seating is better than flat benches as it will help from people camping out and sleeping across the bench. Keep the walls as open and transparent as possible for riders safety. A fresh modern design with some roof elements are nice.
21. They should be functional, but don't overspend to make something too elaborate.



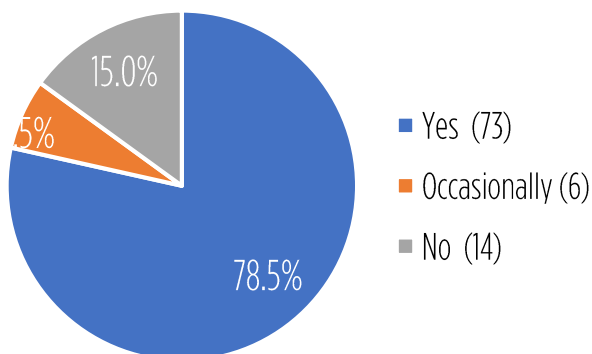
22. I used to be a daily transit rider when working in downtown Phoenix. I found that the transit shelters at park-and-rides were not large enough to afford protection during popular/busy commute times.
23. I attended the meeting at the Pyle Center on Jan. 21. Didn't want to comment online. Hope this gets to you. It's a good endeavor. I'm sure appreciated by riders. Also like cool aspect of under seat lighting.
24. I like the green plants on A
25. Generally, these are all pretty bad. They could be really innovative... but these are just blah. Incorporate some green features. solar panels for nighttime lights, and plenty of shade no matter where the sun is located or the time of year. And make sure the seats don't get so hot you can't even sit on them.... Yes, I've been burned before by the seats at a bus stop. And all stops do need seats. I'd love to see part of the new "design" of its bus shelters include actual trees... which provide shade and look nice... A lot of existing bus shelters would be perfectly OK if only for more shade... perhaps from some trees.
26. I really haven't ridden the bus since before I had a driver's license, except when visiting other cities by plane, at which time my primary concerns at a bus stop are safety from other riders and/or people living in the transit shelter, having a sheltered place to wait with some separation from cigarette smoke, clear information about using the transit system, and cleanliness of the shelter. I'm guessing very little of that has to do with the shelter other than not designing shelters that allow for full-grown men to recline completely on a length of bench. Living in Tempe, I want for shelters to be safe and comfortable for riders who respect the property and dispose of their trash in the receptacles provided.
27. It does not appear to provide very much shade.
28. Shade please
29. Shade, Windbreak, Place to sit, Rain shelter, Visible from blocks away, lighting at night. Would be my priorities.
30. Placement should be such that the shelters truly provide shelter to the hot afternoon and evening sun.
31. They appear to favor art/appearance over comfort. The shade is totally inadequate. Some stops would be well-served by planting a nice shade TREE on two on the side. (lots more shade)
32. I would like the bus stop to have blue lights to provide a calm and inviting atmosphere and to act as traffic calming in the area. colors that match the Orbits and the city logo and that highlight bus stop locations in the area. a way to easily identify a bus stop on the street from a regular light.
33. Concept A has interesting active angles creating a more distinctive and dynamic design. Good placement and lettering for street names.
34. I like concepts A & B but I like all the teal coloring.
35. C: I like the simplicity, but this is too spare. B: I love the mid-century style- reflects Tempe well- the night lighting is great! A: Great angles and shading. CHOOSE B!
36. I like A best
37. Well when I use the bus the ones in Tempe are just right (the way they are!) (P.S. but the buses could come faster! And I doubt you can do much about that!)
38. Visually impaired person, Things are ok as is.
39. Tempe is setting the way in introducing their own bus stops. This will show other cities in the region how way finding and infrastructure can unite and give individuality to each city. Hopefully, other cities will follow Tempe's example into tackling infrastructure and public transit and bring it to more aesthetic ways
40. Great project, shade is desperately needed!
41. The design looks modern and nice.

- 42. Hopefully the existing shelters will be kept to save money. I love the copper roofs and need to be kept. They can be painted to match the new shelters.
- 43. as Tempe grows you need to keep people with bikes in mind we are one of the biggest biking communities in the valley and I would love to see more secure options for bikes
- 44. I love option B
- 45. I think the City of Tempe should add commuter crosswalks that can be activated with a button so I don't have to jaywalk with the rest of the people who get off at the stop at Broadway and Country Club Way. Another bad spot is on Rural if I want to go to Fry's. I am in my 60's and I don't like to go out of my way to walk to the crosswalk at Southern. Put in crosswalks so I can get home using the bus stop that makes sense without risking my life.
- 46. No metal seats. Get seats that won't heat up please in the summer. Also water fountains at every transit shelter that work would be beautiful please
- 47. in the afternoon the sun is often blinding and uncomfortable

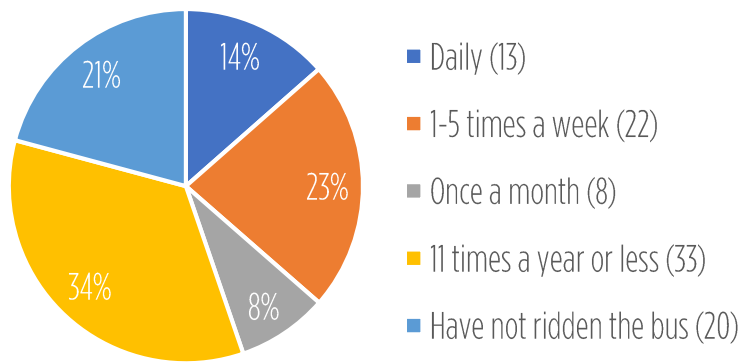
**3. Are you a transit rider? (105 responses)**



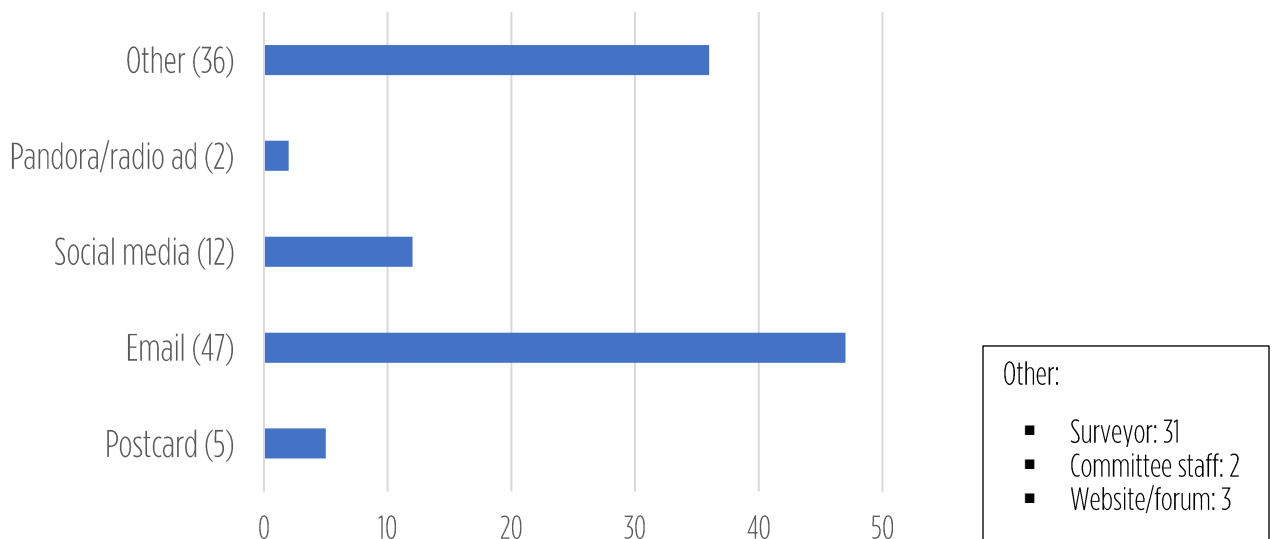
**4. Do you own or have access to a vehicle? (93 responses)**



### 5. How often do you ride the bus? (96 responses)

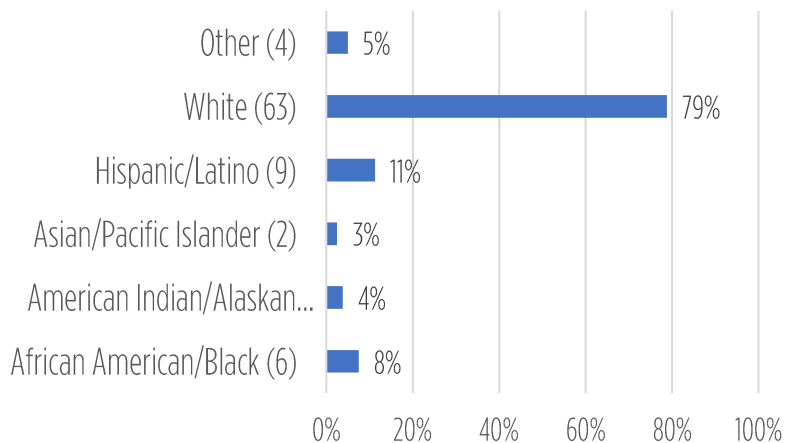


### 6. How did you find out about the transit shelter design project? (103 responses)



## IV. Demographic Information

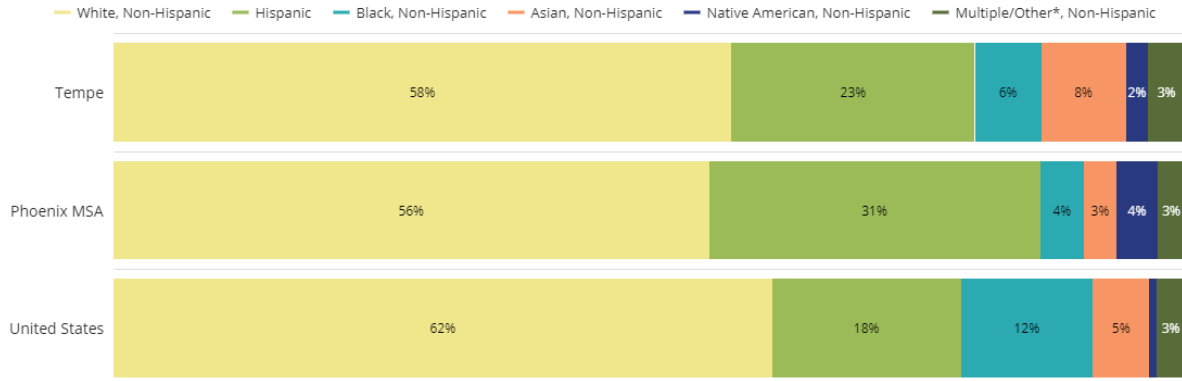
Respondents were asked to choose all that apply (87 responses; some checked more than one)



Since Tempe has bus routes throughout the entire city, the project area is the city limits.

## Race and Ethnicity

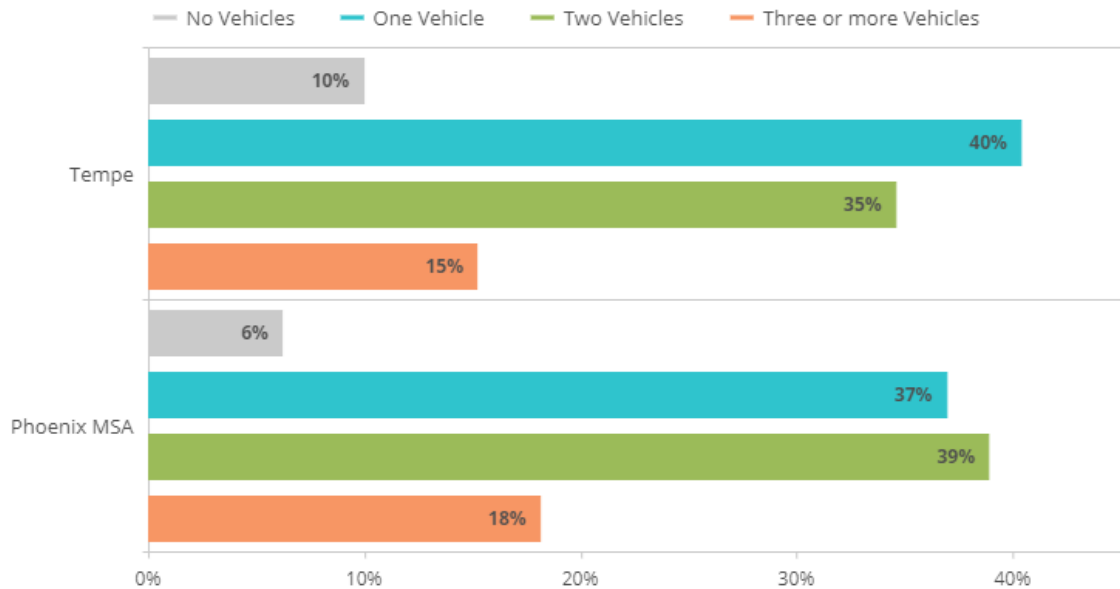
In Tempe, 42% of the population are part of a minority race or ethnic group.  
The largest percent of the population is **White (58%)**.



