

# Tempe Streetcar

APTA Streetcar Subcommittee 2019 Mid-Year Meeting February 27, 2019





#### **Outline**



- Regional Rail System
- City of Tempe
- Overview/Project Features
- Design Challenges
- Schedule/Milestones
- Construction Challenges
- Financial Breakdown
- Streetcar Extension Study



## Regional Light Rail System

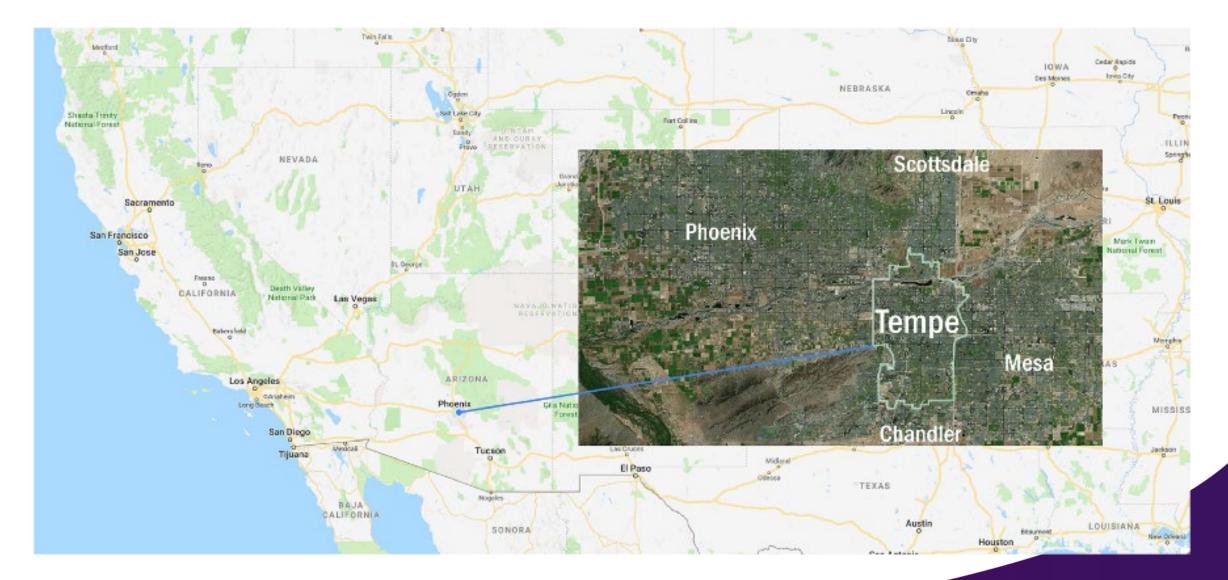






