Pursuant to Arizona Revised Statutes, A.R.S. Section 38-431.02, notice is hereby given to the members of the CITY OF PHOENIX CITIZENS TRANSPORTATION COMMISSION and to the general public, that the CITIZENS TRANSPORTATION COMMISSION (CTC) will hold a meeting open to the public on Sept. 27, 2018, at 5:00 p.m. located in the Saguaro Conference Room, 2nd Floor, Public Transit Building, 302 N. 1st Avenue, Phoenix, Arizona.

One or more commission members may participate via teleconference. Agenda items may be taken out of order.

The agenda for the meeting is as follows:

| 1. | Call to Order | Chairperson Pastor |
| 2. | Approval of the minutes of the August 23, 2018 meeting | Commission members |
| 3. | Options to Increase Pavement Maintenance on City Streets | Street Transportation Public Transit |
| 4. | South Central Light Rail Extension Update | Public Transit Jesus Sapien |
| 5. | T2050 Annual Progress Report | Report Only No Presentation |
| 6. | USDOT Grant Submissions- Advanced Transportation and Congestion Management Technology Deployment Initiative (ATCMTDI) | Report Only No Presentation |

This item is for information, discussion, and possible action.

This item is for information and discussion.

This item is for information only.
|   | **7. T2050 Financial Update**  
This report shows the current fiscal year sales tax revenues collected, life-to-date sales tax revenues collected, and the current year program expenditures. | Report Only  
No Presentation |
|---|---|---|
|   | **8. Upcoming T2050 Related Public Meetings/Events**  
This report provides a list of upcoming T2050 related public meetings/events held by Public Transit and Street Transportation Departments, and Valley Metro. | Report Only  
No Presentation |
|   | **9. Call to the Public**  
Consideration, discussion, and concerns from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of the public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date. | Chairperson  
Pastor |
|   | **10. Request for Future Agenda Items**  
Commission member request for information, follow-up or future agenda items. | Commission members |
|   | **11. Adjournment** | Chairperson  
Pastor |

For further information, please call Kelly Murray, Acting Management Assistant II, 602-534-6385.

Persons paid to lobby on behalf of persons or organizations other than themselves shall register with the City Clerk prior to lobbying or within five business days thereafter, and must register annually to continue lobbying. If you have any questions about registration or whether or not you must register, please contact the City Clerk’s Office at 602-262-6811.

To request reasonable accommodations, call Kelly Murray at Voice/602-534-6385 or TTY/7-1-1 as early as possible to coordinate needed arrangements.
Public Transit Department  
302 N. First Avenue, 2nd Floor

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<tr>
<th>Commission Present</th>
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<tr>
<td>David Adame</td>
<td>Kelly Kaysonepheth</td>
<td>Kathryn Boris</td>
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<td>Bert Aldieri</td>
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<td>Angel Borrego</td>
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<td>Jennifer Mellor</td>
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**Absent**

Ed Pastor  
Gail Knight  
David Martin

1. **Call to Order**  
   Chair Naimark called the meeting to order at 5:00 p.m. with a quorum present.

2. **Approval of the minutes of the May 31, 2018 meeting**  
   Chair Naimark asked for a motion to approve the minutes.
Commissioner Glawe moved to approve the May 31, 2018 minutes. The motion was seconded by Aldieri.

Commissioner Pangrazio – yes
Commissioner Smith – yes
Commissioner Glawe – yes
Commissioner Mellor – yes
Commissioner Miller – yes
Commissioner Loyola – yes
Chair Naimark – yes
Commissioner Tempest – yes
Commissioner Adame – yes
Commissioner Brennan – yes
Commissioner Aldieri – yes

The motioned passed.

Commissioner Miller inquired about a question he asked at the May 31, 2018 meeting regarding the cost of the I-10 interchanges. Deputy City Manager Mario Paniagua affirmed a response will be as soon as the information is available.

Mr. Paniagua announced the retirement of Street Transportation Director Maria Hyatt and introduced Interim Street Transportation Director Bill Wiley.

3. Complete Streets Design Guidelines

Deputy City Manager Mario Paniagua introduced Special Projects Administrator Chris Kowalsky to present on item 3. Mr. Kowalsky gave an overview of the work completed by the Complete Streets Working Group, which included a balanced cross-section of stakeholders. He described the key points of the proposed Complete Streets Design Guidelines. He noted the proposed Complete Streets Design Guidelines are not a "one-size fits all" application and would require a context-sensitive approach to areas where applicable. Mr. Kowalsky emphasized the guidelines are not regulatory, but a pattern for discussion to update City documents, policies, and plans. He reviewed the cost analysis and benefits of the guidelines. Mr. Kowalsky requested the Citizens Transportation Commission (CTC) recommend Transportation and Infrastructure (T&I) Subcommittee and City Council approval of the proposed Complete Street Design Guidelines.

Commissioner Miller inquired about the process used for the Complete Streets Working Group meetings and presenting revised Complete Streets Design Guidelines to the CTC. Chair Naimark explained that the process was appropriate, as the Working Group provided guidance to staff, who then developed a revised set of proposed guidelines, following through with the Commission's request to gather input and return with recommendations.

Chair Naimark explained the Complete Streets Design Guidelines are used as guidance for policy makers to make policies.

Chair Naimark called to the public for comment. There were no public comments.
The Commission discussed the flexibility that the guidelines provides to address various conditions of areas and neighborhoods.

Commissioner Miller commented he attended the meetings held to discuss the Complete Streets Design Guidelines. He stated he expressed his desire to include the term “efficiency” into the guidelines, but it was not included in the proposed guidelines. Vice Chair Naimark clarified the guidelines presented is a staff recommendation based upon stakeholder input who attended the meetings. Mr. Kowalsky clarified there was significant discussion and alternate viewpoints from the Working Group about including the term “efficiency” into the guidelines. Mr. Kowalsky explained “efficiency” would be better suited for key performance indicators.

Commissioner Aldieri stated his support of the proposed Complete Streets Design Guidelines.

Commissioner Tempest commented there are Complete Streets Design Guidelines across the nation that include recommendations to address safety, inclusivity, aesthetics, and the heat island effect. She expressed the guidelines have been softened and recommended some language from the original guidelines be included in the proposed guidelines.

Commissioner Adame inquired about how the Phoenix Planning and Development Department will utilize the Complete Streets Design Guidelines. Mr. Kowalsky informed the Commission that the guidelines will provide the basis for a list of options of Complete Streets elements, and used as a guide for the development community when reviewing the impacts in the right-of-way.

In response to Mr Adame’s question about budgetary impacts, Mr. Paniagua explained to the Commission that the guidelines will have budget impacts that will be reviewed and implemented on a case by case basis. Since each project will be determined by the appropriate context, he explained that the individual project budgets will incorporate the costs of the elements determined to be included for each project.

Mr. Kowalsky recommended reviewing the guidelines by section, and the commission agreed.

Mr. Kowalsky read through Section 1 Introduction of the proposed Complete Streets Design Guidelines.

Commissioner Smith commented that multiple cities are removing and reconsidering bike lanes on high traffic streets.

Chair Naimark mentioned the guidelines take into account public input, language and terms, and various area conditions.

Chair Naimark inquired for a motion to adopt the guidelines section by section.
Commissioner Aldieri moved to adopt the Complete Streets Design Guidelines as presented and recommended by staff. The motion was seconded by Commissioner Pangrazio.

Commissioner Miller stated the motion should be ruled out of order. Chair Naimark indicated the motion was not out of order.

After additional discussion, Commissioner Aldieri moved to withdraw the motion. The motion to withdraw was seconded by Commissioner Pangrazio.

Commissioner Mellor moved to approved the introduction as written. The motion was seconded by Commissioner Miller.

Commissioner Pangrazio – yes
Commissioner Smith – yes
Commissioner Glawe – yes
Commissioner Mellor – yes
Commissioner Miller – yes
Commissioner Loyola – yes
Chair Naimark – yes
Commissioner Tempest – yes
Commissioner Adame – yes
Commissioner Brennan – yes
Commissioner Aldieri – yes

The motion passed, 11–0.

Section 2 – Design Principles for Successful Complete Streets
Design for Context

Mr. Kowalsky read through the subsection ‘Design for Context’ of Section 2 Design Principles for Successful Complete Streets of the proposed Complete Streets Design Guidelines.

Commissioner Miller moved to revise bullet point 3 of section 2 to be worded “should be considered where appropriate, however…” The motion was seconded by Commissioner Loyola.

The commission discussed the motion and clarified including a period (.) after the word “appropriate.”

Commissioner Pangrazio – no
Commissioner Smith – yes
Commissioner Glawe – no
Commissioner Mellor – no
Commissioner Miller – yes
Commissioner Loyola – no
Chair Naimark – no
Commissioner Tempest – no
Commissioner Adame – no
Commissioner Brennan – no
Commissioner Aldieri – no

The motion failed, 2-9.

Commissioner Aldieri stated his recommendation was to veer from making cosmetic revisions.

Chair Naimark agreed, and stated motions for revisions should be made if they significantly alter the guidelines.

Commissioner Loyola called for question. The call for question was seconded by Commissioner Aldieri. The motion made by Commissioner Miller and seconded by Commissioner Loyola to change bullet point 3 of section 2 to be worded “should be considered where appropriate.”

Commissioner Pangrazio – No
Commissioner Smith – Yes
Commissioner Glawes – Yes
Commissioner Mellor – No
Commissioner Miller – Yes
Commissioner Loyola – Yes
Chair Naimark – No
Commissioner Tempest – No
Commissioner Adame – No
Commissioner Brennan – No
Commissioner Aldieri – No

The motion failed, 4-7.

Commissioner Tempest commented that the second bullet point has been too carefully worded. She inquired about why some terms from the original second bullet point was removed and recommended to include the original second bullet point into the proposed guidelines. Mr. Kowalsky stated the revisions were made to help refrain from being too specific and keep to the context-sensitive approach.

Commissioner Tempest moved to change the word “buffered” from the third bullet point to the original sentence. The motion was not seconded.

Commissioner Tempest moved to remove the second sentence from the third bullet point. The motion was not seconded.

Commissioner Mellor moved to adopt ‘Design for Context’ subsection as written. The motion was seconded by Commissioner Glawes.

Commissioner Pangrazio – Yes
Commissioner Smith – No
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – No
Commissioner Loyola – Yes
Chair Naimark – Yes
Commissioner Tempest – No
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motion passed, 8-3.

Section 2 – Design Principles for Successful Complete Streets
Design for Safety

Mr. Kowalsky read the subsection ‘Design for Safety’ of Section 2 Design Principles for Successful Complete Streets of the proposed Complete Streets Design Guidelines.

Commissioner Aldieri moved to adopt ‘Design for Safety’ subsection as written. The motion was seconded by Commissioner Mellor.

Commissioner Tempest explained she is not in favor of the motion and stated the proposed ‘Design for Safety’ subsection does not have language about designing streets for slower speed to reduce the number of serious crashes and streets should be designed for the posted street limit, which were in the original ‘Design for Safety’ subsection.

Commissioner Miller expressed he is not in favor of the motion and stated the proposed ‘Design for Safety’ subsection does not include “efficiency” in the title.

Commissioner Tempest requested to amend the motion and replace bullet points one and two of the proposed ‘Design for Safety’ subsection with bullet points one and two from the original ‘Design for Safety’ subsection. Commissioner Loyola seconded the motion.

Commissioner Aldieri expressed his disagreement with the amended motion.

Commissioner Pangrazio – No
Commissioner Smith – No
Commissioner Glawe – No
Commissioner Mellor – No
Commissioner Miller – No
Commissioner Loyola – Yes
Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – No
Commissioner Brennan – Yes
Commissioner Aldieri – No
The motion failed, 4-7.

Commissioner Aldieri moved to adopt ‘Design for Safety’ subsection as written. The motion was seconded by Commissioner Mellor.

Commissioner Pangrazio – Yes
Commissioner Smith – No
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – No
Commissioner Loyola – Yes
Chair Naimark – Yes
Commissioner Tempest – No
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motion passed, 8-3.

Section 2 – Design Principles for Successful Complete Streets
Design for Comfort and Convenience

Mr. Kowalsky read the subsection ‘Design for Comfort and Convenience’ of Section 2 Design Principles for Successful Complete Streets of the proposed Complete Streets Design Guidelines.

Commissioner Miller moved to revise bullet points two and remove the word “all” and add “where appropriate” after the word infrastructure. The motion was seconded by Commissioner Smith.

Commissioner Loyola stated bullet point two is context-sensitive.

Commissioner Aldieri agreed that the ‘Design for Comfort and Convenience’ subsection is context-sensitive.

Commissioner Pangrazio – No
Commissioner Smith – Yes
Commissioner Glawe – No
Commissioner Mellor – No
Commissioner Miller – Yes
Commissioner Loyola – No
Vice Chair Naimark – No
Commissioner Tempest – No
Commissioner Adame – No
Commissioner Brennan – No
Commissioner Aldieri – No

The motion failed, 2-9.
Commissioner Glawe moved to adopt the ‘Design for Comfort and Convenience’ subsection as written. The motion was seconded by Commissioner Loyola.

Commissioner Pangrazio – Yes
Commissioner Smith – No
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – No
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motion passed, 9-2.

Section 2 – Design Principles for Successful Complete Streets

Design for Sustainability

Mr. Kowalsky read the subsection ‘Design for Sustainability’ of Section 2 Design Principles for Successful Complete Streets of the proposed Complete Streets Design Guidelines.

Commissioner Smith moved to adopt ‘Design for Sustainability’ in Section 2 of the proposed Complete Streets Guidelines and remove the word “maximize” for bullet one. The motion was seconded by Commissioner Miller.

Commissioner Pangrazio – No
Commissioner Smith – Yes
Commissioner Glawe – No
Commissioner Mellor – No
Commissioner Miller – Yes
Commissioner Loyola – No
Vice Chair Naimark – No
Commissioner Tempest – No
Commissioner Adame – No
Commissioner Brennan – No
Commissioner Aldieri – No

The motion failed, 2-9.

Commissioner Loyola moved to adopt ‘Design for Sustainability’ subsection as written. The motioned was seconded by Commissioner Glawe.

Commissioner Pangrazio – Yes
Commissioner Smith – No
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – No
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motion passed, 9-2.

Section 2 – Design Principles for Successful Complete Streets
Design for Cost-Effectiveness

Commissioner Loyola moved to adopt ‘Design for Cost-Effectiveness’ as written. The motion was seconded by Commissioner Mellor.

Commissioner Pangrazio – Yes
Commissioner Smith – Yes
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – Yes
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motioned passed, 11-0.

Section 2 – Design Principles for Successful Complete Streets
Design for Connectivity

Commissioner Miller moved to adopt ‘Design for Connectivity’ subsection as written. The motion was seconded by Commissioner Aldieri.

Commissioner Pangrazio – Yes
Commissioner Smith – Yes
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – Yes
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes
The motion passed, 11-0.

Section 3 – NACTO Urban Street Design Guide

Commissioner Tempest moved to adopt the Section 3 ‘NACTO Urban Street Design Guide’ as written. The motion was seconded by Commissioner Aldieri.

Commissioner Pangrazio – Yes
Commissioner Smith – Yes
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – Yes
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motioned passed, 11-0.

Section 4 – Stormwater Management & Green Infrastructure

Commissioner Miller moved to adopt Section 4 ‘Stormwater Management & Green Infrastructure’ as written. The motion was seconded by Commissioner Aldieri.

Commissioner Pangrazio – Yes
Commissioner Smith – Yes
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – Yes
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motioned passed, 11-0.

Commissioner Aldieri moved to adopt the entire proposed Complete Streets Design Guidelines. The motion was seconded by Commissioner Tempest.

Commissioner Miller expressed his disagreement of the proposed Complete Streets Design Guidelines not including language about efficiencies and he is not favor of the motion.
Commissioner Tempest expressed she is pleased to with development and progress of the proposed Complete Streets Design Guidelines after four years of coordination with the community and she is in favor of the motion.

Commissioner Aldieri stated efficiency is addressed throughout the proposed Complete Streets Design Guidelines and he is in favor of the motion.

Commissioner Loyola stated performance measures will track efficiency of the proposed Complete Streets Design Guidelines and stated he is in favor of the motion.

Commissioner Smith stated his community is concerned the Complete Streets Design Guidelines will negatively impact the character of the community and he is not favor of the motion.

Commissioner Brennan stated the proposed Complete Streets Design Guidelines will be a benefit to the South Mountain Community and he is in favor of the motion.

Chair Naimark described the history and development of the proposed Complete Streets Design Guidelines and stated he is in favor of the motion.

Commissioner Adame stated he is in favor of the motion.

Commissioner Pangrazio – Yes
Commissioner Smith – No
Commissioner Glawe – Yes
Commissioner Mellor – Yes
Commissioner Miller – No
Commissioner Loyola – Yes
Vice Chair Naimark – Yes
Commissioner Tempest – Yes
Commissioner Adame – Yes
Commissioner Brennan – Yes
Commissioner Aldieri – Yes

The motion passed, 9-2.

4. **T2050 Financial Update**

   Vice Chair Naimark informed the commission that agenda item 4 was an information report only.

   There were no comments.

5. **Upcoming T2050 Related Public Meetings/Events**

   Chair Naimark informed the commission that agenda item 5 was an information report only.
There were no comments.

6. Call to the Public

Chair Naimark called for public comment.

Commissioner Aldieri requested a copy of the South Central Light Rail report to be provided to Council.

7. Request for Future Agenda Items

Future agenda items agreed upon by the commission included:

1) IGA with MCDOT – Consent Action

2) Conduent (Vehicle Management System) Maintenance Contract Extension – Action

3) T2050 Annual Report – Info/Discuss

The commission discussed items they would like to have brought forth:

Commission Adame requested an update regarding the South Central Light Rail Extension Project. Chair Naimark inquired about the timeline for the South Central Light Rail Extension Project. Mr. Paniagua informed the Commission the South Central Light Rail Extension Project is expected return to City Council based on a request by the Federal Transit Administration for the Council to confirm the project design.

Commissioner Aldieri requested the Commission be continuously informed about staff recommendations or reports regarding the South Central Light Rail Extension. Commissioner Miller requested a special CTC meeting prior to the South Central Light Rail Extension Project returning to City Council.

Assistant Chief Counsel Jo Ellen McBride informed the Commission that City Council has already acted on CTC recommendations about the South Central Light Rail Extension Project. Commission Miller inquired if a new recommendation could be made. Ms. McBride stated the Chair would have to approve a new item with a recommendation on a new agenda.

Commissioner Aldieri requested revisiting light rail operating cost and an update about the replacement of street signs and painting of street sign posts.

Commissioner Smith requested information about the ADOT work on the Central Ave bridge over the I-17 and the potential impacts to the South Central Light Rail Extension Project. Mr. Paniagua stated staff would get with him to provide the information.

Commissioner Miller requested bicycle traffic counts.

Commission Smith encouraged the commission to read the newsprint he provided from the Wall Street Journal regarding the “The Future of Cities.”

8. Adjournment
The meeting was adjourned at 7:20 p.m.

August 23, 2018
This report provides information on City pavement conditions and potential funding options to expedite pavement maintenance on City streets, including evaluation of planned future light rail extensions, as requested by the City Council. The Citizen's Transportation Commission is requested to provide a recommendation on this issue for Council consideration.

BACKGROUND
The Street Transportation Department (Streets) maintains a comprehensive roadway network of more than 4,863 miles of public streets, including:

- Major Streets: arterials and major collectors - typically the major north/south and east/west transportation corridors, spaced at each mile for arterials and on the ½-mile for major collectors
- Minor Streets: minor collectors and residential/local - lower level transportation corridors and roads in residential areas providing connectivity between the collectors and arterials

The chart in Attachment A shows the breakdown of the 4,863 street miles by City Council District.

With current funding, the department has expanded options for the pavement maintenance program to include pavement preservation treatments such as: crack seal, fog seal and microsurfacing in addition to asphalt overlays. The use of several levels of preservation treatments provides multiple benefits to the pavement maintenance program, including:

- Lower cost of treatment per mile, both initially and over the pavement lifecycle
- Increased quantity of roadways that receive treatments annually
- Higher number of roadway miles maintained in fair to very good condition
- Increased number of roadway miles maintained appropriately, extending pavement lifecycle

Currently, approximately 300 miles annually are treated through the comprehensive pavement preservation program, which allows for arterial and major collector streets to be treated every 10 years, and minor collector and residential streets treated every 10-12 years.

Prior to passage of Proposition 104 (T2050) by Phoenix voters in 2015, funding for pavement maintenance was reduced to as low as $13 million annually for the City’s
entire street network due to the economic downturn and reductions to statewide Highway User Revenue Funds (HURF). Funding levels at that time allowed for a pavement maintenance cycle of one asphalt overlay every 67 years for City streets. All of this led to a more rapid deterioration of pavement conditions and a higher number of roads in poor or failing condition. Due to limited funding, the pavement maintenance program was modified to consist of asphalt overlay-only treatments. The use of other interim pavement treatment options to extend the pavement life were eliminated, which significantly limited the effectiveness and reach of the overall program.

With T2050 in place to supplement state HURF, Streets spends approximately $45 million annually on its pavement maintenance program. This includes about $29 million per year from HURF funds for local/residential streets and about $16 million per year from T2050 on arterial/major collector streets. With those current funding levels for the comprehensive pavement maintenance program, arterial and major collector streets are treated every 10 years, and minor collector and local streets are treated every 10-12 years.

CURRENT PAVEMENT CONDITIONS
To establish priorities of streets to receive pavement maintenance and type of pavement treatments, staff uses the Pavement Management System (PMS) to determine the condition of roadways. PMS is a tool used by cities throughout the country. PMS is built on field data obtained using a high-tech pavement management vehicle, which objectively measures and records the condition of roads, evaluating them on surface roughness, environmental stresses and structural condition. The evaluation and analysis produces a pavement condition index (PCI) measurement and rating system for the City’s streets. These ratings are tracked, mapped and managed in the department’s PCI database. Staff uses these objective measurements of roadway conditions to determine a list of streets to receive pavement maintenance treatments.

The PCI is measured on a scale of 0-100, with 100 being the best. A street in good condition is considered to have a minimum PCI of 70. Using the most recently collected PCI data, only approximately 30 percent of our roads are considered in good or excellent condition. The remainder are classified as fair, poor or very poor condition, which means that of the 4,863 miles of streets Citywide, about 3,227 miles are currently in less than good condition. This includes approximately 380 miles of major streets (arterials and major collectors) and approximately 2,847 miles of minor streets (residential and minor collectors).

Streets staff benchmarked surrounding cities to determine how they evaluate and manage their streets and found that they also utilize average PCI goals. The current PCI ratings for the surrounding cities ranged from 70 to 76 for arterial streets, while residential and collector streets ranged between 60 and 80. Phoenix’s current overall average PCI is around 66.

With consideration of feedback received concerning the condition of City streets, as well as a desire to potentially increase focus and resources dedicated to pavement maintenance, Streets staff is proposing to bring all streets to a minimum (not average) PCI of 70.

Based on a Finance Department analysis of existing fund balances, Streets is using a one-time amount of $50 million from the current HURF fund balance to address immediate pavement maintenance needs.
Attachment B provides a PCI forecast based on several assumptions and factors for street miles in each Council District that are currently below and that will fall below 70 PCI within the next five years.

FUNDING REQUIRED TO ACHIEVE A MINIMUM 70 PCI ON CITY STREETS
To reach a minimum 70 PCI would require significant additional funding above what is currently allocated. Further, because of the extensive amount of work this involves throughout the City, including availability of contractors, necessary traffic restriction impacts, and other factors outlined later in this report, staff would recommend completing such an effort over a five-year period that includes the current fiscal year. The chart in Attachment C outlines the estimated additional pavement overlay costs of $1.6 billion to reach a minimum good (70 or above PCI) condition for approximately 4,085 miles of streets over the next five fiscal years.

The City Council has also indicated the importance of addressing other right-of-way infrastructure improvements along City roadways such as curb, gutter, sidewalks, landscaping and streetlights in certain areas that lack these street amenities, but desire them. Costs for these improvements are not included in the above estimates as part of the pavement maintenance program.

OPTIONS TO INCREASE FUNDING FOR PAVEMENT MAINTENANCE
At the request of City Council, Streets staff identified the options below as possible ways to increase funding for pavement maintenance:

1. **Modify Distribution of Current HURF Funds and T2050 Streets Funds**
   Currently, about 30 percent of both State HURF and T2050 Streets Capital Improvement Program (CIP) funds is allocated to the construction of new and expanded streets throughout the City. Shifting the allocation of these funds from 30 percent to 15 percent would free up approximately $23 million annually to the pavement maintenance program, but would require delaying currently planned and future Streets Capital Improvement Program projects. Over five years, this would total approximately $115 million to address pavement condition. Additionally, continuing this allocation beyond the five-year period would provide some of the additional funds needed to ensure that streets can be maintained above 70 PCI on an ongoing basis. This option will postpone several planned CIP projects a minimum of five years, and will greatly limit the number of new street improvement projects that can be started. Attachment D includes the list of planned CIP projects that would be impacted.

2. **Accelerate Pavement Funding in Streets T2050 Through Financing**
   Finance Department analysis shows that about $150 - $200 million in funding could be advanced during the next five fiscal years through financing within the existing Streets allocation of T2050. Because this option utilizes the existing Streets allocation of T2050 funds, no transit-related projects would be impacted by this option. Although this would help address immediate pavement maintenance needs, it would reduce funds available in future years for street maintenance as the debt service is paid. It is estimated that this option would require debt service payments of $12 - $15 million annually from future Streets T2050 revenues over the next 20 years. This option does not provide any new revenues to Streets for pavement maintenance. The timing of debt issuance and repayment plan would require further analysis and development by the Finance Department.
3. Accelerate Pavement Funding in Streets HURF Through Financing
Finance Department analysis shows that about $150 - $200 million in funding could be advanced during the next five fiscal years through financing within the Streets allocation of HURF funds. Although this would help address immediate pavement maintenance needs, it would reduce funds available in future years for street maintenance as the debt service is paid. It is estimated that this option would require debt service payments of $12 - $15 million annually from future Streets HURF revenues over the next 20 years. This option does not provide any new revenues to Streets for pavement maintenance. The timing of debt issuance and repayment plan would require further analysis and development by the Finance Department.

4. Additional Financing for Current Rail Projects to Free Up Current Funds for Streets Pavement Maintenance
Based on analysis by the Finance and Public Transit departments of current projections, without affecting future rail projects, the City Council could direct financing to make available up to an additional $150 - $200 million of T2050 transit funds during the next five fiscal years. This would reduce future reserves and the ability to weather economic downturns as debt service is paid over the life of the T2050 program. This option would not impact the timing or implementation of any currently planned or future light rail projects; rather it would potentially require additional financing for the implementation of the three light rail projects currently slated for completion in 2023. This option would provide Streets with additional T2050 program monies, which Streets would not be required to repay to the T2050 Light Rail Program. The timing of debt issuance and repayment plan would require further analysis and development by the Finance Department.

5. Delay West Phoenix and Northeast Light Rail Extensions
Two future light rail extension projects were identified by the City Council during the discussions on this issue for possible delay to free up T2050 funds for additional street pavement maintenance:
   a. West Phoenix - This project would extend the existing light rail system along Camelback Road from 19th Avenue west over Interstate 17 to 43rd Avenue, where it would terminate. The City of Glendale no longer plans to connect and extend light rail at that point. The current regional transportation plan has a planned opening year of 2026 for the West Phoenix extension.
   b. Northeast - This project would extend the existing light rail system to the Paradise Valley Mall area, with a planned opening year of 2034. Two corridor route options have been identified for further study, but a preferred alignment has not been determined.

If these two projects were delayed so that the first-year expenditures would both occur in year 2050, the final year of the 35-year T2050 program, the T2050 light rail program would realize significant capital and operating resource savings.

For the West Phoenix extension project, if the City Council delays the project as described above, additional financing could enable funds to be used during the next five fiscal years. Approximately $200 million could be financed in such a way that resources could be available by FY 2023 or 2024. As with the previous debt-related items, a financing plan would need to be developed to ensure the timing of future pavement project funding needs coincides with the timing of the debt issuance and repayment plan.
For the Northeast Phoenix project, because the timing of the programmed expenditures is much further out due to its planned 2034 opening, funds would not be available to cover pavement maintenance costs during the next five fiscal years. However, these savings could be utilized to meet the additional annual on-going pavement maintenance resource needs to keep improved City streets in good or excellent conditions.

Although the options to delay light rail projects provide significant savings that could be used for additional pavement maintenance, the delayed light rail projects would not be completed or operational during the T2050 program. Since these projects were shown on the ballot map for the Proposition 104, it is important to give careful consideration to making such significant changes to this voter-approved plan.

Attachment E provides a summary of the funding options.

ADDITIONAL CONSIDERATIONS
There are several further important considerations associated with a substantial increase to the number of lane miles treated annually. These include:

- **Traffic** - Multiple streets being treated simultaneously could cause temporary but additional travel delays, restrictions, detours and traffic congestion.

- **Utilities** - The City requires restoration of streets whenever pavement is cut to access utilities buried below roads. This includes water and wastewater, electrical, gas and telecommunication lines. In cases where a cut is made to a street for which the pavement overlay is less than two years old, the cutting agency must place a new overlay on and around the cut area. For pavement over two years old, the City requires a microseal treatment around the pavement cut area. Substantial increases to the amount of new pavement throughout the City will impact the cost of managing utilities buried in the right-of-way. In recent years, the City and the various utility agencies have significantly ramped up efforts to coordinate planned projects in the right-of-way to minimize impacts to streets and avoid unnecessary costs. With increased pavement maintenance projects, these coordination efforts will become even more important.

- **Contractor/Material Pricing and Availability** - Significant increases in the amount of asphalt overlays performed annually on City streets could impact or influence pricing and availability of paving materials, as well as qualified contractors and skilled labor.

- **Staffing** - Additional pavement maintenance program work would be performed by licensed contractors, but Streets would need to increase internal staffing to effectively administer and provide oversight on this contracted work.

- **Bike Lanes** - Another key element of the T2050 plan is the addition of bike lanes to enhance bicycle safety and connectivity throughout the City. Where feasible and supported by the community, the City adds bike lanes as part of the pavement maintenance program. Additional pavement maintenance would require greater community outreach to determine if bike lanes are supported on impacted streets.

- **Construction Conflicts** - In order to properly coordinate increased pavement maintenance projects with other planned right-of-way projects from utility companies, developers and other City departments, there could be unforeseen delays in pavement maintenance on some streets.

- **On-going Pavement Maintenance Program Requirements** - Streets staff has analyzed the additional on-going pavement maintenance program resources needed to ensure improved streets are maintained in good or excellent condition.
going forward. Staff estimates that the pavement maintenance program would need to be increased to $107 million annually from the current $45 million.