## Transportation in Tempe

### Vehicles Available

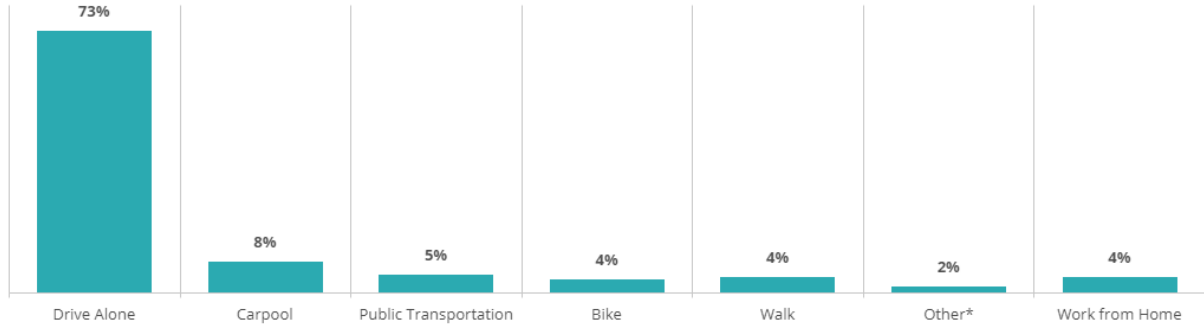
Universe: Total Occupied Housing Units





## Means of Transportation to Work

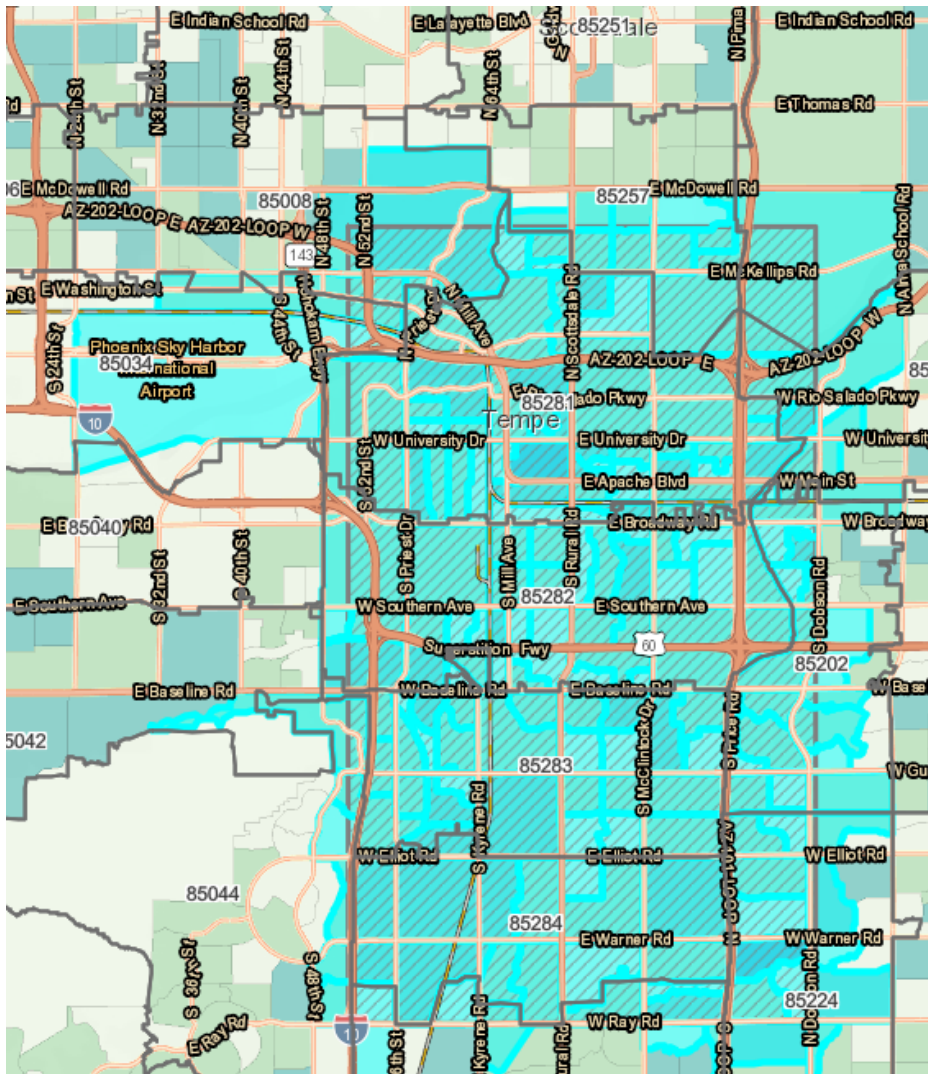
Universe: Total Workers, Age 16+



\*Other\* includes Taxicab and Motorcycle

Source: U.S. Census Bureau, 2017 American Community Survey (ACS) 5-Year Estimates

The data that follows is based on census tract data that includes the area in turquoise below.



Selected Block Groups ACS 2012-2016 ACS 5-Year Estimates

Topic	Estimate	Percent
<b>Total Population</b>		<b>45,191</b>
<b>Race and Ethnicity</b>		
Hispanic	9,169	20.3%
<b>Non-Hispanic</b>		
White, Non-Hispanic	27,256	60.3%
Black, Non-Hispanic	3,189	7.1%
Native American, Non-Hispanic	1,127	2.5%
Asian, Non-Hispanic	2,602	5.8%
Pacific Islander, Non-Hispanic	451	1.0%
Other, Non-Hispanic	22	0.0%
Two or More, Non-Hispanic	1,375	3.0%
Minority (1)	17,935	39.7%
<b>Ability to Speak English</b>		
<b>Population 5 years and over</b>	<b>42,869</b>	<b>-</b>
Speak Only English	33,072	77.1%
Speak Other Languages	9,797	22.9%
Speak English "very well"	7,198	-
Persons with Limited English Proficiency (LEP)	2,599	-
Speak English "well"	1,716	-
Speak English "not well"	725	-
Speak English "not at all"	158	-
<b>Households</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Family Households (Families)	8,430	46.8%
Married-couple family	4,997	-
Female Householder, no husband present	2,138	-
with own children under 18 years	906	-
Nonfamily Households	9,591	53.2%
Householder living alone	5,919	-
<b>Household Income (in 2016 inflation-adjusted dollars)</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Less than \$10,000	2,041	11.3%
\$10,000 to \$14,999	1,104	6.1%
\$15,000 to \$24,999	1,990	11.0%
\$25,000 to \$34,999	1,811	10.0%
\$35,000 to 49,999	2,701	15.0%
\$50,000 to \$74,999	2,851	15.8%
\$75,000 to \$99,999	2,652	14.7%
\$100,000 to \$149,999	1,800	10.0%
\$150,000 to \$199,999	638	3.5%
\$200,000 or more	433	2.4%
with related children under 18 years	101	-
Female householder, no husband present	671	-
with related children under 18 years	612	-
Male householder, no wife present	206	-
with related children under 18 years	145	-
<b>Commuting to Work</b>		
<b>Workers 16 years and over</b>	<b>25,946</b>	<b>-</b>
Car or Truck - drive alone	18,570	71.6%
Car or Truck - carpool	2,381	9.2%
Public Transportation	1,227	4.7%
Bicycle	1,543	5.9%
Walked	545	2.1%
Other means (taxicab, motorcycle, etc.)	619	2.4%
Work at home	1,061	4.1%
<b>Vehicles Available</b>		
<b>Occupied Housing Units</b>	<b>18,021</b>	<b>-</b>
No vehicle available	1,946	10.8%
1 vehicle available	7,362	40.9%
2 vehicles available	6,100	33.8%
3 or more vehicles available	2,613	14.5%
<b>Area</b>		
Total Area in Acres	6,816.2	-
Total Area in Square Miles	10.7	-

Source: United States Census Bureau, American Community Survey 2012-2016 5yr Estimates

Source: U.S. Census Bureau, 2012-2016 American Community Survey (ACS) 5-Year Estimates. ACS data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate is represented through the use of a margin of error (MOE). In addition to sampling variability, the ACS estimates are subject to nonsampling error. The MOE and effect of nonsampling error is not represented in these tables. Supporting documentation on subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Data and Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Methodology section. The MOE for individual data elements can be found on the American FactFinder website ([factfinder2.census.gov](http://factfinder2.census.gov)). Note: Although the ACS produces population, demographic and housing unit estimates, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. Prepared by: Maricopa Association of Governments, [www.azmag.gov](http://www.azmag.gov), (602) 254-6300

## V. Emailed comments

Sent: January 15, 2020

We didn't talk at the transportation commission meeting and I wanted to share the e-mail I sent to Bonnie with you as well.

I was looking at the transit shelters and I have a really good feeling about concept B. It's a simple yet attractive design and looks fairly easy to maintain. It provides a lot of seating and shade and is a shelter the city could be proud of.

I read some cities have used blue lights as traffic calming and to reduce crime / vandalism. That would be an interesting way to design the shelter in a way to nudge good behavior. I like the idea of the shelter standing out and promoting a safer environment. Either way blue matches the Orbits and the city logo.

Sent: January 15, 2020

Thanks!

I love Concepts B and C.

Also, I disagree with the new commissioner's comment about using the standard bike rack design. There are plenty of nicer designs that are just as functional as the inverted U!

Great project for Tempe.



## Transit Shelter Design Project: Public Input Summary, July 2020

### I. Background

Tempe is working with a consultant team, guided by a Steering Committee, to develop new shelter designs that encourage increased ridership by improving the waiting environment and provide a new iconic Tempe identity for the transit system.

Currently, there are approximately 800 transit stops in Tempe; 40% have shelters. Tempe is committed to working with all stakeholders to develop a new shelter that is sustainable, comfortable, and adapts to a variety of locations. Prior to this round of input:

- 4 public meetings (October 2019, January 2020)
- 4 steering committee meetings
- Meeting with residents of Broadway Apartments
- 5 Pop ups to survey transit riders at bus stops
- 9 presentations to commissions

### II. Outreach

- **Postcards** inviting the public to attend the meetings or to comment online were mailed to 3853 households. The mailing was targeted to households surrounding bus stops with the highest ridership. A virtual public meeting was held on July 21, 2020.
- The topic was **posted online** from July 21 – August 4, 2020 through Tempe Forum.