## Tempe, AZ

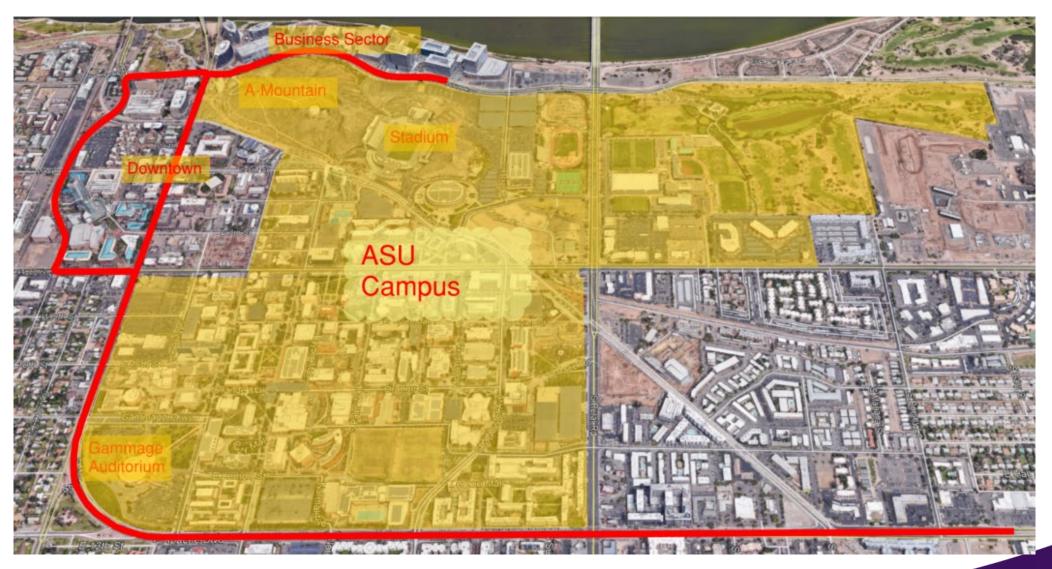






## Tempe, AZ

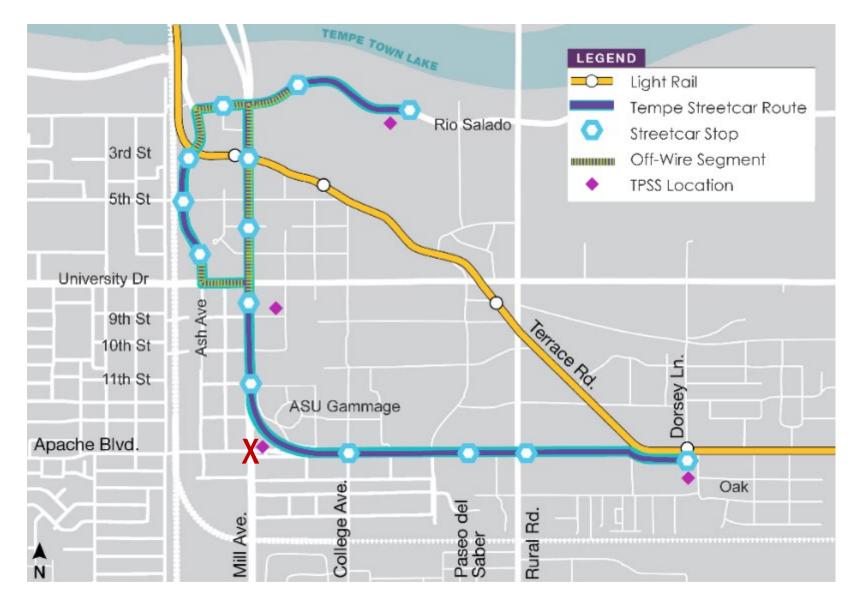






#### **Overview**





- Approximately 3 Miles
- 14 Stops
- 2 LRT Crossings
  - Ash Avenue
  - Mill Avenue
- 1 LRT Connection
  - Dorsey Lane
- 3 Traction Power Sub Stations (TPSS)