RECOMMENDATION
Staff requests that the Citizen’s Transportation Commission provide a recommendation on this issue for Council consideration.
Miles of Streets

4,863
Total Public Street Miles

= 872
Major Street Miles + 3,991
Minor Street Miles
Pavement Preservation Program

Current Program
• $45M annually
• Comprehensive pavement preservation program
• Streets treated every 10-12 years

Prior to T2050
• As low as $13M annually
• Asphalt overlay only
• One asphalt overlay every 67 years
Pavement Condition Index (PCI)

- Used to determine roadway conditions
- Establishes priorities for pavement maintenance & types of treatments
- Produces a PCI scale of 0 – 100
- Good condition street has a minimum PCI of 70
- 30% Phoenix streets are considered good or excellent
- 2% Phoenix streets are considered poor

<table>
<thead>
<tr>
<th>Phoenix Streets PCI</th>
<th>90-100</th>
<th>70-89</th>
<th>45-69</th>
<th>20-44</th>
<th>0-19</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EXCELLENT</td>
<td>GOOD</td>
<td>FAIR</td>
<td>POOR</td>
<td>VERY POOR</td>
</tr>
<tr>
<td></td>
<td>.5%</td>
<td>29.5%</td>
<td>68%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Excellent to Very Good Condition

PCI of 90

Central Ave – Baseline Road to Vineyard
Good Condition

PCI of 70

Buckeye Road, 43rd Ave to 35th Ave
PCI of 60 and Under

- PCI 60
  - Fair Condition
  - Buckeye Road, 59th Ave to 51st Ave

- PCI 40
  - Poor Condition
  - 3rd Avenue, Van Buren St to Fillmore St

- PCI 10
  - Very Poor Condition
  - 4th Ave at Grant St
## Valley Benchmark Cities

<table>
<thead>
<tr>
<th>Comparable Average PCI</th>
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</thead>
<tbody>
<tr>
<td>Mesa</td>
<td>77</td>
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<tr>
<td>Peoria</td>
<td>74</td>
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<tr>
<td>Scottsdale</td>
<td>72</td>
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<tr>
<td>Tempe</td>
<td>59</td>
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<tr>
<td>Phoenix</td>
<td>66</td>
</tr>
<tr>
<td>Type of Street</td>
<td>Miles</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Arterials &amp; Major Collectors Below 70 PCI within Next Five Years</td>
<td>519 Miles</td>
</tr>
<tr>
<td>Residential &amp; Minor Collectors Below 70 PCI within next Five Years</td>
<td>3,566 Miles</td>
</tr>
<tr>
<td>All Streets Below 70 PCI within Next Five Years</td>
<td>4,085 Miles</td>
</tr>
</tbody>
</table>
Other Infrastructure Improvements

- Identified Resources Do Not Include Funding For:
  - Sidewalks
  - Streetlights
  - Landscaping
  - Curbs
  - Gutters
  - Storm Drains
Pavement Funding Options:

Option 1

• Move Streets Funds from Major Projects to Maintenance
  • $115 Million over 5 years
  • Provides on-going funding

• Trade-Off: Requires delaying capital projects (Attachment D)
Pavement Funding Options:

Option 2

• Borrow Against Future Streets **T2050** Funding
  • $150-$200 Million over 5 years
  • One-time funding to address immediate pavement needs

• **Trade-Off:** More pavement maintenance now, but less in future years
Pavement Funding Options:

**Option 3**

- Borrow Against Future Streets **HURF** Funding
  - $150-$200 Million over 5 years
  - One-time funding to address immediate pavement needs
  - **Trade-Off:** More pavement maintenance now, but less in future years
Pavement Funding Options:

Option 4

• Borrow Against T2050 Light Rail Reserves
  • $150 - $200 Million over 5 years
  • One-time funding to address immediate pavement needs

• Trade-Off: May not be able to build promised Light Rail lines if there is an economic downturn
Pavement Funding Options:

Option 5A

- Delay West Phoenix Light Rail Extension
  - Approx. $200 Million in 2023 or 2024
  - Trade-Off: Delayed project not completed and operational by 2050
Pavement Funding Options:

Option 5B

- Delay Northeast Light Rail Extension
  - Future funding outside 5-Years
  - Potential use for ongoing maintenance later in the program

- Trade-Off: Project not completed and operational by 2050
Funding Options Within Next 5-Years

Combined Total: $765 - $915M thru FY 2023

• About ½ resources needed to achieve minimum GOOD condition for ALL streets
Considerations

- Traffic
- Utilities
- Contractor/Material Pricing and Availability
- Staffing
- Bike Lanes
- Construction Conflicts
- On-going Pavement Maintenance Program Requirements
RECOMMENDATION

Staff requests that the Citizen’s Transportation Commission provide a recommendation regarding the proposed options for City Council consideration.
### ATTACHMENT A

**BREAKDOWN OF STREET MILES BY CITY COUNCIL DISTRICT**

<table>
<thead>
<tr>
<th></th>
<th>District 1</th>
<th>District 2</th>
<th>District 3</th>
<th>District 4</th>
<th>District 5</th>
<th>District 6</th>
<th>District 7</th>
<th>District 8</th>
<th>Total</th>
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<tbody>
<tr>
<td>Arterials and Major Collectors</td>
<td>112</td>
<td>150</td>
<td>76</td>
<td>79</td>
<td>60</td>
<td>111</td>
<td>137</td>
<td>147</td>
<td>872</td>
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<tr>
<td>Residential and Minor Collectors</td>
<td>577</td>
<td>555</td>
<td>509</td>
<td>398</td>
<td>403</td>
<td>526</td>
<td>492</td>
<td>531</td>
<td>3,991</td>
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<tr>
<td>Total</td>
<td>689</td>
<td>705</td>
<td>585</td>
<td>477</td>
<td>463</td>
<td>637</td>
<td>629</td>
<td>678</td>
<td>4,863</td>
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ATTACHMENT B

STREET MILES BELOW 70 PCI WITHIN FIVE YEARS BY COUNCIL DISTRICT

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<thead>
<tr>
<th>Street Miles Below 70 PCI Within Five Years by Council District</th>
<th>District</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Major Streets</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Arterials/Major Collectors &lt;70</td>
<td></td>
<td>72</td>
<td>90</td>
<td>48</td>
<td>59</td>
<td>37</td>
<td>38</td>
<td>91</td>
<td>84</td>
<td>519</td>
</tr>
<tr>
<td><strong>Minor Streets</strong></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Residential/Minor Collectors &lt;70</td>
<td></td>
<td>513</td>
<td>465</td>
<td>455</td>
<td>359</td>
<td>403</td>
<td>372</td>
<td>468</td>
<td>531</td>
<td>3,566</td>
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<tr>
<td><strong>Total &lt;70</strong></td>
<td></td>
<td>585</td>
<td>555</td>
<td>503</td>
<td>418</td>
<td>440</td>
<td>410</td>
<td>559</td>
<td>615</td>
<td>4,085</td>
</tr>
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## ATTACHMENT C

### ADDITIONAL FUNDS NEEDED OVER FIVE YEARS TO REACH 70 OR ABOVE PCI

<table>
<thead>
<tr>
<th>Type of Street</th>
<th>Miles</th>
<th>Additional Funds Needed Over 5 years</th>
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<tbody>
<tr>
<td>Arterials &amp; Major Collectors Below 70 PCI within Next Five years</td>
<td>519 miles</td>
<td>$519 Million</td>
</tr>
<tr>
<td>Residential &amp; Minor Collectors Below 70 PCI within Next Five Years</td>
<td>3,566 miles</td>
<td>$1.1 Billion</td>
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<tr>
<td>All Streets Below 70 PCI within Next Five Years</td>
<td>4,085 miles</td>
<td>$1.6 Billion</td>
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ATTACHMENT D

STREET TRANSPORTATION DEPARTMENT
5-YEAR CAPITAL IMPROVEMENT PROGRAM
MAJOR TRANSPORTATION PROJECTS

PROJECTS PROPOSED TO BE DELAYED

T2050-FUNDED PROJECTS

- 35th Avenue: Camelback Road to Bethany Home Road project ($1,331,000 / FY19-FY20)
  - Construct drainage improvements, bus bays/pads, add curb, gutter and sidewalks, new
    sidewalks and curb ramps where non-ADA compliant, continuous 6-foot-wide bike lanes,
    and landscaping.
- 35th Avenue: Bethany Home Road to Glendale Avenue project ($1,145,000 / FY21-FY22)
  - Construct intersection improvements to enhance sight distance for permissive left turns,
    potential modification of traffic signal phasing and upgrade missing concrete curb ramps
    or non-ADA compliant ramps.
- 43rd Avenue: Grand Canal to Glendale Avenue project ($399,000 / FY22-FY23)
  - Install guide signs at intersection of Camelback Road on the southern leg and raised
    pavement markers on east leg of Bethany Home Road intersection. Remove frontage
    road east of 43rd Avenue between Maryland Avenue and McLellan Boulevard.
- 43rd Avenue: Glendale Avenue to Greenway Road project ($138,000 / FY22-FY23)
  - Re-stripe eastern and western legs of the intersection at Greenway Road to a left-turn,
    two through lanes and a right-turn configuration. Add northbound right-turn pocket at
    Northern Avenue and bus bay for southbound stop south of Northern Avenue.
- 91st Avenue: Thomas Road to Indian School Road project ($1,609,000 / FY21-FY22)
  - Roadway improvements including undergrounding powerlines, relocating irrigation
    ditches, roadway widening, ADA and drainage improvements, new bus shelters,
    streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.
- 91st Avenue: Indian School Road to Camelback Road project ($1,576,000 / FY22-FY23)
  - Construct improvements for drainage, bus shelters, re-stripe roadway to accommodate a
    5.5 foot bike lane on each side of the street, a 5 foot sidewalk along portions of the
    westside of the corridor, and landscaping.
- Baseline Road: 46th Avenue to 43rd Avenue project ($1,903,000 / FY20-FY21)
  - Roadway improvements including undergrounding powerlines, relocating irrigation
    ditches, roadway widening, ADA and drainage improvements, new bus shelters,
    streetlights, traffic signals, bicycle lanes landscaping, curb, gutter and sidewalks.
- Indian School Road: 107th Avenue to 99th Avenue project ($3,310,000 / FY20 & FY22)
  - Construct roadway improvements including drainage improvements, bus bays/pads,
    curb, gutter and sidewalks, add new sidewalks and curbs where non-ADA compliant,
    continuous 6 foot wide bike lanes, and landscaping.
- Indian School Road: 99th Avenue to 91st Avenue project ($10,691,000 / FY19-FY20 & FY23)
  - Construct drainage improvements, construct bus bays and pads, add curb, gutter and
    sidewalks, new sidewalk and curbs where non-ADA compliant, continuous 6 foot bike
    lanes, and landscaping.
ATTACHMENT D

STREET TRANSPORTATION DEPARTMENT
5-YEAR CAPITAL IMPROVEMENT PROGRAM
MAJOR TRANSPORTATION PROJECTS

PROJECTS TO BE DELAYED (continued)

T2050-FUNDED PROJECTS (continued)

• Lower Buckeye Road: 91st Avenue to 83rd Avenue project ($323,000 / FY21-FY22)
  o Roadway improvements including undergrounding powerlines, relocating irrigation
ditches, roadway widening, ADA and drainage improvements, new bus shelters,
streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.

• Lower Buckeye Road: 83rd Avenue to 75th Avenue project ($1,262,000 / FY19-FY20 & FY22)
  o Roadway improvements including undergrounding powerlines, relocating irrigation
ditches, roadway widening, ADA and drainage improvements, new bus shelters,
streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.

• Lower Buckeye Road: 71st Avenue to 67th Avenue project ($2,000,000 / FY19)
  o Roadway improvements including undergrounding powerlines, relocating irrigation
ditches, roadway widening, ADA and drainage improvements, new bus shelters,
streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.

• Lower Buckeye Road: 43rd Avenue to 35th Avenue project ($875,000 / FY21-FY22)
  o Roadway improvements including undergrounding powerlines, relocating irrigation
ditches, roadway widening, ADA and drainage improvements, new bus shelters,
streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.

• Lower Buckeye Road: 35th Avenue to 27th Avenue project ($3,639,000 / FY19-FY20 & FY22)
  o Roadway improvements including undergrounding powerlines, relocating irrigation
ditches, roadway widening, ADA and drainage improvements, new bus shelters,
streetlights, traffic signals, bicycle lanes, landscaping, curb, gutter and sidewalks.

• Reduce funding for future Major Transportation Projects ($8,656,000 / FY20-FY23)
  o Provide roadway improvements for T2050 funded major transportation projects.

Additional T2050 funding for Pavement Maintenance Program $38.9 Million

HURF-FUNDED PROJECTS

• Pinnacle Peak Road: Central Avenue to 7th Street project ($2,749,000 / Move from FY20-21
to FY23-FY24)
  o Construct street improvements on the north side to include paving, curb, gutter,
sidewalk, overlay, traffic signals, ADA ramps, driveway entrances, street lights, manhole
adjustments, clearing and grubbing, and fire hydrant relocations.

• Van Buren Street: 24th Street to 40th Street project ($6,600,000 / FY20-FY22)
  o Design and construct street improvements on Van Buren Street from 24th Street to 40th
  Street.

• Reduce funding for Undetermined Major Streets to $5M annually ($37,000,000 / FY21-
FY23)
  o Construct streets yet to be determined.
PROJECTS TO BE DELAYED (continued)

HURF-FUNDED PROJECTS (continued)

- Reduce funding for project assessments ($1,400,000 / FY20-FY23)
  - Complete engineering project assessments for multiple corridors throughout the City as needs are identified for existing and expanded roadway corridors.
- Reduce funding for pre-design and planning for future Major Transportation Projects ($625,000 / FY19-FY23)
  - Design and acquire right-of-way for small projects.

Additional HURF funding for Pavement Maintenance Program $48.3 Million

PROJECTS PROPOSED TO CONTINUE AS SCHEDULED BASED ON CURRENT STAGE OR PROGRESS OF PROJECT

T2050-FUNDED PROJECTS

- 43rd Avenue: McDowell Road to Virginia Avenue project ($4,381,740 / FY19-FY20)
  - Street improvements include installing concrete medians and adding/removing lanes on 43rd Avenue from McDowell Road to Virginia Avenue.
- 43rd Avenue: Virginia Avenue to Grand Canal project ($2,445,000 / FY19-FY20)
  - Street improvements include adding a turn lane, constructing bus bay, reconstruct sidewalks and installing HAWK crossing at Grand Canal crossing at 43rd Avenue from Virginia Avenue to Grand Canal crossing.
- 43rd Avenue: McDowell Road to Bell Road ADA project ($2,649,960 / FY19)
  - Install ADA compliant curb ramps or upgrade curb ramps to meet current ADA standards.
- Buckeye Road: 67th Avenue to 59th Avenue ($10,231,000 / FY19 & FY21)
  - Street improvements include roadway widening, drainage improvements, HAWK crossing, bike lanes, new street lighting, curb, gutter and sidewalks, multi-use trail and ADA improvements at Buckeye Road from 67th to 59th Avenue.
- Lower Buckeye Road: 27th Avenue to 19th Avenue project (9,298,000 / FY19-FY20)
  - Rebuild roadway to include pedestrian and ADA upgrades on north side of Lower Buckeye from 27th Avenue to 19th Avenue.

HURF-FUNDED PROJECTS

- 15th Avenue: South of Madison Street Burlington-Northern-Santa Fe Railroad Improvements project ($2,000 / FY19)
  - Acquire right-of-way and construct concrete curb, gutter and sidewalk at railroad crossing south of Madison.
PROJECTS PROPOSED TO CONTINUE AS SCHEDULED BASED ON CURRENT STAGE
OR PROGRESS OF PROJECT (continued)

HURF-FUNDED PROJECTS (continued)

- 24th Street and Grand Canal Bridge ($6,142,000 / FY19-FY20)
  - Replace bridge at 24th Street and Grand Canal.
- 27th Avenue: Lower Buckeye Road to Buckeye Road project ($7,980,000 / FY19)
  - Design, acquire right-of-way and construct one mile of major street.
- 27th Avenue and Thomas Road Railroad Crossing Upgrades project ($76,176 / FY19)
  - Improve railroad crossings at 27th Avenue and Thomas Road.
- 32nd Street: Southern Avenue to Broadway Road project ($30,000 / FY19)
  - Construct one mile of major street.
- 35th Avenue: South of Indian School Road Railroad Crossing project ($50,000 / FY19)
  - Improve railroad crossings at 35th Avenue and Indian School Road.
- 35th Avenue: North of Harrison Street Union Pacific Railroad Improvements project ($104,593 / FY19)
  - Acquire right-of-way and construct concrete approach slabs, median island, curb, gutter
    and sidewalk at Union Pacific railroad crossing north of Harrison.
- 48th Street: South Point Parkway to Baseline Road project ($5,483,000 / FY19)
  - Design and construct street improvements on 48th Street from Baseline road to South
    Point Parkway.
- Avenida Rio Salado / Broadway Road: 27th Avenue to 17th Avenue project ($200,000 / FY19)
  - Acquire right-of-way.
- Avenida Rio Salado / Broadway Road: 35th Avenue to 27th Avenue project ($80,000 / FY19)
  - Acquire right-of-way.
- Avenida Rio Salado / Broadway Road Phase II project ($2,253,000 / FY19)
  - Install curb, gutter, sidewalk, bike lanes, street lighting, landscaping, ADA ramps, road
    widening and intersection improvements.
- Broadway Road Corridor Plan ($100,000 / FY19)
  - Create a plan for the Broadway Corridor.
- Interstate 17 / Pinnacle Peak Road and Happy Valley Road Interchange Utilities ($80,000 / FY19)
  - Provide spare conduit in the new bridge structures as part of the traffic interchange
    projects for City use.
- Jomax Road: Interstate 17 to Norterra Parkway project ($1,032,000 / FY19)
  - Design, acquire right-of-way and construct widening of the north side of Jomax Road
    between I-17 Freeway and Norterra Parkway to two lanes in both directions with a
    median, bike lanes, and sidewalks.
PROJECTS PROPOSED TO CONTINUE AS SCHEDULED BASED ON CURRENT STAGE OR PROGRESS OF PROJECT (continued)

HURF-FUNDED PROJECTS (continued)

- Pinnacle Peak Road: 45th Avenue to 35th Avenue project ($10,533,000 / FY19)
  - Construct street improvements including pavement rehabilitation and bike lane addition. South side improvements include landscaping, street lighting, curb and gutter, sidewalks and intersection improvements.
- Railroad Crossing Improvements projects ($275,000 / FY19-FY23)
  - Design and construct improvements at railroad crossings.
- Riverview Drive: 18th Street to 22nd Street project ($3,950,000 / FY19)
  - Construct a bridge on Riverview Drive between 18th Street and 22nd Street.
- South Mountain Freeway / Loop 202 Support Work ($10,000 / FY19)
  - Provide support work to ADOT and Design/Build/Maintain team potentially including design reviews, right-of-way assessment, real estate analysis, water services, meetings and field work.
- Van Buren Street: 7th Street to 24th Street project ($3,903,000 / FY19-FY20)
  - Design and construct street improvements to include milling, ADA ramps, truncated domes, decorative concrete median, sign posts, re-striping, pedestrian improvements of sight furnishings/light fixture upgrades and sidewalk improvements.
## ATTACHMENT E – SUMMARY OF PAVEMENT FUNDING OPTIONS

<table>
<thead>
<tr>
<th>Option</th>
<th>Amount Raised Over Next 5 Years</th>
<th>Impact</th>
</tr>
</thead>
</table>
| 1. Modify Existing Streets Funds Distribution - Lower CIP from 30% to 15% and Raise Pavement Maintenance from 50% to 65% | $115 million                    | • Provides ongoing annual fund source to address pavement needs.  
• Requires elimination and foregoing of future capital improvements and new and expanded streets projects. |
| 2. Finance Using Existing Streets T2050 funding                         | $150 - $200 million             | • Provides one-time funding to address immediate pavement needs without impacting any transit-related projects, as currently projected.  
• Would reduce funds available in future years by $12-$15 million per year for street maintenance as debt service is paid. |
| 3. Finance Using Existing Streets HURF funding                          | $150 - $200 million             | • Provides one-time funding to address immediate pavement needs without impacting any transit-related projects, as currently projected.  
• Would reduce funds available in future years by $12-$15 million per year for street maintenance as debt service is paid. |
| 4. Finance Using T2050 Light Rail Funding - Reducing Overall Future Reserve Levels | $150 - $200 million             | • Provides one-time funding to address immediate pavement needs without impacting any transit-related projects, as currently projected.  
• Would reduce future reserves and ability to weather economic downturns as debt service is paid over life of T2050 program. |
| 5. a. Delay West Phoenix Light Rail Extension - First year expenditure in 2050 | $200 million (Available in 5\(^{th}\) Year) | • Provides one-time and ongoing funding to address pavement needs in fifth year.  
• Project would not be completed during the life of the T2050 program, countering what was displayed on the Proposition 104 ballot. |
| 5. b. Delay Northeast Light Rail Extension - First year expenditure in 2050 | Additional funds fall outside of 5-Year window | • Provides ongoing funding outside of the 5-Year window to ongoing pavement needs.  
• Project would not be completed during the life of the T2050 program, countering what was displayed on the Proposition 104 ballot. |
TO: Mario Paniagua  
Deputy City Manager  

FROM: Jesús Sapien  
Light Rail Administrator  

SUBJECT: SOUTH CENTRAL LIGHT RAIL EXTENSION UPDATE  

This transmits the City Council Report and associated attachments that were sent to the City Council for their September 26, 2018 Special Council Meeting regarding the South Central Light Rail Extension.

The information provides the most recent update for the South Central Light Rail project.

At the Citizens Transportation Commission meeting on September 27, 2018, staff will provide a verbal update on action taken by the City Council at the September 26 meeting.

RECOMMENDATION  
This report is for information only.
CALL TO ORDER AND ROLL CALL

DISCUSSION AND POSSIBLE ACTION (ITEM 1)

1 South Central Light Rail Extension Update

This transmits the findings of independent facilitator Eric Bailey (Attachment A) and the lane configuration analysis regarding the South Central Light Rail Extension Project (Attachment B). The reports reflect work completed in response to the June 20, 2018 Council direction to conduct an analysis of four vehicular through-lanes to the full extent possible along Central Avenue within the existing federally-approved environmental footprint and a comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design. Staff requests Council direction to determine the lane configuration and next steps for the South Central Light Rail Extension (SCE) project.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Responsible Department
This item is submitted by Deputy City Manager Mario Paniagua and the Public Transit Department.

ADJOURN

Upon request, the City Clerk Department will make this publication available through appropriate auxiliary aids or services to accommodate an individual with a disability by calling the Council Support Section, 602-262-6557 or Relay 7-1-1.
South Central Light Rail Extension Update

This transmits the findings of independent facilitator Eric Bailey (Attachment A) and the lane configuration analysis regarding the South Central Light Rail Extension Project (Attachment B). The reports reflect work completed in response to the June 20, 2018 Council direction to conduct an analysis of four vehicular through-lanes to the full extent possible along Central Avenue within the existing federally-approved environmental footprint and a comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design. Staff requests Council direction to determine the lane configuration and next steps for the South Central Light Rail Extension (SCE) project.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Summary
The SCE extends light rail along Central Avenue from Downtown Phoenix to Baseline Road. It is planned to open in 2023, with construction scheduled to begin in late 2019. Extensive environmental, design and pre-construction work proceeded based on the November 2014 Council approval of the roadway configuration, which includes flared arterial intersections with six lanes and remaining signalized intersections with four lanes (including dedicated left-turn lanes) and two continuous through-lanes.

Following the June 20 Council direction, engineering and design teams analyzed a four-lane configuration within the approved footprint and produced graphics, video simulations, information boards, and other materials showing the lane configurations and traffic flow. The information and materials were presented at six highly-publicized meetings to community residents, business owners and stakeholders for discussion, questions and input through independent facilitator Eric Bailey of the Bailey Strategic Innovation Group. During the meetings, more than 450 conversations with community members allowed meaningful discussion on the differences of the two- and four-lane configurations, funding, and many other project aspects. Participants were able to ask detailed questions to better understand the project as well as provide input. More than 400 questions were asked and answered. Additionally, input was received through online submittals and comment cards. Further detail regarding the meetings and Mr. Bailey’s findings are discussed in Attachment A - Independent Facilitator
Community Meetings Report.

Public Outreach
English and Spanish outreach regarding the community meetings included:
- In-person door-to-door canvassing with bilingual staff, with visits to more than 5,000 homes, businesses and organizations in the South Central Phoenix area.
- Direct mailings and door hangers to properties between Portland Street and Baseline Road between 7th Street and 7th Avenue.
- Individual meetings with faith-based organizations, community groups, stakeholders, and education representatives.
- Advertisements, social media, and English/Spanish radio and print outlets.
- Signage at city-owned properties throughout the alignment.
- Multiple mobile stations/tabling events at businesses, city facilities, community events, grocery stores, schools, neighborhood associations, and places of worship.
- Extended hours at the South Central community office.
- On-board bus announcements across the regional fleet.
- Notifications at bus stops along Central Avenue between downtown and Baseline Road, and at all digital signs downtown and at Phoenix park-and-ride locations.
- Posting of all community meeting materials online.
- Online posting of all community members' questions and answers.

Attachments
A - Independent Facilitator Community Meetings Report
B - Valley Metro Lane Analysis Report

Responsible Department
This item is submitted by Deputy City Manager Mario Paniagua and the Public Transit Department.
Dear Mayor and Council,

It was my honor to facilitate the South Central Extension Meetings and is my privilege to share this summary report of the South Central Light Rail Extension Community Conversations.

This report will cover the following:
- The initial scope of work as requested by Council
- The approach we took to engaging the community
- A general summary of observations
- An appendix that lists all of the questions that were asked and all of the answers that were given as part of this public outreach process
- An addendum with additional (outside of scope) observations and recommendations

Above all else, it was exceedingly clear that the South Phoenix community is an engaged, active, and caring community truly interested in a dialogue about how to best meet the needs of the residents both today and into the future.

Very Respectfully,

Eric Bailey
President
Bailey Strategic Innovation Group

Independent Third Party Facilitator
South Central Light Rail Extension Community Conversations
Scope of Work as Requested by Council

Eric Bailey, President of Bailey Strategic Innovation Group, will facilitate public discussion and input at six public meetings regarding the South Central Light Rail Extension (SCE) project, implementing the Phoenix City Council's direction to "conduct a full business and community engagement process using an independent facilitator to specifically discuss the full impacts, costs and benefits of the 4-lane design."

Mr. Bailey will meet with Valley Metro, City of Phoenix and associated contractors as needed in advance of public meetings to advise on effective outreach and on meeting content, format, structure, layout, presentations, and other components to optimize results.

The facilitation should ensure the attendees are provided the opportunity to be fully informed on the SCE background and lane analysis costs/benefits/impacts, as well as the opportunity to provide meaningful input on the project lane analysis issue. Mr. Bailey will provide a report on overall findings based on the public input gathered at the public meetings.

Additional Output

Public Posting of Community Questions

After the second meeting, we (the project team) realized that over 100 cumulative questions and comments had been collected. Lisa S. of Valley Metro suggested that we place the questions and answers on the project website in addition to the appendix of this report. Beginning September 10, 2018, the list was published to the project website.

Community observations about public meetings

During face-to-face conversations with several community members, a few recurring themes surfaced about the physical set up of the meetings.

- Police vehicles at and near the entrance to the meeting room may have dissuaded certain citizens from even approaching the building, let alone entering and sharing their questions and feedback.
- There were a couple of meetings that were not official meetings by The City or Valley Metro. Several conversations referenced information from these meetings that was either outdated or incorrect. The perception was that we (the project team) had lied or changed answers.
## Schedule and Location of Meetings

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, August 30</td>
<td>6:00 pm</td>
<td>Audubon Center</td>
</tr>
<tr>
<td>Tuesday, September 4</td>
<td>6:00 pm</td>
<td>Cesar Chavez Community School</td>
</tr>
<tr>
<td>Thursday, September 6</td>
<td>6:00 pm</td>
<td>Lowell Elementary School</td>
</tr>
<tr>
<td>Wednesday, September 12</td>
<td>3:30 pm</td>
<td>South Mountain Community Center</td>
</tr>
<tr>
<td>Thursday, September 13</td>
<td>6:00 pm</td>
<td>South Mountain Community Center</td>
</tr>
<tr>
<td>Saturday, September 15</td>
<td>10:00 am</td>
<td>South Mountain Community Center</td>
</tr>
</tbody>
</table>

## Project Website

www.ValleyMetro.org/southcentral or www.valleymetro.org/project/south-central-extension
Our Approach to Community Conversations

Traditional approaches to public meetings often lack true dialogue. With a central microphone, an audience, and a body of listeners congregated at a table, the conversation is generally one-sided. There are benefits and drawbacks to this approach. The key benefit is that it gives the person with the microphone the opportunity to share their opinion and get their questions answered. The key drawback to this approach is that it can make people feel that their questions are not as important as the questions raised by others.

The infinite variability of humanity suggests that each citizen has a unique perspective and therefore has the potential to bring up different issues and questions. Having a central microphone reduces the opportunity for everyone in the room to feel that their unique questions are as important as others who may appear to have more passion, conviction, or confidence. This is evidenced by the number of questions/comments that are asked in public forums compared to the number of people who attend. Additionally, this forum does not take into account that some citizens do not feel comfortable speaking in front of a group. The open microphone concept makes it difficult, often prohibitively difficult, for such people to get their questions answered.

The approach that we took for this community conversation was focused on the desired result: Extraordinary Dialogue while maintaining transparency. “Dialogue” meaning multi-directional communication; “Extraordinary” meaning incorporating as many unique perspectives as possible; “Transparency” meaning everyone has access to every question asked as well as the answers. These meetings were designed to have many smaller conversations rather than a few broadly shared opinions.

As with any approach, there are benefits and drawbacks. This method did not allow folks to make their opinion known broadly, to persuade or convince the people around the room. This method did not allow for public debate. Most importantly, this approach was intentionally different, and as we know, change can lead to unmet expectations, which can in turn lead to frustration or upset. I made an attempt to personally dialogue with each person who expressed frustration about not having an open microphone so that their opinions would be captured as well.

Principles of Human Understanding™

In every organization I work with, I introduce some (if not all) of my Principles of Human Understanding. These principles are rooted in psychology and neuroscience and help explain the universal barriers that adults come across when trying to communicate. Over my career, I have seen that when people are exposed to these principles prior to engaging in discussion, the conversations are more calm, more productive, and people spend more time exploring the merit of ideas that are not their own.
The Illusion of Certainty

The first principle that I shared is the “Illusion of Certainty.” This is essentially our brain's propensity to project certainty even if we are truly uncertain. This manifests itself in the unyielding belief that the way we see something is the way it truly is; that our idea or opinion is the one, true, right idea. When people propose ideas contrary to ours, we often feel defensive and possibly argumentative.

Perception and Reality

The second principle that I shared is “Perception is More Important Than Reality.” We want to believe that we perceive the world as it actually is, but that is not always true. Our past experiences, attitudes, emotions, brain chemistry, and expectations are a few of the things that can influence how we perceive the world. Additionally, our perceptions are susceptible to blind spots, or gaps in perception, where we are unable to see something as it actually is. An example of this is the following image, which has twelve black circles at the intersections of the lines.

As we move our eyes around the image, we can count all twelve of them. However, we are incapable of seeing (perceiving) all twelve circles at the same time. Most of us can only see a few at a time.
The key in all of this is that all of our behaviors, the choices we make, are based on our perceptions, not necessarily reality. As we communicate with other people, it is important to understand that this is true for them as well. They are not going to react based on what you said, they are going to react based on what THEY HEARD you say. They are not going to react based on what you did, they are going to react based on what THEY FELT you did. This concept is foundational to communication, especially when conversations are of a particularly contentious nature, or there is a difference of opinion. Understanding that we can all have different perceptions of the same information is a critical foundation for meaningful dialogue.

**Meeting Structure / Agenda**

1. Introduction to the meeting format and why this meeting will “feel different”
2. Answer top three ‘out of scope questions’
   a. “Why Central Avenue?”
   b. “Why Light Rail?”
   c. “Can the Funds Be Used For Other Projects?”
3. Debunk the perception that a 4 lane configuration is not possible
4. Share logistical information about 2 and 4 lanes
5. Discuss the distinction between purpose and process to change debate into dialogue
6. Discuss the distinction between ‘traffic flow’ and ‘street capacity’
7. Share simulation information on traffic flow in the 2 and 4 lane configurations
8. Open the stations and allow attendees to ask questions of subject matter experts
Quantitative Results

An important element of the meetings is the sheer number of questions that were answered. These questions (appendix A) cover a wide range of topics. Over the course of the six meetings, over 450 questions were asked and answered! This unprecedented result is a wonderful indication that the South Central Phoenix community has a desire to engage in the process.