Below is a summary of additional **outreach tools** that were used to provide information to the public regarding the meetings, project, and opportunities for input:

#### FACEBOOK

7/7/20 – public meetings. Reach/Impressions: 1902 | Engagement: 156

7/17/20 – public meeting reminder. Reach/Impressions: 1157 | Engagement: 78

7/29/20 – online input reminder. Reach/Impressions: 1495 | Engagement: 87

#### TWITTER

7/7/20 – public meetings. Reach/Impressions: 4643 | Engagement: 93

7/17/20 – public meeting reminder. Reach/Impressions: 1922 | Engagement: 92

7/29/20 – online input reminder. Reach/Impressions: 2009 | Engagement: 52

#### NEXTDOOR

7/7/20 – public meetings. Reach/Impressions: 2575 | Engagement: 3

7/21/20 – public meeting reminder. Reach/Impressions: 2940 | Engagement: 5

7/29/20 – online input reminder. Reach/Impressions: 2476 | Engagement: 3



**PRESS  
RELEASE**

7/7/20 – virtual public meeting. 2001 emails sent, 29.5% open rate, 1.1% click rate

7/20/20 – Coronavirus newsletter. 6505 emails sent, 34.1% open rate, 5.2% click rate

### III. Survey Results

**A total of 101 unduplicated survey responses were received.**

Respondents were asked to share their input regarding the proposed design concept:

1. I think the design used depends on the space where it goes. For example, if it's a small space, use the small B design. If it's in from of Friendship Village, use a larger design, like C or D. It's nice to have the open center to allow for any airflow and some separation of seating.
2. A is enough.
3. I like the micro & small
4. Thank you for this informative presentation (July 21 Web meeting) ! I just love the idea of original art possibly for use in the "screen" perhaps through neighborhood grants. You can tell a lot of work and research went into all of this. Many thanks to all of you for your efforts!
5. The medium one looks great
6. For 20 years I commuted via public transportation. I believe both the Medium and the Large (C and D above) shelters would be appropriate. The more opportunity to cast shade at a shelter the better. Some transit rides have quite a long wait at stops.
7. I am tossed up between size small and size medium. The small seems to be a good size for stops that are not near an intersection as to keep the homeless from taking them over (sadly this is happening to many stops) . The medium is a good size for those stops near intersections and near the high schools where it seems to have quite a few people waiting in the hot elements.
8. Props for not making more waiting areas with a see through top. I am born and raised here and used the bus for a few years and can not imagine having to sit in a 110 degree weather under a clear plastic roof, it makes no sense to have those here in AZ. I know how busy Tempe can be, the signs on the stops say Apache, which is very busy, so I am voting for more stops like C or D. They have a great long/wide roof, many seats and good dividers for some privacy. I do hope the benches are made of plastic (or something like that) and not metal. Another great idea would be to add water fountains.
9. Really like the look of Concept B. I don't ride the bus much but feel sorry for folks waiting in the heat. I will be riding the bus when I am too old to drive.
10. Though I do not ride I have friends and family who do so I am mindful of the transportation service and frequently scan stops. More often then not there is more then one person awaiting a bus at heavier traffic times of day so medium

size seems ideal to accommodate shelter needs. If budgets would stretch farther so that all stops could have shelter then in lower transfer/utilization areas the small model would suffice.

11. They look good, please make sure the roofs are angled to offer the best shade protection during the busiest times.
12. Looks good
13. I like the concept; however the small shelters are quite small, and more lighting for all of them in the evening and early am. With the heat of the sun in the afternoon; what can be done to provide a bit more shelter out of the sunlight?
14. The design is aesthetically pleasing and should suit the needs of passengers. My recommendation would be to add an angled ledge to the roof to block the sun during different times of the day.
15. Modern and up to date. The shelter should be oriented so that shade is maximized at the hottest times of the day
16. C. It provides good shelter for passengers who deserve comfortable and covered places to rest as they wait during hot summer months. As a regular bus commuter I've noticed that some existing shelters do not afford good visibility, both for seeing the oncoming bus and for being seen at the shelter. Sometimes if the bus driver can't see a person at the shelter he will not slow down or stop, so it's important to be able to see the bus approaching, to be able to stand up and be visible to the driver. 2. I would appreciate "no smoking" signs at bus shelters. If someone is smoking I will stand well away from the shelter. 3. I think our new social distancing rules are here to stay forever and should be considered in shelter designs. 4. I like the idea of incorporating art elements into the design.
17. Pretty basic. I don't think this is the design I voted for months back. I feel like the benches that face each other in the medium and large is awkward. It's awkward to have to face strangers. It'd be nice if the roof was larger/longer on the side that faces a setting sun. Would be nice if there was a live vine/plant growing up the sides.
18. Really like the designs. In light of social distancing, the larger size may be best. The larger size likely provides the most shade/sun, rain protection despite the assumed higher cost. Great job everyone!
19. Providing shade and shelter from the elements being the main function - and natural cooling, ideally - why are trees not incorporated (or shown) around the shelters? In conjunction with an organization such as Trees Matter, for example, the most appropriate trees for each location could be determined and could provide an opportunity for community engagement and volunteering with planting.
20. I like the clean lines and overall design but wonder how much shade will actually be provided.
21. I like the shade.
22. The helpful message about the shelters seems to be missing. Aside from that, the shelters are visually appealing and appear to cast a good deal of shade in the morning and afternoon. How are they at noon when the sun hits from the high side on the front? Are there posts to separate the seats on the bench to discourage sleeping on the benches?

23. The medium concept is visually appealing. It also allows for weather break and social distance.
24. I think the size of the shelters should be determined on an individual basis. Stops with higher ridership need a bigger shelter, but there is no reason to take up the space and spend the money to create a large shelter where there is a small ridership and little to no potential for an increase in ridership
25. Medium one is nice because it provides space and shade but wouldn't be as expensive to build as the larger one.
26. I like the designs, I think they are functional and provide shade.
27. I really like D. There is more shade and seats, which are much needed in Tempe.
28. The larger separated designs are better so riders can sit away from other people. I like the end seating on the large design. There should be cement posts or some sort of protection in the front of seating so cars can't crash into waiting riders. There are a lot of distracted drivers these days. Lots of protection from the sun especially late afternoon angles is needed. I don't ride the bus but I have a family member that does. She has had problems in the past with homeless people at some bus stops so that has to continued to be monitored so riders are comfortable waiting for the bus.
29. A and b too small medium okay don't think we need it large for our population
30. I prefer C, Medium, as it provides more shelter for shade, and space to keep distance from people.
31. It looks great and distinguished.
32. Shelters on bus stops is a critical issue that is long overdue the attention it deserves. About 20% of Tempe's residents live below the poverty line (!!!!!) and public transit is a major mode of transportation. Only 40% of the bus stops provide shade covering, causing undue pain to people waiting for the bus. In one of the sunniest, hottest cities in America, we must do better. I'm glad the city is addressing this issue and working to construct shelters on all the transit stops. They need to be large, comfortable, shaded, and pleasant to wait in. There should be an emphasis on 'green shade' which utilizes plants to block sunlight entering the bus stop at oblique angles, while making the bus stop enjoyable to look at and inhabit. Right now, the city council has an opportunity to make Tempe more beautiful while providing a major service to it's poorest residents. Don't screw this up. The proposed concept design is aesthetically unappealing and lacks a humanistic element. In the presentation on Designing Tempe's New Transit Shelters, there is a Concept 'A' which I thought elevated both of these considerations forward. The concept 'C' shown in the survey above is anti-humanist and the utilitarian architecture communicates discomfort. Please reconsider and choose Concept 'A'.
33. Somewhat boring. I love our artistic transit shelters. These are better than the plain ones that don't have artwork but they seem very conservative.
34. Looks great and provides shade and seating.
35. I like the idea of the awning structure. It provides a decent amount of shade, without taking up too big a footprint. I also like the openness for plenty of line of sight in all directions. I think this will help some of the riders feel more secure and in tune with their environment. I don't think these structures need to be so inviting that they attract people as just a place to hang out.

36. The bus stops along Southern between Price and McClintock have homeless people living in them. The stop on Country Club Way and Southern has a guy who hangs a hammock to sleep at night, and he often sleeps there during the day as well. These stops have been rendered virtually useless to those who really want to ride the bus. I suggest that Tempe bus stops remain shaded in some manner. However, they should not be made large, private, and comfortable to encourage even bigger groups of homeless people taking them over. I wouldn't even consider riding a city bus with the current condition of the stops closest to my home.
37. I like the concept and the design(s). I especially like that there are proportional sizing for areas where there is lesser to greater easement or right of way. I like the uniformity of design, material selection and like the Tempe Color Palette used in creating paint selections. If we hope to increase bus ridership, we'll need to provide relief from the hot sun on extreme heat days.
38. Shaded bus stops are very important. These look nice. I hope we don't lose the unique bus stops.
39. Conservative. I prefer the lovely artistic transit shelters, but if we can't have those all around, these are better than the standard ones we currently have.
40. I would take public transportation more if there was lighting at all stops and an emergency button to security. I am envisioning something similar to what they have on college campuses.
41. I like the design. I like the idea that the shelters will be sustainable.
42. The largest concept should be used whenever possible, due to the fact that so many people smoke in the shelters. When someone is smoking under the shelter (this happens most times I am at the bus stop) I have to leave the shaded area to get away from the smoke. A larger shaded area would be very helpful (as well as actual enforcement to prevent people from smoking under the shelters). Any kind of solar powered cooling that can be combined with the simple shade would be phenomenal, as well as lots of lighting for safety. In other cities the bus stops sometimes have a button you can press that will start a flashing light to let drivers know there is someone waiting at the bus stop at night. I have read that some bus stops will only have a tree for shade. This will not be enough, every bus stop needs to have a roof for shade, though it would be doubly nice and effective if it were combined with a nice shade tree planted behind it.
43. The more shade the better. D :thumbsup:
44. Don't do it.
45. I believe that we should use the large shelter. Considering that the governor has not put in proper corrective measures to help slow the spread of COVID-19, the least we should do for Tempe is provide enough space and shade for those who use public transportation while also allowing a distance of 6 feet for social distancing.
46. C Medium seems sufficient and assumably less expensive than D, provides space for social distancing. W/o cost specs it's hard to compare. If the goal is to increase ridership, build for the goal.
47. I think the basic design is well conceived. I have some concern on the durability of the flip down seats. It would be great to have spots of color against the neutral screens such as the Tempe light green on the seats. The more rectangular trash receptacle, aesthetically, appeals to me more than the rounder versions because

the angles and material flow better with the shelter design. I look forward to seeing what can be done to celebrate the neighborhoods the shelters will reside in.

48. They look good, but it's important that the roof is actually wide enough to actually provide cover from the sun and rain when and is not just decorative. If it only protects at noon, when the sun is directly overhead, then you've failed.
49. I think the designs look great!
50. Prefer large, we need as much shade as possible in this city. In fact, we need more park bike/walk paths that are shaded.
51. all designs are fine. select the one that best fits this area in terms of number of riders picked up on an average stop at this bus stop. if the number is 3 or less, then build A or B, if the number is greater than 4, then build a larger stop. The size of the stop should be based on average number of riders using the bus stop throughout the period of time the buses are in use each day.
52. I prefer small. It seems the larger the stops, the more loitering and transients they attract.
53. I like the overall design. Given the need for social distancing, will these models still work? How easy will each of the sizes be able to be cleaned and disinfected?
54. Will roof orientation alter to maximize shading? Will there be trash receptacles? Can water fountains be added at high use locations?
55. it seems the larger sizes attract homeless people; although the larger sizes would provide the most shade for individuals waiting.
56. Concept C
57. Larger Shelter roof allows more shelter from sun and rain, as well as more seating with social distancing.
58. Perhaps a mix of shelters is called for...larger for the busier stops...and smaller for less used stops.
59. I like the medium size, it welcomes more people and adds more places to sit and wait.
60. Shade is key to getting more people to use buses. I'd also suggest charging stations if feasible.
61. I prefer the design simplicity of the small and medium, however I would hope that the structure could include even more shade, even if there is no additional seating. Any metal seating gets very hot in the summer, so it's less desirable than just standing beneath a more ample shade structure. Standing outside for any period of time not under a shade is so uncomfortable, and a reason to avoid the bus altogether.
62. i think C will be perfect, such a good design, useful for people with disabilities i opt for it; <https://algeriahome.com> and also not very large and can be implemented every where
63. Looks fine. Does it seat the most amount of groups (different people with good separation) possible?
64. While the design is visually pleasing, I am concerned about shade for the seats in the smaller concepts. If the roof is not angled correctly, seats will be useless

during midday hours when the sun will be the most direct on passengers waiting for the bus.