## **Public Art**





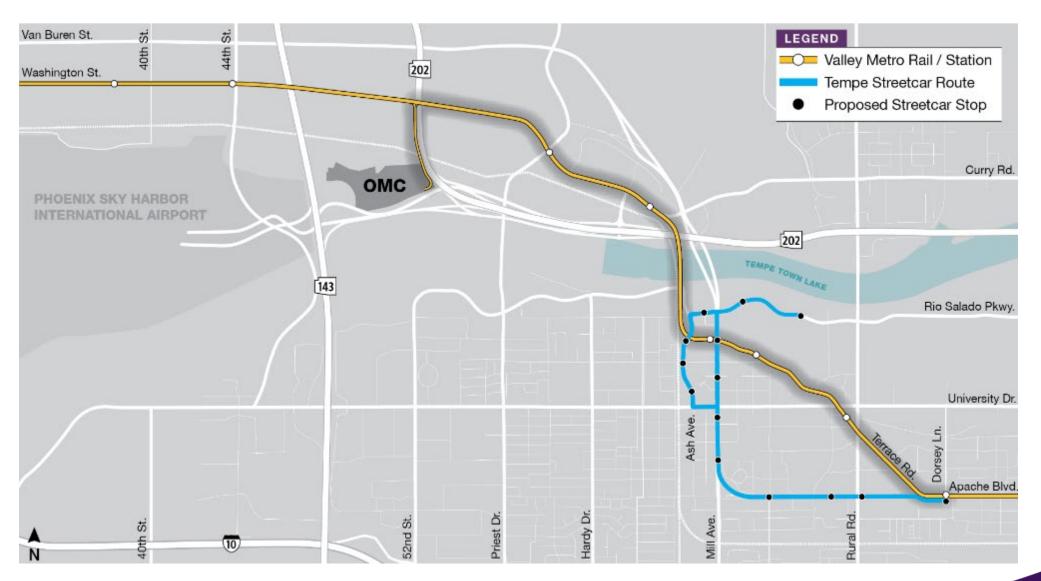






#### **Route to OMC**









### **Streetcar Vehicle**



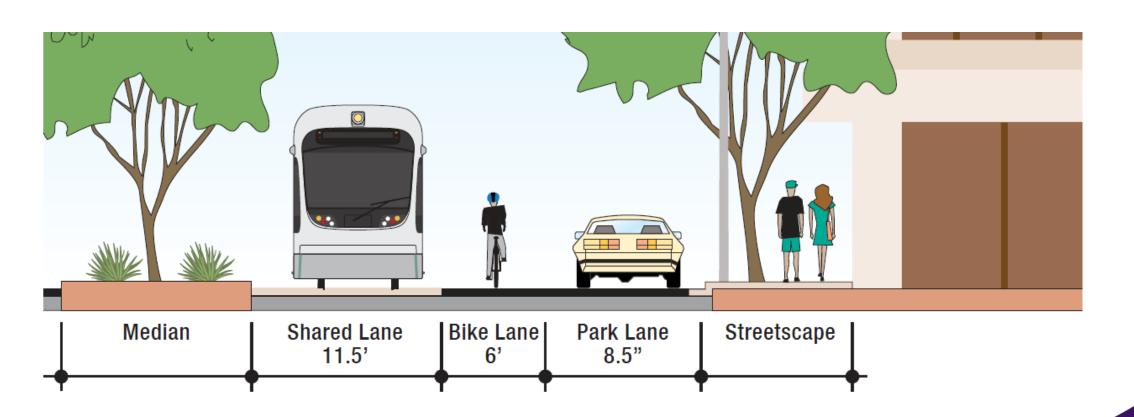






## Mill Avenue Configuration

Mill – University to Rio Salado







## Design Challenges - Miscellaneous

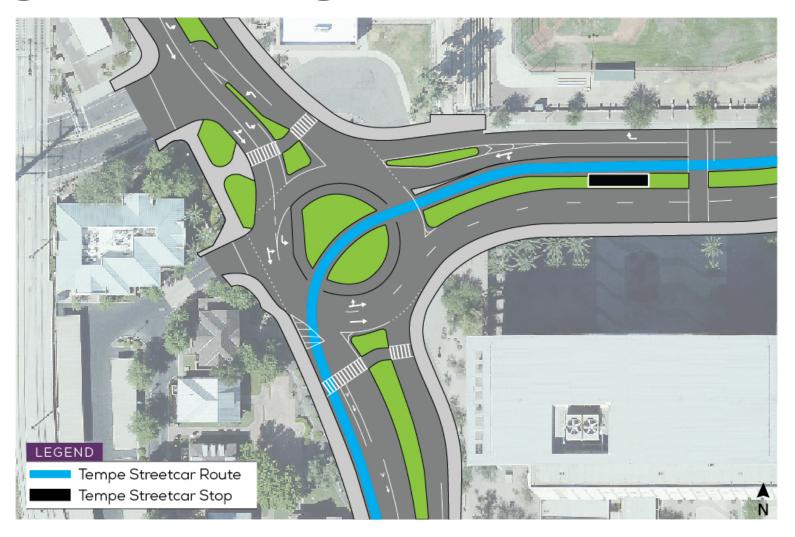
- Utility Relocation Requirements
- # of TPSS
- Feeder Cables
- Landscaping
- Stops
- Alignment







## Design Challenges - Roundabout





## Design Challenges – Rio Salado









#### **Construction Schedule**

| Construction Elements                        | 2017 |  | 2018 |  |  | 2019 |  |  | 2020 |  |  | 2021 |  |  |  |  |  |  |  |
|--|------|--|------|--|--|------|--|--|------|--|--|------|--|--|--|--|--|--|--|
| Utility Relocation                           |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Roadway Work                                 |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Track Guideway Installation                  |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Stop Platforms                               |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Electrical Systems<br>Installation           |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Operations Training Vehicle & System Testing |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |
| Opening                                      |      |  |      |  |  |      |  |  |      |  |  |      |  |  |  |  |  |  |  |

• 14-year process: planning start - 2007



VALLEY METRO

Tempe Streetcar Milestones

- Rail Delivery
- EE Approval
- ASU Agreement
- APS Agreement
- GMP Negotiations
- Risk Review
- SYGA Approval







## **Construction Challenges - LRT**





## **Construction Challenges - Traffic**







#### **Traffic Control Challenges**

- No surprises
- Capacity maintained during peak travel around the alignment dependent on caliber of work
- Restrictions limited to active work areas (traffic control will disperse when/where work is completed)
- Coordination with special events, adjacent construction, stakeholders, traffic engineering, Tempe PD