Here is a breakdown of the numbers from the meetings:
- 6 Meetings at 4 locations
- 4 Stations for questions and comments
  - Traffic Flow
  - Community Enhancements
  - Project History
  - Jobs and Business Assistance
- 402 Individual Citizens Attended
  - This number takes into account that some citizens attended multiple meetings
  - Some citizens decided not to sign in
- 455 questions asked and answered at the stations
- 125 questions and comments were written down on comment cards and handed in at the meetings
- 6 questions and comments were written down on comment cards and were mailed or emailed in
- 251 questions and comments were typed on the online comment section of the project website

Comment Cards

In addition to soliciting questions and comments from the community, there was an opportunity for citizens to share which of the following elements were most important to them. The options:

- Bike Lanes
- Bus Pullout
- Business Assistance
- Enhanced Sidewalks
- Four Lanes
- Improved Landscaping
- Job Opportunities
- Maintain Traffic Flow
- Pedestrian Shade
- Turn Lanes at Intersections

Of these options, 42% of respondents selected Bike Lanes, 39% selected Pedestrian Shade, 37% selected Turn Lanes at Intersections, 35% selected Maintain Traffic Flow, 31% selected Bus Pullouts, 29% selected Enhanced Sidewalks, 28% selected Improved Landscaping, 27% selected Four Lanes, 21% selected Job Opportunities, 17% selected Business Assistance.
General Observations / The Pulse of the Community

As with any project of this nature, it is expected that there will be many varying perspectives. The South Central Extension, however, brought out dozens of personal perspectives and anecdotes that were (rightly or wrongly) projected across the entire community. It is important to understand that the following observations are based on themes, rather than just a single conversation.

One recurring theme that I encountered is that many citizens in the South Central Phoenix community feel as if their voices have not been heard in major municipal decisions. Some people feel that there is little to no outreach with the community when big changes happen. This perception can be due to a number of reasons. Some of which include a realistic dearth of community outreach, sparse invitation/attendance at community meetings, poor communication when community meetings have taken place.

The South Central Phoenix community is wonderfully engaged, and asked many powerful questions. The key takeaway is that there was a real hunger for information in the community. One common theme that I heard throughout the meetings is that there is a lot of rhetoric out there, and the people just wanted to identify, to the best of their ability, what is really going on, and how it will impact their lives.

These meetings began on Thursday August 30th. Several people referenced meetings prior to that date where “you” (City of Phoenix and/or Valley Metro) provided different information than what “you” (Eric Bailey) presented today. There was a common theme that there was quite a bit of either outdated or erroneous information in the community. Many people used these meetings to gain clarity, but it would be reasonable to assume that citizens who did not come may be operating under outdated or false information.

The overall tone of the meetings was wonderful. Outside of a few interruptions, I believe that we accomplished what we set out to accomplish, which was sharing information and giving as many people as possible the opportunity to engage in dialogue.

Conclusions (In Scope)

Based on the meeting output (the questions, the information, hours of observation, and dozens of one-on-one conversations), the input indicates that the community does not feel good about losing lanes on Central Ave but sees the overall value of the 2 lane configuration when compared to the 4 lane configuration.

If the question is 2 lanes vs. 4 lanes, based on the functional use of the space, the answer seems to be 2 lanes. After the community conversations however, there might be additional questions that we could be asking. These questions are outlined as ‘themes’ in the Addendum.
Addendum
Out of Scope Observations and Opportunities
Addendum: Out of Scope Observations and Opportunities

I was asked to get the pulse of the community around the South Central Extension, specifically around 2 lanes and 4 lanes. As I was having conversations with folks from around the community, I identified there are several large conversations outside of the scope of this meeting, that are happening in the community. I think it is imperative that the City of Phoenix is at the least a part of these conversations, and at most, organizing and facilitating these conversations.

Although these additional observations are outside of the initial scope requested by Council, they are an important reflection of the complete multi-dimensional feedback we received throughout the course of this six-part community conversation.

In addition to the conversation about 2 lanes and 4 lanes, there was a predominant and critical theme that emerged from residents: They do not feel their concerns about possible displacement due to the construction and subsequent presence of light rail are being heard, and they want to engage in that conversation.

There is a significant amount of frustration as well as fear in the community over the impacts of the light rail extension. There are concerns over what will happen to their homes, their rents/leases, their livelihoods, the future of their families and the future of the community. Many feel they will be forced to leave their homes or close their businesses either directly or indirectly because of Light Rail. The citizens do not want to leave their homes, and some feel they do not have an option to leave their homes, and they are concerned about what will happen when staying in their homes is no longer a viable option. Business owners are concerned about their financial well-being and are concerned about a lack of options for relocation. This theme covers gentrification, which is an important conversation that many citizens want to have.

Another theme that coursed through many of the conversations is the perceived lack of attention the South Central Phoenix community has received in the areas of missing sidewalks, street maintenance, education, and crime. Many citizens are concerned that The City is ignoring the request to solve certain problems and moving to solve the Light Rail problem instead.

One final theme that ran across nearly every meeting were questions regarding the cost of the project. The finer financial details of a project like this are hard to nail down, especially before the engineering is finalized. There were citizens who did not believe that the financial outlay of a project like this would ultimately be worth it. Additionally, many citizens asked whether or not the money could be repurposed to address outstanding infrastructure needs in South Phoenix. While we did address this in the presentation, it remains to be a question in the community.

All of these themes are overlaid by the perception that “Nobody is listening.” Looking back through history, this perception has been ever present in the South Central Phoenix community.
Often times, these large, seemingly unanswerable questions are simply not addressed. But it doesn’t have to be that way. These meetings are a powerful indication that there is a hunger for community conversations of this nature.

Recommendation

I do not operate under the delusion that any of these themes can be resolved quickly, or by simply having a conversation. I do, however, believe that in having conversations, we can restore dignity to the topics and to the citizens that care about them. I recommend Council considers convening a Conversation Task Force where citizens are invited from around the community to come and share their thoughts, opinions, fears, and questions about these important topics. The intention of these conversations would NOT be to solve any given problem, but rather to bring the issues to light. (Granted, it is possible that solutions and ideas do come out of the forums.)

The City cannot be wholly responsible for the actions of private businesses and citizens, but the City is responsible for listening to and caring for its people.

Listening leads to understanding. Understanding leads to positive change.
Appendix A
Questions and Comments from Flip Charts / Community Meetings
Questions & Answers/Comments from Community Meeting’s Flip Charts

As part of the community meetings, presentation boards and flip charts were stationed around the meeting space. City of Phoenix, Valley Metro, and design and consultant staffs were on hand at each meeting to answer as many questions as possible in person with the goal to answer as many questions as possible during the meeting, whether presented to staff as group or individual questions. During the six community meetings, held on August 30th, September 4th, 6th, 12th, 13th, and 15th, 455 questions and comments were received. The questions and answers are organized by categories in alphabetical order. The questions have been answered and affirmed as accurate by the subject matter experts.

Questions Related to the Alignment

Q: Why not 24th Street for light rail? (8/30/18)
Q: Why can’t it be down 24th Street? (9/4/18)

A: Compared to 24th Street, Central Avenue will provide light rail access to more residents and more jobs, and has more existing bus ridership. As seen in the table below, the Central Avenue corridor has approximately 2X the residents, 2X the jobs, and 4X existing bus ridership.

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Totals within 1/2 Mile of Corridor</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Population¹</td>
</tr>
<tr>
<td>24th Street</td>
<td>13,361</td>
</tr>
<tr>
<td>Central Avenue</td>
<td>26,020</td>
</tr>
</tbody>
</table>

1 American Community Survey 2016 data
2 MAG 2015 data
3 Valley Metro April 2018 data. Includes all North/South routes within 1/2 mile of corridor.

Q: Was Central Avenue picked because its 5.5-miles to connect with the existing light rail on Jefferson Street instead of other roads? (9/6/18)

A: Central Avenue was selected over other roadways because of its close proximity to a combination of businesses, schools, and residents. It also provides a direct connection to other regional transit services including the existing light rail line and the Central Station bus transfer center at Central Avenue and Van Buren Street where light rail passengers can transfer to buses that travel throughout the region. All of the roadways evaluated through the alternatives analysis provided in the Locally Preferred Alternative Report available on Valley Metro’s website: https://www.valleymetro.org/sites/default/files/uploads/event-resources/southcentral-locallypreferredalternativereport.pdf

Q: Were we limited to 7th Avenue and 7th Street for alternatives? (8/30/18)

A: No. The alternatives analysis, which was completed in 2014, studied multiple roadways that could connect downtown Phoenix and south Phoenix with improved transit service. The analysis included 11 different combinations of segments from Central Avenue, 1st Avenue, 7th Avenue, and 7th Street. All of the roadways evaluated through the alternatives analysis are provided in the Locally Preferred Alternative Report available on Valley Metro’s website: https://www.valleymetro.org/sites/default/files/uploads/event-resources/southcentral-locallypreferredalternativereport.pdf
Q: Why can’t it be built 3-miles at a time like elsewhere, such as north of Washington Street? (9/4/18)
A: Valley Metro constructed the initial 20-mile light rail line as single project and has since constructed two 3-mile extensions and is currently constructing a 2-mile segment in Mesa. The South Central light rail extension is being constructed as a single 5.5-mile project based on the following reasons:
Connects the neighborhoods between Baseline Road and downtown Phoenix at the same time.
Allows extension to be competitive for federal grant funding; a 2-mile or 3-mile segment would be less competitive based on federal funding criteria.
Offers cost efficiencies; splitting it into two or more phases would cost more in the long-run and result in multiple construction projects, over time, in the same areas.

Q: Will the system operate in a north, south, east and west fashion? (9/6/18)
Q: How does the system operate now that there will be two lines? (9/15/18)
A: When the South Central light rail extension opens, one route will run north and south from Baseline Road to 19th Avenue and Dunlap and eventually to Metrocenter Mall, when the Northwest Phase II Extension is open. A second route will run east and west from Main Street and Gilbert Road in Mesa to downtown Phoenix and eventually to the State Capitol, when the Capitol/I-10 West Phase I Extension is open.

Q: Where do the two lines come together? (8/30/18)
A: The north-south light rail line and east-west light rail line will come together in downtown Phoenix at Central Avenue and Jefferson Street.

Q: What will the transfer station look like from South Phoenix to Sky Harbor Airport? (9/6/18)
A: In the future, light rail passengers traveling from south Phoenix to Sky Harbor airport will be able to transfer at Central Avenue and Jefferson Street and head east to Valley Metro’s 44th Street and Washington Street light rail station where they can ride the Sky Harbor Sky Train into the airport. The downtown light rail transfer will be made possible by the construction of two new light rail platforms. One station will be located on Central Avenue on the north side of Jefferson Street and the other will be located on Jefferson Street on the west side of Central Avenue.

Q: Will the intersection downtown be a timed transfer? (9/6/18)
A: Yes. The light service will be scheduled to balance the amount of time passengers will wait to transfer between light rail lines.

Q: How many park-and-rides will be built? (9/6/18)
Q: How many park-and-rides will be built? (8/30/18)
Q: Any plans for park-and-ride lots? (9/13/18)
A: Two general park-and-ride locations, one near Baseline Road and another near Broadway Road were identified during the environmental assessment phase. The need for and specific location of both park-and-rides is continuing to be evaluated.
Q: Why can’t the design be reworked for 4-lane? (8/30/18)
Q: Why can’t the light rail go through on the 4-lane design? (9/12/18)
A: Light rail on Central Avenue can physically be constructed with 4-lanes. However, the 2-lane design was selected for several reasons including the ability to avoid fully or partially demolishing up to 60 buildings along Central Avenue. Using the same “foot print” as the 2-lane design, 4 lanes will fit, but there are differences. The 4-lane would have less space for shade and landscaping, it would not include dedicated bike lanes, speed limits would be reduced from 35 miles per hour to 30 miles per hour on Central Avenue for cars, delivery trucks, and light rail, and at 13 of the 17 signalized collector and neighborhood streets, left turn lanes would be shared with through auto traffic. Estimated travel time for automobiles on Central Avenue would be longer for the 4-lane concept than the 2-lane design.

Q: Why is there only a 2-lane and 4-lane design? Can a new design be developed? (9/13/18)
A: During the evaluation of alternatives in 2012 and 2013 several design concepts were reviewed including 2 lanes, 4 lanes, 3 lanes and a hybrid. The hybrid includes some segments that would be 2 lanes while other segments would be 4 lanes. The 2-lane design was selected with modifications at major intersections (Buckeye, Broadway, Southern and Baseline) and at all neighborhood and collector (e.g. Alta Vista) street intersections with left turns. The modifications at the major intersections includes a 6-lane design with a dedicated left turn lane, through lane, and right turn lane in both directions. The modifications at the neighborhood and collector street intersections with left turns intersections includes a 4-lane design with a dedicated left turn lane and a shared through and right turn lane in both directions.

Q: What is being done about the addition of more stops for light rail because currently citizens have to ride the bus to get to the next stop? (9/13/18)
A: On the existing light rail system and on the South Central light rail extension, passenger stop spacing is generally every half-mile to mile. The stop spacing along with the independent trackway save passengers travel time and make it more convenient than local buses to travel long distances. On the existing light rail line a new passenger stop is currently being constructed at 50th Street and Washington Street. This new stop will fill in a large gap between stations on Washington Street. However, no other additional stations are being planned.

Q: If someone boards on Baseline and Central Avenue how far can they travel without transferring? (9/15/18)
A: If someone boards the future light rail train at Baseline Road and Central Avenue they can transfer at Jefferson Street and Central Avenue to another light rail if they desires to travel east or west. Alternatively, they can stay on the original train they boarded and travel to the Metrocenter area without a transfer.

Q: If heading north on the South Central light rail extension, can you continue all the way to Metrocenter? (9/13/18)
A: Yes.
Questions Related to Bike Lanes

Q: Can bike lanes be moved to more residential 7th Avenue and 7th Street? (9/4/18)
   A: The bike lanes included in the 2-lane design are replacing existing bike lanes from south of downtown Phoenix to Southern Avenue. There are also existing bike lanes 7th Street and a portion of 7th Avenue, south of the Salt River. The 4-lane concept does not include bike lanes on Central Avenue; bicycles will share the right lane with automobile traffic.

Q: Which is safer for bicycles, the 2-lane or 4-lane? (9/6/18)

Q: Which configuration is more bicycle-friendly, 2 or 4 lanes? (9/12/18)
   A: The 2-lane option provides exclusive striped bike lanes versus the shared vehicle/bike lane provided by the 4-lane option. The exclusive lane is preferred to avoid mixed vehicle and bicycle traffic.

Q: Why does design have to be different on South Central from North Central Avenue – 2-lane vs 4-lane with bike share? (9/6/18)
   A: When light rail was constructed on North Central Avenue, the roadway was reduced from six lanes to four. With buildings along North Central Avenue generally set back further from the sidewalk, a 4-lane design with shared bike lanes and dedicated left turns was feasible. Constructing South Central Avenue with same design as North Central Avenue, would result in fully or partially acquiring some buildings and relocating businesses.

Q: Will the bike lanes be striped? (9/6/18)
   A: Yes, but it will be striped differently depending on which lane configuration is chosen. The 2-lane option provides exclusive striped bike lanes versus the “sharrows” in the 4-lane option to designate the shared vehicle/bike lane.

Q: How much support and/or desire exists for exclusive bike lanes? (9/6/18)
   A: Bike lanes currently exist on most of Central Avenue from south of downtown Phoenix to Southern Avenue. Throughout the 2-lane and 4-lane analysis, support for retaining and improving the bike lanes along Central Avenue has been received from some community members while other community members have expressed an interest in removing the existing bike lanes to provide an additional automobile lane.

Q: Are we having dedicated bike lanes throughout the entire alignment? (9/6/18)
   A: Only for the 2-lane design. The 4-lane will have shared bike lane with vehicular traffic.

Q: How can we do an assessment of the current bicycle use? (9/6/18)
   A: The City of Phoenix Bicycle Master Plan includes an assessment of bicycle use throughout the city. The Bicycle Master Plan is available on the web at: https://www.phoenix.gov/streetssite/Pages/Bicycle-Master-Plan.aspx

Q: Why are there no bike lanes? (8/30/18)
   A: In the 4-lane concept, the bike lanes were removed to make enough space for the additional automobile lane. The 2-lane design includes bike lanes from downtown Phoenix to Baseline Road.

Q: Why not add bike lanes and left turn lanes to the 4-lane option? (9/13/18)
   A: Including dedicated left turn lanes and bike lanes with a 4-lane configuration would not fit within the environmental foot print and could impact up to 60 existing buildings.

Q: Can we move Central Avenue bike lanes to 3rd Street and 3rd Avenue? (9/15/18)
A: 3rd Street and 3rd Avenue are not continuous from Baseline Road to downtown Phoenix and neither roadway includes bridge crossings over the Salt River, Western Canal, and other transportation barriers.
Questions Related to Bridges

Q: Will the Salt River Bridge withstand the weight of the light rail? (9/6/18)
A: A four-pronged approach was taken to determine whether the existing Salt River Bridge had sufficient capacity to support light rail. First, an in-depth inspection was performed to determine the condition of the existing bridge. Second, a materials testing program was used to extract samples of concrete and reinforcing steel from the bridge to verify their strengths. Third, a hydraulic analysis of the Salt River was performed to determine the bridge’s vulnerability to scour during high flow events. And fourth, a 3-D computer model was created using the construction plans of the original bridge to analyze the effects of light rail traffic, highway traffic, river flow events, wind, and other force effects on the bridge. In summary, the analysis showed that the existing bridge has sufficient capacity to support two light rail tracks and two traffic lanes provided that certain repairs and improvements were made. These repairs and improvements include: supplementing the existing scour slab that is currently only in the low-flow channel with new scour slab extensions that extend all the way across the river to the abutments; provide a new overlay on the bridge deck to refurbish the existing traffic-worn surface; replace some of the rubber bearing pads where the bridge beams rest on top of the piers and abutments; repair areas of spalled concrete at pier diaphragms; and repair some cracks at the abutments.

The bridge has been tested by two major (larger than 100 year storm) floods occurred in the late 1970’s. Structural analysis of the bridge indicates the bridge is adequate for two traffic lanes and light rail loading. Additional protection against scour (protects bridge during a flood) is being prepared and will be implemented.

Q: Will light rail go under the bridges downtown and over the Salt River Bridge? (8/30/18)
A: Yes. Light rail will go under the Union Pacific Railroad bridges and Jackson Street bridges in downtown Phoenix and will cross the river on the existing Salt River Bridge.

Q: Why aren’t we building a new bridge for light rail similar to Tempe? (8/30/18)
Q: Why is the Salt River Bridge not being replaced? (9/15/18)
A: The design team completed a structural assessment on the existing bridge, and it was determined that the existing bridge was in very good shape, and therefore can be retrofitted to accommodate light rail for the usable life of the light rail infrastructure.

Q: Can 4 lanes fit on the Salt River Bridge? (9/4/18)
A: The Salt River Bridge cannot structurally support light rail and four lanes.

Q: Will the Salt River Bridge be bottlenecked? (9/4/18)
A: In the 2-lane design, the bridge and the roadway on either side of the bridge have the same number of auto lanes. The 4-lane concept has two auto lanes (one lane in each direction) on the bridge and through the roundabouts, but has four auto lanes (2 lanes in each direction) north of the bridge and south of the roundabouts. With a change in the number of lanes in the 4-lane concept, northbound traffic could be affected south of the roundabouts and a southbound traffic could be affected north of the bridge.

Q: Will light rail fit under the heavy rail bridge downtown? (9/6/18)
A: Yes.

Q: How will the light rail travel under the Central Bridge? Is flooding an issue?
A: An underground storm water detention structure will be installed under Central Avenue to temporarily store the excess flood water (up to 50-year storm) before the storm water gets pumps into the nearby storm drain system.

Q: Will the area under Jackson Street flood? (9/6/18)
A: An underground storm water detention structure will be installed under First Avenue at Jackson to temporarily store the excess flood water (up to 50 year storm) before the storm water gets pumps into the nearby storm drain system. The street and light rail tracks would remain operational under a 50 year storm event.

Q: How will light rail travel under I-17 Bridge? (9/4/18)
Q: How will the light rail get under the overpass? (9/4/18)
Q: What about the bridges? Can light rail get under the I-17 historic bridge? (9/4/18)
A: Yes, light rail will operate under the new I-17 bridge being proposed by the Arizona Department of Transportation (ADOT), as the current bridge has met the end of its useful life. The light tracks will stay in the middle of Central Avenue. ADOT will look into raising the bridge as part of their bridge replacement project, and Valley Metro is proposing lowering Central Avenue slightly to maximize the vertical clearance between the proposed track elevations and the new bridge.
Questions Related to Bus Service

Q: The South Mountain West Rapid goes to Capitol, will this route go away? (9/4/18)
   A: Any decision to modify the South Mountain West Rapid will be made closer to the planned opening of the South Central light rail extension in 2023. As with any route in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself.

Q: How late will buses run? (9/4/18)
   A: For any routes in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself. A key component of the T2050 program is to analyze routes that intersect with light rail and provide hours of operation that match light rail hours for the most utilized routes.

Q: What happens to the bus service? (9/4/18)
Q: Will bus service be reduced on Central Avenue? (9/12/18)
   A: Bus service continues to operate along the current 26-mile alignment providing much needed connections between modes, especially at routes that intersect with light rail and at transit centers and park-and-rides along the alignment.

Q: Instead of 30 minute waits for buses can we have 15 minute waits? (9/4/18)
   A: As with any route in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself. By way of example, Route 0 (Central Avenue) currently operates on a 10-minute frequency for portions of the route during peak times, and 20-minute frequency during the remaining hours of operation.

Q: Would bus stop intervals stay the same? (9/6/18)
Q: What will the frequency be? (9/12/18)
Q: What will happen to bus service on Central once light rail is built? (9/12/18)
   A: As with any route in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself.

Q: Why keep buses with light rail on Central? (8/30/18)
Q: Why do we have buses and light rail? (9/4/18)
Q: Why simultaneous bus and light rail on the same route? (9/13/18)
Q: Why still have buses if light rail would be in place? (9/12/28)
Q: Why bus with light rail? (9/12/18)
Q: Why do we need to have both buses and light rail on Central Avenue? (9/13/18)
   A: Bus service continues to operate along the current 26-mile alignment providing much needed connections between modes, especially at routes that intersect with light rail and at transit centers and park-and-rides along the alignment. Buses offer connections across the region where light rail doesn’t operate, and provides opportunities to stop on a more frequent bases – in the Phoenix region, that’s usually every quarter-mile.

Q: Can light rail and bus connections be better timed and coordinated? (9/4/18)
   A: Regional planners analyze transit schedules every six months and make changes as needed. Due to the regional nature of the transit system, bus and rail routes have different start- and end-times, and (more importantly) different operating frequencies. Transit route frequencies also change from peak times to non-peak times; the bi-annual changes are developed based on historical ridership trends and overall route changes.

Q: What is the plan for transit on Baseline? (8/30/18)
A: Any decision to modify transit service will be made closer to the planned opening of the South Central light rail extension in 2023. As with any route in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself. On the Proposition 104 ballot in 2015, Baseline Road was shown as an area to be studied for a Bus Rapid Transit (BRT) line as part of the T2050 program.

Q: What does the future Bus Rapid Transit system look like? (9/4/18)
A: The City of Phoenix is currently working to develop Bus Rapid Transit routes and concepts as part of the city’s T2050 program. As the program is developed, design concepts will be shared with the community to seek input on routes, modes of operation, and other design elements.

Q: How many bus pullouts are already in place in the existing corridor? (9/13/18)
A: There are 7 bus pullouts in the existing corridor.

Q: Do you have statistics regarding the ridership on buses? (9/15/18)
A: Today, the three north-south operating bus routes within 1/2 mile of Central Avenue (Route 0 – Central Avenue, Route 7 – 7th Street, and Route 8 – 7th Avenue), pick up approximately 2,700 passengers each weekday in the area south of downtown, but not including downtown.

Q: What was the tipping point for having a new transportation system put in place related to the volume of buses? (9/15/18)
A: One purpose for initiating the 2012 study for a new transportation system for South Phoenix was based on the performance of the existing bus system. Despite frequent bus service in the corridor in 2012 and today (every 10 minutes during rush-hour), local buses on Central Avenue (Route 0) provide some passengers with a standing-room only ride during peak travel hours. Existing ridership data shows that some bus trips during rush-hour regularly experience overcrowding. Furthermore, the projected growth in population and employment in the South Central Avenue corridor will increase the need for more transit service. While increasing the volume of buses on Central Avenue was a consideration, it would have also required purchasing more buses, which need to be replaced more frequently than light rail trains and increasing the number of bus operators, which directly relates to an increase in operating costs.

Q: In terms of buses, is the light rail worth the cost benefit? (9/15/18)
A: The operating cost of light rail is more efficient than the operating cost of bus. As reported in the Valley Metro 2017 Transit Performance Report, the operating cost per passenger boarding for light rail was $2.51. The operating cost per passenger boarding for bus was $5.02. The Transit Performance Report is available on Valley Metro’s website: https://www.valleymetro.org/sites/default/files/uploads/event-resources/2017_transit_performance_report_0.pdf

Q: I have not yet found/seen clarification of the plans of bus scheduling on South Central Avenue with light rail. It was my understanding of preliminary plans that headways between local buses on Central would be almost doubled - to 20 minutes during peak and 30 minutes for the rest of the time. Valley Metro should clarify how this reduction in local bus service will affect South Central’s usage of light rail. (9/15/18)
A: Any decision to modify transit service will be made closer to the planned opening of the South Central light rail extension in 2023. As with any route in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself.
Questions Related to Business Assistance and Jobs

Q: Has business outreach/tech assistance considered cash payments to businesses instead of technical assistance like 911 or hurricane relief? (9/4/18)
Q: Are there other non-restrictive funds that can be used for business support? (9/6/18)
Q: Why can’t we provide funds to businesses during construction? (9/6/18)
Q: Is there any financial assistance programs for the businesses that are tenants (non-land owners)? (9/6/18)

A: If the South Central light rail extension is constructed using federal funding, federal guidelines do not allow the City of Phoenix or Valley Metro from providing actual dollars to businesses. However, the City and Valley Metro will work with local organizations and nonprofits to determine the forms of assistance that can be provided.

Q: Will these, business assistance and jobs, remain if light rail does not go through? (9/4/18)
A: Valley Metro’s Business Assistance Program and job opportunities specific to the construction of the South Central Extension are contingent on the project being constructed.

Q: How are you mentoring small and disadvantaged business owners? (9/6/18)
Q: Are you mentoring small and disadvantaged business owners? (9/6/18)
A: The City of Phoenix will offer business owners the opportunity to work with experienced consultants, prior to construction, to meet their business needs and future plans. This offering is made possible by the Transit Oriented Development Grant sponsored by the Federal Transit Administration. Services available include:

- Accounting and Bookkeeping
- Marketing
- Website Development
- Finance & Loan Packaging
- Information Systems
- Procurement
- Human Resources

Q: Have there been studies to show how businesses fared during the light rail construction? (9/6/18)
Q: How did businesses fare downtown as part of the original systems construction? (9/6/18)
A: Valley Metro has found that businesses who took part in the assistance programs offered fared better than those who did not.

Q: How are you being transparent in regards to business assistance? (9/6/18)
A: Businesses can contact Valley Metro’s Business Assistance Coordinator Flor Mason at fmason@valleymetro.org or Markus Coleman with the City of Phoenix at markus.coleman@phoenix.gov for any questions related to the business assistance programs available.

For more information on the business assistance and construction support, please visit Valley Metro’s website:

Q: What is the City doing to assist businesses for noise abatement on windows? (9/6/18)
Q: Is there a program to assist businesses and residents with double pane windows for noise abatement?
A: As part of the environmental analysis required for the project, a ‘Noise and Vibration Technical Report’ was conducted. The analysis includes a review of “noise concerns associated with a light rail system (to) include light rail operations; effects from special track work, track curvature, audible warnings and traction power substations (TPSS) and construction of the system,” and mitigation efforts where required. The analysis found that “with implementation of mitigation where needed, the proposed project would not result in exceedances of the applicable noise criteria thresholds. Therefore, the project would have no significant adverse noise impact.” The complete report can be found at: https://www.valleymetro.org/sites/default/files/uploads/event-resources/south_central_appendice_e_noise_vibration_report.pdf

Q: Are low interest loans available for businesses?  (9/6/18)

Q: Does the City have relationships or programs with financial institutions?  (9/6/18)
A: The City and Valley Metro are exploring opportunities to partner with organizations to provide businesses with loans as part of the business assistance program.

Q: Can Community Reinvestment Act money be used?  (9/6/18)
A: The City and Valley Metro will explore any methods that can be utilized for investment in the community – of note is that Community Reinvestment Act is specific to financial institutions and “intended to encourage depository institutions to help meet the credit needs of the communities in which they operate, including low- and moderate-income neighborhoods, consistent with safe and sound banking operations.”

Q: What is the City Council meeting update from 8/29/18 whether you must attend one of the schools on the alignment to participate in STEM program?
A: Please provide more information on your question, as there were no South Central light rail extension items for approval on the 8/29/19 agenda. Please contact Jesus Sapien at jesus.sapien@phoenix.gov to inquire further.

Q: How many people are you hiring for the project (Kiewit)?  (9/6/18)
A: Kiewit intends to hire approximately 200 craftsmen and expects subcontractors and vendors to employee another 200 with a total of 400 craftsmen being employees on the project.

Q: What is the City of Phoenix doing in terms of jobs and workforce development?  (9/12/18)
A: There are job and workforce development opportunities available as part of the design and construction of the South Central light rail extension. Opportunities include jobs and internships for individuals in engineering fields, training and craft development in the construction industry, and college mentoring as part of the ‘Engineers of the Future’ program. Please contact Flor Mason at fmason@valleymetro.org for more information.

Q: How are businesses impacted?  (9/13/18)
A: Any form of construction within a roadway can impact nearby businesses. Regardless of the roadway configuration (2-lane design or 4-lane concept), nearby businesses could be impacted by the related construction.

Q: How are you going to keep businesses from going under during construction?  (9/13/18)
Q: Are there plans in place to mitigate the impact on businesses on Central Avenue during construction? Lessons learned?  (9/13/18)
Q: What are you going to do for businesses along Central Avenue when light rail comes?  (9/13/18)
Q: What type of business assistance are you providing?  (9/15/18)
Q: What types of business assistance are available to businesses along the alignment?  (9/15/18)
A: Valley Metro requires the construction contractor to maintain access during construction. Notice and coordination will be provided prior to any work adjacent to a business. Additionally, Valley Metro and the City of Phoenix provides business assistance before and throughout construction, in the form of business assessments, special events, customized signage, marketing/social media assistance, and accounting/financial planning.

Valley Metro has staff available 24/7 to answer questions from business owners and to respond rapidly to any emergencies that may arise from construction.
Alexis Hermosillo at 602.523.6039 or ahermosillo@valleymetro.org (Broadway – Baseline)
Julie Smith at 602.744.5563 or jmsmith@valleymetro.org (Lincoln – Broadway)
Julie Cruz Gilfillan at 602.495.8274 or jcruz@valleymetro.org (Downtown – Lincoln)
Flor Mason at 602.523.6032 or fmason@valleymetro.org (Business Assistance Coordinator - entire alignment)

Q: Why do we need the light rail if businesses don’t need help? (9/13/18)
Q: Why do we need light rail? (9/12/18)
Q: Are we building light rail to solve a current or future problem? Why do we need it if there is no current problem? (9/13/18)
A: Families and individuals along the South Central corridor need and deserve infrastructure improvements and additional public transportation options for convenient access to work, school and more. Voters approved the extension in 2000, 2004 and in 2015. Prop 104, known as Transportation 2050 plan, received 75% approval from voters who live along the South Central line. The Phoenix City Council approved the route and design in 2014, and acceleration of the project in 2016.

Q: What opportunities will there be for businesses along the corridor and larger South Phoenix area? (9/15/18)
A: For businesses along Central Avenue, Valley Metro and the City of Phoenix provides business assistance before and throughout construction, in the form of business assessments, special events, customized signage, marketing/social media assistance, and accounting/financial planning. Subcontracting opportunities with the construction contractor are also available.

Q: How many businesses closed during previous light rail projects? (9/15/18)
A: Valley Metro does not track that information.

Q: What are the statistics in hiring community members for past light rail construction? (9/15/18)
A: The South Central Extension is the first to encompass a focused workforce development plan, so the number of community members hired on previous projects were not tracked. However, the overall number is. During peak construction, 700 jobs were generated on the Central Mesa Extension and 600 on the Northwest Extension in Phoenix.