65. i like the designs, they look modern. it is difficult to see details in the images. I don't think panels on the sides of the structure add much value, the roof is overhanging for shade... side panels make it difficult to watch for the bus. please have seating so that people can not lay down and take over the entire seating area.
66. Do NOT put wheelchair spaces on the end of the shelters!!! They will be used for locking bicycles and storing the rental scooters. If the City is serious about being inclusive, wheelchair spaces should be in the center of seating to increase visibility, and thus awareness.
67. I PREFER "D". ALL OF THE DESIGNS ARE SIMPLE AND OFFER COMFORTABLE SEATING AND SOME PROTECTION FROM THE SUN. #D OFFERS MORE SEATING AND WOULD BE MOST PRACTICAL.
68. The larger the better to achieve your goal of higher ridership... more people = need more space under shade structure.
69. I love the shade design D provides! My only concern is the metal seats. Even if seating is available, if the seats are hot, I will not sit on them. I would suggest wooden seats and adding some sort of plant to cover the shelter to make it cooler in temp. (I've seen it around Phoenix for context).
70. The designs are fine. They're not iconic. There's nothing glaringly wrong with them. They're extremely fine. If you're going for iconic, I'd go back to the drawing board. If you're going for extremely fine, you've nailed it.
71. I just think it's funny that Kathy D. on 3042 S Country Club Way, who has never ridden the bus, knows that all of the bus stops on Southern are "rendered useless" due to homeless people. That's just a blatant lie and I would be embarrassed to post something so bigoted on a public forum, along with my name and address. I guarantee she's never had a personal encounter with any of these people and if she did, she would realize that her neighbor with the Trump poster in his yard and AK sticker on his car is a bigger threat to public safety than the guy with the hammock. Instead of demonizing people who live outside your little white church bubble, let's actually make some progressive changes in Tempe, making it better for everyone. If anything, these bus shelters could provide more shelter and resources to those in need. They should also have information for people in need of help, like suicide prevention hotlines, AHCCS, etc... They could also have bike service stations along bike routes. They have a pump and other bike tools secured to a pole so anyone can use them if they need to service their bike. I've seen these in other cities and they're a real treat for cyclists. There might be some in Tempe, I just don't know about. I know we have Bike Saviours, which is a fantastic service. My biggest comment is; don't listen to any of these replies. Get the opinion of the folks who these designs could affect, not just people who have the time and resources to blabber their opinion from the comfort of their home. This forum is an obvious example of white privilege and none of the replies should be taken seriously (except for mine, obviously) - Go out on the bus or ride the light rail and get the opinion of the people who actually use these services, not the people who just drive by and make their judgements. Okay, time for coffee...
72. re new ntaxes. projects are you folks blind?
73. Love it. We need to have a more friendly and useable public transport system, and having adequate shade is part of that. I would prefer it to be maximum size

wherever possible. I'm not a bus rider at this point, but folks who are deserve protection.

74. Functional but boring design--no personality. What happened to the public art??
75. I think this is an idea that solves an age old issue. By my house, I can think of three different bus stops, only one has a shelter. The others are simply a bench by the bus stop sign. On Baseline east of McClintock, I've often seen people sitting back and away from the bench in the shade. (what little they can find) But the shade is back where the bus driver cant see them and I imagine they miss the bus because of this. Some stops have the cutover for the bus, and have a tiny bench or no bench at all. I think the minimum size should be (B) Small. I don't see any point on the (A) Micro I only have concerns that homeless might take over a sheltered stop. I do not use the bus for transit. I have tested it for my work commute, and I would have to leave 90 minutes or before work. It takes me 14 minutes if I drive. But I would definitely use the bus and train if gas prices became an issue. And I do use the train for down town. Parking at a park and ride is sometimes easier than downtown PHX
76. Very plain. Not a modern design.
77. The more shade, the bigger the better. Add trees nearby and vines or plants, I don't see waste cans. Solar panels could be connected to outlets for charging phones. Water would be nice as well.
78. They all look good.
79. Looks nice
80. The designs are not practical. The sun moves so being able to sit or stat under the top isn't possible. This is a waste of money. These are becoming homeless shelters instead. I've called Tempe, Police and Transit and nobody takes responsibility. You know what is needed at bus stops; DRINKING FOUNTAINS. I've been here since 1989 and Az isn't getting any cooler.
81. I think the medium or large shelters would be best as they increase the likelihood that seats within the shelter are shaded (dependent on time of day and positioning of course) and provide more space for riders to be in the shade while keeping distance from other riders waiting if they choose.
82. Choice B - small
83. i vote for the small shelter -B.
84. The more shade the better, but then again if its a certain time of day the overhead shade / roof doesn't matter. Vertical blockage of the sun is very sought out as there is usually no refuge anywhere near the bus tops. Also shade for 1 seat that is good for two people also is a waste when there's 5-6 people waiting for the bus.
85. Instead of spending money on what appears like metal transit shelters, is it possible to install trees (like palo verde) and have wooden seats? During the hot season, the seating would not be used and with the sun moving throughout the day the wide vertical stands block the view of incoming buses. Planting trees seems to be the most sustainable option plus they are beautiful and you don't need to spend money on design. Also, the city of Tempe needs to take this survey to the streets and ask directly to the ridership. By only taking the feedback via online survey, you are missing out on key information from the people that use this service.

86. These are all nice. I would like to see the micro or small stops pop up at the flag stops that are currently unshaded and extremely uncomfortable like Hardy south of Baseline :( Also, these look good already, but more cooling strategies are necessary for them to be truly comfortable, like plants and trees which is easy or some methods to mitigate heat storage and latent heat from the asphalt and car traffic, that is a heftier project but there are some simple solutions like road diets and street-sidewalk barriers (like planters, dedicated bike lanes (like Hardy north of Southern), etc.
87. I really appreciate the proposed large signage for the stop name. As an infrequent rider I am often hard pressed to know where I'm getting off until I have a chance to learn the route and having signage that is easily viewable from the bus makes that process easier.
88. The "micro" ones look too small. While bigger may mean better for social distancing, it's also more to maintain and more of a target for graffiti, etc. Most of the time folks just need a little shade and maybe a place for a person or two to sit.
89. Like the proposed shading of the shelters. Are they made entirely of metal including the benches? Metal benches can be very hot in the summer May-October. I think there has to be a trash receptacle included or close by. Are the roofs white or a dark color? I think white might help deflect heat.
90. My experiences catching a bus is that more shelter is better. A place to sit and shade makes the wait so much easier. I realize that space at each designated spot should dictate size of shelter but I applaud providing a space to wait as a nudge towards increasing use of public transportation.
91. I find that the design is pleasing, but I worry that kind of the designs properly block heat from the sun. Any stops facing west of East will become much too hot and could be dangerous for citizens during summer, as these look like metal boxes that will, if anything, trap in heat. Please consider all white painted materials, larger rooftops to provide more shade, and perhaps obligatory placement of trees in the adjacent streetscape to help provide shade.
92. The more shade the better out here. I like options B and C. I think A is too small and looks crowded. Visually the 3 larger options look best.
93. Have a design that provides shade perhaps throughout the day not just in the mid afternoon. Ensure designs allow bus drivers to see if there are any inattentive passengers sitting in the bus stop. If there are more natural shade options to include such as trees. Trash and recycling bins would be much appreciated. Scooter parking would be helpful so that passengers may continue their journey after getting off the bus. "Cool pavement" as being tested in Phoenix would be really neat. And the bus stops to be a pull out rather than a stop in the street blocking traffic (a bus stop in the street causes traffic congestion, drivers to resent public transit, pollution from cars having to stop and go behind a bus, etc). Now the next suggestions are real techy but it would be nice to have LED signs that indicate when the next bus is arriving (or even provide real time tracking) that is much more reliable than the NextRide texting service. The LED sign doesn't always have to be on. I have visited another out of state city that had a button that you could press and then the LED sign would turn on with it's information. This was a way to save electricity I presume. I actually use the NextRide texting service but not all stops have the stop number sign and I sometimes find that the bus doesn't arrive at the predicted time by up to 15 minutes...



94. This project is long overdue! The design seems functional by providing several seating options for maximum shade. Glad to see materials are being considered to minimize heated surfaces. I hope the final color choices are "cool".
95. Looks like a typical bus shelter. Not particularly artistic or creative.
96. Use the smallest footprint that will save the City the most money. Road repairs should be the priority, not how nice the bus stops look.
97. I prefer the small Station. It has enough room for two at least and the side awnings to provide shade. Small has a better footprint- not as much space taking up./I used to take the bus every week to class at Pyle - now closed. Once a month for other errands.
98. Shade canopy and screen walls should both be as wide as possible to provide maximum shelter from bright, hot days. Perhaps there could be a button-activated signal of some kind so that the driver knows to stop even if a person is not visible in the shelter.
99. I like the design but will there be greenery like in the PowerPoint slide 4 (example of existing structure) and slide 8 (Early Concept Exploration A)? I just hope they maximize shade. The transit shelters on Hardy between Broadway and University are a joke - no real shade and no proper cover in case it rains. These appear MUCH better.
100. I support the medium size shelter as they provide sufficient shade and also have a reasonable footprint. The micro and small sizes would not provide enough shade for customers. The large size is nice but would take up quite a bit of space on/near sidewalks and other common areas. Thank you for considering my comments.
101. I believe that the Large shelter is the best option. It is roomy enough for patrons to social distance and to provide adequate space for non-smoking patrons to be away from patrons who smoke, thus hopefully minimizing exposure to second-hand smoke. There appears to be ample seating and shelter from the sun and other inclement weather. It appears to have space to shelter bicycles or other items (e.g., groceries, luggage) from exposure on the exterior.

## Emailed comments

I wanted to give some feedback about the new bus designs in Tempe.

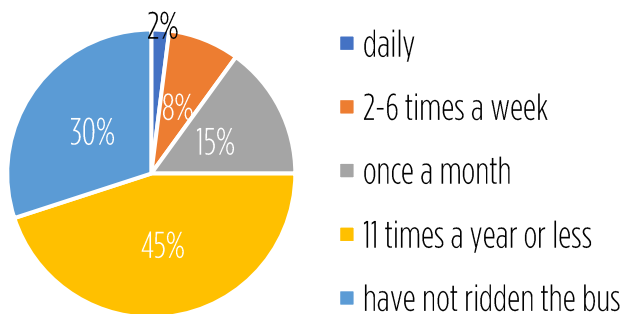
1. On rainy days the shelter won't protect you much because the rain may fall at an angle and get you wet anyway. And if there are a few people in the stop there may be only 1 pedestrian who is able to stand on the opposite wall where the rain isn't falling.
2. The shelter won't protect a pedestrian in the sun. The shade from the roof may only cover the top 3 feet of the shelter. And pedestrians won't benefit from that. In fact, the problem may be caused that a pedestrian moves to the back of the wall of the shelter to be in the shade while they wait for their bus. And then they miss their bus because the wall was blocking the bus driver from seeing the pedestrian.

Maybe a design could be created that has 4 poles on each side of roof--and there are signs that hang down from the roof at pedestrian level that show routes and bus schedules or advertising. This way the center of the roof is functional for rain protection and sun protection and the functionality of the wall remains functional.

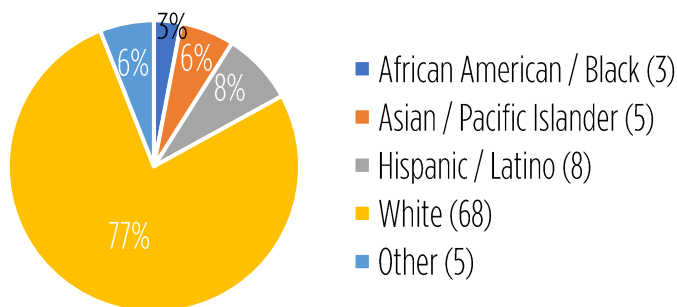
This is the product I just came across today while researching for our owner who is concerned that handrails exposed to direct sun may be too hot to touch. It is just a coating and readily available. I think that Option B was the right one and am glad to see that is moving forward for farther development. Good luck for the rest of the project. Please let me know if I can be a help. Stay safe and well.

It would be nice if the designers of bus stop shelters took into consideration the location of the sun at each site.

### 3. How often do you ride the bus? (100 responses)



### 4. Respondents were asked to choose all that apply (88 responses; some checked more than one option)

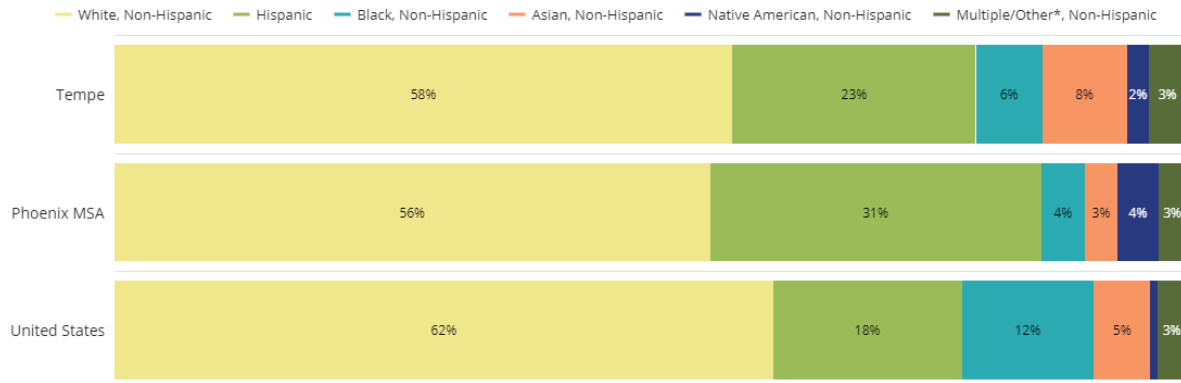


## IV. Demographic Information

Since Tempe has bus routes throughout the entire city, the project area is the city limits.