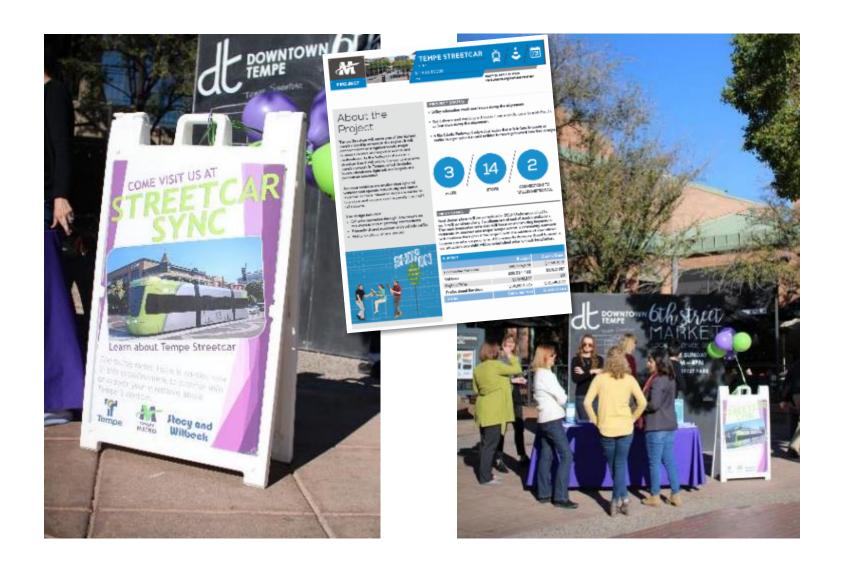
## Tempe Streetcar Project Funding

| Funding           | Amount  |
|-------------------|---------|
| Regional/Prop 400 | \$95 M  |
| FTA Small Starts  | \$75 M  |
| Federal CMAQ      | \$19 M  |
| Tempe/Private     | \$13 M  |
| Total             | \$202 M |



#### **Outreach & Business Assistance**











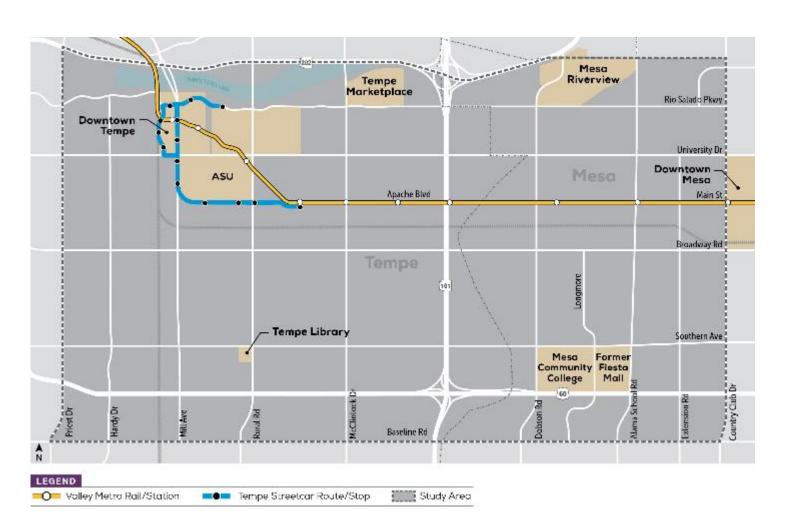
## **Coordinating with Others**

| Gilbane Hayden Ferry                  |               |  | Public Wor                            |                                  |                            |                   |  |  |  |
|---------------------------------------|---------------|--|---------------------------------------|----------------------------------|----------------------------|-------------------|--|--|--|
|                                       | Lakeside, l   | -LC. Couri                               | n/                                    | ADOT                             | Hayden Fid                 | Hayden Flour Mill |  |  |  |
| Tempe Commissio<br>Disability Concern |               | FTA                                      |                                       | )mni                             | UPRR                       | Downtown<br>Tempe |  |  |  |
| City of Pho                           | oenix – Water |  | NPS Va                                | alley Metro –<br>ublic Relations | <b>ASU</b> Tempe City      | Authority         |  |  |  |
| Tempe Police Dept. Zay                | Zayo          |  | roducts                               | Four Southern                    | Tribes                     | Mirabella         |  |  |  |
| Valley N                              | 1etro –       | Maple-Ash<br>Neighborhood<br>Association | AT&T                                  | Tempe Fire D                     | •                          | Level 3           |  |  |  |
| •                                     | Operations &  |  | Ne                                    | exa                              | VMA                        |                   |  |  |  |
| Mainter Southwest Gas                 | Brook         | ville Pre                                | mpe Historic<br>servation<br>mmission | Maricopa<br>Environme            | County –<br>ental Services |                   |  |  |  |



## **Streetcar Extension Study**





- Partnership with Valley Metro, Tempe & Mesa
- Investigate and identify highcapacity rail corridors
- Expand on potential extensions identified in 2014

# **Next Steps**

- SYGA Approval
- Continue Track Installation (2,600' out of 28,000' to date)
- Finish utility relocations, including 3<sup>rd</sup> Party
- First Summer Downtown
- Vehicle Delivery April 2020
- Substantial Completion November 2020
- Open 2021





#### **Thank You!**







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