Q: How much funding will be reserved for T2050 grant and business assistance? (9/12/18)
A: The Federal Transit Administration (FTA) awarded the City of Phoenix a transit oriented development (TOD) planning grant to implement an early action business assistance program and to plan for future development along the South Central light rail extension. The city received funding of $2 million, which is further supported by a $400,000 local (T2050) match. As the grant is focused on early business assistance and TOD planning, the city and Valley Metro will provide further assistance closer to, and during, the construction period.
Questions Related to Community Beautification – Landscape, Sidewalks, Shade, Bus Pullouts

Q: Will side streets and sidewalks be improved with this project? (9/6/18)
A: Area side streets, sidewalks and streetscapes are not included as part of the scope of the light rail project. However, the City of Phoenix has established the T2050 Mobility Improvements Program to improve mobility safety and connectivity of all roadway users. The program will identify opportunities for new sidewalk construction, bicycle facilities and connections to existing transit stops. Of the 11 areas currently being looked at city-wide, two overlap with the proposed light rail alignment. More information can be found at: https://www.phoenix.gov/streetssite/Pages/Mobility-Improvements-Program.aspx

Q: Will there be enhancements on side streets/streetscape? (9/6/18)
A: Area side streets, sidewalks and streetscapes are not included as part of the scope of the light rail project. However, the City of Phoenix has established the T2050 Mobility Improvements Program to improve mobility safety and connectivity of all roadway users. The program will identify opportunities for new sidewalk construction, bicycle facilities and connections to existing transit stops. Of the 11 areas currently being looked at city-wide, two overlap with the proposed light rail alignment. More information can be found at: https://www.phoenix.gov/streetssite/Pages/Mobility-Improvements-Program.aspx

Q: At bus pullouts can we add 2 to 3 feet of bike lane and reduce lane width on the 2-lane scenario – striping only? (9/4/18)
A: Widening the pullouts up to an additional 2 to 3 feet will extend outside of the environmentally cleared project area, and in some areas it is not be feasible due to how close some buildings are to the roadway.

Q: Are you putting in mature shade trees at bus stops (downtown is ugly)? (9/4/18)
A: The type and size of trees installed will be determined by the lane configuration, sidewalk widths, and available landscaping areas.

Q: Can we keep bus pullouts at Central Avenue and Southern in both directions? (8/30/18)
A: The 2-lane design is able to accommodate bus pullouts in both directions (northbound and southbound) at Central Avenue and Southern Avenue. The wider roadways in the 4-lane concept do not provide the same opportunities as the 2-lane design to include bus pullouts.

Q: Can landscape areas be used for bus pullouts? (9/6/18)
A: In the 2-lane design, bus pullouts are located in areas that would have otherwise been landscaped. The wider roadways in the 4-lane concept do not provide the same opportunities as the 2-lane design to include bus pullouts.

Q: What will be done to improve Central Avenue? (9/6/18)
A: Improvements on Central Avenue will include new sidewalks, new landscaping between the roadway and sidewalk, new buffered bicycle lanes, new bus stops, and new roadway pavement.

Q: How do we make sure we have trees and shade on Central Avenue so that sidewalks have shade in the 2-lane and 4-lane designs? (9/12/18)
A: Both the 2-lane design and 4-lane concept include shade and landscaping. However, with the wider roadway required for the 4-lane concept, there would be less shade and landscaping than the 2-lane design.

Q: Who is going to maintain landscaping? (9/12/18)
Q: Who will manage the upkeep of the street landscaping? (9/13/18)
A: Landscaping will be jointly maintained by the City of Phoenix and Valley Metro.

Q: Would there be new landscape without light rail? (9/12/18)
A: There are no plans currently place for additional landscaping along Central Avenue without light rail.

Q: Why are there no trees with the 4-lane concept at LoLo’s? (9/12/18)
A: In the 4-lane concept the roadway is widened on both sides of Central Avenue to include two lanes in each direction. The additional roadway width does not leave enough space to have a landscape planter that is wide enough to allow trees to be planted and survive.

Q: Why were lane design, landscaping and alignment decisions made without the community of South Phoenix agreeing completely? (9/13/18)
A: Community members have been and will continue to be invited to provide input on the design of the project. Community meetings were held in early in the planning process when lane design and alignment recommendations were made. With the project in final design now, additional opportunities to provide input on the design of project features like landscaping are available by meeting one-on-one with Valley Metro and City of Phoenix staff as well as at future community meetings specifically related to the design of the light rail extension.

Q: What will the density be of shade trees and shade structures? (9/13/18)
A: Approximately 370 shade trees, including trees on light rail passenger platforms and in the light rail guideway, are being planned throughout the corridor where space allows. Shade structures will be placed at station platforms only.
Questions Related to Community Meetings (2-lane and 4-lane comparison)

Q: Can you show landscaping on the concepts? (9/6/18)

A: Landscape plans are being evaluated now as part of the project’s design process. In April 2018, Valley Metro held workshops to gather input from the community on the types of trees, shrubs and plants that could be utilized as landscaping along the corridor. A comparison of the landscaping areas between the 2-lane and 4-lane designs is being presented at the meetings or is available to view on Valley Metro’s website: valleymetro.org/southcentral

Q: I would like comparison information for existing roadway configuration: landscape, trees, bicycles, bus pullouts, auto and light rail speeds, Salt River Bridge, roundabouts, dedicated left turn lanes, travel time, cost/cost difference. (9/6/18)

Q: To better understand the impact of the South Central light rail extension on South Central Avenue traffic, for every traffic engineering metric associated with South Central light rail extension, I seek apples-to-apples comparison of two-lane with light rail, four-lane with light rail, and current four-lane without light rail configurations of Central Avenue. (9/15/18)

A: Existing roadway configuration was not included in the 2-lane and 4-lane comparison because action directed by the Phoenix City Council was to complete an analysis of a 4-lane roadway configuration within the environmental footprint of the 2-lane design. However, the table below provides the requested information.

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>2-Lane</th>
<th>4-Lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape - Trees</td>
<td>132 total trees with 69 located on the side of the roadway and 63 in the median</td>
<td>4,400 linear feet of 4-foot wide tree areas, estimated 160 trees</td>
<td>2,000 linear feet of 4-foot wide tree areas, estimated 65 trees</td>
</tr>
<tr>
<td>Bicycles</td>
<td>Dedicated lanes north of Southern Avenue, mixed with automobile traffic south of Southern Avenue</td>
<td>Dedicated buffered lanes</td>
<td>Mixed with automobile traffic</td>
</tr>
<tr>
<td>Bus Pullouts</td>
<td>7</td>
<td>21</td>
<td>None</td>
</tr>
<tr>
<td>Automobile and Light Rail Speed Limits</td>
<td>35 MPH</td>
<td>35 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Salt River Bridge and Roundabouts</td>
<td>4 travel lanes</td>
<td>2 travel lanes</td>
<td>2 travel lanes</td>
</tr>
<tr>
<td>Dedicated Left-Turn Lanes</td>
<td>At 29 collector and neighborhood streets; only 4 are signalized</td>
<td>All 17 signalized collector and neighborhood streets</td>
<td>At 4 of the 17 signalized collector and neighborhood streets</td>
</tr>
<tr>
<td>Travel Time (Baseline - Broadway)</td>
<td>4 – 5 minutes</td>
<td>4.5 minutes</td>
<td>7.5 minutes</td>
</tr>
<tr>
<td>Cost</td>
<td>Not applicable</td>
<td>No change</td>
<td>Approximately $7 Million</td>
</tr>
</tbody>
</table>

4-lane concept remains within environmental limits of 2-lane design; no additional properties or buildings would be purchased.

Q: Can you bring a map with locations of all bus stops? (9/6/18)
A: The map below shows where bus stops are currently planned along Central Avenue in the 2-lane design between downtown Phoenix and Baseline Road.
Q: Will the same information be presented at the six meetings?  (8/30/18)
   A: Yes. The same meeting information is also available on the Valley Metro’s website: valleymetro.org/southcentral

Q: I missed the presentation. How can I get the information?  (9/4/18)
   A: Visit Valley Metro’s website valleymetro.org/southcentral. All meeting materials are posted on the South Central Extension page.

Q: When will public get to review questions and answers from the six open houses before going to council – maybe online?  (9/4/18)
   A: Questions and answers from the six meetings will begin to be posted starting on September 12. All questions and answers will be included as part of the independent facilitator’s report to council summarizing the feedback received. The report will be posted on the Valley Metro’s website prior to the Phoenix City Council Meeting tentatively scheduled for Wednesday, September 26, 2018. Mr. Eric Bailey serves as the independent meeting facilitator.

Q: Who made these videos? They are slanted towards 2 lanes for light rail, such as “as you can see” or “safety”?  (9/6/18)
   A: The videos were produced by the South Central project team based on information from the technical analysis on the 2-lane design and 4-lane concept. The project team continues to evaluate the meeting materials to ensure clear and accurate information is being presented.

Q: Why can’t we ask questions as a group and not as individuals?  (9/6/18)
   A: The goal is to answer as many questions as possible during the meeting, whether presented to staff as group or individual questions. City of Phoenix, Valley Metro, and design and consultant staffs were on hand at each meeting to answer as many questions as possible in person.

Q: Why pay Eric Bailey to present?  (9/13/18)
   A: The community meetings that were held were done so at the Phoenix City Council’s direction to conduct a full, comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design.
Questions Related to Construction

Q: What will be done to keep access open during construction? (9/6/18)
   A: Valley Metro requires the construction contractor to maintain access during construction. Notice
      and coordination will be provided prior to any work adjacent to a business.

Q: What is the difference in construction time between 4-lane and 2-lane? (9/4/18)
   A: Staff currently estimates that there is no difference in construction time, although changes may
      result if the project undergoes a redesign.

Q: What is the construction phasing plan? Is it built in segments starting from the north end? (9/6/18)
Q: Where will construction begin? Will it all be torn up at the same time? (9/13/18)
Q: What is going to happen with construction on Broadway and Central Avenue? (9/15/18)
   A: A construction schedule and phasing plan has not yet been determined. Concurrent construction
      activities, in different phases, will occur throughout the entire alignment and not in segments. A plan
      will be developed between the 60% and 90% percent design milestones and will be shared with the
      community prior to the start of construction.

Q: What happens to the bus service during construction? (9/6/18)
   A: Bus service will continue during construction. All schedules will be maintained, but some bus
      stops may be moved to accommodate the construction work in that area. All bus stops are required
      to remain ADA accessible.

Q: When will construction start and how long will it last? (9/15/18)
   A: Construction will begin on Central Avenue in late 2019/early 2020. The extension is expected to
      open in 2023.

Q: If there is a problem or issue that occurs due to construction, who is the contact for the businesses? (9/12/18)
   A: Valley Metro has staff available 24/7 to answer questions from business owners and to respond
      rapidly to any emergencies that may arise from construction.
      Alexis Hermosillo at 602.523.6039 or ahermosillo@valleymetro.org (Broadway – Baseline)
      Julie Smith at 602.744.5563 or jmsmith@valleymetro.org (Lincoln – Broadway)
      Julie Cruz Gilfillan at 602.495.8274 or jcruz@valleymetro.org (Downtown – Lincoln)
      Flor Mason at 602.523.6032 or fmason@valleymetro.org (Business Assistance Coordinator - entire
      alignment)
Questions Related to Emergency Vehicles

Q: Concerned about emergency vehicles serving people – 2 lanes will slow vehicles. If there is a crash that closes the street then what happens? (9/4/18)

A: The 2-lane design is specifically planned to provide access to emergency vehicles. When an emergency vehicle travels on Central Avenue, cars and trucks will be able to move to the right and stop in the bicycle lane to allow emergency vehicles to pass. In the event that the roadway becomes blocked on either side of the light rail tracks, emergency vehicles can enter the light rail trackway and proceed to the emergency. Emergency vehicles can enter the light rail trackway at openings located at intersections or by driving over the curb.

Q: What if a car breaks down on the bridge and an emergency vehicle needs to get through? (8/30/18)

A: If a car breaks down on the Salt River Bridge, emergency vehicles will be required to utilize the remaining automobile lane and bike lane width on the bridge. If the roadway becomes completely blocked, emergency vehicles will utilize the automobile lane on the other half of the bridge, driving in opposite direction to normal traffic flow.

Q: What's the difference between 4-lane vs 2-lane and emergency vehicle/bus pullouts? (9/4/18)

A: The 2-lane design is specifically planned to provide clear access to emergency vehicles. When an emergency vehicle travels on Central Avenue, cars and trucks will be able to move to the right and stop in the bicycle lane to allow emergency vehicles to pass. The overall roadway area in the 4-lane concept is 2 feet wider in most places than the 2-lane design. For the 4-lane concept, cars in the left lane will need to maneuver to the right lane to safely move to the curb to stop for emergency vehicles. In the event that the roadway becomes blocked on either side of the light rail tracks in both the 2-lane and 4-lane, emergency vehicles can enter the light rail trackway and proceed to the emergency. Emergency vehicles can enter the light rail trackway at openings located at intersections or by driving over the curb.
Questions Related to Funding

Q: What consultants are assigned to the light rail project and what is the budget for them? (9/6/18)
   A: The project is currently in the final design and pre-construction phase. To complete final design, Valley Metro has contracted with a final design consultant team, systems design firm, a program management firm, and construction management team. The budget for this phase of the project is $50 million. Additionally, the City of Phoenix has initiated an early business assistance program and an equitable transit oriented development planning program. Approximately $2.5 million, which is primarily funded by a federal grant, is budgeted for these activities.

Q: Does the T2050 plan include enough funds to operate the light rail system through 2050? (8/30/18)
   A: Yes. The T2050 plan includes enough funds to operate the light rail system through 2050.

Q: How does the Proposition 400 money get split between modes? (8/30/18)
   A: Regional Proposition 400 Sales Tax are split between modes as follows:
   - Highways/Freeways 56.2%
   - Arterial Streets 10.5%
   - Transit 33.3%

Q: Were all alternatives evaluated based on Federal Transit Administration (FTA) funds? (8/30/18)
   A: Twenty-three (23) criteria were used to evaluate the final alternatives. Some of the criteria are similar to criteria used by FTA to determine federal grant eligibility. An evaluation of the project’s potential FTA rating for a Federal New Starts Grant was conducted on the preferred alternative prior to advancing to the FTA grant process. The evaluation criteria are provided in the Locally Preferred Alternative Report available on Valley Metro’s website:

Q: Why will 4-lane cost more? (9/4/18)
   Q: Why are the costs for 4-lanes higher? (9/6/18)
   Q: Why does 4-lane increase the cost of 7 million? (9/6/18)
   A: The 4-lane concept is estimated to cost at least $7 million more than the 2-lane design because there will be additional costs associated with re-doing some design work already completed for the 2-lane design.

Q: Does current funding consider upgrades to system to increase capacity? (9/6/18)
   A: No. Funding is not specifically reserved for future system upgrades to increase capacity.

Q: How many riders are needed to sustain light rail before it goes to the red? (9/6/18)
   A: No light rail system or other form of transit service in the United States operates without subsidies. Light rail passengers pay for approximately 32% of the operating and maintenance costs, while bus passengers pay for approximately 15%.

Q: What happens to the funding? (9/6/18)
Q: Where does the T2050 money component project go to if the light rail doesn’t happen? (9/13/18)
A: If the South Central Light Rail Extension does not get built, a majority of the project funding would not be directly eligible for reinvestment into the South Central Corridor. A description of each fund source and its potential use is provided below:

Phoenix Transportation 2050 funds (23% of funding) could be used for other transportation projects throughout the entire City as approved by the City Council.

Regional Proposition 400 Sales Tax (16% of funding) would be returned to the region to reallocate among transit projects within the County. This will require approval from the Maricopa Association of Governments.

Federal funds (61% of funding) would not be available.

Q: How does the cost per mile for the South Central Extension compare to other light rail extensions to be completed in 2023?

A: Compared to the Northwest Light Rail Extension Phase II (NWEII), which is scheduled to open in 2023, the total project cost per mile is similar. The NWEII is a 1.5-mile extension with an estimated cost of $318 million. The cost per mile is $212 million.

Q: What happens when cost overruns schedule delays?

A: The impacts of potential cost overruns and schedule delays are mitigated by the extensive project reviews completed by the Federal Transit Administration (FTA) throughout planning, design, and construction of the project. The FTA’s reviews include a cost and schedule risk assessment, value engineering, and ongoing project oversight. Through these procedures, the FTA develops and assigns an appropriate level cost and schedule contingency.

Q: If we start over with design to provide design that is similar to the Camelback Road and 19th Avenue would have more competitive project for the future?

A: No. If we were to restart the design following a similar approach as Camelback Road and 19th Avenue, the region would not have a more competitive project for the future. The project would have higher costs resulting from the purchase of additional land and buildings, relocation of residents and businesses with no improvement in light rail ridership.

Q: How much money would it cost to have trolleys similar to Scottsdale run from South Phoenix to Downtown? (9/12/18)

A: The operating and capital cost of a service similar to the Scottsdale trolleys, which are custom buses, would be similar to existing bus service on Central Avenue. In 2017, the average operating cost per passenger boarding for bus was $5.02, while the average operating cost per passenger boarding for light rail was $2.51.

Q: Isn’t one billion dollars ridiculous for a five-mile stretch? (9/12/18)

A: The 5.5-mile South Central light rail extension not only includes building light rail within the roadway but also includes rebuilding the roadway and adjacent sidewalks, new traffic signal systems, new street lights, landscaping, relocation and replacement of utilities throughout the corridor, reinforcing or building new bridges, purchasing 17 light rail vehicles, and modifications at the light rail operations and maintenance center to accommodate the additional trains.

Q: Is the current light rail system being subsidized? (9/12/18)

A: Yes. Light rail, and all other forms of transit, is subsidized. Approximately 32% of the operating costs for light rail are paid for by passenger fares.

Q: Is the federal government eventually going to pay maintenance and operations costs for the long term and how does it work within the existing system? (9/12/18)
A: The federal government provides a small amount of capital funding that can be used to offset capital related maintenance costs. These availability of these funds is anticipated to continue when the South Central light rail extension opens. For the existing light rail line, a majority of the operations and maintenance costs are funded by the three cities in the region that have light rail: Phoenix, Mesa and Tempe.

Q: Why not budget more for South Central so we have 4 lanes? The land costs less compared to up north where it costs more. Did you budgeted for it? (9/13/18)
A: To construct the South Central light rail extension with four lanes, dedicated bike lanes, dedicated left turn lanes and the same level of landscaping as the 2-lane design, additional land and budget would be required. However, the recommendation in 2014 to construct a 2-lane design was based more on the desire to avoid demolishing, either fully or partially, up to 60 buildings along Central Avenue, than it was to increase the amount of funding for buying additional land.

Q: Is the cost of the rail efficient? Is it a wise use of money? (9/13/18)
A: The operating cost of light rail is more efficient than the operating cost of bus. As reported in the Valley Metro 2017 Transit Performance Report, the operating cost per passenger boarding for light rail was $2.51. The operating cost per passenger boarding for bus was $5.02. The Transit Performance Report is available on Valley Metro’s website: https://www.valleymetro.org/sites/default/files/uploads/event-resources/2017_transit_performance_report_0.pdf

Q: Will the federal funds go away with the 4-lane configuration? (9/15/18)
A: Yes. The federal funds are contingent upon meeting federally specified deadlines. Advancing a 4-lane design and completing environmental documentation to a level acceptable for submittal to the Federal Transit Administration in the time to meet grant milestones is not feasible.

Q: Does the funding for this project affect the funding for the Capitol/I-10 West Extension if the South Central Extension does not occur? (9/15/18)
A: No. Funding for the Capitol/I-10 West light rail extension is budgeted separately from the South Central light rail extension.

Q: Will project money go towards affordable housing? (9/15/18)
A: No. All current funding identified for the project are eligible for transportation purposes only.
General Questions

Q: Is there a way to connect Broadway to the neighborhood north of Broadway and west of Central – possibly connect through extension of 2nd or 3rd Avenue? (9/6/18)
A: 3rd Avenue terminates at Pueblo Avenue on the south end; the land parcels along the south side of Pueblo Avenue are owned by multiple private parties and are not planned for acquisition as part of the light rail project. However, 6th Avenue provides a direct connection to Broadway Road approximately 800 ft. to the west of 3rd Avenue. 2nd Avenue does not exist on the north side of Broadway Road in this area.

Q: How is the neighborhood improvement plan being formed to include the 114 adjacent roads that are not to current city standards? (8/30/18)
A: Street conditions and infrastructure needs will be analyzed throughout the city as part of the T2050 program. Specific to the South Central light rail extension, the city’s Street Transportation Department is currently undertaking a ‘Mobility Improvements Program’ which will evaluate and improve mobility safety and connectivity for all roadway users. Of the 11 areas currently being looked at city-wide, two overlap with the proposed light rail alignment. More information can be found at: https://www.phoenix.gov/streetssite/Pages/Mobility-Improvements-Program.aspx

Q: What is the relationship between the light rail project and the South Mountain Village plan? (9/6/18)
Q: Why is light rail being planned separate from the village plan for South Phoenix? (9/13/18)
A: The city and the South Mountain Village planning committee utilizes several plans and overlays to guide the character, land use and development of the area. For the plans and overlays specific to the South Mountain Village, visit https://www.phoenix.gov/villages/South-Mountain for more information; for information on the city’s transit-oriented development (TOD) framework, visit https://www.phoenix.gov/villagesite/Documents/pdd_pz_pdf_00380.pdf. All documents on both links are searchable (i.e., search for ‘light rail’ using the ‘find’ function) to find information on how transit complements the long-term vision for specific areas and the city as a whole.

Q: What is the City’s sensitivity to the issues? (9/4/18)
A: Without knowing the specific issues posed for this question, the City of Phoenix and Valley Metro have conducted, and continue to conduct, outreach for the South Central light rail extension in order to continue obtaining input on the project and any potential impacts it may have.

Q: Will the City of Phoenix have sensitivity to variances and can there be a designated staff person to assist with small property improvements – streamlining, fees, landscaping and drainage requirements? (9/4/18)
Q: How will the city deal with variances to accommodate the businesses on the alignment? (9/6/18)
A: There are different types of variances the city would evaluate/can consider based on the request from a particular property owner, business owner, or resident. City staff are actively working with property owners to address challenges such as parking, access and business operations to accommodate the specific needs of properties. We would encourage anyone with specific information on a variance to reach out to city staff so that more detailed information can be provided and evaluated per city ordinances and other guidelines. A good starting point would be the city’s Office of Customer Advocacy (602.534.7344), where city staff are assigned to assist property and business owners along the light rail alignment.

Q: Can we get a reduction in permits fees for property improvements? (9/6/18)
A: The city has programs in place to assist and guide business and property owners through the permitting process. The city also partners with community organizations who may have programs in place to assist business and property owners, depending on the improvements the owner is proposing. Please contact the city’s Office of Customer Advocacy (602.534.7344), where city staff are assigned to assist property and business owners along the light rail alignment.
Q: When will a decision be made on the number of lanes? (9/6/18)
Q: When will the City Council vote take place? What are we voting on? Will I get a chance to vote? (9/13/18)
A: The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018. The public may request to address the Council regarding an agenda item by submitting a yellow Request to Speak card at the meeting, or may submit a white card to state their support or opposition to an item for the record without speaking. Individuals should arrive and submit a card by the beginning of the meeting, before action is taken on the item. After action has been taken on an item, cards will not be accepted.

Q: What if South Phoenix residents don’t want light rail? (9/6/18)
Q: How can we terminate the project? (9/6/18)
Q: How can I stop light rail? (9/12/18)
Q: Can we stop the light rail project? (9/12/18)
A: The community meetings that were held were done so at the Phoenix City Council’s direction to conduct a full, comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design. The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018, that is open to the public.

Q: What can I do to make this project start as soon as possible? (9/12/18)
A: The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018, that is open to the public.

Q: Are you having these meetings with your answer/choice set and not prepared to cancel the light rail project? (9/4/18)
A: The community meetings currently that were held were done so at the Phoenix City Council’s direction to conduct a full, comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design, although residents can provide any input they would like.

Q: If businesses and residents along South Central want 4-lanes how will the City Council address this? (9/6/18)
A: The community meetings that were held were done so at the Phoenix City Council’s direction to conduct a full, comprehensive community engagement process facilitated by an independent facilitator to specifically discuss the impacts of a 4-lane design. The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018, that is open to the public.

Q: What are the impacts of last week’s City Council vote? (9/4/18)
A: If this question is in relation to Item #130 at the August 29, 2018 Phoenix City Council meeting, that item, as approved by Council, requests “approval for staff from the Street Transportation Department to spend in excess of eight hours of staff time, per City Council Rule 12, to examine street repair options using Transportation 2050 (T2050) revenues.” The potential delay of light rail projects, as discussed by City Council at the time, is specific to projects not already in the stages of planning or design. If this is in reference to a difference City Council action, please let us know.

Q: Can I have more information on property taxes? (9/12/18)
Q: Can low income residents and senior citizens property taxes be grandfathered in? (9/12/18)

A: Property taxes are assessed and collected by the Maricopa County Assessor’s Office. Under the Light Rail Valuation Relief Program, eligible property owners could receive partial property tax relief during light rail construction. Contact Tracy Johnston with the Assessor’s Office at 602.372.9213 or mcassessor@maricopa.gov for more information.

Q: Can we do tax incentive and reinvestment zones (TIFS)? (9/12/18)

A: The City and Valley Metro will explore any methods that can be utilized for investment in the community.

Q: What is the purpose of the report once it is completed? (9/12/18)

A: The purpose of the report is for the independent meeting facilitator to summarize the feedback received. The report will be posted on the Valley Metro’s website prior to the Phoenix City Council Meeting tentatively scheduled for Wednesday, September 26, 2018. Mr. Eric Bailey serves as the independent meeting facilitator.

Q: Will there be public opinions opportunities at the City Council meeting? (9/12/18)
Q: How will there be public participation for the City Council meeting? (9/12/18)

A: The public may request to address the Council regarding an agenda item by submitting a yellow Request to Speak card at the meeting, or may submit a white card to state their support or opposition to an item for the record without speaking. Individuals should arrive and submit a card by the beginning of the meeting, before action is taken on the item. After action has been taken on an item, cards will not be accepted.

In addition, Citizen Comments are heard for up to 15 minutes at the start of the regular formal meeting and, if necessary, for up to 15 minutes (unless extended by the Chair) before adjournment or recess provided a quorum of the Council is present. Any member of the public will be given three minutes to address the Council on issues of interest or concern to them. Speakers will be called in the order in which requests to speak are received. As mandated by the Arizona Open Meeting Law, officials will not discuss matters raised during the Citizen Comment session, but may respond to personal criticism, and may direct staff to follow-up with the citizen.

Q: How much time does the public have to respond to the report once it is published? (9/12/18)

A: The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018, that is open to the public.

Q: What is the procedure for the public to respond if they do not agree with an answer given? (9/12/18)

A: The item is tentatively scheduled for a City Council meeting on Wednesday, September 26, 2018, that is open to the public.

Q: Is South Phoenix property costs lower than North Phoenix? (9/13/18)
A: Property values are based on various factors specific to a particular parcel (location, zoning, size, existing buildings or facilities, etc.). The Maricopa County Assessor’s office, which is responsible for property valuations, states: “To establish market value, the Assessor's Office gathers information from a number of sources, including previous sales from the area, zoning, topography, view, livable square footage, lot size and other component information, just to name a few. The valuation is determined by a computer analysis of the information gathered. Although properties may look alike on the surface there may be subtle differences. In mass appraisal those are not always obvious, even though they result in different values.”

Source: https://www.mcassessor.maricopa.gov/faq/faq-property-values.php

Q: Where there be additional improvements to the streets besides Central Avenue? (9/13/18)
A: Three roadway improvements on 7th Street and 7th Avenue are included with the South Central light rail extension. These improvements include additional right turn lanes 7th Street and I-17 and 7th Avenue and I-17 additional. The third improvement, which also includes additional turn lanes is located at 7th Avenue/Southern Avenue.

Street conditions and infrastructure needs will be analyzed throughout the city as part of the T2050 program. Specific to the South Central light rail extension, the city’s Street Transportation Department is currently undertaking a ‘Mobility Improvements Program’ which will evaluate and improve mobility safety and connectivity for all roadway users. Of the 11 areas currently being looked at city-wide, two overlap with the proposed light rail alignment. More information can be found at: https://www.phoenix.gov/streetssite/Pages/Mobility-Improvements-Program.aspx

Q: Who pays for non-project costs such as extra landscaping and art? (9/13/18)
A: The City of Phoenix is responsible for paying for any concurrent non-project activities that may occur during light rail construction.

Q: How much will properties appreciate once construction is complete?
Q: How will light rail affect property values for tax purposes? (9/12/18)
A: Changes in property values are unknown, as they are subject to various factors and economic cycles. The Phoenix City Council has also appointed the South Central Transit Oriented Development (TOD) Steering Committee. This committee is charged with review of specific community inputs to formulate the transit oriented development policy plan which will serve as a guide for future investment in the corridor. The planning process will yield a TOD policy plan specific to the South Central corridor, which will serve to attract, guide, and prioritize strategic investments in infrastructure, housing, economic development, and other areas to realize a shared vision for the future. The plan will include actionable strategies for achieving long-range community goals and identify appropriate partners (city, business, or community) for implementation. For more information, please contact Mailen Pankiewicz at mailen.pankiewicz@phoenix.gov.

Q: Has there been outreach to property owners to protect their investment (taxes, gentrification) or the renters who have been there for decades?
A: The city’s business assistance team is currently meeting with business and property owners to conduct business assessments to determine the tools necessary to assist them with meeting their business needs and future plans. Please contact Markus Coleman at markus.coleman@phoenix.gov.

Q: So as a transit user/not a South Phoenix resident, how do you ensure that corporate entities do not take over small businesses or homes? (9/6/18)
A: Any decisions regarding the disposition of a business or home, such as the sale of a business or rezoning process, would be done only with the consent of the owner.
Q: How are we ensuring that we continue to have affordable housing for current and future residents of South Phoenix? (9/4/18)

A: Infrastructure projects such as the South Central light rail extension provide the opportunity to expand the number of affordable housing units using federal, state, city, private, and non-profit organizations’ programs and policies; today, there are approximately 1600 affordable housing units throughout the corridor. The Phoenix City Council has also appointed the South Central Transit Oriented Development (TOD) Steering Committee. This committee is charged with review of specific community inputs to formulate the transit oriented development policy plan which will serve as a guide for future investment in the corridor. The planning process will yield a TOD policy plan specific to the South Central corridor, which will serve to attract, guide, and prioritize strategic investments in infrastructure, housing, economic development, and other areas to realize a shared vision for the future. The plan will include actionable strategies for achieving long-range community goals and identify appropriate partners (city, business, or community) for implementation. For more information, please contact Mailen Pankiewicz at mailen.pankiewicz@phoenix.gov.

Q: Are there any homes being displaced by the light rail project? (9/12/18)

A: No.

Q: Why does light rail have to force families out of their homes because of gentrification? (9/4/18)

A: This has not been shown to be the case along the existing 26-mile light rail alignment in the Valley. Any decisions regarding the disposition of a home, such as the sale or rezoning process, would be done only with the consent of the owner.

Q: How do we ensure that there is no down zoning? (9/6/18)

A: The City has no plans to rezone property along the corridor without the consent of the property owner. Rather, the process to rezone property is initiated by the property owner.

Q: How can I be a part of land use planning for the South Central light rail extension? (9/6/18)

Q: What is the time table for the TOD Planning Study? (9/15/18)

A: The Phoenix City Council has appointed the South Central Transit Oriented Development (TOD) Steering Committee. This committee is charged with review of specific community inputs to formulate the transit oriented development policy plan which will serve as a guide for future investment in the corridor. The planning process will yield a TOD policy plan specific to the South Central corridor, which will serve to attract, guide, and prioritize strategic investments in infrastructure, housing, economic development, and other areas to realize a shared vision for the future. The plan will include actionable strategies for achieving long-range community goals and identify appropriate partners (city, business, or community) for implementation. For more information, please contact Mailen Pankiewicz at mailen.pankiewicz@phoenix.gov.