### Race and Ethnicity

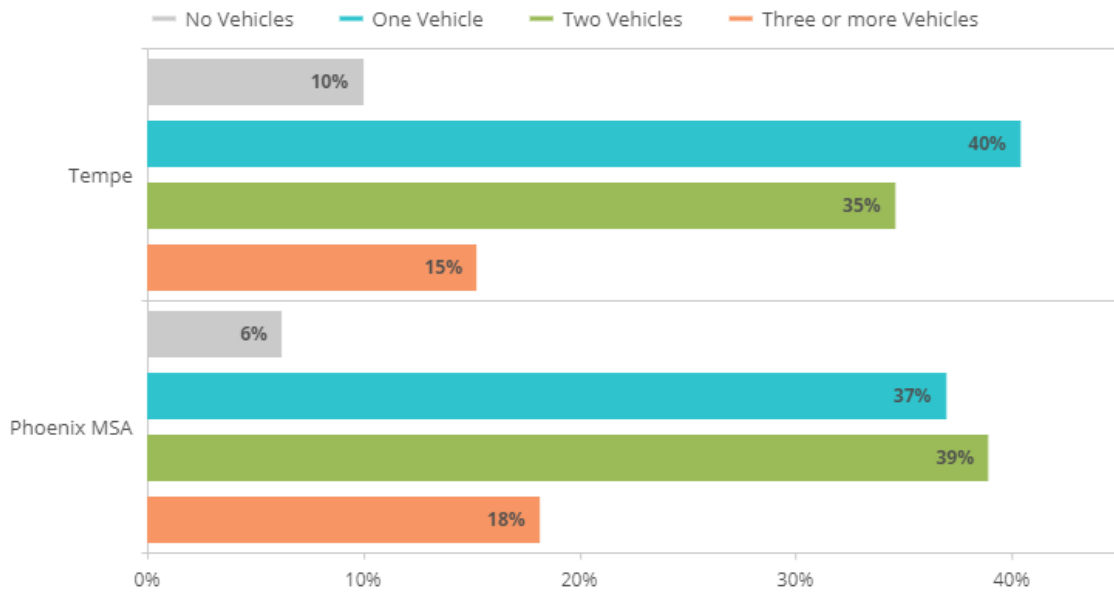
In Tempe, 42% of the population are part of a minority race or ethnic group.  
The largest percent of the population is **White (58%)**.



### Transportation in Tempe

#### Vehicles Available

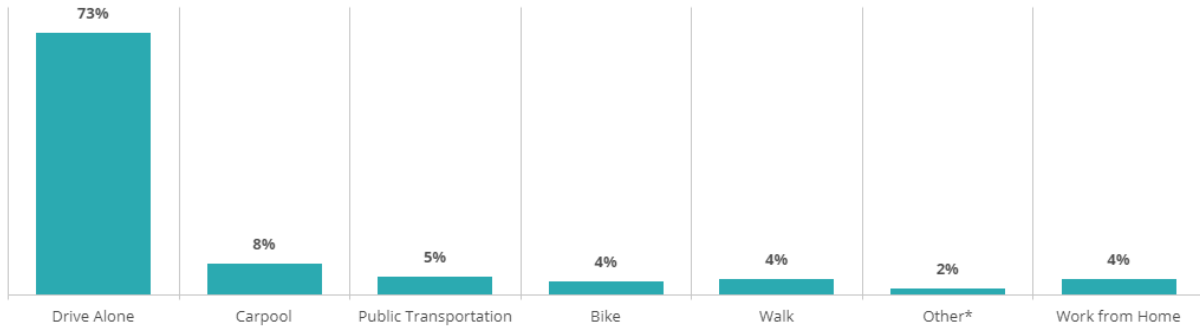
Universe: Total Occupied Housing Units





## Means of Transportation to Work

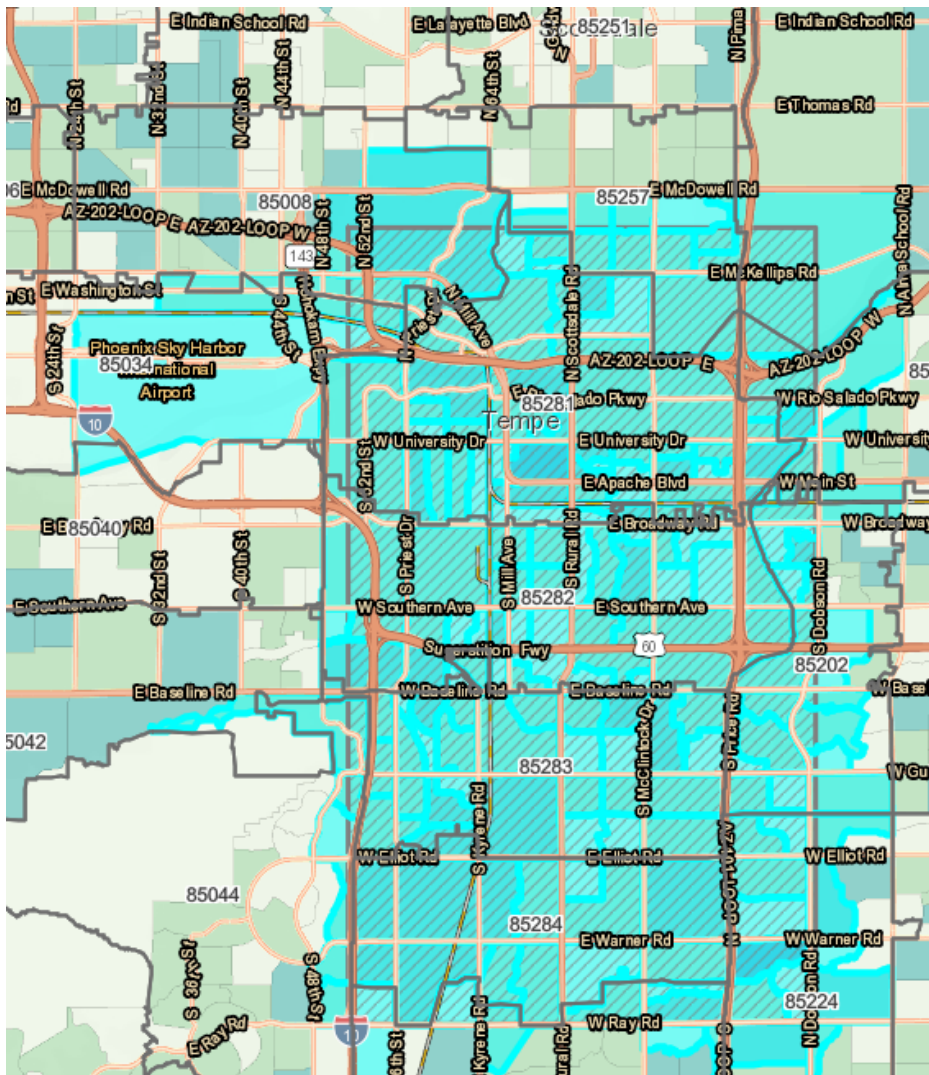
Universe: Total Workers, Age 16+



\*Other\* includes Taxicab and Motorcycle

Source: U.S. Census Bureau, 2017 American Community Survey (ACS) 5-Year Estimates

The data that follows is based on census tract data that includes the area in turquoise below.



Selected Block Groups ACS 2012-2016 ACS 5-Year Estimates

Topic	Estimate	Percent
<b>Total Population</b>		<b>45,191</b>
<b>Race and Ethnicity</b>		
Hispanic	9,169	20.3%
<b>Non-Hispanic</b>		
White, Non-Hispanic	27,256	60.3%
Black, Non-Hispanic	3,189	7.1%
Native American, Non-Hispanic	1,127	2.5%
Asian, Non-Hispanic	2,602	5.8%
Pacific Islander, Non-Hispanic	451	1.0%
Other, Non-Hispanic	22	0.0%
Two or More, Non-Hispanic	1,375	3.0%
Minority (1)	17,935	39.7%
<b>Ability to Speak English</b>		
<b>Population 5 years and over</b>	<b>42,869</b>	<b>-</b>
Speak Only English	33,072	77.1%
Speak Other Languages	9,797	22.9%
Speak English "very well"	7,198	-
Persons with Limited English Proficiency (LEP)	2,599	-
Speak English "well"	1,716	-
Speak English "not well"	725	-
Speak English "not at all"	158	-
<b>Households</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Family Households (Families)	8,430	46.8%
Married-couple family	4,997	-
Female Householder, no husband present	2,138	-
with own children under 18 years	906	-
Nonfamily Households	9,591	53.2%
Householder living alone	5,919	-
<b>Household Income (in 2016 inflation-adjusted dollars)</b>		
<b>Total Households</b>	<b>18,021</b>	<b>-</b>
Less than \$10,000	2,041	11.3%
\$10,000 to \$14,999	1,104	6.1%
\$15,000 to \$24,999	1,990	11.0%
\$25,000 to \$34,999	1,811	10.0%
\$35,000 to 49,999	2,701	15.0%
\$50,000 to \$74,999	2,851	15.8%
\$75,000 to \$99,999	2,652	14.7%
\$100,000 to \$149,999	1,800	10.0%
\$150,000 to \$199,999	638	3.5%
\$200,000 or more	433	2.4%
with related children under 18 years	101	-
Female householder, no husband present	671	-
with related children under 18 years	612	-
Male householder, no wife present	206	-
with related children under 18 years	145	-
<b>Commuting to Work</b>		
<b>Workers 16 years and over</b>	<b>25,946</b>	<b>-</b>
Car or Truck - drive alone	18,570	71.6%
Car or Truck - carpool	2,381	9.2%
Public Transportation	1,227	4.7%
Bicycle	1,543	5.9%
Walked	545	2.1%
Other means (taxicab, motorcycle, etc.)	619	2.4%
Work at home	1,061	4.1%
<b>Vehicles Available</b>		
<b>Occupied Housing Units</b>	<b>18,021</b>	<b>-</b>
No vehicle available	1,946	10.8%
1 vehicle available	7,362	40.9%
2 vehicles available	6,100	33.8%
3 or more vehicles available	2,613	14.5%
<b>Area</b>		
Total Area in Acres	6,816.2	-
Total Area in Square Miles	10.7	-

Source: United States Census Bureau, American Community Survey 2012-2016 5yr Estimates

Source: U.S. Census Bureau, 2012-2016 American Community Survey (ACS) 5-Year Estimates. ACS data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate is represented through the use of a margin of error (MOE). In addition to sampling variability, the ACS estimates are subject to nonsampling error. The MOE and effect of nonsampling error is not represented in these tables. Supporting documentation on subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Data and Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website ([www.census.gov/acs](http://www.census.gov/acs)) in the Methodology section. The MOE for individual data elements can be found on the American FactFinder website ([factfinder2.census.gov](http://factfinder2.census.gov)). Note: Although the ACS produces population, demographic and housing unit estimates, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. Prepared by: Maricopa Association of Governments, [www.azmag.gov](http://www.azmag.gov), (602) 254-6300

# Transit Shelter Design Steering Committee

- **Transportation Commission**
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- **Sustainability Commission**
  - John Kane, [jfkane@architekton.com](mailto:jfkane@architekton.com)
- **Neighborhood Advisory Commission**
  - Kyomi Kurooka, [kkurooka@yahoo.com](mailto:kkurooka@yahoo.com)
  - Jonathan Gelbart (Alt.), [jdgelbart@gmail.com](mailto:jdgelbart@gmail.com)
- **Design Review Commission**
  - Michelle Schwartz, [Michelle.Schwartz@rsparch.com](mailto:Michelle.Schwartz@rsparch.com)
- **Commission on Disability Concerns**
  - Katie Schmidt, [kebschmidt@gmail.com](mailto:kebschmidt@gmail.com)
- **Arts & Culture Commission**
  - Kyomi Kurooka, [kkurooka@yahoo.com](mailto:kkurooka@yahoo.com)
- **Residents, businesses & property owners**
  - **ASU student** – Grace Logan, [Grace\\_Logan@tempe.gov](mailto:Grace_Logan@tempe.gov)
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  - Scott Wisner, [swisner@valleymetro.org](mailto:swisner@valleymetro.org)

# Transit Shelter Design Steering Committee

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  - Tremeal Manley, [Tremeal.Charae@gmail.com](mailto:Tremeal.Charae@gmail.com)
  - We will meet with others at EVBOM
- **Downtown Tempe Authority**
  - Kate Borders, [kate@downtowntempe.com](mailto:kate@downtowntempe.com)
- **Tempe Bicycle Action Group**
  - Stevie Milne, [stevie@biketempe.org](mailto:stevie@biketempe.org)
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  - Ed Soltero, [Edmundo.Soltero@asu.edu](mailto:Edmundo.Soltero@asu.edu)

## 1. PROJECT DESCRIPTION/BACKGROUND

The City of Tempe has contracted with T.Y. LIN International to redesign the existing transit shelters to:

- Accommodate the changing transit fleet
- Adapt to a variety of physical locations with a ‘kit of parts’ approach that will adjust to site constraints
- Maximize shade, passenger visibility, airflow and amenities
- Provide a unique Tempe identity
- Be resistant to vandalism; easy to maintain and clean
- Incorporate sustainable strategies and materials

Currently, there are approximately 800 transit stops; 40 percent have shelters in place.