Q: Is the design efforts considering current or future homes and people living in South Central? (9/13/18)

A: The Phoenix City Council has appointed the South Central Transit Oriented Development (TOD) Steering Committee. This committee is charged with review of specific community inputs to formulate the transit oriented development policy plan which will serve as a guide for future investment in the corridor. The planning process will yield a TOD policy plan specific to the South Central corridor, which will serve to attract, guide, and prioritize strategic investments in infrastructure, housing, economic development, and other areas to realize a shared vision for the future. The plan will include actionable strategies for achieving long-range community goals and identify appropriate partners (city, business, or community) for implementation. For more information, please contact Mailen Pankiewicz at mailen.pankiewicz@phoenix.gov.

Q: How do we address gentrification? (9/13/18)
A: The Phoenix City Council has appointed the South Central Transit Oriented Development (TOD) Steering Committee. This committee is charged with review of specific community inputs to formulate the transit oriented development policy plan which will serve as a guide for future investment in the corridor. The planning process will yield a TOD policy plan specific to the South Central corridor, which will serve to attract, guide, and prioritize strategic investments in infrastructure, housing, economic development, and other areas to realize a shared vision for the future. The plan will include actionable strategies for achieving long-range community goals and identify appropriate partners (city, business, or community) for implementation. For more information, please contact Mailen Pankiewicz at mailen.pankiewicz@phoenix.gov.

Q: Can you provide more information on the T2050 Mobility Program? (9/12/18)
A: The city’s Street Transportation Department is currently undertaking a ‘Mobility Improvements Program’ which will evaluate and improve mobility safety and connectivity for all roadway users. Of the 11 areas currently being looked at city-wide, two overlap with the proposed light rail alignment. More information can be found at: https://www.phoenix.gov/streetssite/Pages/Mobility-Improvements-Program.aspx

Q: What is the plan for West Phoenix since Glendale cancelled the light rail plans? (8/30/18)
A: Valley Metro will work with the City of Phoenix to discuss next steps and transit options that best fit the needs and future demand for travel in the West Phoenix area.

Q: When is light rail planned for North Phoenix? (8/30/18)
A: Information on the city’s Transportation 2050 (T2050) program can be found at https://www.phoenix.gov/T2050, including light rail planning elements.

Q: What about the foundation of my home? (8/30/18)
Q: What responsibility does Valley Metro have for cracked basements because of rail? (8/30/18)
A: Valley Metro conducts a noise and vibration analysis as part of the environmental analysis to identify sensitive areas that may exceed Federal Transit Administration (FTA) standards. Where noise and vibration is identified to exceed standards, changes are incorporated into the light rail design to bring the light rail within compliant noise and vibration levels.

Q: How big are the power stations? (8/30/18)
A: The Traction Power Substations (TPSS) are approximately the size of a two car garage.

Q: What about access to South Mountain Park? Uber or Waymo connection? (9/6/18)
A: Access to the South Mountain Park will not be impacted as a result of the light rail project.

Q: Is the project primary for people in South Phoenix or the region? (9/6/18)
A: The project will serve both the residents of South Phoenix and the region.

Q: Will enough people ride light rail? (9/4/18)
Q: How many people would use light rail? (9/12/18)
A: Using the Federal Transit Administration’s (FTA) ridership forecasting model, it is estimated that the South Central Light Rail Extension will carry approximately 10,000 passenger trips each day.

Q: Parking downtown for a ball game costs $10-$20 and a day pass costs $4.00 today, 4x5 = $20.00. How am I saving money? (9/6/18)
A: For a family, there may not be a cost savings of take light rail over paying for parking. However, for traveling to a ball game, light rail offers other benefits, like avoiding traffic.
Q: How does the light rail save the tradition and heritage of the South Phoenix community?  (9/6/18)
A: As designed, the light rail extension does not hit any buildings along Central Avenue between Buckeye Road and Baseline Road. More than a dozen of the artists selected to design art for the passenger stations and other light rail features will help the extension better integrate into the culture and heritage of the community. In addition, light rail provides a transportation option for community South Phoenix members to more efficiently access education, employment, cultural, and recreation opportunities throughout the region. Likewise, the extension will provide an opportunity for people throughout the region to discover the unique amenities that the South Phoenix Community offers.

Q: How can light rail help benefit schools?  (9/6/18)
Q: How many schools are there along the light rail that can benefit from the light rail?  (9/6/18)
A: Preschool through 8th grade classrooms are eligible for free rides on local bus and light rail services. Valley Metro can help plan group trips on regular transit service, provide an itinerary and provide a free group field trip pass.

Q: Who can I talk to get my school (Cesar Chavez) involved in public art on light rail?  (9/6/18)
A: Contact your Community Outreach Coordinator Julie Smith at 602.744.5563 or jmsmith@valleymetro.org for more information.

Q: Can light rail hours be extended later into the night and morning?  (9/6/18)
A: For any routes in the region, ridership is the determining factor for any changes made to a route, including changes to frequency, the hours of operation, and changes to the route itself.

Q: What is the process for fare changes?  (9/6/18)
A: Fare changes are necessary to preserve service and are planned to occur as needed. The last fare change occurred in 2013. Any proposed future fare changes would include an opportunity for public input and would be a regional decision.

Q: Can bike racks be lowered on trains?  (9/6/18)
A: If you are unable to rack your bike, you can stand with your bike on the light rail.

Q: Would an elevated system minimize the conflict between the rail and vehicular traffic?  (9/12/18)
A: An elevated system could minimize the conflict between the rail and vehicular traffic; however, the initial cost to build an elevated system could two times or more than that of a street-level system. Additionally, the ongoing maintenance costs of an elevated system are also higher than a street-level system.

Q: Would an elevated system increase the area at ground level for 4 lanes and turn signals?  (9/12/18)
A: A design for an elevated system in the South Central corridor has not been prepared, but an elevated system could potentially allow for a 4-lane configuration with dedicated left turn lanes. However, initial construction and ongoing maintenance costs of an elevated system are substantially higher than a street-level design. Additionally, environmental elements such as noise and vibration and visual effects of an elevated system would need to be evaluated and potentially mitigated.

Q: Why can’t someone from the bus system kick out the light rail people?  (9/12/18)
A: The regional bus and light rail services are part of a regional transit system. Light rail can move more people with fewer vehicles and operators, while allowing passengers to travel greater distances in a shorter amount of time than buses. However, buses provide connectivity to areas throughout the region that can’t necessarily support light rail but still have public transportation needs.

Q: Why is the Capitol/I-10 West Extension a hashed line on a map? (9/12/18)
A: The hashed line for the Capital/I-10 West Extension indicates that it is a light rail extension on Valley Metro’s High Capacity Transit System map. To review the map, which was apart of the display boards at the community meetings, visit https://www.valleymetro.org/sites/default/files/uploads/event-resources/sce_community_mtg_boards.pdf

Q: What is the ridership for light rail? (9/12/18)
A: The annual ridership for light rail in fiscal year 2017 (July 1, 2016 to June 30, 2017) was 16,511,184 passengers.

Q: What is the fare recovery for bus and rail? (9/12/18)
A: For fiscal year 2017 (July 1, 2016 to June 30, 2017), the fare recovery for bus is 15.4% and 32.2% for rail.

Q: Are we going to add another freeway in South Phoenix? (9/13/18)
A: No. For more information on the South Mountain Freeway currently under construction, visit the Arizona Department of Transportation’s website at: https://www.azdot.gov/projects/central-district-projects/loop-202-(south-mountain-freeway)

Q: How does the light rail differ from the Tempe Streetcar? (9/12/18)
A: The Tempe Streetcar differs from light rail for the following reasons:
• Streetcar can operate with mixed traffic unlike light rail that operates in an exclusive lane
• Streetcar stops are more similar to bus stops and are smaller and less complex than light rail stops
• Streetcar vehicles operate individually, not linked together
• Streetcar uses vehicles that are smaller than light rail vehicles

Q: How will the noise off of the light rail be handled? (9/12/18)
A: Valley Metro conducts a noise and vibration analysis as part of the environmental analysis to identify sensitive areas that may exceed Federal Transit Administration (FTA) standards. Where noise is identified to exceed standards, changes are incorporated into the light rail design to bring the light rail within compliant noise levels.

Q: Will light rail have WiFi charging stations at seats, screens with news or entertainment and/or headphone jacks? (9/13/18)
A: No, that technology is not included on our current light rail vehicles.

Q: Why can't we do an elevated or underground train? (9/13/18)
Q: What about an underground train? (9/13/18)
A: An elevated or underground system would have a substantially higher initial cost to build compared to a street-level system. Additionally, the ongoing maintenance costs of an elevated or underground system are also substantially higher than a street-level system.

Q: How was outreach conducted during the early years of the South Central Extension light rail project? (9/13/18)
Q: What type of outreach was done when the light rail was being planned? (9/13/18)
Q: What was the attendance at early planning meetings? (9/4/18)
Q: What kind of community input was received during the planning process? (9/13/18)

A: During the planning and environmental assessment phase of the project, which began in 2012, public outreach was conducted through open public meetings, one-on-one and small group stakeholder meetings, and a community working group. A summary of the public outreach activities conducted during the planning and environmental assessment phases are documented in the reports available on Valley Metro’s website. Please see the links below for the appropriate document:


Q: Will I have to pay twice to use the light rail, once to get on the bus and once to use the light rail? (9/13/18)

A: With the purchase of all all-day pass or multi-day pass, riders can transfer between local bus and light rail without additional costs. For more information visit Valley Metro’s website at: valleymetro.org/fares

Q: Is the fare for the bus cheaper than the one for light rail? (9/13/18)

Q: What is the fare for light rail vs buses? (9/13/18)

A: Local bus and light rail share the same fare structure and pass types. The Express/Rapid bus service has an upgraded costs. For more information visit Valley Metro’s website at: valleymetro.org/fares

Q: What is the distance of the downtown alignment and where does it go in comparison to the South Central Extension? (9/13/18)

A: The downtown alignment will include approximately one mile of new light rail track. The new track will be constructed on Washington Street from 1st Street to 3rd Avenue, on 3rd Avenue from Washington Street to Jefferson Street, and on Jefferson Street from 3rd Avenue to 1st Avenue. The South Central route will connect into the downtown alignment track at Central Avenue/Jefferson Street and 1st Avenue/Jefferson Street, allowing passengers to transfer to light rail services destined east or west.

Q: What is the distance and proposed alignment for the Capitol I-10 project? (9/13/18)

A: The 10-mile Capitol/I-10 West light rail extension will connect with the existing Valley Metro Rail system in downtown Phoenix, to the 79th Avenue park-and-ride. In 2016, the Phoenix City Council and Valley Metro Rail Board of Directors approved a phased approach to the project. Phase I will connect downtown Phoenix to the State Capitol area and Phase II will extend light rail along I-10 to 79th Avenue.

Q: I’ve heard light rail will take us to schools and entertainment. Which ones? (9/13/18)

A: Valley Metro has created a light rail destination guide. Visit Valley Metro’s website to view the brochure: https://www.valleymetro.org/sites/default/files/uploads/event-resources/lrt4700_light_rail_destination_guide.pdf

Q: How can other schools not on Central Avenue get involved in the Engineers of the Future? (9/13/18)

A: For more information on becoming apart of the Engineers of the Future program contact Athena Sanchez at athena@torresmulticultural.com.

Q: How many people were involved in the process for the project? (9/13/18)
A: Staff and consultants from Valley Metro, City of Phoenix, and the Federal Transit Administration led the planning and environmental assessment. Community members and organizations involved in these processes are documented in reports available on Valley Metro’s website. Please see the links below for the appropriate document:

Q: Is there a rapid bus that goes from 24th Street to Downtown? (9/13/18)
A: Yes; the South Mountain East RAPID operates between the 24th Street and Baseline park-and-ride and 17th Avenue at Jefferson Street. For a full schedule, visit: https://www.valleymetro.org/maps-schedules/sme

Q: What studies have been done in the community regarding crime, property values and economic development? (9/13/18)
A: The City of Phoenix Police Department conducts various reports and crime analyses. Please provide more specific information for the first part of this question, or contact the Police Department’s Community Relations Bureau at 602.495.5976. As part of the analysis required for the project, an 'Economic Development Technical Memorandum' was provided and can be found at: https://www.valleymetro.org/sites/default/files/uploads/event-resources/south_central_appendice_b_economic_dev_tech_memo.pdf

Q: What is the carbon footprint of light rail vs vehicles? (9/13/18)
A: According to the Federal Transit Administration’s report, “Public Transportation’s Role in Responding to Climate Change”, an automobile produces 0.96 pounds of CO₂ per passenger mile compared to 0.36 pounds of CO₂ per passenger mile for light rail transit.
Source: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/PublicTransportationsRoleInRespondingToClimateChange2010.pdf

Q: If the power goes out does the train stop running? (9/13/18)
A: If the power goes out in a given area, the system is designed to maintain operations by using power from adjacent substations.

Q: Can you provide an equity review and analysis of the 2-lane and 4-lane options considering low income, mobility challenged, blind and deaf and communities of color? (9/13/18)
A: A federally compliant environmental justice analysis, which evaluates potential impacts to low-income and minority populations was completed as part of the project’s Environmental Assessment. The 4-lane concept was not carried forward to the Environmental Assessment; therefore, a complete environmental justice analysis was not completed for this concept. The Environmental Assessment report is available online here: https://www.valleymetro.org/sites/default/files/uploads/event-resources/south_central_environmental_assessment.pdf

Q: Can you top the project for a couple of years to do analyze more in depth for the 4 lane configuration? (9/15/18)
A: Direction provided by Phoenix City Council in June 2018 was to continue with the 2-lane design but evaluate and compare the 2-lane design to a 4-lane configuration that would not extend beyond the current environmental footprint. Valley Metro and City of Phoenix staff were also directed to conduct community outreach efforts to obtain community input and communicate the results of the 2-lane and 4-lane evaluation. The community outreach phase ended on September 15, 2018, and Phoenix City Council will provide further direction at a tentatively set meeting on Wednesday, September 26, 2018.

Q: How did you inform the public of the 4-lane configurations? (9/15/18)
A: Alternatives, including 4-lane configurations, were evaluated as part of the planning phase during 2012 and 2013. During this phase of the project, public outreach was conducted through open public meetings, one-on-one and small group stakeholder meetings, and a community working group. A summary of the public outreach activities conducted during the planning phase is documented in a report available on Valley Metro’s website.

Q: What age group uses light rail most? (9/15/18)
A: Based Valley Metro’s 2015 On-board Origin and Destination Study, the average age of light rail riders is 35.

Q: Any plans for light rail on Baseline? (9/13/18)
A: On the Proposition 104 ballot in 2015, Baseline Road was shown as an area to be studied for a Bus Rapid Transit (BRT) line as part of the T2050 program.

Q: Regarding the initial Transportation Technical Report (“Appendix C”) and any recent updates: How have the computer models been validated before their application in these studies? (9/15/18)
A: The 2035 traffic forecasts used in the South Central Transportation Technical Report are based on the Maricopa Association of Governments (MAG) regional travel demand model. The model is validated to several data sources including the regional household travel survey, observed traffic delay information, and observed traffic count information. The MAG travel demand model has been peer reviewed by the Federal Highway Administration and is certified for regional air quality conformity analysis.

The SYNCHRO traffic operations software used in the South Central Transportation Technical Report relies on traffic count and traffic signal information provided by the City of Phoenix. It is validated to observed corridor travel times and delays.

For recent studies, microsimulation models were developed for 2018 existing conditions and for future conditions in the projected opening year 2023 for both the 2-lane design and the 4-lane concept to compare operations. These models were validated using the GEH statistic, compares vehicle inputs to vehicle outputs. In other words, we made sure the number of vehicles that could be accommodated by each signal in the model was equal to the number of vehicles we observed being accommodated by each signal in the field.
Questions Related to Right-of-Way

Q: Will the light rail cut through the property near Lincoln where the tracks come together and will there be an easement? (9/6/18)
   A: The light rail tracks will impact the Queen's Convenience Store. The parcel is currently planned to be acquired. Staff has been in communications with the business owner as design plans progress.

Q: Can we purchase the 50 properties and relocate them to frontage properties on the light rail route? (9/4/18)
   A: No. The 50+ buildings that were evaluated early in the project would be impacted by a 4-lane light rail option with bike lanes and dedicated left turn lanes throughout Central Avenue are not included in the project’s environmental clearance or project budget – the decision to not take more properties than necessary was made during previous studies and with input from the community.

Q: How much right-of-way is being taken extra in the 4-lane configuration? (9/13/18)
   A: The 4-lane concept was analyzed within the same environmental foot print as the 2-lane design. Using the same “foot print” as the 2-lane design, 4 lanes will fit without additional right-of-way, but there are differences. The 4-lane would have less space for shade and landscaping, it would not include dedicated bike lanes, speed limits would be reduced from 35 miles per hour to 30 miles per hour on Central Avenue for cars, delivery trucks, and light rail, and at 13 of the 17 signalized collector and neighborhood streets, left turn lanes would be shared with through auto traffic.

Q: Can I meet with staff to find out what my property near the light rail would look like/be affected due to the light rail? (9/6/18)
   A: Yes. Contact the designated Community Outreach Coordinator in your area and they will schedule a meeting with you to share current design plans.
   Alexis Hermosillo at 602.523.6039 or ahermosillo@valleymetro.org (Broadway – Baseline)
   Julie Smith at 602.744.5563 or jmsmith@valleymetro.org (Lincoln – Broadway)
   Julie Cruz Gilfillan at 602.495.8274 or jcruz@valleymetro.org (Downtown – Lincoln)
   Flor Mason at 602.523.6032 or fmason@valleymetro.org (Business Assistance Coordinator - entire alignment)

Q: 50 businesses were protected for 2 lanes. What type of businesses were they? (9/15/18)
   A: The 50+ buildings that were evaluated early in the project were a variety of businesses and properties.

Q: How does property acquisition take place? (9/13/18)

Q: When will the land acquisition process start and who is responsible for it? (9/13/18)
   A: The City of Phoenix is responsible for purchasing any right-of-way needed for the project. The acquisition process typically begins following the 60% design milestone and takes 12-24 months.

Q: If we buy property, do we pay the property owner? (9/13/18)
   A: Yes. The City of Phoenix compensates property owners for any land acquisition.
Questions Related to Roundabouts
Q: Where will roundabouts be? (9/6/18)
   A: One roundabout will be located just south of the Salt River Bridge at the entrance to the Audubon Center. The second roundabout will be located two blocks south of the first roundabout at Victory Street.

Q: Can we have roundabout at Yuma instead of an intersection? (8/30/18)
   A: Near the intersection of Yuma Street and Central Avenue there are buildings close to Central Avenue. Staff research shows that constructing a roundabout at Yuma Street with light rail in the median would require the need to fully or partially demolish at least one building and relocating the current business.

Q: Why is there only one lane in the roundabouts? How does/would the 2-lane work? (9/4/18)
   A: The roundabout width at its narrowest location is only about 24 feet wide. With the tight turning radii, the roundabout width (both north and south bounds) cannot fit two longer vehicles, such as trucks with trailers, at the same time; therefore, only one lane can be accommodated in each direction. The roadway transitions from 4-lanes to 2-lanes north of the Salt River Bridge at Watkins Street, and remains 2-lanes until Elwood Street where the roadway transitions back to 4-lanes.

Q: What is the size of the roundabouts? (9/12/18)
   A: Both of the roundabouts (roadway pavement) have a diameter of approximately 150 to 160 feet.

Q: Will roundabouts be big enough to actually work as roundabouts or will they work as stop signs? (9/12/18)
   A: Yes. Roundabouts are large enough to hold the largest trucks (WB-67), and therefore will be large enough to function as a true roundabout when the train is not passing through. When the train comes through, a traffic control device will stop vehicles wishing to make a left turn or U-turn, and there will be storage for 2-3 cars during train operations that will allow vehicles wishing to go through to continue on in their direction of travel.

Q: Why are we putting in roundabouts? (9/12/18)
   A: Roundabouts are included to provide delivery and freight truck access to industrial/commercial businesses on both sides of Central Avenue. In addition, the roundabouts allow cars to travel along Central Avenue without stopping for train.

Q: Regardless of roundabouts, are there going to be 2 or 4 lanes in that area? (9/13/18)
   A: In the area north of Elwood Street and south of Watkins Road, there would be 2 lanes of traffic in both the 2-lane design and 4-lane concept. This area includes the roundabouts and the Salt River Bridge.

Q: Will roundabouts accommodate large turning trucks? (9/13/18)
Q: Are the roundabouts designed for semis and large vehicles? (9/15/18)
Q: Will roundabouts be able to handle large vehicles? (9/15/18)
   A: Yes. The roundabouts are designed to handle WB-67 trucks, which are the largest trucks.

Q: How do bike lanes interact in the roundabouts? (9/13/18)
   A: Depending on their comfort level, bicyclist can either share the travel lane with vehicles or dismount and use the adjacent sidewalk as a pedestrian while walking with their bike.

Q: How will traffic signals work with roundabouts? (9/13/18)

A: The roundabouts will allow incoming traffic to enter a roundabout by yielding to any traffic already in the roundabout. When a train is traveling through a roundabout, a signal or other device will hold cars in the dedicated left turn pocket, while cars traveling straight on Central Avenue will be allowed to continue traveling.
Questions Related to Safety/Security

Q: What is being done about people riding light rail and not paying a fare? (9/4/18)

A: Valley Metro continues to increase security and fare inspection across the light rail system. The fare evasion rate is at 7% which is typical for open light rail systems.

Q: What about crime that light rail will bring? (9/4/18)

A: Since light rail opened in 2008, rider safety and security have always been a top priority at Valley Metro and data shows light rail is safe. Light rail ordinances and policies were created for the safety, security and protection of all riders. Activity on trains and at stations is continuously monitored. Security officers are continually observing the system and interacting with riders on trains or station platforms. Security is increased for special events along the line that increase ridership such as concerts and sporting events. Valley Metro also partners with the police departments in the cities of Phoenix, Tempe and Mesa to provide an additional layer of security and enforcement.

Q: What is the crime associated with light rail? (9/4/18)

A: Valley Metro Rail is a safe system. Valley Metro rail operates daily for up to 20 hours across 26 miles an urban environment carrying an average of 44,000 riders each weekday. Serious safety and crime incidents are rare. Valley Metro understands being safe and feeling safe can differ, which is why a new Respect the Ride Code of Conduct was created to address bad behavior. To learn more about the Respect the Ride Code of Conduct, visit valleymetro.org/RespectTheRide

Q: What will be the increase in crime and homelessness? (9/4/18)

A: Data shows that light rail does not increase crime. Valley Metro is actively engaged with local agencies and law enforcement who are addressing longer term solutions for homelessness. Valley Metro values the collaboration of our community partners and will continue to provide support. As a visible and essential part of public travel across the region, our top priority is to provide transit services that are safe and reliable.

Q: Why don’t you point out the increase in crime currently all along the light rail now? (9/6/18)

A: Crime in the Valley reached an all-time low about 10 years ago and is now on the increase. While crime on light rail has not increased, the service is a reflection of the community that it serves. It also has a greater concentration of people and the perception may be there that crime is more apparent. Valley Metro is very engaged with law enforcement in each neighborhood that we serve. We partner with police on programs to help reduce crime and support a positive and safe environment for our riders.

Q: Are you considering how to deal with the homeless? (9/6/18)

A: Our staff is actively engaged with local agencies and law enforcement who are addressing longer term solutions for homelessness. Valley Metro values the collaboration of our community partners will continue to provide support. As a visible and essential part of public travel across the region, our top priority is to provide transit services that are safe and reliable.

Q: How will safety be incorporated on the platforms? (9/6/18)

Q: How do we address security at the end-of-line (Baseline)? (9/15/18)

A: Safety is incorporated into the design of the stations, including lighting, cameras, emergency phones and how seats and screen walls are designed and placed. Platforms are monitored by patrolling security and are paid fare zones requiring a valid fare to be on the platform. Park-and-rides, generally at the end-of-line stations, are monitored by patrolling security and cameras.

Q: Is the security personal adequate? (9/6/18)

Q: How is lack of visibility and presence of security being addressed by Valley Metro? (9/15/18)
A: With every project extension, Valley Metro conducts a preliminary hazard assessment and threat and vulnerability analysis. These two assessments are used to develop security staffing. In addition, Valley Metro works with public safety to identify proper staffing models and deployment strategies for the existing 26-mile line and future extensions. Valley Metro has a variety of enforcement and safety specialists. Phoenix Transit Enforcement Unit (TEU) patrols the city’s bus and light rail system.

- Sworn officers
- Municipal security guards
- K-9 handlers
- Police assistants
- Valley Metro also employs fare enforcement officers on the light rail system to conduct routine fare checks.

Q: What is being done to address crime issues before light rail stops? (9/12/18)

A: With every project extension, Valley Metro conducts a preliminary hazard assessment and threat and vulnerability analysis. These two assessments are used to develop security staffing. In addition, Valley Metro works with public safety to identify proper staffing models and deployment strategies. Safety is also incorporated into the design of the stations, including lighting, cameras, emergency phones and how seats and screen walls are designed and placed.

Q: What about security on buses? (9/13/18)

Q: What is being done about security on buses? (9/13/18)

A: Valley Metro has a variety of enforcement and safety specialists. Phoenix Transit Enforcement Unit (TEU) patrols the city’s bus and light rail system.

- Sworn officers
- Municipal security guards
- K-9 handlers
- Police assistants

Q: Is the train safe for children getting on and off? (9/13/18)

A: Yes. Passengers enter and exit the vehicle at level ground at a light rail station. There is a signalized crosswalk at each light rail station.

Q: Will light rail have a commuter rail experience that has somebody that is always on train checking tickets and providing security? (9/13/18)

Q: Will someone oversee that passengers have paid tickets? (9/13/18)

A: Valley Metro has a variety of enforcement and safety specialists. Phoenix Transit Enforcement Unit (TEU) patrols the city’s bus and light rail system.

- Sworn officers
- Municipal security guards
- K-9 handlers
- Police assistants
- Valley Metro also employs fare enforcement officers on the light rail system to conduct routine fare checks.
Questions Related to System Operations

Q: How many trains will be on South Central? (9/4/18)
Q: How many trains will there be? (9/6/18)
Q: How often will trains run? (9/12/18)

A: During weekdays, passengers will have a train every 12 minutes in both directions throughout most of the day. Early morning, night, and weekend service will be about every 15 to 20 minutes.

Q: What is the train speed on fully developed roadway with train track? (9/4/18)

A: The train speed will be 35 miles per hour in the 2-lane design and 30 miles per hour in the 4-lane configuration. The train will travel at the same speed as automobiles.

Q: Will the new cars be the same design and same bike racks as the current cars? (9/6/18)

A: Valley Metro is purchasing new train cars made by a different manufacturer than the current train cars, and both types of train cars will be used on the South Central light rail extension. Bike racks on the new vehicles will be designed to maximize use and passenger comfort.

Q: Is the design of the new stations the same as the existing stations? (9/13/18)

A: The design of the stations will be similar to the stations along the existing 26-mile alignment. Community input regarding the art concepts and architecture will continue to be sought as the project design advances.
Questions Related to Traffic

Q: How many left-hand turns will be available if light rail is a go? (9/6/18)
   A: The 2-lane design includes dedicated left turn lanes at a total of 21 intersections along the alignment. Four intersections are located at the major intersections (Buckeye Road, Broadway Road, Southern Avenue, and Baseline Road). The other 17 intersections with dedicated left turn lanes will be located at collector and neighborhood streets. In the 4-lane concept, only four of the collector and neighborhood street intersections will be dedicated left turn and U-turn use; all other left turn lanes in the 4-lane concept will be shared with through traffic.

Q: Why are there no left turns and U-turns between Roeser and Sunland? There are six locations where you cannot make a left or right or U-turn in this stretch. (8/30/18)
   A: Not including the intersections at Roeser Road/Central Avenue and Sunland Avenue/Central Avenue, there are three locations on Central Avenue between these roadways where traffic can currently make a left turn or U-turn. For safety purposes, automobiles are only allowed to cross light rail tracks at an intersection with a traffic signal or at a roundabout. To maintain traffic flow, light rail flow, and provide automobile access to businesses and neighborhoods, traffic signals are spaced approximately every quarter-mile, which is the distance between Roeser Road and Sunland Avenue.

Q: How far do people have to travel to make left hand turns? (8/30/18)
   A: Left hand turn and U-turn locations will be located approximately every quarter-mile along Central Avenue.

Q: The left-hand turn lane will be longer due to more people in line to make U-turns. How long will the turn lane be? (9/4/18)
   A: The length of each of the turn lanes varies based on the traffic projections and demand including the additional volumes for vehicles making U-turns.

Q: If I’m traveling northbound on Central and need to get to a business on the west side of the street will I need to go out of my way and make a U-turn? (8/30/18)
   A: Yes, if the business is located between two intersections. Left hand turn and U-turn locations will be located approximately every quarter-mile along Central Avenue.

Q: Will U-turns be allowed? (8/30/18)
   A: Yes, U-turns will be allowed at signalized intersections, which will be located approximately every quarter-mile along Central Avenue.

Q: Suggest that you test the traffic flow making left hand turns to and from the residential streets vs Broadway and Baseline? (9/4/18)
   A: The traffic analyses prepared for the different roadway configurations included actual traffic data collected on Central Avenue and other area streets. The traffic data includes the traffic that turned on to and off of Central Avenue from and to residential streets. This data was factored into the traffic analyses completed.

Q: What are the locations of left hand turn lanes? (8/30/18)
A: The map below shows where left turn lanes are currently planned along Central Avenue between downtown Phoenix and Baseline Road. In the 2-lane design, all left turns are dedicated for left turn and U-turn use only. In the 4-lane concept, only four of the collector and neighborhood street intersections will be dedicated left turn and U-turn use; all other left turn lanes in the 4-lane concept will be shared with through traffic.

Q: Can pedestrian bridges be added where there are a lot of children crossing Central Avenue? (9/6/18)
Q: Will there be crosswalks for students? (9/6/18)

www.BaileyInnovationGroup.com
Q: Will there be crosswalks for students? (9/6/18)
   A: Where possible, crosswalks are planned for students to utilize when crossing Central Avenue.

Q: Can a crosswalk be placed at Pima instead of Yuma? (8/30/18)
   A: The Yuma Street crosswalk will not be moved to Pima Street because it is at Yuma Street to help passengers safely access the Buckeye Road/Yuma Street light rail station. However, there will continue to be a crosswalk at Mohave Street, two blocks south of Pima Street.

Q: Why can’t traffic lights be adjusted to allow traffic to flow smoothly with 4-lanes? (9/6/18)
   A: Traffic signals have been synchronized for the 4-lane model to allow auto traffic and trains to flow as smoothly as possible. Similar to previous light rail extensions, the City of Phoenix will adjust the traffic signal system prior to start of light rail service based on current traffic conditions at that time and will continue to monitor traffic flow and adjust the signals as needed. The primary impact to traffic flow in the 4-lane design is not traffic light timing, but rather the elimination of various left-turn lanes along the alignment.

Q: Will it block Central Avenue and First Avenue? (9/6/18)
   A: Central Avenue between Jefferson Street and Washington Street will be redesigned to transition automobile access to 1st St. However, this segment will remain open to light rail trains, buses, bicyclists, and pedestrians.

Q: Why not 4 lanes and a turn lane? (9/6/18)
   Q: Why not purchase more to expand the space under a 4-lane with bus pullouts, bike lanes and landscaping? (9/13/18)
   A: Building light rail on Central Avenue with 4-lanes and dedicated turn lanes throughout would extend outside of the environmentally cleared project area and is some areas would require fully or partially demolishing buildings and relocating the current business. This configuration was evaluated early in the planning stages of the project and was not pursued due to the resulting demolition of buildings that would be required in this scenario.

Q: How and where can we turn left? (9/13/18)
Q: Where will intersections be located besides major intersections to cross the tracks? (9/6/18)
   A: Signalized intersections and/or roundabouts, which allow safe movement of vehicles across the light rail tracks, are provided at the following locations.