FISCAL IMPACT: Capital improvement funds have been set aside in the budget for this project.

## 2. PUBLIC INVOLVEMENT OBJECTIVES

The City of Tempe values public input and believes that community members should be engaged early on in decisions that affect them. The purpose of the Public Involvement Program (PIP) is to create an open and transparent process to guide the design of a new transit shelter in a shared community vision.

The scope of the PIP is to:

- Provide objective information to assist the public in understanding the opportunity to provide an improved transit shelter through the redesign process.
- Provide the opportunity for stakeholders to give input as to what components are most valued.
- Seek and encourage the involvement of all community members.
- Provide a variety of opportunities for the public to contribute ideas and provide feedback through all phases of the process.
- Make the process accessible and engaging to interested community members.

## 3. STAKEHOLDER ANALYSIS

An early step in the Public Involvement Program is to identify the internal and external community members that have an interest in the process.

### Internal

- Mayor and Council
- City Departments



- Transportation Commission
- Sustainability Commission
- Development Review Commission
- Mayor’s Commission on Disability Concerns
- Arts Commission

**External**

- Residents, businesses and property owners
- Transit users (adult and youth)
- Transit drivers
- Valley Metro
- Tempe Bicycle Action Group
- ASU Transit and Facilities Development

**4. INVOLVEMENT TECHNIQUES & COMMUNICATION APPROACH**

A stakeholder committee will be assembled to help guide the design process and serve as a sounding board for ideas during the process. The stakeholder group will be comprised of individuals from the aforementioned groups.

Public involvement and communication techniques may vary depending on the phase of the planning efforts. The approach will be to facilitate working directly with the public throughout the process to ensure that public issues and concerns are consistently noted, understood and considered.

While traditional methods (meetings, presentations, etc.) will still play an important role in public engagement, social media and electronic participation and communication tools will also be extensively used to disseminate information and broaden outreach.

The following dedicated websites, online URLs and social media handles will be used to share information and to collect feedback throughout the process:

Website	<a href="http://www.tempe.gov/TransitShelters">www.tempe.gov/TransitShelters</a>
E-mail	<a href="mailto:neighborhoods@tempe.gov">neighborhoods@tempe.gov</a>
Facebook	<a href="http://www.facebook.com/CityofTempe">http://www.facebook.com/CityofTempe</a>
Twitter	@tempegov
Newsroom	<a href="http://www.tempe.gov/newsroom">http://www.tempe.gov/newsroom</a>
Comments	<a href="http://www.tempe.gov/TransitShelters">http://www.tempe.gov/TransitShelters</a>

The following methods will also be used to achieve broad and continuous public participation:

- Regular meetings held with the stakeholder committee.
- Documents posted on the project website.
- Public meetings held to receive input.
- Comment forms available at the public meetings and on-line throughout the duration of the project in both English and Spanish.
- Presentations to stakeholder Boards and Commissions.
- One on one meetings with interested stakeholders.

The communication methods used will include:

- Tempe Today newsletter
- Tempe 11
- Press release
- Social media (Twitter, Facebook, NextDoor)
- City online calendar
- Digital screen announcements at city facilities
- Project web site with online comment form
- Signs on FLASH and Orbit buses
- Paid online advertising – audio and static ads

#### 5. PROJECT TIMELINE

- June 27, 2019: Council approval of consultant contract
- August 9, 2019: Council Friday packet
- August 14, 2019: Steering Committee meeting
- August 30, 2019: Council Friday packet
- September 10, 2019: Transportation Commission
- September 21 & 25, 2019: Public Meetings (receive initial input)
- November 12, 2019: Steering Committee
- November 22, 2019: Council Friday Packet
- December 2, 2019: Commission on Disability Concerns
- January 10, 2020: Council Friday packet
- January 13, 2020: Sustainability Commission
- January 14, 2020: Transportation Commission
- January 21 & 28, 2020: Public Meetings (present 3 alternatives; 60% design)
- February 5, 2020: Neighborhood Advisory Commission
- February 10, 2020: Residents of Broadway Apartments
- February 11 -14, 2020: Pop Ups at Bus Stops to survey riders
- February 11, 2020: Meeting with ASU professors re potential materials
- February 21, 2020: Council Friday packet
- February 25, 2020: Development Review Commission
- February 27, 2020: Valley Metro Accessibility Advisory Group
- March 13, 2020: Friday packet
- March 25 & 28: Public meetings- CANCELLED due to COVID 19

- June 18, 2020: Steering Committee
- July 17, 2020: Friday packet
- July 21, 2020: Public Meetings: (present refined design)
- August 18, 2020: Transportation Commission
- August 20, 2020: City Council Issue Review Session

## 6. PUBLIC and STAKEHOLDER MEETING SCHEDULING, LOCATION & ACCESS

There will be four public meetings held; the first round in September of 2019 to inform the public about the project and to gather initial input. The second round of public meetings will be held in November/December 2019 to present three design concepts based on input received and select a preferred alternative.

Public meetings will be scheduled at times that help maximize attendance. Meetings will be held in locations accessible to persons with disabilities and will be held as near as possible to transit routes when possible. With 48 hours advance notice, special assistance will be provided for persons with sight and/or hearing impairments; a Spanish translator was available for the meetings.

## 7. RESPONSIBLE DOCUMENTATION

Documentation of all phases of the process will occur for future use and understanding of how the program worked, what comments were received and how the results of the public involvement were used in the development of the new transit shelter design.

Documentation will include:

- The Public Involvement Program
- List and samples of outreach and communication documents
- Database of participant contact information
- All public comments made
- Survey results

## 8. PROCESS EVALUATION & CONCLUSION

The City of Tempe seeks continual improvement of all of its activities. An evaluation will be performed throughout the public involvement process to ensure the PIP is meeting participation requirements mandated by state law. Feedback opportunities related to public involvement techniques will be provided through the website and meetings and continuously reviewed.



TRANSIT SHELTER DESIGN  
PUBLIC INVOLVEMENT PROGRAM  
July 2020

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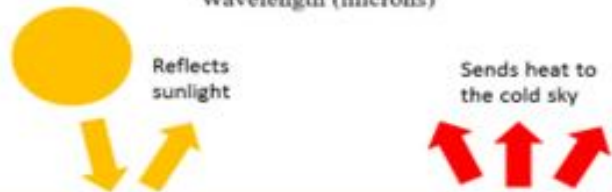
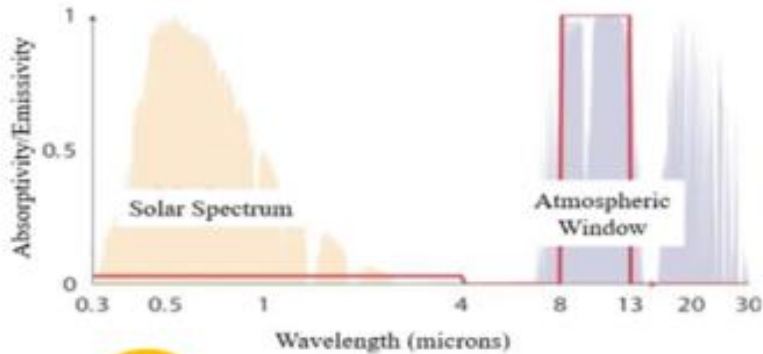
This Public Involvement Plan may change as conditions change or additional resources become available. The most current information about upcoming meetings and comment opportunities will be available on the dedicated website.

For further information about the process, please contact the following City of Tempe staff:

Bonnie Richardson  
Principal Planner  
480-350-8628  
Bonnie\_Richardson@tempe.gov

Laura Kajfez  
Neighborhood Services Specialist  
480-350-2840  
laura\_kajfez@tempe.gov

# RADIATIVE COOLING PROCESS



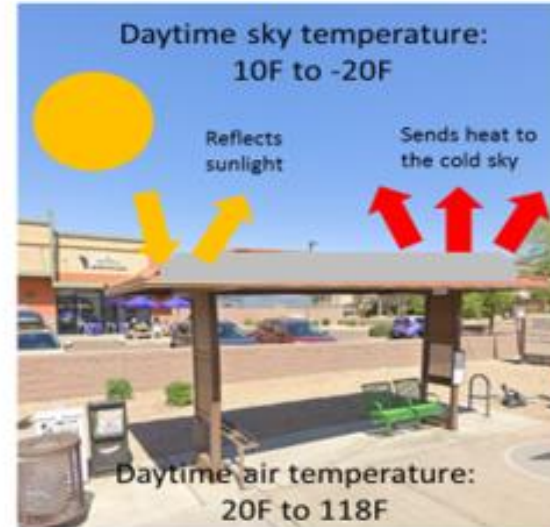
## Daytime Radiative Cooling Surface

*MOF VIS Mirror + IR Mirror  
Rejects Solar Spectrum*

*Provides high emissivity  
in 8-13 micron range*



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‘Super-cool’ materials stay colder than their surroundings even in direct sunlight, by emitting heat that can pass through the atmosphere and into space.

# MEMORANDUM

**TO:** Tempe Transportation Commission  
**FROM:** Trent Luckow, Sergeant, 480 350 8335  
**DATE:** August 4, 2020  
**SUBJECT:** Tempe Transit System Security Update  
**ITEM #:** 5



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**PURPOSE:**

To provide the Commission with an update on the Tempe Transit Security program.

**RECOMMENDATION OR DIRECTION REQUESTED:**

For Information

**CITY COUNCIL STRATEGIC PRIORITY:**

- Safe and Secure Communities

**BACKGROUND INFORMATION:**

The safety and security of passengers, employees and contractors is the highest priority. The public's overall perception of transit system safety plays an important role to maintain and increase use of public transit.

The Transportation Division- Transit provides funding for one full-time police sergeant position. This position is a liaison between Tempe Transit, Tempe PD, Valley Metro Security and Phoenix, Mesa and ASU Police Departments for transit related police and security issues. The Transit Sergeant works closely with Transit Facilities and Operations staff to address any security concerns brought forward by passengers or bus operators along with Valley Metro safety and security staff to address security issues related to light rail operations. As part of the Regional Security Team, the Transit Sergeant collaborates with Valley Metro and partner law enforcement agencies to share and address local and regional transit issues and successes.

The Transit Sergeant oversees facility security for the Tempe Transit Center (TTC) and the East Valley Bus Operations and Maintenance (EVBOM). This function includes general oversight of contracted security personnel and criminal backgrounds of incoming contractors working in and around the facility.

Transit also contributes some funding for a Police Explosives Ordinance Detection (EOD) K9. K9 Storm was a recent addition to the Tempe PD K9 team, and this past year became explosives certified after completing an extensive course. The handler and K9 are deployed for large special events and on an as needed basis for any transit related calls. The K9 handler assists the Transit Sergeant with administrative tasks and can be a resource to patrol officers for transit related issues.