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Q: Why are fewer cars at intersections in 2-lane and more cars stopped on the 4-lane? (9/6/18)
A: In the 2-lane design the northbound and the southbound vehicular traffic get a circular green signal at the same time. The northbound and the southbound through vehicular traffic also get a circular green signal when the light rail vehicle is going through the intersection. Left turn bays are provided at most of the signalized intersections for northbound and southbound left turns across the tracks. These movements are controlled by Red-Yellow-Green arrow signal heads. Due to the ability of the traffic signals in this design to service the northbound and southbound through movements concurrently and with the light rail vehicles these vehicles are less likely to get stopped at the intersections.

The 4-lane concept provides for 2-lanes in each direction. At all the minor intersections the inner lane (close to the light rail guideway curb) is a left and through lane while the outside lane is a through lane (also allowing right turn movements). The northbound and southbound traffic movements are controlled by Red-Yellow-Green circular traffic lights. Since, the left turn movements (northbound and southbound) from the inner lane conflict with the movement of the light rail vehicle and the opposing through vehicle movements each of these cannot operate concurrently. When the northbound signal indication is green the southbound is red and all vehicles are stopped. Similarly, when the southbound signal indication is green the northbound is red. This concept of traffic signal phasing is called “Split Phasing”. When the light rail vehicle goes through the intersection all signal indications are red and traffic is stopped. Due to the inability to service through vehicular traffic in the northbound and southbound directions concurrently with the light rail vehicle movement and opposing through movement, northbound and southbound through traffic is more likely to get stopped at the minor intersections in this concept.

Q: How will drivers turn into businesses? (9/6/18)
A: There will be no change for drivers accessing businesses on the right side of the roadway. If a driver wants to access a business located on the left side of the roadway and the business is between two intersections; they will be able to make a U-turn at one of the 21 signalized intersections located approximately every quarter-mile along Central Avenue.

Q: If you take out left turn lanes traffic will get backed up, then what will happen? (8/30/18)
A: Both the 2-lane design and 4-lane concept include left turn lanes at all signalized intersections. The difference is that the 2-lane design has dedicated left turn lanes, while the 4-lane concept has shared left turn lanes (i.e., the lane can be used for either travelling straight through or to make a left turn, depending on a driver’s decisions). Traffic studies indicate that the 4-lane concept with shared left turn lanes will result in more traffic delays than the 2-lane, which is one of the reasons the 2-lane design with dedicated left turn lanes was originally recommended.

Q: Was 2-lane traffic model updated recently to compare appropriately with the 4-lane concept? (9/6/18)
A: Microsimulation models using VISSIM was developed for 4 models:

- 2018 Existing Conditions
- 2023 2-Lane Design
- 2023 4-lane Concept without diversion
- 2023 4-lane concept with diversion (same amount of diversion as the 2-lane design)

The models were developed for the section of the alignment along Central Avenue from Broadway Road to Baseline Road.

If we measure capacity as the number of personal vehicles that can be accommodated in a segment of the roadway, there is less capacity in 2023 2-lane scenario than existing. The 2023 4-lane concept will have the same capacity as existing at segments where two lanes in each direction can be provided.
Q: How does the 2-lane traffic model compare to current operations based upon the current street configuration and how is traffic capacity and flow affected? (9/6/18)

A: Both the 2-lane design and 4-lane concept include left turn lanes at all signalized intersections. The difference is that the 2-lane design has dedicated left turn lanes, while the 4-lane concept has shared left turn lanes (i.e., the lane can be used for either traveling straight through or to make a left turn, depending on a driver’s decisions). Traffic studies indicate that the 4-lane concept with shared left turn lanes will result in more traffic delays than the 2-lane, which is one of the reasons the 2-lane design with dedicated left turn lanes was originally recommended.

Q: Why reduced speeds? (8/30/18)
Q: Why is the speed limit in the 4-lane design 30 miles per hour? (9/13/18)

A: The 4-lane concept does not allow enough lane width to safely maintain the 35 miles per hour speed limit. Also, the 4-lane concept provides for a shared bike lane compared to a buffered bike lane in the 2-lane design. Lowering the speed limit allows for safer movement of all traffic modes sharing the lane by reducing the speed differential.

Q: Why is there no option for one rail? (8/30/18)
Q: Why not just one track on Central Avenue? (9/12/18)
Q: Why can’t it be one track from Van Buren and Central Avenue to Baseline? (9/12/18)
Q: Why can’t it be one track from Van Buren and Central Avenue to Baseline? (9/12/18)
Q: Can a single track be considered? (9/12/18)
Q: Can this operate like the Sky Train with single track? (9/12/18)

A: A one-rail option has been studied, but is not feasible for safety and operational reasons.

Q: How is Valley Metro addressing residents not being able to get out of their community at Central and Baseline (community at southwest corner)? (8/30/18)

A: The South Central light rail extension will preserve the current traffic access points into and out of the neighborhood not prevent automobile traffic from turning in to or out of the neighborhood at the southwest corner of Baseline Road and Central Avenue. Residents will have the same access as there is today at Central Avenue and Harwell Road and the following four intersections along Baseline Road: 1st Drive, 2nd Avenue, 3rd Avenue, and 4th Avenue.

Q: Can engineers do a real “mock up” of the one lane configuration with traffic control to see how traffic flows? (8/30/18)
Q: Can you cone off one lane on Central Avenue now to assess traffic impact? (9/6/18)

A: Validated computer-based traffic models using observed traffic data are used to simulate traffic impacts. Models are used because actual tests to fully simulate traffic operations would require much more than “coning off” lanes. The overall design for 2-lane or 4-lane includes widening major intersections (Buckeye, Broadway, Southern, and Baseline) beyond the current roadway width to include a dedicated left-turn lane, dedicated thru-lane, and dedicated right-turn lane in both directions of travel. In addition, corresponding intersection expansion at 7th Street/I-17, 7th Avenue/I-17, and 7th Avenue/Southern Avenue along with traffic signal adjustments along multiple roadways would be required to adequately simulate the 2-lane design or 4-lane concept.

Q: How does 2-lanes vs 4-lanes work? (8/30/18)
Q: What is the difference between the 2-lane and 4-lane at the intersections? (9/4/18)

A: At signalized neighborhood and collector street intersections, like Central Avenue and Roeser Road, both the 2-lane design and 4-lane concept include left turn lanes. The difference is that the 2-lane design has dedicated left turn lanes, while the 4-lane concept has shared left turn lanes. With dedicated left turn lanes, traffic traveling on Central Avenue will be able to travel through an intersection at the same as trains. In the 4-lane concept, traffic in all directions of travel will be required to stop at an intersection when a train travels through. For additional graphics and traffic simulations, please visit Valley Metro’s website: valleymetro.org/southcentral
Q: What will be done to accommodate traffic at 7th Street and 7th Avenue?  (8/30/18)
Q: Will there be improvements on 7th Street and 7th Avenue and what are the improvements? (9/13/18)
Q: Will 7th Street and 7th Avenue be improved? (9/13/18)
Q: What happens to traffic on 7th Avenue after light rail is complete? (9/13/18)
A: Traffic studies completed for the light rail extension have indicated that some through traffic could divert from Central Avenue to other roadways including 7th Street and 7th Avenue. The studies indicated that three intersections could be affected more than others; therefore, specific roadway improvements on 7th Street and 7th Avenue are included as part of the light rail extension. These improvements include additional right-turn lanes 7th Street and I-17 and 7th Avenue and I-17 additional. The third improvement, which also include additional turn lanes is located at 7th Avenue/Southern Avenue.

Q: Is the 2-lane configuration anywhere else in the Valley, such as downtown Mesa or by Sun Devil Stadium?  (8/30/18)
A: Yes. The 2-lane configuration currently exists in the following locations:

- Veterans Way – College Avenue to 6th Street
- Terrace Road – Rural Road to Apache Boulevard
- Main Street – Country Club Drive to Mesa Drive

The Gilbert Road light rail extension is currently under construction. This new extension will be constructed as a 2-lane roadway from Mesa Drive to Gilbert Road.

Q: Will there be traffic signals surveys on Baseline and Southern before construction?  (9/4/18)
A: The most recent traffic surveys at Baseline and Southern occurred in April 2018. If needed, additional traffic surveys will be completed prior to construction.

Q: How many trains/signals?  (9/4/18)
A: During weekdays, passengers will have a train every 12 minutes in both directions throughout most of the day. Early morning, night, and weekend service will be about every 15 to 20 minutes.

The current two lane design provides for 33 signalized intersections from Hadley Street to Baseline Road. Some of these signalized intersections are for providing signalized pedestrian crossings across Central Avenue.

Q: Will you adjust signal system for 4-lanes?  (9/6/18)
A: The primary impact to traffic flow in the 4-lane design is not traffic light timing, but rather the elimination of various left turn lanes along the alignment. Traffic signals have been synchronized for the 4-lane model. The signal system will be adjusted based on the model prior to opening day.

Q: What will traffic in South Phoenix be like without light rail in 10-20 years?  (9/4/18)
A: Traffic operations can be compared based on Level of Service (LOS) for an intersection. The Highway Capacity Manual defines level of service based on the delay experienced by vehicles at the intersection and assigns a letter grade A-F ("A" being the best and "F" being the worst operationally). The Transportation Technical Report for the South Central Extension compared the intersection LOS without light rail for 2035, with projected traffic volumes based on traffic growth. Several, intersections are anticipated to operate at a LOS of "E" and "F" without light rail.

The Environmental Assessment Transportation Technical Report for the South Central Extension is on Valley Metro’s website:
Q: Can you guarantee that future traffic volumes will be accommodated with only one through lane per direction? (9/4/18)
A: Estimates of traffic growth have been developed based on Maricopa Association of Government’s regional traffic demand model and traffic data collected during the design and planning process. The models developed demonstrate that future traffic volumes will be served with the 2-lane design.

Q: What happens to future auto capacity needs in the Central corridor? (9/4/18)
A: Eleven different combinations of roadways between 7th Avenue and 7th Street were evaluated for transit improvements. Due to the half-mile spacing and associated long walk distance between 7th Avenue, Central Avenue, and 7th Street a one-way couplet using these roadways was not considered. In downtown Phoenix and on east Washington and Jefferson streets where light rail operates on a one-way couplet, the spacing between the roadways/tracks is approximately 400 feet. Having the tracks close together is important because many riders who get on a train at one location; for example, near their home, will return to the same location after their work day, errand, etc., is complete.

Q: In school zones, will the light rail slow down to school zone speeds? (9/12/18)
A: The light rail vehicle will travel at the same speed limit as the roadway traffic. It will have to comply with all regulatory traffic signs. Light rail will slow down at school zones when a slower speed is posted.

Q: Was a one-way couplet considered for light rail (7th Avenue, Central, 7th Street)? (9/12/18)
A: The station at Rio Salado Drive, between Pioneer Street and the Salt River Bridge, was located at its current location based on a number of factors including community input, impacts to nearby properties and buildings, and light rail track alignment constraints. Right turns on to Rio Salado and right turns out will be provided on both sides of Central Avenue and the two roundabouts located just north and south of Rio Salado Drive will allow traffic to turn around if desired.

Q: Can we move the station at Rio Salado and add an intersection there? (9/12/18)
A: Yes. There will be a traffic signal at Alta Vista.

Q: When did you do your surveys of traffic to prepare the traffic simulations? (9/12/18)
A: The turning movement counts were completed during the Environmental Assessment portion of the project in August 2015. Tube counts (not counts at intersections), including truck percentages were last collected on April 25-26, 2018 (Wednesday-Thursday). Supplemental volumes are also taken from the most recent available data on the City of Phoenix and Arizona Department of Transportation (ADOT) websites. For projections, historical data is drawn from City and ADOT websites, and comparative growth projections are drawn from the Maricopa Associations of Governments regional travel demand model.
Q: Which option is more efficient at moving traffic, 2 or 4 lanes? (9/13/18)
A: The two lane design is more efficient in moving traffic through the intersection. This is evidenced by lower average travel times (compared to the 4-lane concept) for a northbound or southbound vehicle moving through the corridor.

Q: Which option is preferable if a crash blocks traffic? (9/13/18)
A: If a crash fully blocks traffic in either the 2-lane design or 4-lane concept, through traffic will be unable to pass the crash at the point of the incident until cleared by first responders. The 2-lane design is specifically designed to provide enough space for vehicles to move to the right curb (bike lane) for emergency vehicles to pass traffic and respond to crashes or other incidents.

Q: Can traffic lights change quickly after a train has passed so cars can move quickly? On Washington Street near 16th Street the lights take too long to change after the train has passed. (9/13/18)
A: The City of Phoenix signal timing standards provides guidance for calculating the yellow time and all-red time at intersections, both with and without a train. The purpose of the yellow time is to allow vehicles moving through to clear the intersection. All-red time is meant to provide final clearance for any vehicle that may be already in the intersection for it to clear the intersection (as a safety measure). We will time the signals to meet these guidelines and safety standards. We also will be prioritizing pedestrian safety, and making sure that pedestrians have ample time to clear the intersection before a conflicting traffic phase is allowed to begin.

Q: Will the traffic get heavier on 7th Street and 7th Avenue after this project is finished? (9/13/18)
A: Yes, this is anticipated. As recommended in the Environmental Assessment, improvements are being designed at the following intersections to accommodate the additional traffic volumes prior to construction on Central Avenue.

- 7th Avenue and Southern
- 7th Avenue and I-17
- 7th Street and I-17

Q: How many signals will be added to South Central and how many current signals are there now? (9/13/18)
A: Between Lincoln Street and Baseline Road, the 2-lane design includes 22 signalized intersections. Within this same area, there are currently 9 signalized intersections.

Q: Have traffic models accounted for mid-block driveways, entrances and exits? (9/13/18)
A: Yes. The traffic models developed for comparing the 2-lane design and 4-lane concept using VISSIM accounts for the traffic from mid-block driveways (entrances and exits). This is also seen in the video simulations that were generated from the model.

Q: Will the traffic be better with 2 lanes? (9/13/18)
A: Traffic flow will be better in the 2-lane design.

Q: Does the light rail have to reduce the current flow of traffic? Can you come up with a solution that keeps the current flow or improves it? (9/13/18)
A: It will not be possible to maintain the same number of lanes on the roadway while also building the light rail line within the footprint of the environmentally cleared right-of-way. The concept of “flow” on the corridor is generally dictated in an urban arterial by the function of the signals on that arterial. The City and Valley Metro are working diligently to ensure that signals are working optimally to maximize flow on the corridor. As part of this effort, simulation models will be developed with light rail operations to develop the signal timings for each intersection that minimizes impacts to vehicular flow. An advanced traffic signal system is being designed which allows for passing of information from upstream intersections to downstream intersection that alerts the intersection of the arrival of the light rail vehicle and helps prepare the intersection to make a decision regarding allowing for the passage of the train while minimizing impacts to vehicular traffic.

Q: Are cars safe traveling next to the train? (9/13/18)
A: Yes, cars are safe travelling next to trains. Valley Metro has 10 years of experience operating light rail service adjacent to cars.

Q: What will happen to the 30 miles per hour vs 35 miles per hour speed limit during rush hour? Will 30 miles per hour be slower? Also, with the reduced speed limits to accommodate school crossings, will that put a strain on the 30 mile per hour speed limit? (9/13/18)
A: Speed limits will remain 35 miles per hour in a 2-lane scenario and 30 miles per hour in a 4-lane scenario. This will be true throughout the day. Under either circumstance, vehicles will accelerate to meet the speed limit whenever they have space to do so comfortably. During rush hour, it is highly likely that the speed limit would not be reached, especially in a scenario with more congestion.

The presence of school zones will remain with reduced speed limits and the light rail will have to operate at the lower speed limit in these areas. The light rail vehicle will not have any congestion limiting its acceleration, and will therefore likely be able to accelerate to meet the speed limit.

Q: Can you add a green light to the curb lane of the 4-lane alternative? (9/15/18)
A: The northbound and southbound traffic movements are controlled by Red-Yellow-Green circular traffic lights in the 4-lane option. These signals are based on the standards set forth in the Manual on Uniform Traffic Control Devices (MUTCD). Since both lanes of traffic allow for through traffic movement and are controlled by same type of signals (Red-Yellow-Green balls) we cannot operate these independently.

Q: Will businesses be impacted by 4-lane design? (9/15/18)
A: Any form of construction within a roadway can impact nearby businesses. Regardless of the roadway configuration (2-lane design or 4-lane concept), nearby businesses could be impacted by the related construction.

Q: Can you provide different signalization for turning vs through traffic in the 4-lane option? (9/15/18)
A: In the 4-lane option the inner lane (close to the light rail guideway curb) is a shared left and through lane while the outer lane is a through lane (also allows right turns). We cannot provide separate signals for turning versus through traffic in the 4-lane concept as per the requirements set forth in the MUTCD. Since both lanes of traffic allow for through traffic movement and are controlled by same type of signals (Red-Yellow-Green balls) we cannot operate these independently.

Q: Is there a travel time difference between 2-lane and 4-lane? (9/15/18)
A: The traffic analysis completed for the 2-lane and 4-lane comparison projects that the 4-lane concept would take 2 to 3 minutes of additional travel time compared to the 2-lane design, during the PM rush hour in the segment evaluated (Baseline Road to Broadway Road).

Q: Please clarify and quantify the impact of (presently unsignalized) reconfigured (for 2-lane with light rail and for 4-lane with light rail) left turns (into driveways) and U-turns versus the functionality and flow of the present configuration of South Central Avenue. (9/15/18)
A: The existing corridor has a two-way left turn lane median which generally allows for left turn ingress and egress movements at unsignalized accesses along the corridor. The construction of light rail will essentially create a median that will prevent all left turn movements along the corridor outside of signalized intersections. This will induce new U-turn movements as left turn ingress and egress movements will be displaced to downstream signalized intersections. U-turns affect capacity at signalized intersection and should be accounted for. The impact is quantified in terms of the delay and level of service (LOS) of the signalized intersections.

For the 2-lane and 4-lane comparison, a traffic analysis was completed using the VISSIM traffic modeling application for a segment of Central Avenue between Baseline Road and Broadway Road. The 4-lane with diversion assumes the same diversion as the 2-lane model to adjacent parallel arterials while the 4-lane without diversion assumes no diversion to parallel arterials. Comparative models were developed for the section between Broadway Road and Baseline Road along Central Avenue. Results of the analysis indicate that 3 of 11 signalized intersections in the 2-lane design would operate at a LOS of D – F, while 4 of the 11 intersections in the 4-lane concept would operate at a LOS of D – F.

Q: As I understand it, the plans close all medians and channelize all left and U-turns into left turn lanes controlled by (some new) traffic signals. If future traffic forecasts are low -- at all -- construction will again be needed to lengthen the turn lanes so the car queues don’t spill over into the through lane. This task, if having to be undertaken at one of the major intersections with a train station on it, would be quite difficult to accomplish. (9/15/18)

A: We agree and as part of the design effort we have gone through quite a rigorous process with the 2-lane design to make sure that turn lanes will accommodate future turning traffic (including U-turns and taking into account projected traffic growth). We based our left turn lane bay lengths on several different estimates from different methodologies. The actual turn bay length designed was based on a conservative calculation or estimate (longer length) that could be accommodated, unless it’s impacting existing buildings or getting into adjacent intersections. In the existing system there are several locations where turn lane lengths cannot accommodate the existing turning queue and our goal is to design to prevent that in the future.

Q: The road capacity factors used within the initial two-lane computer model are derived from the 2010 National Highway Capacity Manual/Software. That manual was completely updated for 2016. The new National Highway Capacity Model update (HCM 2016) now, for the first time, explicitly takes into account the slowing effect on traffic caused by unsignalized driveway movements entering the adjacent through lane. City and Valley Metro project computer models presumably by now are updated so as to be able to evaluate proposed new private and public sector projects for their traffic impact. How do the two-lane and four-lane plans compare with the current configuration for traffic performance when all are assessed with HCM 2016? (9/15/18)

A: The initial traffic analysis was performed using HCM 2010 standards. For new traffic analyses, including the 2-lane and 4-lane comparison analysis, a VISSIM microsimulation model is used to directly measure the delay and density on the roadway, then applying that delay and density to the most updated tables in HCM to output the level of service. Because VISSIM is a microsimulation model, the effect of each vehicle entering the system on all other vehicles in the system is accounted for. We then take the delay that results from the combined effect of all vehicles, and prescribe the level of service (LOS) recommended by HCM for that level of delay.
In general, the HCM recognizes that the LOS on signalized urban arterials, like Central Avenue, is controlled by the LOS at the signalized intersections. HCM takes into account traffic caused by unsignalized driveways but this is more appropriate for a long stretch of unsignalized roadway where these flows are what impede flow of through traffic. On an urban arterial like Central Avenue, with signalized intersections, flow is impeded at the signalized intersections and vehicular delay at the intersections (basis for LOS) is the appropriate measure.

Q: Will the number of related collisions increase with the 4-lane design? (9/13/18)
A: A final design has not been prepared yet; however, any design created, 2-lane or 4-lane, will be evaluated by Valley Metro, the City of Phoenix, and the State Safety Oversight Office for compliance with local and national roadway safety standards.
Questions Related to Why Light Rail?

Q: Can buses handle the demand? (8/30/18)
Q: Why not use buses? (9/4/18)
Q: What can light rail do that a bus can’t? (9/6/18)
Q: Why can’t the bus system and shuttle buses be improved, or 24th Street? (9/12/18)
Q: Why would we need both buses and light rail? (9/12/18)
Q: Isn’t it better to have more bus service instead of the light rail? (9/13/18)
Q: Can we have more bus service in place of the rail? (9/15/18)

A: Despite frequent bus service in the corridor today (every 10 minutes during rush-hour), local buses on Central Avenue (Route 0) provide some passengers with a standing-room only ride during peak travel hours. Existing ridership data shows that some bus trips during rush-hour regularly experience overcrowding. Furthermore, the projected growth in population and employment in the South Central Avenue corridor will increase the need for more transit service.

For serving the same number of passengers, light rail is more efficient than bus service. For example, operating a three-car train, which has nearly 200 passenger seats requires just one train operators, while operating three (3) 60-foot buses, which has less than 180 passengers seats requires three bus operators. Increasing the number of buses on Central Avenue requires purchasing more buses, which need to be replaced more frequently than light rail trains and increasing the number of operators, which directly relates to an increase in operating costs.

Furthermore, light rail offers the quickest and most reliable travel times from Baseline Road to Downtown Phoenix and can be fully integrated with existing light rail system.

Q: What percentage of people actually take the bus now and will later when light rail is completed? (9/12/18)

A: Today, the three north-south operating bus routes within 1/2 mile of Central Avenue (Route 0 – Central Avenue, Route 7 – 7th Street, and Route 8 – 7th Avenue), pick up approximately 2,700 passengers each weekday in the area south of downtown, but not including downtown. Past experience with the introduction of light rail in other parts of the region, indicates that intersecting bus routes generally experience increases in passenger use, while bus routes on the same roadway or nearby roadways travelling in the same direction experience decreases in passenger use.

The Federal Transit Administration’s validated ridership forecasting model estimates that overall regional bus passenger use will increase by two percent with the implementation of the South Central light rail extension. Similar to local past experience, local bus routes intersecting the light rail line along Central Avenue generally show increases in passenger use, while passenger use on north-south routes decrease once the South Central light rail extension is implemented. These decreases are due to the increase in light rail service frequency in the corridor and the reduction in service frequency on bus Route 0 (Central Avenue).
Citizen Comments provided on the flip charts:

- I want pullouts for buses.
- Improve bus pullouts for the whole city.
- I want improved street lighting.
- Please answer all of our questions.
- I am in favor.
- Should have been done a long time ago.
- Don’t need light rail because we already have the bus.
- Object to bus bays, support 4 lanes – pullouts not needed.
- Need established trees – cluster around bus areas, shaded areas – provide in proper location.
- People do not want the train.
- 4-lanes shared bike lanes.
- Prefer bike lanes be moved to 7th Street and 7th Avenue – most bikes used are not from south Phoenix.
- 7th Avenue – Broadway to Southern – there are bike safety and pedestrian concerns and also bike and sidewalk concerns.
- Transparency in regards to business assistance.
- Consider an option for public transit: sky train pod system = coming to Middle East and Florida.
- These discussions have been very helpful, but should have been done before the Proposition 104 vote.
- I argue against the whole project but fervently oppose the 4-lane option as presented.
- 1st choice – no train, 2nd choice 2-lane, 3rd choice 4-lane.
- Liked dedicated left turn lanes.
- ADA compliance on all facilities.
- Recommendation – inform business owners that access to businesses will remain/participate in modification.
- Concern - maintenance of landscaping old and new.
- Recommendation – have entire alignment on one map – 2 lanes and 4 lanes.
- Add more shade and trees.
- Add electric route signage at bus stops.
- Add more shading and trees.
- Keep traffic flowing while train passes in same directions.
- More community outreach.
- Propaganda/boards are slanted to make 2-lane option more favorable.
- Need to show “sharrow” on all 4-lane segments/boards for consistency.
- Info is slanted to 2 lane bias.
- Alternative methods to get around, Uber, Lyft or taxi used on occasions instead of every day.
- The light rail will be a ghost train or a constant reminder of a moving money pit.
- The elderly should not drive. I can only speak for my siblings and family, but before my 94.5 young mother passed away, my siblings and I would take my mother to appointments, church, shopping and visit family. When there is a will, there is a way.
- I would not expect an elderly person to walk from their home. For example, 2nd Avenue to Central Avenue and then a .25 to .50 mile to the next major intersection, to get on the light rail or bus. Our parents may have been poor but they were blessed with children who cared for them.
- If you build it they will come.
- The buses are not packed now. Would riders come out of the woodwork just to ride the light rail? I have ridden the light rail three times to see how it was.
• Add no smoking signs to bus stops.
• All traffic stops when light rail train passing through intersection for safety.
• Boundaries should follow streets grid, not necessarily a circle.
• Building heights should step down as distance from station increase.
• Stations too far apart.
• Concerns about added traffic signals on Central.
• Traffic calming measures south of Baseline to reduce cut through traffic.
• Want truck access for businesses in South Phoenix.
• Clarify travel time more succinctly in traffic flow info – show on comparison table but does not stand out.
• Teach all the bus riders how the buses run. For example, the 24th Street bus picks up at 24th Street and Baseline and rides to Glendale. People need to know this. Another example is 7th Street bus goes to Deer Valley from the south side.
• Small electric busses to run from Baseline to Watkins more frequently than the larger buses that would go from Van Buren from Dobbins St. Catherine’s church. On Fridays students (250 students) cross Central at Alta Vista. Need enough time for students to safely cross Central between 7:30 - 8:00 am and 9:00 - 9:30 am.
• In morning parents drop off kids at St. Catherine’s school. Training drivers to move over safely to the right (bike) lane during emergency vehicle operation. Provide additional signage.
• Don’t need light rail because we already have bus.
• Need to accommodate this traffic 7:30 – 8:00 am and 3:00 – 3:30 pm after school.
• Concern about crime due to light rail.
• Need data on businesses lost during north Central and Mesa 2 lane construction.
• W. Pueblo Ave. dead ends; restricts fire department access and residential egress.
• Trash in alley is resident’s problem - alley access restricted by trash.
• Street lights out between 12th and 7th Avenue and Baseline.
• We were not clear about plan in T2050 and Proposition 400 when votes occurred.
• “T2050 may go away” is an incorrect statement.
• Nearly empty train passing by our favorite restaurant and business closed down.
• The light rail forces families to move out of their homes because of gentrification.
• Light rail forces families to move out of their homes because of gentrification.
• Nearly empty trains passing by our closed down businesses.
• The light rail forces families to move out of their homes because of gentrification.
• I am in favor.
• Should have been done a long time ago.
• People do not want the train.
• The train is a good thing. Others want it.
• Two lanes is bad – 4 lanes is worse – horrible plan.
• I want community to vote on 4-lane/2-lane or no train initiatives.
• Please present info at South Mountain Village Planning Committee.
• Concern: security and homelessness.
• Community should vote on light rail, 2-lanes, 4-lanes and no train
• Business owners in the Warehouse District is very much in favor of light rail and the 2-lane option.
• I like the idea of community enhancements.
• One million for new buses is better than one billion for light rail.
• Path from St. Catherine School to mass.
• Set parents into St. Catherine’s School.
• No one contacted us about the meeting (funeral home).
• Get new buses because we have old buses that are always breaking down and light rail will just add to the congestion.
• Should consider ADA compliance and bike lanes.
• Prefer no light rail.
• Concern about light rail forcing residents and businesses owners out.
• 100% public transportation user: bus system is slow and takes two hours to get to South Phoenix.
• Expects the light rail to come because of dedicated guideway.
• Light rail is faster.
• I want South Phoenix to be connected to the rest of the city.
• Want to be connected to restaurants, galleries and parks.
• Look at opportunities to provide access to businesses through public alleyways.
• Include signage to help guide customers to alternate entry (example: Pulsipher Dentistry).
• We need to build this segment - it is core service.
• Spending 1 billion on light rail is a waste of money.
• Concern about properties becoming unaffordable with light rail.
• I travel from Tempe and take light rail and transfer to South Phoenix using Route 0 – please build the extension.
• I like the 2-lane option.
• The rail and the buses running together is a waste of money.
• Do not think that running buses on light rail after light rail opens makes sense.
• Prefer 2 lanes instead of 4 lanes due to traffic flow and mix of 4/2 lane at roundabouts and the Salt River Bridge.
• Prefer 2 lanes based on bus pullouts, bike lanes and shade.
• Consider striping at bus pullouts on 2-lane design to maintain exclusive bike lane.
• It would nice to have trains with a schedule similar to the airport.
• Without the train traffic is already at a standstill. With the 4-lane and no bus pullouts traffic will be stopped, so 2-lane is preferred.
• Keep traffic moving.
• Stand still starting at 3:00 pm.
• At I-10 and 24th Street is the worst exit. Transition between the ramp and the street is uneven and needs to be fixed.
• We need cash assistance for local businesses to keep them open during construction and beyond construction.
• Trains have more room for bicycles and less seats for riders.
• Concerns about emergency vehicles getting to house.
• Doesn't want light rail but if it is coming, would prefer the 2-lane option.
• I don’t think people use it.
• Traffic is congested on 7th Avenue – improvements needed.
• Need more pedestrian crossings on Central Avenue.
• 2-lane design is more efficient than the 4-lane.
• The 4-lane design should have a lower speed limit than the 2-lane because it is not safe as the 2-lane.
• Want to have a crosswalk at Alta Vista and 7th Avenue for kids getting to bus stops.
• Wants the light rail because currently use the bus and the bus is not always on time and sometimes dirty.
• Prefers “sharrows” over bike lanes (as a 10 year cycling instructor).
• Supports train and 2-lane.
• This type of outreach should have happened in the beginning.
• Concerns of losing passengers because of required transfers in downtown Phoenix.
• Valley Metro is doing the right thing and needs to keep moving forward.
• Our existing bus service is good and it works.
• We want to access businesses during construction.
• The freight train stops buses at 24\textsuperscript{th} Street and Jefferson.
• Roundabouts shown on board are a good way to handle the type of traffic in the area.
• No need for light rail with buses and cars.
• Why are people so against the light rail?
• The initial transportation technical study states that the greatest impact would be felt during the late afternoon PM peak - typically during the commuter “rush hours.” There is the morning rush hour with its school traffic followed by returning school traffic in the early earlier afternoon. These primary school children returning to their neighborhood homes have to rely on adult crossing guards to cross Central. These crossings of children made at minor intersections stop are not achieved in one signal cycle but as many as are needed. As Central could only have one travel lane, car queues for that period will necessarily be longer (and yet the four-lane with train would appear to be worse).
• Keeping in mind always that slower speeds on Central mean fewer cars clearing intersections and longer queues left behind at the signals backing up traffic, there may have to be a “workaround” for the condition here of a high number of closely-spaced lower-volume driveways in place of a low-number of higher-volume driveways provided for by the highway capacity model. There are additionally a number of side streets without traffic signals that must turn onto Central. Cars entering those streets have to slow to make the customary 90-degree turn too. Tailoring the model to the unique road conditions here is an effort that needs to be made.)
September 20, 2018

Mr. Ed Zuercher
City Manager
City of Phoenix
200 W. Washington Street
Phoenix, AZ 85003

RE: Final Report on South Central Extension Lane Analysis, Public Outreach and FTA Response

Dear Mr. Zuercher:

I am writing to provide you with a final report of the actions requested by the Phoenix City Council at its June 20, 2018 meeting regarding the South Central Light Rail Extension (SCE). This report is an update to the status report on the project I previously sent, dated July 27, 2018. Since the July status report, Valley Metro staff and our consultants completed their analysis of a 4-lane configuration and presented their findings at a series of six public meetings moderated by an independent facilitator. As the facilitator (Eric Bailey) has prepared a separate report detailing his observations during the public meetings, this report will focus on specific findings of the lane analysis and the impact on those findings on the FTA funding application process.