Tempe utilizes off-duty Uniformed Tempe Police officers to provide a presence on the Light Rail and bus systems during peak service hours and late nights on weekends. They may at times work in a plain clothes capacity or unmarked vehicle in order to be more effective in observing any criminal behavior. The officers working the light rail security detail work closely with Valley Metro's contract fare inspectors/security officers as security has no legislative authority to detain people, as a result numbers of fare inspections have continued to increase over this past year.

**Training**

During this past fiscal year, Tempe Transit has continued its partnership with the Tempe PD SWAT, Explosive Ordinance Teams and K9's to conduct systems and scenario-based training on both Light Rail and a variety of City Buses. K9 Storm and Officer Razo's addition, after completing an explosive certification, is a welcome to the EOD and K9 teams. In addition, preliminary discussions for training of the new Streetcar System has begun for security and police responders.

**Outreach**

This past year Transit Security and Transit Facilities continued participating in weekly conference calls with Tempe Homeless Services (HOPE Team). These calls discuss various transit concerns as they relate to homelessness, problem areas in Tempe, along with solutions and successes. The weekly discussion reduces the amount of time a complaint or problem can be resolved and provides services quicker to those in need. These discussions and problem-solving techniques also provide an alternative to traditional policing methods and are an invaluable tool. The discussions and outreach have continued throughout the COVID pandemic.

Customer Experience Coordinator's (CEC's) started their presence on the light rail system in August 2019. CEC's are a part of the Respect the Ride campaign and actively assist riders on the platforms with customer service-related questions, ticket purchases, code of conduct rules of riding the system. CEC's also assist in the security of the system by acting as another layer of observation should a security related incident occur. During the recent pandemic the CEC's were there to assist with questions regarding wearing masks and rider safety related to COVID-19.

**COVID-19 Challenges**

Since the outbreak of the COVID-19 pandemic and the stay at home order began in March there has been a steady decline in ridership on the Light Rail system, decreasing at over fifty percent for the each of the months of April, May and June. Some of the factors that may have led to this include a decrease in daily commuters who are now completing work from home or a lack of special events throughout the region. June 2019 compared to June 2020 saw a reduction along the Light Rail system from forty special events to zero. Light rail fare violations however for the months of May and June were the two highest months of this past fiscal year.

Due to the spread of COVID-19, off duty officers working the light rail and bus details are not riding the trains or buses, only boarding if the situation is necessary. Officers are instead checking bus stops, light rail platforms and park N' rides for any violations, provide an educational resource for the public and to provide a uniformed security presence. Arrests however on the bus system from these work groups has decreased, likely from a reduction in officer to person contacts due to less fare enforcement and not accepting bus fares at the front of the bus.

**FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:**

N/A

**ATTACHMENTS:**

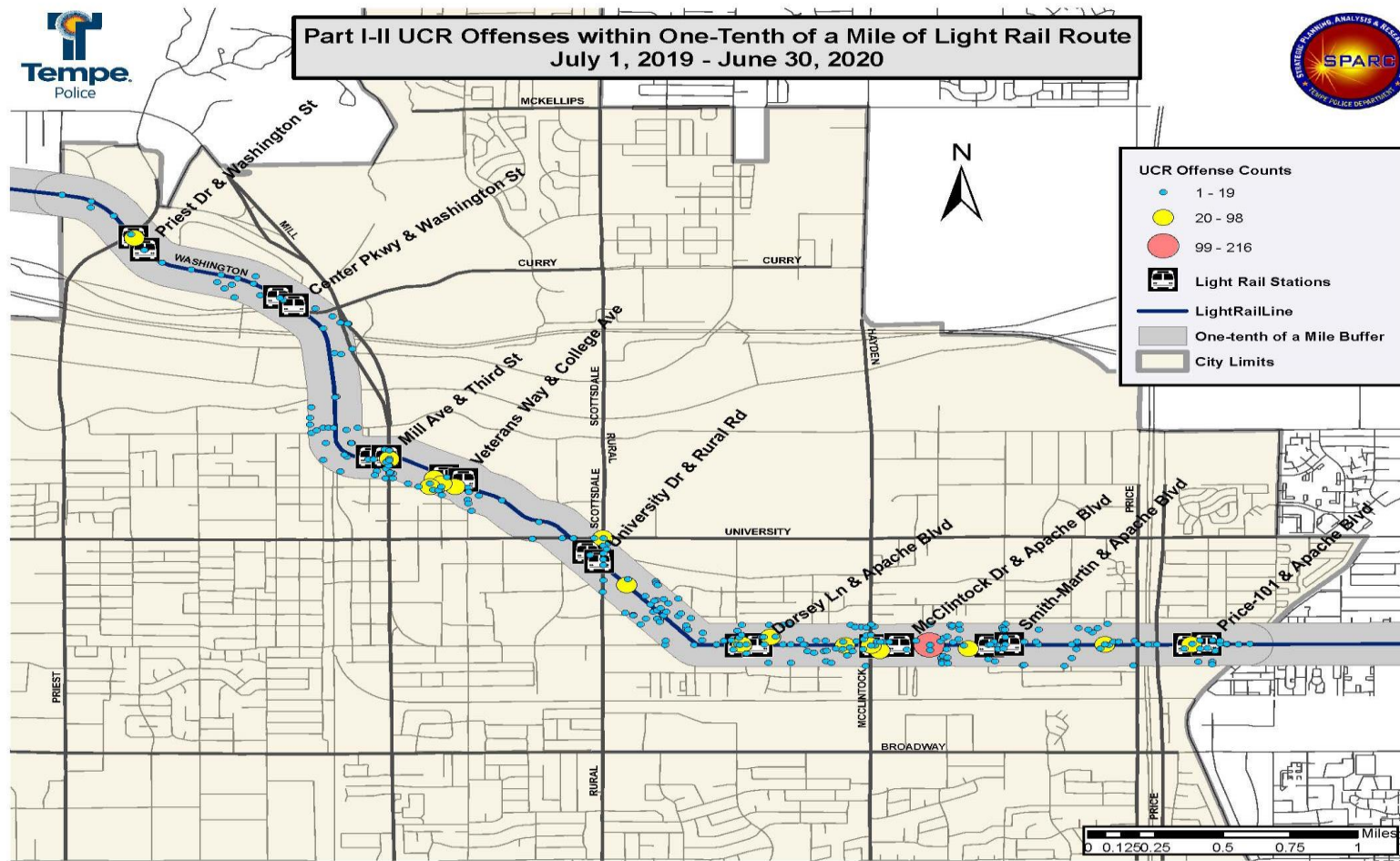
PowerPoint



# Transit Security Update



# Transit Security Update-Light Rail



# Light Rail Security Update




**Part I-II UCR Crime: July 1, 2019 - June 30, 2020**

  
 Statistics Prepared by SPARC on 7/7/2020

### Offenses by UCR Type

		UCR PART I	UCR PART II	TOTAL
2019	Jul	50	87	137
	Aug	51	136	187
	Sep	59	143	202
	Oct	64	97	161
	Nov	66	106	172
	Dec	56	106	162
	Total	346	675	1,021
2020	Jan	56	107	163
	Feb	60	97	157
	Mar	41	91	132
	Apr	51	78	129
	May	52	109	161
	Jun	30	80	110
	Total	290	562	852
<b>TOTAL</b>	<b>636</b>	<b>1,237</b>	<b>1,873</b>	

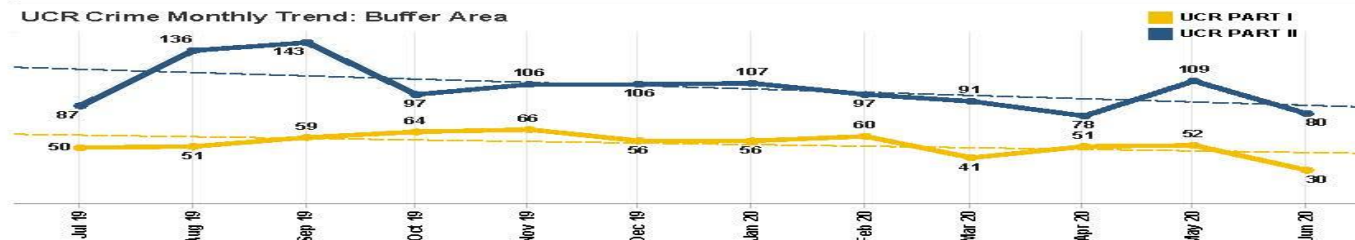
Tables include Part I-II UCR crimes grouped from General Offense data. Offenses include those falling completely within one-tenth of a mile of light rail route within Tempe city limits (**buffer area**).

Place Name was used to identify offenses that were labeled as having occurred at the light rail station. **Interpret with caution**, as some offenses may have occurred at a light rail station, but were not labeled as such (resulting in lower totals). These offenses are included in the totals, and designated as **Light Rail Station**.

### Offenses by UCR Type: July 1, 2019 - June 30, 2020 Light Rail Stations vs. Other Place Types (based on Place Name)

		LIGHT RAIL STATION		OTHER PLACE TYPE		Grand Total	
		UCR PART I	UCR PART II	UCR PART I	UCR PART II		
2019	Jul	1	3	49	84	137	
	Aug	2	7	49	129	187	
	Sep	2	10	57	133	202	
	Oct		10	64	87	161	
	Nov	2	9	64	103	172	
	Dec		9	66	66	101	162
	Total	7	38	339	637	1,021	
2020	Jan	1	5	55	102	163	
	Feb	3	4	57	93	157	
	Mar	2	4	39	86	132	
	Apr		5	49	72	129	
	May	5	5	47	103	161	
	Jun		2	30	78	110	
	Total	13	28	277	534	852	
<b>TOTAL</b>	<b>20</b>	<b>66</b>	<b>616</b>	<b>1,171</b>	<b>1,873</b>		

UCR Crime Monthly Trend: Buffer Area



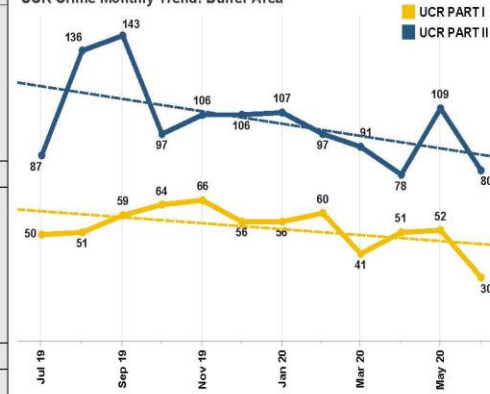


# Transit Security Update – Light Rail

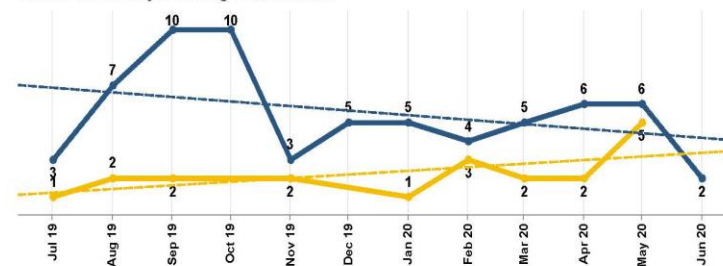
Crime by UCR Type in Buffer Area

	UCR PART I	UCR PART II	TOTAL	
2019	Jul	50	87	137
	Aug	51	136	187
	Sep	59	143	202
	Oct	64	97	161
	Nov	66	106	172
	Dec	56	106	162
<b>Total</b>	<b>346</b>	<b>675</b>	<b>1,021</b>	
2020	Jan	56	107	163
	Feb	60	97	157
	Mar	41	91	132
	Apr	51	78	129
	May	52	109	161
	Jun	30	80	110
<b>Total</b>	<b>290</b>	<b>562</b>	<b>852</b>	
<b>TOTAL</b>	<b>636</b>	<b>1,237</b>	<b>1,873</b>	

UCR Crime Monthly Trend: Buffer Area



UCR Crime Monthly Trend: Light Rail Stations



	2019						2020						TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
PRIEST DR/WASHINGTON ST	1	1	3	4	1	1	1	1	3	2	1		17
MILL AVE/3RD ST	2	2	2	2	1		2	1	3	1	1		17
UNIVERSITY DR/RURAL RD	1	1	1			2		1		1	2	1	10
PRICE-101 FWY/APACHE BLVD		3	2		2		1			2			10
WASHINGTON ST/CENTER PKWY			1	1			2	1		1	1		7
VETERANS WAY/COLLEGE AVE		2			1	1				1	1	1	7
DORSEY LANE/APACHE BLVD			2	1				2			2		7
SMITH-MARTIN/APACHE BLVD				1		1		1			3		6
MCCLINTOCK DR/APACHE BLVD	1		1	1			1		1				5
<b>TOTAL</b>	<b>4</b>	<b>9</b>	<b>12</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>11</b>	<b>2</b>	<b>88</b>