The final analysis confirmed most of the information on the lane configuration we reported to you in our July status report. The findings can be summarized as follows:

- The Central Avenue alignment can accommodate 4 lanes within the environmental footprint for the entire street south of Lincoln with the exception of the Salt River Bridge and approximately two blocks to the south of the river.
- The amount of landscaping possible along the corridor is approximately 55% less with a 4-lane configuration, with 65 fewer trees planted.
- A dedicated bike lane is included with 2-lanes, but is not possible with 4-lanes. Bikes will share the lane with autos in a 4-lane design.
- The 2-lane design includes 21 bus bays where buses can move out of the traffic lane at each stop. The 4-lane design includes no bus bays.
- The speed limit on Central will be 35 mph with 2-lanes, and 30 mph with 4-lanes.
- Dedicated left-turn lanes that are controlled by traffic signals are included at all 13 secondary street intersections on Central in a 2-lane design. Due to space limitations in a 4-lane design, all of these intersections will have dual purpose lanes that will
allow both left-turn and through traffic. There will be no dedicated left turn lanes. A split-phase traffic signal will be utilized with 4-lanes.

- Due to the split phase traffic signals at intersections, bikes sharing lanes with autos, and buses stopping in traffic lanes, the traffic flow on Central will not perform as efficiently with 4-lanes as it would with 2-lanes.
- Traffic engineers estimate travel time between Baseline and Broadway will be 40% slower with 4-lanes.

A summary of the findings of our lane configuration analysis is attached to this letter, with more detailed information having been provided at the community meetings.

The differences in outcomes with a 2-lane or a 4-lane design will be accepted or rejected by the community based on residents’ preferences and values. Neither configuration materially impacts the design, construction or operation of light rail. However, due to the stage where this project currently is, the lane decision will have a significant impact on how the South Central Extension and Downtown Hub project moves forward.

This project is seeking significant Federal Government participation through the Federal Transit Administration (FTA). In order to be eligible for federal money, projects must advance through a prescribed process that leads up the awarding of a formal grant agreement. For the past two years, SCE has been in Project Development phase of review. FTA guidelines require that in order to move forward toward a grant, a project must move from Project Development into the Engineering Phase. Our deadline to move into Engineering is November 2018. If SCE is not accepted into Engineering by November, the FTA could remove SCE from its Capital Investment Grant program, and federal funding will no longer be available.

The primary challenge facing SCE right now is timing. The November deadline is fast approaching. As stated in my July 2018 status report, the FTA has asked that Valley Metro (VM) not submit paperwork related to our application until the Council has acted specifically on the lane configuration question. VM has completed the necessary paperwork for the application to enter the Engineering phase, which we can do soon after the Council action on September 26. A quick submittal after the Council meeting will allow the FTA to review the application prior to the November deadline. However, this paperwork is based on the previously approved configuration, which is a 2-lane design. We have not prepared any design documents for any other configuration. If the Council chooses an alternative design, VM will begin immediately to work on that design. While the light rail design will be virtually the same, completely redesigning five miles of Central Ave. will take an estimated four or more months to complete, which will not allow us to submit our application for Engineering until well past the November deadline. We estimate that the redesign will also add at least an additional $7 million to the project.
More problematic than the redesign is the impact on existing environmental studies and conclusions. The Council understood the importance of not impacting the already approved environmental work on SCE when it instructed VM to analyze a 4-lane configuration “within the environmental footprint”. That meant that we were to analyze a 4-lane configuration that would not require any building to be touched or large parcel of new property to be taken. To do so would have created what is referred to as an “adverse environmental impact”, which may require reopening the environmental process. If this were to happen, we would experience significant delays that would once again place us far beyond the November 2018 deadline to enter the Engineering phase. Any delay that takes SCE further past the November deadline greatly increases the risk of losing federal funding.

During our analysis of the 4-lane configuration, our environmental engineers noted the negative impact on traffic flow. The engineers reviewed the impact of the traffic slowdown, especially with cars stopping at intersections and in traffic much more often with a 4-lane configuration. With this condition, the engineers determined that a 4-lane design would “likely result in a new adverse effect compared to the existing Environmental Assessment,” which results in “triggering a supplemental environmental assessment, including a public review and amending the FTA’s previous Finding of No Significant Impact (FONSI).” If this were to happen, the project would very likely be denied progression into the next phase of the federal grant process.

VM is prepared to submit the application to the FTA as soon as possible after the Council takes formal action. This application is based on the existing design as currently approved by the Council. Any change in design at this stage of the project will delay the application. The delays will significantly increase the risk of the project not receiving federal funding. VM therefore asks the Council to not cause a delay in our ability to submit an application to the FTA at this time.

Thank you for the opportunity to work with you, your staff and the community on a project that has such a large impact on Phoenix and the region. If you have any questions, please contact me directly.

Sincerely,

Scott Smith, CEO
## 2-Lane vs 4-Lane Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>2-LANE</th>
<th>4-LANE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape - Trees</td>
<td>4,400 linear feet of 4-foot wide tree areas, estimated 160 trees</td>
<td>2,000 linear feet of 4-foot wide tree areas, estimated 65 trees</td>
</tr>
<tr>
<td>Bicycles</td>
<td>Dedicated buffered lanes</td>
<td>Mixed with automobile traffic</td>
</tr>
<tr>
<td>Bus Pullouts</td>
<td>21</td>
<td>None</td>
</tr>
<tr>
<td>Automobile and Light Rail Speed Limits</td>
<td>35 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Salt River Bridge and Roundabouts</td>
<td>2 travel lanes</td>
<td>2 travel lanes</td>
</tr>
<tr>
<td>Dedicated Left-Turn Lanes</td>
<td>All 17 signalized collector and neighborhood streets</td>
<td>At 4 of the 17 signalized collector and neighborhood streets</td>
</tr>
<tr>
<td>Travel Time (Baseline - Broadway)</td>
<td>4.5 Minutes</td>
<td>7.5 Minutes</td>
</tr>
<tr>
<td>Cost</td>
<td>No change</td>
<td>Approximately $7 Million</td>
</tr>
</tbody>
</table>

4-lane concept remains within environmental limits of 2-lane design; no additional properties or buildings would be purchased.
This report provides information to the Citizens Transportation Commission (CTC) on the Transportation 2050 (T2050) annual progress report.

BACKGROUND

Progress Report #1, covering the period from Jan 1, 2016 to June 30, 2017, was provided to the CTC and published in September 2017.

The FY 2018 T2050 Annual Progress Report includes updated information on the program status, financial information, annual and inception-to-date accomplishments, and status of the major projects within the program. Similar to the first progress report, this report covers the various funding sources contributing to the T2050 program, the assumptions used in the development of the overall financial plan, and the status of the 35-year life-cycle program.

OTHER INFORMATION

Staff worked with the Program Management Consultant (PMC) to develop the FY 2018 T2050 annual progress report. The complete report will be available online in an interactive format, with a print version shown here as Attachment A. The report includes:

- **Chapter 1 – Program Overview**
  An overview of the development of the T2050 program, the goals and objectives of the T2050 program, and oversight.

- **Chapter 2 – Bus and Dial-a-Ride Service**
  Discusses the projects, programs and activities of the bus and Dial-a-Ride service including FY 2018 accomplishments, cumulative inception-to-date accomplishments, and goals.

- **Chapter 3 – High Capacity Transit**
  Discusses the projects, programs and activities of the high capacity transit service including FY 2018 accomplishments, cumulative inception-to-date accomplishments, and goals.

- **Chapter 4 – Street Maintenance and Improvements**
  Discusses the projects, programs and activities of street maintenance and improvements including FY 2018 accomplishments, cumulative inception-to-date accomplishments, and goals.
• Appendices
  Provides tables of the T2050 sales tax projected revenue stream, FY2018 financial overview, and five-year implementation plan. Covers the various funding sources contributing to the T2050 program, the assumptions used in the development of the overall financial plan, and the status of the 35-year life-cycle program.

RECOMMENDATION

This information is presented for information only.

Attachment:
A. T2050 Annual Progress Report FY 2018
"The voter-approved T2050 plan continues to improve transportation in Phoenix..." read more

"Phoenix is only two and a half years into the 35-year T2050 plan..." read more

"Since the Phoenix Transportation 2050 plan started in 2015..." read more
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Program Overview</td>
</tr>
<tr>
<td>2.0</td>
<td>Bus and Dial-a-Ride</td>
</tr>
<tr>
<td>3.0</td>
<td>High Capacity Transit</td>
</tr>
<tr>
<td>4.0</td>
<td>Street Maintenance and Improvements</td>
</tr>
<tr>
<td>Appendix</td>
<td></td>
</tr>
</tbody>
</table>
1.0

Program Overview
The Street Transportation Department has ...read more
T2050 AT A GLANCE

FUNDING

- T2050 FUNDS
- REGIONAL FUNDS
- FEDERAL FUNDS
- TRANSIT FARE REVENUES
- FINANCING
- OTHER TRANSIT REVENUES

PROGRAM AREAS

- NEW AND EXPANDED BUS AND DIAL-A-RIDE
- MOBILITY AND ACCESSIBILITY
- TRANSIT INFRASTRUCTURE
- HIGH CAPACITY TRANSIT
- TECHNOLOGY ENHANCEMENTS
- NEW AND EXPANDED MAJOR STREETS
- PAVEMENT MAINTENANCE
## T2050 35-Year Goals

### Bus and Dial-A-Ride

**Continue**
- Bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for **35 Years**

**Extend**
- Bus and Dial-a-Ride service hours to **match light rail hours**

**15 Min**
- Provide 15-minute frequency on half of all bus routes

**Extend & Add**
- Bus service to unserved major streets

**Extend & Add New**
- RAPID service

**Add New**
- Circulator service

**Purchase New**
- Buses and Dial-a-Ride vehicles

**Build New**
- Park-and-ride lots

### High-Capacity Transit

**Continue**
- 17 Miles of light rail service

**Add**
- 42 Miles of new light rail in Phoenix

**Provide**
- 75 Miles of new Bus Rapid Transit service

**Build new light rail station at 50th Street**

### Streets

**680 Miles**
- Of new overlays on arterial/major streets

**1,080 Miles**
- Of new bike lanes

**2,000**
- New street lights

**135 Miles**
- Of new sidewalks

**$240 Million**
- For new roads and upgraded bridges

Technology enhancements

Build additional bus bays
Proposition 104 was approved by Phoenix voters Aug. 25, 2015, creating a sales tax increase from 0.4 to 0.7 percent. This revenue helps fund the Phoenix Transportation 2050 (T2050) plan, which is dedicated to improving streets and transit service throughout the city.

The T2050 sales tax will generate a little more than half of the plan’s overall funds. The remaining funds for the 35-year plan will be comprised of federal, regional and other local funding sources. The plan dedicates about 86 percent of T2050 to Phoenix’s public transit program, with the remaining funds used to supplement existing streets funding sources.

Prior to the start of T2050, which became effective Jan. 1, 2016, the mayor and City Council appointed the 15-member Citizens Transportation Commission (CTC) to oversee the T2050 program to ensure transparency and accountability in the expenditures of funds, as well as provide oversight during implementation of the various improvements identified in the plan.
Program Overview (cont’d)

Public outreach is incorporated into the planning and development of new bus routes and service extensions, high capacity transit options including light rail and bus rapid transit, and street projects from building and improving roads to creating bike lanes and ADA ramps. Staff members host open houses and meet-and-greet activities, conduct public meetings, and attend community events to provide information and gather input.

The City Council’s Aviation and Transportation Subcommittee provides recommendations on streets and transit issues before items move to the full council for action.

This report identifies progress through the 2017-18 fiscal year and gives a glimpse of what T2050 improvements are planned over the next five years.

More information on the regional and federal funding programs is available at www.phoenix.gov/T2050/Funding.

Aviation and Transportation Subcommittee

Councilwoman Debra Stark
Chairwoman Aviation and Transportation Subcommittee

Mayor Thelda Williams
Member Aviation and Transportation Subcommittee

Councilwoman Felicita Mendoza
Member Aviation and Transportation Subcommittee
Lifecycle: Balancing Revenues and Expenditures

At times, T2050’s projected revenue will exceed projected expenditures for a given year. This was done intentionally to ensure the plan has available funds in future years for large expenditures, such as light rail projects and park-and-ride facility construction.

In addition to the sources of funds shown in Figure 1.1, the Public Transit and Street Transportation staff pursue opportunities to reduce costs through innovation, value engineering and other project delivery and financing methods such as Public-Private Partnerships (P3). In FY 2018, awards included $380,000 for mobility projects from MAG and $125,000 for alternative transportation program taxi subsidies.

For more information on assumptions, please see Table A.1 in the appendix.
FY 2018 Financial Summary

The total budget for fiscal year (FY) 2018 was nearly $216 million. Figure 1.2 shows planned uses of funds. Please see Table A.2 in the appendix for additional information.

Figure 1.2 Planned Uses of Funds

FY 2019 - FY 2023 Financial Summary

A summary of the budgeted and actual sales tax revenue, as well as the five-year projected revenue figures are shown in Figure 1.3. The five-year financial plan for the FY 2019–2023 time period is shown in Table A.3 in the appendix. The balance of the fund is anticipated to increase through FY 2020, when funds will be used for the new light rail and major streets construction projects.

Figure 1.3 T2050 Sales Tax Revenue Summary
Thanks to T2050 improvements ...read more
MAKING PROGRESS

NEW OR IMPROVED BUS AND DIAL-A-RIDE

EXTENDED SERVICE HOURS
for bus and Dial-a-Ride to MATCH LIGHT RAIL HOURS

DONE!

INCREASED FREQUENCY
off-peak to 15 MIN on 4 routes:

19th Avenue 3 Van Buren Street 50 Camelback Road 29 Thomas Road

DONE!

INCREASED FREQUENCY
weekdays & weekends to 30 MIN

EXTENDED BUS ROUTES

Lower Buckeye Rd 51
19th Ave
51st Ave

Hayward Valley Rd 23rd Ave
19

Pinnacle Peak Rd

Dreamy Draw Park-and-Ride 39 She Blvd

ASU West Campus

122 Cactus Rd

Camelback & 16th St 60
16th St

Camelback & 24th St

он

Camelback Rd 32
32nd St

Baseline Rd & Priest Dr

140 Ray Rd

Gilbert Rd

ADDED BUS ROUTES

Camelback Rd

Baseline Rd & Priest Dr

ORDERED

219 LOCAL BUSES

12 RAPID BUSES

72 DIAL-A-RIDE VEHICLES

5 BUS BAYS INSTALLED

4 BUS BAYS IN DESIGN

40 BUS STOPS INSTALLED

97 BUS SHELTER SHADE STRUCTURES INSTALLED
MAKING PROGRESS
CUMULATIVE PROGRESS TO DATE
Jan. 1, 2016 - June 30, 2018

NEW OR IMPROVED BUS AND DIAL-A-RIDE

OTHER IMPROVEMENTS COMPLETED

7.4% BUS RIDERSHIP INCREASE
February 2016* through July 2018

LAUNCHED TRIPSPARK
customer web portal for
Dial-a-Ride users

DEPARTMENT OF HOMELAND
SECURITY ENDORSEMENT
to double K-9 security

REGIONAL DIAL-A-RIDE
IMPLEMENTED
eliminating transfers

INTERACTIVE DIGITAL SIGNS
project in progress

COMPUTER AIDED DISPATCH
system in progress

AUDIO ON DIGITAL BUS SIGNS

$23 MILLION RECEIVED
in FTA formula grants
for Phoenix transit

Continued refurbishing
SOUTH TRANSIT FACILITY

$2.6 MILLION RECEIVED
in grant funding
to purchase buses

AWARDED ALTERNATIVE
TRANSPORTATION SERVICES
contract for technology enhancements

$2 MILLION SAVED
with new
LIQUEFIED NATURAL GAS (LNG)
contract

Partnered with LYFT
for 20% discounted first/last
mile rides

Awarded contract for
WEST TRANSIT FACILITY
fixed route services

$2.6 MILLION RECEIVED
in grant funding
to purchase buses

REGIONAL DIAL-A-RIDE
IMPLEMENTED
eliminating transfers

INTERACTIVE DIGITAL SIGNS
project in progress

Audio on digital bus signs

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with new
LIQUEFIED NATURAL GAS (LNG)
contract

Partnered with LYFT
for 20% discounted first/last
mile rides
In FY 2017-18, Phoenix continued to invest in the improvement of its local bus service, by improving off-peak frequency of several routes that service the city’s core. These improvements are the latest in a five-year cycle that has $1.2 billion dedicated T2050 funds for the improvement of local bus and Dial-a-Ride (DAR) services. In addition to T2050 funds, the plan utilizes federal and state grants, local funds, and the Regional Public Transportation Fund (PTF).

In FY 2018, the Public Transit Department completed grant applications and received awards of nearly $71 million in Federal Transit Administration (FTA) formula grants for the region, of which nearly $23 million is allocated for Phoenix transit projects. Also, Phoenix received an award of $2.6 million in competitive grant funding from the FTA Bus and Bus Facilities Infrastructure Investment Program for the purchase of new local buses.
Table 2.1  T2050 Bus and Dial-a-Ride Progress

<table>
<thead>
<tr>
<th>Completed July 1, 2017 to June 30, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years</strong></td>
</tr>
<tr>
<td>• Maintained existing services, which includes 38 Phoenix-operated local routes, six RAPID routes, four circulators and Dial-a-Ride.</td>
</tr>
<tr>
<td><strong>Improve bus frequency</strong></td>
</tr>
<tr>
<td>• Oct. 2017: Increased weekday off-peak frequency to 15 minutes on Thomas Road (Route 29) and Camelback Road (Route 50).</td>
</tr>
<tr>
<td><strong>Extend and add bus service to unserved major streets</strong></td>
</tr>
<tr>
<td>• Oct. 2017: Extended Route 19 service on 23rd Avenue between Pinnacle Peak and Happy Valley roads, where it now connects riders to Route 35.</td>
</tr>
<tr>
<td>• Oct. 2017: Valley Metro added Route 140 on Ray Road. The Phoenix portion of the route is between 48th Street and I-10 in Ahwatukee, and ends at Gilbert Road in the town of Gilbert.</td>
</tr>
<tr>
<td>• Oct. 2017: Extended Route 60 service from 16th Street and Bethany Home Road to Camelback Road and 24th Street, giving riders a direct connection to Biltmore Fashion Park.</td>
</tr>
<tr>
<td>• April 2018: Extended Route 51 in April 2018 south on 51st Avenue from Lower Buckeye Road to Baseline Road. The route was also combined with Route 251 that services the Gila River Indian Community. Today, a one-seat ride is possible from the Gila River Indian Community to ASU West on Thunderbird Road.</td>
</tr>
<tr>
<td>• April 2018: Added bus service on 40th Street (Route 32) between University Drive and Baseline Road, extending the route to Arizona Mills Mall in Tempe. The extension now provides a one-seat ride from Camelback High School to Arizona Mills Mall, via Phoenix Sky Harbor International Airport.</td>
</tr>
<tr>
<td><strong>New buses and Dial-a-Ride vehicles</strong></td>
</tr>
<tr>
<td>• 66 new local buses</td>
</tr>
<tr>
<td>• 46 are the standard 40-foot buses</td>
</tr>
<tr>
<td>• 20 are the 60-foot articulated buses</td>
</tr>
<tr>
<td>• 12 new RAPID buses</td>
</tr>
<tr>
<td>• 10 are the 40-foot buses</td>
</tr>
<tr>
<td>• 2 are the 60-foot articulated buses</td>
</tr>
<tr>
<td>• 25 new Dial-a-Ride vehicles</td>
</tr>
<tr>
<td><strong>Increase security</strong></td>
</tr>
<tr>
<td>• The Department of Homeland Security delivered a positive endorsement to double the K-9 security detail from three to six teams.</td>
</tr>
<tr>
<td>• Transferred nine municipal security guard positions from Police Transit Bureau to Public Transit Department to supplement private security contract. New Public Transit MSGs will be stationed at our north, south and west operating garages.</td>
</tr>
<tr>
<td><strong>Bus bays</strong></td>
</tr>
<tr>
<td>• 4 bus bays in design.</td>
</tr>
<tr>
<td><strong>Bus stops</strong></td>
</tr>
<tr>
<td>• 40 bus stops installed along new route extensions.</td>
</tr>
<tr>
<td>• 66 new shelters installed at existing bus stops to provide shade.</td>
</tr>
<tr>
<td><strong>Incorporate technology</strong></td>
</tr>
<tr>
<td>• Launched TripSpark, a customer web portal for DAR users.</td>
</tr>
<tr>
<td>• Awarded the Alternative Transportation Programs contract, which allows passengers to schedule flexible transportation to meet their travel needs.</td>
</tr>
<tr>
<td><strong>Other improvements</strong></td>
</tr>
<tr>
<td>• Partnered with Lyft to pilot a “First Mile, Last Mile” program, offering a 20 percent discount on Lyft rides in the north and south Phoenix areas where bus service is limited.</td>
</tr>
<tr>
<td>• Awarded the liquefied natural gas (LNG) contract, resulting in anticipated annual savings of about $2 million.</td>
</tr>
<tr>
<td>• Awarded the West Transit Facility fixed route services contract to the existing contractor, First Transit. The $296 million contract has a five-year base and two one-year options to extend. The contract’s annual revenue miles are about 6.5 million for 11 local routes and one circulator.</td>
</tr>
</tbody>
</table>
### Table 2.2  T2050 Bus and Dial-a-Ride Goals, FY 2019

<table>
<thead>
<tr>
<th>Planned for FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years</td>
</tr>
<tr>
<td>• Continue to provide safe and reliable services.</td>
</tr>
<tr>
<td>Improve bus frequency</td>
</tr>
<tr>
<td>• Conduct a study on existing ridership patterns with the goal to improve Phoenix’s high frequency transit network.</td>
</tr>
<tr>
<td>Increase security</td>
</tr>
<tr>
<td>• Continue to add security features on local bus, light rail and at transit facilities.</td>
</tr>
<tr>
<td>• Hire and train new municipal security guards to provide a stronger security presence at our north, south and west operating garages.</td>
</tr>
<tr>
<td>Bus stops</td>
</tr>
<tr>
<td>• Install new shelters at 80 bus stops to provide riders with shade.</td>
</tr>
</tbody>
</table>
**Table 2.3  T2050 Bus and Dial-a-Ride Goals, FY 2020 – 2023**

<table>
<thead>
<tr>
<th>Planned for FY 2020 – 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years</strong></td>
</tr>
<tr>
<td>- Build on, and improve upon, existing transit services offered in the city of Phoenix.</td>
</tr>
<tr>
<td><strong>Improve bus frequency</strong></td>
</tr>
<tr>
<td>- Identify three high ridership local routes in Phoenix to increase weekday peak service frequency to 15 minutes.</td>
</tr>
<tr>
<td>- Increase weekday midday frequency to 15 minutes on two local bus routes in Phoenix.</td>
</tr>
<tr>
<td><strong>Extend and add bus service to unserved major streets</strong></td>
</tr>
<tr>
<td>- Add new bus route in north Phoenix on 56th Street between Shea Boulevard and Deer Valley Drive. This route would connect with five other local bus routes in the area.</td>
</tr>
<tr>
<td><strong>Improve neighborhood circulation service</strong></td>
</tr>
<tr>
<td>- Complete the neighborhood circulation study and pilot program(s), and potentially implement a neighborhood circulator service.</td>
</tr>
<tr>
<td><strong>Build park-and-ride lots</strong></td>
</tr>
<tr>
<td>- Construct a park-and-ride to provide Laveen commuters with RAPID service to downtown Phoenix via the Loop 202 (South Mountain Freeway) and I-10.</td>
</tr>
<tr>
<td><strong>Increase security</strong></td>
</tr>
<tr>
<td>- Assign additional employees to the Phoenix Police Transit Enforcement Unit (TEU) to continue to increase security presence along all modes of transit in Phoenix.</td>
</tr>
<tr>
<td><strong>Bus stops</strong></td>
</tr>
<tr>
<td>- Shade 400 bus stops with new bus shelters.</td>
</tr>
<tr>
<td>- Install 56 new bus stops along new and expanded routes.</td>
</tr>
</tbody>
</table>
RAPID Commuter

RAPID is a Phoenix-operated commuter bus services that connects residents in Phoenix’s suburban areas, with downtown Phoenix. There are currently six RAPID routes that allow riders to bypass driving in favor of being a passenger and focusing on other things besides taillights and bumpers on their daily commute to and from work.

In 2023, Phoenix will add a new RAPID route in southwest Phoenix utilizing the Loop 202 (South Mountain Freeway), which is still under construction by the Arizona Department of Transportation.

Circulator Service

Phoenix has four circulator routes that connect area residents with key destinations in their neighborhoods, like libraries, grocery stores and community centers. The circulators are the ALEX (Ahwatukee Local Explorer), DASH (Downtown Area Shuttle), MARY (Maryvale Area Ride for You) and the SMART (Sunnyslope Multi-Access Residential Transit).

BUS AND DIAL-A-RIDE (FY 2018)

Local Fixed Route

Local fixed route bus service is the workhorse of Phoenix’s transit system – with more than 35 million passenger boardings last fiscal year.

Local bus service in Phoenix operates on a grid system, and provides a straight-forward, easy-to-navigate way for riders to connect their homes to work, school and other key hubs throughout the city and region. In 2016 and 2017, Phoenix Transit utilized funds generated for T2050 to increase Phoenix local bus frequency to every 30 minutes, less for weekday routes with high ridership, as well as match light rail hours service hours.

In fiscal year 2017-18, Phoenix bus ridership rose over 5 percent over the previous fiscal year, which itself experienced a 6.5 percent increase. In fact, Phoenix is one of only four cities with high-transit ridership that experienced an increase in transit boardings in 2017 – Phoenix has had 18 straight months of ridership increases (January 2016 to June 2018).

In the first six months of 2018, bus ridership is up 4.6 percent overall, with a 3.64 percent increase on weekdays, 14.33 percent on Saturdays and 14.24 percent on Sundays and holidays, which operate with Sunday-level service.
Dial-a-Ride and Alternative Transportation Services

Dial-a-Ride (DAR) is a federally required paratransit service that complements local transit by providing a convenient transportation option for those who are unable to ride bus or light rail. Under T2050, Phoenix has expanded hours and replaced 25 DAR vehicles this year.

In 2018, the city of Phoenix and their service provider, MV Transportation, launched TripSpark - a web portal that allows Phoenix Dial-a-Ride users to schedule and book their trips online at their convenience. The new service, along with the existing phone reservation service, provides customers flexibility when booking their DAR trips.

In addition, Phoenix continued its Alternative Transportation Services contract with MV Transportation. This contract provides for the following services: ADA Ride, Senior Ride and Senior Center Shuttle, Employment Transportation and Medical Trip.

Security

To provide for the safety and security of Phoenix’s transit passengers the Phoenix Police Department’s Transit Enforcement Unit (TEU) works with Phoenix Transit municipal security guards, a private security contractor, and Valley Metro’s fare enforcement security.

All of these unite to provide security at the Central Station Transit Center and Phoenix’s other six transit centers, nine park-and-rides, and all three operation and maintenance facilities. Also, cameras are installed on vehicles and at city-owned and operated facilities to assist police and security when needed.

Passenger Facilities

Phoenix has added 60 new shade shelters this year, with plans to add at least 20 more by the end of 2018.

Operations and Maintenance Facilities

Phoenix has three separate bus yards strategically located around the city where all bus maintenance, fueling and cleaning take place.

This fiscal year the city awarded a new liquefied natural gas (LNG) contract to Clean Energy to fuel the city’s LNG and CNG fleet. The new contract gives Transit an annual fuel cost savings of nearly $2 million compared to the previous contract.

Additionally, the West Transit Facility fixed route services contract was awarded to First Transit, the incumbent contractor. The $296 million contract has a five-year base, with two one-year extension options. There are about 6.5 million revenue miles from the 11 local and one circulator route operated from the West Transit Facility.
Other Accomplishments

The Phoenix Public Transit Department was given the 2018 Outstanding Transit Organization/Partnership of the Year (Large Urban) award at the annual Arizona Transit Association (AzTA) conference in April.

The award recognized Phoenix’s 2017 efforts in implementing T2050 improvements, including the sustained increase in local bus ridership, other route improvements that promoted an increase in ridership, and the continued advancement of light rail projects.

The city partnered with Lyft to pilot a “First Mile, Last Mile” program in the far north and south Phoenix areas where bus service is currently limited. The no-cost partnership offers riders a 20 percent discount on Lyft rides to connect from these identified areas. In exchange, the Transit Department utilized space available shelter advertising to promote the Lyft discount.

This program has provided more than 1,000 discounted rides in the first six months of the 12-month pilot program. The partnership was awarded the 2018 AzTA/ADOT Excellence Award for “Transit Innovation of the Year.”
3.0
High Capacity Transit
Light rail in the Valley turns 10 ... read more
NEW OR IMPROVED HIGH CAPACITY TRANSIT

**SOUTH CENTRAL CORRIDOR**
- Accelerated completion by more than 10 years
- $2 M grant awarded for business assistance and Transit Oriented Development land use planning services
- Expansion approved for transfer hub in downtown Phoenix
- Extension design and pre-construction activities

**NORTHWEST PHASE I EXTENSION**
- Service began March 19, 2016

**NORTHWEST PHASE II EXTENSION**
- Advanced preliminary engineering plans to next phase
- Project designer contract awarded
- Funding, design and construction agreement finalized

**CAPITOL/I-10 WEST**
- Environmental Assessment underway
- Planning traffic analysis

**NORTHEAST CORRIDOR**
- Preliminary planning and corridor evaluation

**50TH STREET STATION**
- Construction underway

**WEST PHOENIX EXTENSION**
- Preliminary planning

**BUS RAPID TRANSIT (BRT) SERVICE**
- Launched Bus Rapid Transit Program
- Selected BRT planning and design consultants
- CTC recommended approval of BRT consultant contracts
- Submitted a federal grant for advanced signal technologies

CUMULATIVE PROGRESS TO DATE: Jan. 1, 2016 - June 30, 2018
Phoenix’s T2050 plan includes a $1 billion investment planned for FY 2018-2023 in improving the city’s high capacity transit (HCT) network, including developing bus rapid transit (BRT), and light rail improvements and expansion. In addition to revenues generated by the city’s sales tax, T2050’s other funding sources includes federal and state grants, the Public Transportation Fund (PTF), fares, advertising, and other local funds.

Table 3.1 T2050 High Capacity Transit Progress

<table>
<thead>
<tr>
<th>Completed July 1, 2017 to June 30, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase light rail in Phoenix</strong></td>
</tr>
<tr>
<td>• South Central project expansion approved by the Phoenix City Council and Valley Metro Rail Board, to include a transfer hub in downtown Phoenix.</td>
</tr>
<tr>
<td>• South Central extension design and pre-construction is ongoing, including survey work and gathering of utility data.</td>
</tr>
<tr>
<td>• Construction continued on the 50th Street station near Ability360, a destination resource center for the Valley’s disabled community. The station, which is the first T2050-funded capital improvement project, is anticipated to open in early 2019.</td>
</tr>
<tr>
<td>• Northwest Phase II extension preliminary engineering plans advanced to the next phase and the Valley Metro Rail Board awarded a project designer contract.</td>
</tr>
<tr>
<td>• City of Phoenix and Valley Metro entered into a funding, design and construction agreement for Northwest Phase II.</td>
</tr>
<tr>
<td>• Capitol/I-10 West Phase I project team conducted work on the federally required Environmental Assessment (EA) documents.</td>
</tr>
<tr>
<td>• Northeast corridor preliminary planning and corridor evaluation continued.</td>
</tr>
<tr>
<td>• West Phoenix extension preliminary planning occurred.</td>
</tr>
</tbody>
</table>

**Begin new bus rapid transit program**

• Public Transit worked with the Street Transportation Department to submit a federal grant for advanced signal technologies for Baseline Road – a corridor identified as a potential BRT route.
• BRT planning and engineering consultant procurement process underway.
### Table 3.2 T2050 High Capacity Transit Goals, FY 2019

**Planned for FY 2019**

**Increase light rail in Phoenix**
- South Central extension final design.
- Northwest Phase II extension final design and pre-construction.
- Capitol/I-10 West Phase I extension environmental study and initial design.
- Conduct feasibility study for proposed Northeast Corridor extension.
- Open 50th Street station in early 2019.