# Transit Security Update-Light Rail

## Tempe Police Officer Light Rail Security Activity



July 2019-June 2020

Month	Fare Inspection	Fare Violation	Alcohol Violation	Trespass	Code of Conduct Warnings	Warrant	Positive Feedback
July '19	994	62	6	24	54	21	32
August '19	1027	99	10	26	42	24	22
September '19	1022	76	7	26	69	12	18
October '19	1058	82	7	17	48	22	18
November '19	806	54	6	35	66	22	12
December '19	851	81	11	21	68	14	22
January '20	812	46	2	12	52	10	14
February '20	864	64	4	13	57	16	8
March '20	791	46	6	21	56	20	21
April '20	412	61	8	21	45	6	15
May '20	1084	169	9	36	66	20	20
June '20	351	146	7	35	74	20	46
Total	10072	986	83	287	697	207	248

# Light Rail Security Update

## 2016-2020 Comparisons



**Part I-II UCR Crime: January 1, 2016 - YTD (July 22, 2020)**  
 Statistics Provided by SPARC on 7/28/2020

**Offenses by UCR Type: January 1, 2016 - July 22, 2020**  
 Light Rail Stations vs. Other Place Types (based on Place Name)

	UCR PART I			UCR PART II			TOTAL
	LIGHT RAIL STATION	OTHER PLACE TYPE	Total	LIGHT RAIL STATION	OTHER PLACE TYPE	Total	
2016	Jan	58	58	125	125	183	183
	Feb	44	44	117	117	161	161
	Mar	66	66	144	144	210	210
	Apr	78	78	144	144	222	222
	May	79	79	154	154	233	233
	Jun	74	74	146	146	220	220
	Jul	79	79	119	119	198	198
	Aug	70	70	113	113	183	183
	Sep	96	96	143	143	239	239
	Oct	84	84	123	123	207	207
	Nov	96	96	123	123	219	219
	Dec	91	91	134	134	225	225
<b>Total</b>	<b>847</b>	<b>847</b>	<b>1,520</b>	<b>1,520</b>	<b>2,167</b>	<b>2,167</b>	
2017	Jan	64	64	107	107	171	171
	Feb	57	57	117	117	174	174
	Mar	60	60	124	124	184	184
	Apr	60	60	106	106	166	166
	May	60	60	190	190	250	250
	Jun	50	50	120	120	170	170
	Jul	44	44	96	96	140	140
	Aug	47	47	113	113	160	160
	Sep	55	55	109	109	164	164
	Oct	55	55	121	121	176	176
	Nov	66	66	103	103	169	169
	Dec	71	71	136	136	207	207
<b>Total</b>	<b>741</b>	<b>741</b>	<b>1,423</b>	<b>1,423</b>	<b>2,164</b>	<b>2,164</b>	
2018	Jan	48	48	133	133	181	181
	Feb	47	47	84	84	131	131
	Mar	57	57	113	113	170	170
	Apr	54	54	123	123	177	177
	May	57	57	130	130	187	187
	Jun	50	50	95	95	145	145
	Jul	47	47	96	96	143	143
	Aug	50	50	135	135	185	185
	Sep	50	50	144	144	194	194
	Oct	48	48	129	129	177	177
	Nov	50	50	117	117	167	167
	Dec	50	50	125	125	175	175
<b>Total</b>	<b>734</b>	<b>734</b>	<b>1,480</b>	<b>1,480</b>	<b>2,106</b>	<b>2,106</b>	
2019	Jan	45	45	104	104	149	149
	Feb	48	48	98	98	146	146
	Mar	45	45	132	132	177	177
	Apr	67	67	98	98	165	165
	May	44	44	123	123	167	167
	Jun	44	44	123	123	167	167
	Jul	50	50	84	84	134	134
	Aug	40	40	129	129	169	169
	Sep	64	64	103	103	167	167
	Oct	44	44	110	110	154	154
	Nov	44	44	87	87	131	131
	Dec	56	56	101	101	157	157
<b>Total</b>	<b>667</b>	<b>667</b>	<b>1,338</b>	<b>1,338</b>	<b>2,005</b>	<b>2,005</b>	
2020	Jan	26	26	103	103	129	129
	Feb	26	26	94	94	120	120
	Mar	26	26	86	86	112	112
	Apr	26	26	72	72	98	98
	May	26	26	104	104	130	130
	Jun	26	26	93	93	119	119
	Jul	26	26	50	50	76	76
<b>Total</b>	<b>139</b>	<b>3,235</b>	<b>3,374</b>	<b>267</b>	<b>6,374</b>	<b>6,641</b>	<b>10,015</b>

Tables include Part I-II UCR crimes grouped from General Offense data. Offenses include those falling completely within one-tenth of a mile of light rail route within Tempe city limits (**buffer area**). Place Name was used to identify offenses that were labeled as having occurred at the light rail station. **Interpret with caution**, as some offenses may have occurred at a light rail station, but were not labeled as such (resulting in lower totals). These offenses are included in the totals, and designated as **Light Rail Station**.

# Transit Security Update-Light Rail

## Ridership changes



### FY 19 & FY 20 Monthly Comparison

PASSENGERS				
Month	FY 2019	FY 2020	FY2019 vs FY2020	
			Change in Ridership	Change in Ridership %
Jul	1,132,145	1,102,434	-29,711	-2.6%
Aug	1,300,396	1,265,384	-35,012	-2.7%
Sep	1,290,632	1,289,552	-1,080	-0.1%
Oct	1,366,460	1,387,730	21,270	1.6%
Nov	1,300,637	1,315,355	14,718	1.1%
Dec	1,198,822	1,204,532	5,710	0.5%
Jan	1,316,749	1,283,967	-32,782	-2.5%
Feb	1,187,969	1,279,472	91,503	7.7%
Mar	1,321,957	980,537	-341,420	-25.8%
Apr	1,295,839	587,183	-708,656	-54.7%
May	1,255,510	585,091	-670,419	-53.4%
Jun	1,117,196	545,234	-571,962	-51.2%
Totals	15,084,312	12,826,471	-2,257,841	-15.0%
Year to Date	15,084,312	12,826,471	-2,257,841	
Average	1,257,026	1,068,873		

### June year over year snapshot

Total Monthly Boardings	Jun-20	Jun-19	Percent Change		
Light Rail	545,234	1,117,196	-51.2%	-571,962	-51.2%
Average Daily Monthly Boardings	Jun-20	Jun-19	Percent Change		
Weekday (Light Rail)	19,153	41,508	-53.9%	-22,355	-53.9%
Saturday (Light Rail)	16,647	31,573	-47.3%	-14,926	-47.3%
Sunday (Light Rail)	14,319	25,834	-44.6%	-11,515	-44.6%
Rail - Days					
Weekday	22	20	2	20,309	
Saturday	4	5	-1		
Sunday	4	5	-1		

# Light Rail Security Update



- Security/Police partnership - increase in productivity
- Part of Regional Security Team with Phoenix PD, Mesa PD, Valley Metro and security teams.
- Information/resource sharing between agencies
- Respect the ride program
- Trespassing & fare enforcement
- Training – Tactical Team, EOD & K-9
- Customer Experience Coordinators (CEC's)

Extension of respect the ride, customer experience, safety and security.

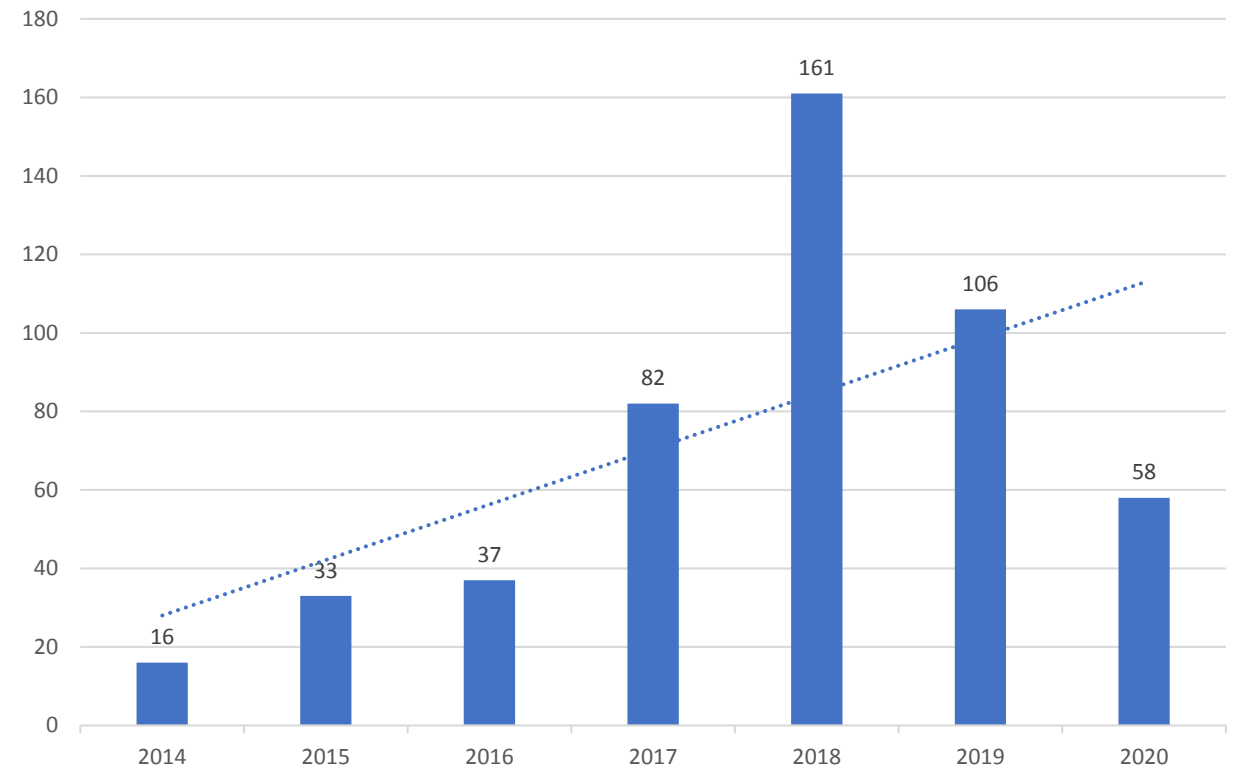


# Bus Security Program Update



- Positive feedback from Bus operators and public
- Balance between enforcement and Social services referrals
- Problem solving – CPTED, HOPE Team, Legal, Transit Facilities
- Training – Tactical Team, Mental Health for First Transit
- EVBOM & TTC camera system improvements
- Unique challenges due to COVID-19 pandemic.

BUS PROGRAM ARRESTS





# MEMORANDUM

**TO:** Tempe Transportation Commission  
**FROM:** Shelly Seyler, Deputy Engineering & Transportation Director, 350-8854  
**DATE:** August 20, 2020  
**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.

**CITY COUNCIL STRATEGIC PRIORITY:** N/a

**BACKGROUND INFORMATION:**

- September 8
  - Annual Report
  - Bike Share
  - Transit Service Reduction Plan
  - Traffic Mitigation Strategies
- October 13
  - Annual Report
  - Priest Drive Bicycle Lane Design Assistance Project
  - BRT Study
  - Ash and University Intersection
- November 10
  - Scottsdale Road Bike Lanes
  - Entitled Development Projects
  - Transportation Demand Management Association
  - Mobility Hubs
- December 8
  - 20 Minute City Market Research Results
  - 2020 Transit Satisfaction Survey Results
- January 12
  - Transit Service Reduction Plan
  - Country Club Way Streetscape
  - Commission Business
  - Vision Zero Update
- February 9
  - Cool Pavement Treatment
  - Personal Delivery Devices
  - Outreach Plan for I-10 Corridor Construction
- TBD: North/South Rail Spur MUP
- TBD: Commuter Rail Study
- TBD: Open Streets

**FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:** N/a

**ATTACHMENTS:** None