**Begin new Bus Rapid Transit program**
- Initiate BRT program planning and community engagement and education.

### Table 3.3 T2050 High Capacity Transit Goals, FY 2020 – 2023

**Planned for FY 2020 – 2023**

**Increase light rail in Phoenix**
- South Central extension construction, with anticipated opening in 2023.
- Northwest Phase II extension construction, anticipated to open in 2023.
- Capitol/I-10 West Phase I extension environmental study and initial design.

**Begin Bus Rapid Transit program**
- Council approval of a BRT implementation plan.
- Initiate preliminary engineering on one or more corridors.
The fiscal year ended with the Phoenix City Council directing Valley Metro to further evaluate a 4-lane design at the June 20, 2018 council meeting, and to conduct a comprehensive community outreach and engagement process with the South Central community.

Northwest Phase II

The Phoenix City Council approved to fund the final design and pre-construction plans for the Northwest Phase II Extension (NWE II) in May 2018. Since that time, the Valley Metro Board approved Jacobs Engineering Inc. as the designer, who will work with Kiewit-McCarthy, the project’s construction contractor.

In addition, the project’s seven artists selected to design public art along the extension were introduced in March. Construction is anticipated to begin on NWE II in 2019, and when completed in 2023 the line will extend west on Dunlap Avenue from 19th Avenue, north on 25th Avenue and across I-17 to end near Metrocenter Mall.

Capitol/I-10 West

The Environmental Assessment (EA) for the project is being drafted, which includes a detailed analysis of how light rail would operate along phase I the route – between downtown Phoenix and the Arizona State Capitol.

The project, which was approved by Phoenix City Council and the Valley Metro Rail Board in 2016, is split into two phases for design and construction. The first phase, downtown to the Capitol, is anticipated to be complete in 2023, followed by phase II of the project – from the Capitol to the 79th Avenue park-and-ride in Maryvale.
Northeast Corridor

Valley Metro is conducting a feasibility study to evaluate two proposed corridor options to connect the existing light rail system to the Paradise Valley Mall area. The study will evaluate a variety of information, including: potential ridership, costs and funding options, engineering constraints, community input and economic development potential.

50th Street Light Rail Transit Station

Construction on the 50th Street light rail station started last year and crews recently wrapped up utility relocation and now focus on roadway widening in the area of the new center-street platform station.

This is the first capital improvement project to take place under T2050, as well as the first new station to be constructed on the existing light rail line.

The station provides access to Ability360, a resource facility for the Valley's disabled community, as well as improved access to nearby businesses and transit-oriented development planned for the area.

The station is anticipated to open in spring 2019.

West Phoenix Transit Corridor Study

Late 2017, the Glendale City Council voted to no longer participate in the West Phoenix/Central Glendale Transit Corridor Study, which would evaluate extending light rail west on Camelback Road into downtown Glendale.

The city of Phoenix and Valley Metro will continue to study the West Phoenix Transit Corridor, which looks at transit needs along the Camelback Road corridor between 19th and 43rd avenues.

Bus Rapid Transit

The planning for future Phoenix bus rapid transit (BRT) is underway. BRT utilizes limited stops, signal prioritization and off-board fare collection to provide riders with a fast and comfortable transit option in high demand travel areas.

Phoenix released a request for proposal in early 2018 for submittals from firms to provide outreach and engagement strategies for the planning and preliminary engineering of the city's BRT network. The consultant is expected to be selected in late 2018 and will assist city staff to evaluate both previous corridors identified, as well as potential new ones, for BRT service in Phoenix.

In addition, the Public Transit and the Streets Transportation departments collaboratively submitted a federal grant for advanced signal technologies along Baseline Road, which is a potential BRT corridor.
4.0 Street Maintenance and Improvements
T2050 allocates $14.1 million annually for ...read more
STREET MAINTENANCE AND IMPROVEMENTS

<table>
<thead>
<tr>
<th></th>
<th>Miles new pavement</th>
<th>Miles pavement treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTERIAL/MAJOR COLLECTORS</td>
<td>90</td>
<td>121</td>
</tr>
<tr>
<td>MINOR COLLECTORS/LOCAL</td>
<td>175</td>
<td>492</td>
</tr>
</tbody>
</table>

- **Miles new pavement**
- **Miles pavement treatments**

**MAJOR STREET/NEIGHBORHOOD PEDESTRIAN & MOBILITY ASSESSMENT PROJECTS**
- 39 in pre-design/project assessment phase

**NEW/EXPANDED STREETS PROJECTS**
- 89 planned

**ROAD AND BRIDGE PROJECTS**
- 87 scheduled to be completed

**MILES OF NEW SIDEWALKS**
- 15

**PAINTED SIGNAL POLES**
- 213

**INSTALLED LEFT-TURN ARROWS**
- 81

**INSTALLED NEW STREET LIGHTS**
- 861

**REPLACED ILLUMINATED STREET SIGNS**
- 2,001

**IMPROVED/INSTALLED ADA RAMPS**
- 5,182
The Street Transportation Department has about $183 million from T2050 dedicated to Phoenix streets construction and maintenance projects over the next five years.

In addition to T2050, the department relies on funding from the state-collected motor fuel taxes, city’s general fund, federal funds and impact fees. This annual report only focuses on projects and programs that receive T2050 funds.

For more information on the Street Transportation Department’s capital improvement program (CIP), which includes T2050 projects, please visit www.phoenix.gov/streets/projects.
Table 4.1 T2050 Street Maintenance and Improvements Progress

<table>
<thead>
<tr>
<th>Completed July 1, 2017 to June 30, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street pavement and overlays</strong></td>
</tr>
<tr>
<td>• Multi-year pavement maintenance program approved through fiscal year 2022.</td>
</tr>
<tr>
<td>• 45 miles of new asphalt pavement on major streets.</td>
</tr>
<tr>
<td>• 51.5 miles of other pavement treatments, such as crack and fog sealing, on major collector streets.</td>
</tr>
<tr>
<td>• Nearly 59 miles of local streets were paved.</td>
</tr>
<tr>
<td>• 166 miles of other pavement treatments, such as crack and fog sealing, applied to local streets.</td>
</tr>
<tr>
<td><strong>Bicycle lanes</strong></td>
</tr>
<tr>
<td>• Installed 40 miles of new bicycle lanes.</td>
</tr>
<tr>
<td><strong>Street lights</strong></td>
</tr>
<tr>
<td>• Installed 430 new street lights.</td>
</tr>
<tr>
<td><strong>Sidewalks</strong></td>
</tr>
<tr>
<td>• Constructed 7.5 miles of sidewalks.</td>
</tr>
<tr>
<td>• Conducted planning activities for mobility projects at 28 locations.</td>
</tr>
<tr>
<td>• Scheduled four locations for completion.</td>
</tr>
<tr>
<td><strong>New roads and upgraded bridges</strong></td>
</tr>
<tr>
<td>• Nine projects in pre-design to study neighborhood pedestrian and mobility on major streets.</td>
</tr>
<tr>
<td>• 51 new or expanded street projects are currently in the design phase.</td>
</tr>
<tr>
<td>• 33 projects currently in the construction phase.</td>
</tr>
<tr>
<td><strong>Intersection technology enhancements</strong></td>
</tr>
<tr>
<td>• Replaced 1,361 street signs at major intersections with illuminated signs.</td>
</tr>
<tr>
<td>• Repainted 149 signal poles at major intersections to extend their lifecycle.</td>
</tr>
<tr>
<td>• Installed 27 new left-turn arrows at warranted intersections.</td>
</tr>
</tbody>
</table>

Table 4.2 T2050 Street Maintenance and Improvements, FY 2019

<table>
<thead>
<tr>
<th>Planned for FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street pavement and overlays</strong></td>
</tr>
<tr>
<td>• Pave at least 19 miles on major streets.</td>
</tr>
<tr>
<td><strong>Bicycle lanes</strong></td>
</tr>
<tr>
<td>• Install more than 30 miles of bicycle lanes.</td>
</tr>
<tr>
<td><strong>Street lights</strong></td>
</tr>
<tr>
<td>• Install 60 new street lights.</td>
</tr>
<tr>
<td><strong>Sidewalks</strong></td>
</tr>
<tr>
<td>• Construct nearly 4 miles of new sidewalks.</td>
</tr>
<tr>
<td>• Complete planning activities for mobility projects at seven locations, and schedule 12 locations for completion.</td>
</tr>
<tr>
<td><strong>New roads and upgraded bridges</strong></td>
</tr>
<tr>
<td>• Complete three neighborhood pedestrian and mobility studies for major streets.</td>
</tr>
<tr>
<td>• Design 21 new or expanded street projects, and schedule 46 projects for completion.</td>
</tr>
<tr>
<td><strong>Intersection technology enhancements</strong></td>
</tr>
<tr>
<td>• Install 999 illuminated signs at major intersections.</td>
</tr>
<tr>
<td>• Repaint 110 signal poles at major intersections.</td>
</tr>
<tr>
<td>• Install 7 left-turn arrows.</td>
</tr>
</tbody>
</table>
STREET MAINTENANCE AND IMPROVEMENTS (FY 2018)

Street Maintenance

Under T2050, there is approximately $1 billion allocated to the maintenance of major arterial streets in Phoenix. This funding leverages other funds to be used for maintenance to all other streets in the city.

T2050 also allows the department to perform routine preventative maintenance more frequently, such as repairing curbs and gutters, as well as sidewalks and ramps to provide enhanced accessibility and mobility.

New and Expanded Streets

The future of Phoenix’s expansion of streets is secure under T2050, because there is an estimated $240 million over the next five years for major street improvement projects, such as new bridges and new roads. These new roads and bridges will help connect and complete the city’s roadway network and work in concert with future transit expansion plans.

Table 4.3 T2050 Street Maintenance and Improvements, FY 2020 – 2023

<table>
<thead>
<tr>
<th>Planned for FY 2020 – 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street pavement and overlays</td>
</tr>
<tr>
<td>• Pave at least 77 miles of new pavement on major streets.</td>
</tr>
<tr>
<td>Bicycle lanes</td>
</tr>
<tr>
<td>• Install 123 miles of bicycle lanes.</td>
</tr>
<tr>
<td>Street lights</td>
</tr>
<tr>
<td>• Install 240 new street lights.</td>
</tr>
<tr>
<td>Sidewalks</td>
</tr>
<tr>
<td>• Construct more than 15 miles of sidewalks.</td>
</tr>
<tr>
<td>New roads and upgraded bridges</td>
</tr>
<tr>
<td>• Begin design activities on 22 projects for new or expanded streets.</td>
</tr>
<tr>
<td>• Plan construction on 22 projects that add new or improved streets to the city’s system.</td>
</tr>
<tr>
<td>• Complete construction of 37 ongoing improvement projects.</td>
</tr>
<tr>
<td>Intersection technology enhancements</td>
</tr>
<tr>
<td>• Repaint 440 signal poles at major intersections.</td>
</tr>
<tr>
<td>• Install 20 left-turn arrows at intersections throughout Phoenix.</td>
</tr>
</tbody>
</table>

Installing new bike lanes...read more
Mobility Improvements

The Transportation Planning and Programming (TPP) section is conducting 11 mobility studies throughout Phoenix to be completed by May 2019. The goal of these mobility studies is to identify barriers pedestrians and bicyclists face when traveling to destinations in their neighborhoods, and recommend solutions that will improve safety, convenience and quality of life. The study areas were identified utilizing data, such as zero-car households, high transit ridership, and accidents involving vehicles and pedestrians and bicyclists.

Intersection Technology Enhancements

T2050 allows the city to improve its maintenance activities of existing traffic control equipment at signalized intersections throughout the city. These investments include adding left-turn arrows, repainting traffic signal poles and replacing deteriorated intersection street name signs with retroreflective sign faces that include LED lighting. Other intersection improvements include installing new signals, signage, detection equipment, as well as traffic management and monitoring systems, to improve traffic congestion throughout the city.

Geographic Information System (GIS)

In 2018, the Streets Transportation Department began to capture T2050 assets in the city’s geographic information system (GIS). GIS is a map-based system that catalogues all types of geographical data, in this case T2050 projects. GIS users can then query the system to sort and analyze the information. The T2050 GIS system has already helped the department with its mobility studies and bikeways reporting. The system will be used in the future for improved planning efforts, conducting more efficient field operations, the analysis of the needs of a community, other reporting opportunities and transparency via maps and dashboards available to city staff and the public.
Appendix
The First Street Pedestrian Improvement Project...read more
Lifecycle Programming Assumptions

As with any long-term plan, preparation of the financial model for the T2050 program required many assumptions for estimated costs, revenues, and timing of projects and new services. Key assumptions of the T2050 program include:

1. The implementation of projects and new services is projected to occur over the course of the 35-year plan as funding allows and service demand dictates.

2. Capital and operating costs are estimated to grow at average inflation rates of 3–4 percent annually over the life of the plan. These inflation rates are somewhat higher than the typical annual increases we have experienced in the large transit contracts, and provide for more conservative cost estimates.

3. T2050 sales tax revenues are estimated to grow at an average annual rate of 4.75 percent, which is approximately the same as the 4.8 percent average annual growth rate in the Arizona Department of Transportation’s most recent forecast prepared in September 2017 for the Proposition 400 Maricopa County Transportation Excise Tax.

4. The existing 0.5 percent Proposition 400 regional tax, currently in place through December 31, 2025 is assumed to be extended for at least 20 years.

5. Federal transit formula funds is assumed to continue through the life of the plan, with very modest increases over time, consistent with Maricopa Association of Government’s long-term Regional Transportation Plan.

6. The financial model is consistent with Valley Metro assumptions, ranging from zero to 49%, for the funding level from discretionary federal Capital Investment Grants for light rail capital costs. Discretionary federal Capital Investment Grants are funding, on average, more than 40 percent of total project costs for current rail projects across the country.

7. Transit fares are assumed to continue to be consistent with the regional fare policy goal of 25 percent recovery of direct transit operations costs.

8. As needed, some capital funding is assumed to be provided through financing, with the corresponding costs estimated using typical municipal bond offerings. Less expensive and more flexible types of financing will be explored to minimize financing costs.

9. Other revenues, such as transit advertising and interest earnings on fund balance, are forecasted using very small growth rates.

10. An operating reserve equivalent to 15 percent of annual public transit operating costs is assumed to be maintained throughout the life of the plan.
The following table includes the projected sales tax revenue for each year of the T2050 plan. Additionally, the table shows the anticipated allocation to the Public Transit and Streets Transportation departments.

### Table A.1 T2050 Sales Tax Projected Revenue Stream

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Overall T2050 (2015 Forecast)</th>
<th>Actual Overall</th>
<th>Forecasted Public Transit (86.2%)</th>
<th>Actual Public Transit</th>
<th>Forecasted Street Transportation (13.8%)</th>
<th>Actual Street Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$89,125,000</td>
<td>$98,593,240</td>
<td>$76,826,000</td>
<td>$85,095,392</td>
<td>$12,299,000</td>
<td>$13,497,848</td>
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<tr>
<td>2017</td>
<td>$204,006,000</td>
<td>$203,352,480</td>
<td>$175,853,000</td>
<td>$175,430,201</td>
<td>$28,153,000</td>
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<td>2018</td>
<td>$213,696,000</td>
<td>$215,805,685</td>
<td>$184,206,000</td>
<td>$185,998,894</td>
<td>$29,490,000</td>
<td>$29,806,791</td>
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<td>2019</td>
<td>$224,401,000</td>
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<td>$193,434,000</td>
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<tr>
<td>2020</td>
<td>$235,642,000</td>
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<td>$203,123,000</td>
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<tr>
<td>2021</td>
<td>$246,835,000</td>
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<td>$212,772,000</td>
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<td>2022</td>
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<td>$222,878,000</td>
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<td>2027</td>
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<td>$281,085,000</td>
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<td>2028</td>
<td>$341,574,000</td>
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<td>$294,437,000</td>
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<td>2029</td>
<td>$357,799,000</td>
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<td>$308,423,000</td>
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<tr>
<td>2030</td>
<td>$374,794,000</td>
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<td>$323,072,000</td>
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<tr>
<td>2031</td>
<td>$392,597,000</td>
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<td>$338,419,000</td>
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<td>2032</td>
<td>$411,245,000</td>
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<td>$354,493,000</td>
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<td>2033</td>
<td>$430,779,000</td>
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<td>$371,331,000</td>
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<td>2034</td>
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<td>$388,970,000</td>
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<td>2035</td>
<td>$472,675,000</td>
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<td>$407,446,000</td>
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<td>2036</td>
<td>$495,127,000</td>
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<td>$426,799,000</td>
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<td>2037</td>
<td>$518,646,000</td>
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<td>$447,073,000</td>
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<td>$543,281,000</td>
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<td>$468,308,000</td>
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<td>2039</td>
<td>$569,087,000</td>
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<td>$490,553,000</td>
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<tr>
<td>2040</td>
<td>$596,119,000</td>
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<td>$513,855,000</td>
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<tr>
<td>2041</td>
<td>$624,435,000</td>
<td></td>
<td>$538,263,000</td>
<td></td>
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<tr>
<td>2042</td>
<td>$654,095,000</td>
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<td>$563,830,000</td>
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<tr>
<td>2043</td>
<td>$685,165,000</td>
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<td>$590,612,000</td>
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<tr>
<td>2044</td>
<td>$717,710,000</td>
<td></td>
<td>$618,666,000</td>
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<tr>
<td>2045</td>
<td>$751,801,000</td>
<td></td>
<td>$649,052,000</td>
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<tr>
<td>2046</td>
<td>$787,512,000</td>
<td></td>
<td>$678,835,000</td>
<td></td>
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</tr>
<tr>
<td>2047</td>
<td>$824,919,000</td>
<td></td>
<td>$711,080,000</td>
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<tr>
<td>2048</td>
<td>$864,102,000</td>
<td></td>
<td>$744,856,000</td>
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<tr>
<td>2049</td>
<td>$905,147,000</td>
<td></td>
<td>$780,237,000</td>
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<tr>
<td>2050</td>
<td>$948,142,000</td>
<td></td>
<td>$817,299,000</td>
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</tr>
<tr>
<td>Total</td>
<td>$16,679,368,000</td>
<td>$14,377,615,000</td>
<td>$2,301,753,000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A.2 FY 2018 Financial Overview (July 1, 2017 - June 30, 2018)

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Budget</th>
<th>Actuals</th>
<th>Amount Over/ (Under Budget)</th>
<th>Percent Over/ Under Budget</th>
<th>Footnotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Sales Tax - T2050</td>
<td>$212,626,000</td>
<td>$215,805,685</td>
<td>$3,179,685</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Local Transportation Assistance</td>
<td>4,300,000</td>
<td>4,366,304</td>
<td>66,304</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Bus Fare Revenue</td>
<td>32,030,706</td>
<td>27,725,802</td>
<td>(4,304,904)</td>
<td>-13.4%</td>
<td>1</td>
</tr>
<tr>
<td>Dial-a-Ride Fare Revenue</td>
<td>1,082,793</td>
<td>1,085,744</td>
<td>2,951</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Rail Fare Revenue</td>
<td>8,300,000</td>
<td>7,642,707</td>
<td>(657,293)</td>
<td>-7.9%</td>
<td></td>
</tr>
<tr>
<td>Federal Transit Funds</td>
<td>37,572,263</td>
<td>10,077,618</td>
<td>(27,494,645)</td>
<td>-73.2%</td>
<td>2</td>
</tr>
<tr>
<td>Regional Transportation Tax</td>
<td>9,827,151</td>
<td>2,725,415</td>
<td>(7,101,736)</td>
<td>-72.3%</td>
<td>3</td>
</tr>
<tr>
<td>Other Revenue</td>
<td>12,526,690</td>
<td>11,128,470</td>
<td>(1,398,220)</td>
<td>-11.2%</td>
<td>4</td>
</tr>
<tr>
<td>Fund Balance</td>
<td>76,987,681</td>
<td>38,920,532</td>
<td>(38,067,149)</td>
<td>-49.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$395,253,284</td>
<td>$319,478,277</td>
<td>$(75,775,007)</td>
<td>-19.2%</td>
<td></td>
</tr>
</tbody>
</table>

| Use of Funds                          |         |          |                            |                           |           |

**Transit Operations**

| Local Fixed Route Bus                 | $125,973,959 | $117,114,340 | $(8,859,620)               | -7.0%                    |           |
| RAPID Commuter Bus                    | 3,862,760   | 3,591,096   | (271,664)                  | -7.0%                    |           |
| Neighborhood Circulator               | 3,290,832   | 3,059,391   | (231,441)                  | -7.0%                    |           |
| Dial-a-Ride Operations                | 19,610,271  | 18,376,093  | (1,234,178)                | -6.3%                    |           |
| Light Rail Operations                 | 32,160,564  | 31,614,797  | (545,767)                  | -1.7%                    |           |
| Bus Rapid Transit                     | -          | -          | -                          | 0.0%                     |           |
| Security                              | 9,494,931   | 11,025,023  | 1,530,092                  | 16.1%                    | 5         |
| Administration & Support              | 21,128,249  | 18,519,549  | (2,608,700)                | -12.3%                    | 6         |
| **Total Operations**                  | $215,521,566 | $203,300,288 | $(12,221,278)              | -5.7%                    |           |

**Capital Projects**

| Bus and DAR Vehicles                  | $36,798,396 | $2,750,180  | $(34,048,216)              | -92.5%                   | 7         |
| Bus Passenger Facilities              | 6,255,349   | 3,006,206   | (3,249,143)                | -51.9%                   | 8         |
| Bus O & M Facilities                  | 8,283,914   | 1,894,044   | (6,389,870)                | -77.1%                   | 9         |
| Bus and DAR Technology                | 13,456,790  | 3,236,642   | (10,220,148)               | -75.9%                   | 10        |
| Other Bus Capital                     | 8,509,049   | 823,506     | (7,685,543)                | -90.3%                   | 11        |
| South Central LRT                     | 17,910,000  | 16,736,890  | (1,173,110)                | -6.6%                    |           |
| Northwest Phase II LRT                | 472,000     | 134,688     | (337,312)                  | -71.5%                   | 12        |
| Capitol/I-10 West Phase 1 LRT        | 75,000      | 85,733      | 10,733                     | 14.3%                    | 13        |
| Nor east LRT                          | 200,000     | -          | (200,000)                  | -100.0%                  | 14        |
| 48th Street LRT Station               | -           | 952,080     | 952,080                    | 15                       |
| LRT Other                             | 15,000      | 26,342      | 11,342                     | 75.6%                    | 16        |
| Bus Rapid Transit                     | -           | 19,165      | 19,165                     |                          |           |
| Streets - Major Maintenance           | 14,810,000  | 15,281,042  | 471,042                    | 3.2%                     |           |
| Streets - Major Transportation Projects| 1,808,220   | 1,539,551   | (268,669)                  | -14.9%                   | 17        |
| Streets - Mobility Projects           | 2,795,000   | 1,956,764   | (838,236)                  | -30.0%                   | 18        |
| Streets - Other                       | 1,180,000   | 434,805     | (745,195)                  | -63.2%                   | 19        |
| Streets - Technology                  | 3,065,000   | 3,320,401   | 255,401                    | 8.3%                     |           |
| **Total Capital Projects**            | $115,633,718 | $52,198,039 | $(63,435,679)              | -54.9%                   |           |

| Total Expenditures                    | $395,253,284 | $319,478,277 | $(75,775,007)              | -19.2%                   |           |
Table A.2 includes the budgeted and actual revenue and expenditures during FY 2018. Footnotes are as follows:

1. Though bus ridership increased, full-fare passes decreased and reduced-fare passes increased, which resulted in lower overall bus fare revenue.
2. Decrease due to capital project delayed.
3. Decrease due to capital project delayed.
4. Alternative fuel tax credit was not reinstated.
5. Police charges for Transit Enforcement Unit were higher than expected.
6. Contractual custodial costs for facilities maintenance was lower than expected.
7. Federal funds over programmed in the budget.
8. Transit furniture maintenance and improvement contract with Talis delayed.
9. Laveen Park n Ride delayed.
10. CAD/AVL delayed.
11. Unused contingency.
12. Some budgeted staffing costs for this project later determined as not necessary in this fiscal year.
13. Land acquisition costs were not programmed in the budget.
14. Northeast extension feasibility study project was not utilized.
15. Budget was not originally programmed for this project, was later revised at preliminary.
16. Disposal of remnant parcels was originally under programmed, was revised at preliminary.
17. Unused contingency.
18. Leveraged other funding opportunities.
19. Unused capacity for contracted services.
Table A.3 on page 44 includes the projected distribution of funds collected over the next five years. The table does not include actual collections. Please note: Bus Rapid Transit (BRT) capital and operations expenditures are planned to be incurred during this five-year plan; however, the amounts have not yet been programmed, pending the results of the BRT study.
### Table A.3 Five-Year Implementation Plan (FY 2019–2023)

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>FY 2018-19</th>
<th>FY 2019-20</th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
<th>FY 2022-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Sales Tax-T2050</td>
<td>$221,264,000</td>
<td>$232,607,000</td>
<td>$243,535,000</td>
<td>$255,189,000</td>
<td>$259,016,835</td>
</tr>
<tr>
<td>Local Transportation Assistance</td>
<td>4,250,000</td>
<td>4,300,000</td>
<td>4,300,000</td>
<td>4,300,000</td>
<td>4,300,000</td>
</tr>
<tr>
<td>Bus Fare Revenue</td>
<td>28,472,964</td>
<td>28,900,058</td>
<td>29,333,559</td>
<td>29,773,563</td>
<td>30,220,166</td>
</tr>
<tr>
<td>DAR Fare Revenue</td>
<td>816,527</td>
<td>828,775</td>
<td>841,207</td>
<td>853,825</td>
<td>866,632</td>
</tr>
<tr>
<td>Rail Fare Revenue</td>
<td>8,400,000</td>
<td>8,526,000</td>
<td>8,653,890</td>
<td>8,783,698</td>
<td>8,915,454</td>
</tr>
<tr>
<td>Federal Transit Funds</td>
<td>119,740,440</td>
<td>26,052,002</td>
<td>11,281,083</td>
<td>25,566,595</td>
<td>29,371,862</td>
</tr>
<tr>
<td>Regional Transportation Tax</td>
<td>4,651,000</td>
<td>4,579,765</td>
<td>1,973,132</td>
<td>4,994,105</td>
<td>5,183,270</td>
</tr>
<tr>
<td>Bond Proceeds</td>
<td></td>
<td>135,855,000</td>
<td>147,804,000</td>
<td>173,184,000</td>
<td>135,651,000</td>
</tr>
<tr>
<td>Other Revenue</td>
<td>9,736,500</td>
<td>9,882,548</td>
<td>10,030,786</td>
<td>10,181,247</td>
<td>10,333,966</td>
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<tr>
<td>Fund Balance</td>
<td>116,324,667</td>
<td>56,861,383</td>
<td>31,787,413</td>
<td>3,985,392</td>
<td>(42,357,413)</td>
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</tbody>
</table>

**Total Revenues**: $513,656,098  $508,392,530  $489,540,070  $516,811,425  $441,501,772

<table>
<thead>
<tr>
<th>Use of Funds</th>
<th>FY 2018-19</th>
<th>FY 2019-20</th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
<th>FY 2022-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Fixed Route Bus</td>
<td>$125,198,665</td>
<td>$128,954,625</td>
<td>$132,823,264</td>
<td>$136,807,962</td>
<td>$140,912,201</td>
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<tr>
<td>RAPID Commuter Bus</td>
<td>3,838,986</td>
<td>3,954,156</td>
<td>4,072,781</td>
<td>4,194,964</td>
<td>4,614,460</td>
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<tr>
<td>Neighborhood Circulator</td>
<td>3,270,581</td>
<td>3,368,698.70</td>
<td>3,469,759.66</td>
<td>3,573,852.45</td>
<td>3,681,066.02</td>
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<tr>
<td>DAR Operations</td>
<td>19,046,384</td>
<td>19,617,775.52</td>
<td>20,206,308.79</td>
<td>20,812,498.05</td>
<td>21,436,872.99</td>
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<tr>
<td>Light Rail Operations</td>
<td>35,689,205</td>
<td>36,759,881.15</td>
<td>37,862,677.58</td>
<td>38,998,557.91</td>
<td>40,168,514.65</td>
</tr>
<tr>
<td>Security</td>
<td>11,890,693</td>
<td>12,247,413.79</td>
<td>12,614,836.20</td>
<td>12,993,281.29</td>
<td>13,383,079.73</td>
</tr>
<tr>
<td>Administration &amp; Support</td>
<td>21,506,731</td>
<td>22,151,932.93</td>
<td>22,816,490.92</td>
<td>23,500,985.65</td>
<td>24,206,015.21</td>
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</table>

**Total Operations**: $220,441,246  $227,054,483  $233,866,118  $240,882,101  $248,402,212

<table>
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<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus and DAR Vehicles</td>
<td>$73,416,180</td>
<td>$31,031,767</td>
<td>$13,654,215</td>
<td>$30,460,700</td>
<td>$35,055,132</td>
</tr>
<tr>
<td>Bus Passenger Facilities</td>
<td>13,483,687</td>
<td>4,389,810</td>
<td>4,446,455</td>
<td>4,505,358</td>
<td>4,614,600</td>
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<tr>
<td>Bus O&amp;M Facilities</td>
<td>1,145,000</td>
<td>956,098</td>
<td>760,000</td>
<td>415,000</td>
<td>750,000</td>
</tr>
<tr>
<td>Bus and DAR Technology</td>
<td>43,023,348</td>
<td>340,000</td>
<td>290,000</td>
<td>140,000</td>
<td>910,000</td>
</tr>
<tr>
<td>Other Bus Capital</td>
<td>10,993,005</td>
<td>1,570,000</td>
<td>6,940,000</td>
<td>8,570,000</td>
<td>500,000</td>
</tr>
<tr>
<td>South Central Light Rail</td>
<td>30,214,983</td>
<td>80,865,322</td>
<td>109,053,151</td>
<td>65,367,600</td>
<td>23,926,411</td>
</tr>
<tr>
<td>Northwest Phase II Light Rail</td>
<td>20,135,218</td>
<td>18,744,576</td>
<td>47,207,353</td>
<td>64,852,117</td>
<td>22,518,271</td>
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<tr>
<td>Capitol I-10 Light Rail</td>
<td>136,592</td>
<td>27,460,474</td>
<td>34,154,518</td>
<td>43,924,549</td>
<td>40,833,346</td>
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<tr>
<td>Northeast Light Rail</td>
<td>200,000</td>
<td>666,000</td>
<td>639,000</td>
<td>646,000</td>
<td>364,000</td>
</tr>
</tbody>
</table>

**Total Public Transit T2050 Capital Projects**: $193,569,872  $166,024,047  $217,144,692  $218,881,324  $129,424,560

| Streets - Major Maintenance           | $14,489,000   | $15,283,000   | $16,042,000   | $16,832,000   | $17,719,000   |
| Streets - Major Transportation Projects| 12,387,700    | 19,999,000    | 10,315,000    | 15,660,000    | 10,611,000    |
| Streets - Mobility Projects           | 3,434,280     | 7,669,000     | 1,936,260     | 5,048,000     | 5,316,000     |
| Streets - Other                       | 1,004,000     | 1,035,000     | 1,035,000     | 1,035,000     | 1,035,000     |
| Streets - Technology                  | 984,000       | 720,000       | 720,000       | 861,000       | 1,772,000     |

**Total Streets T2051 Capital Projects**: $32,298,980  $44,706,000  $30,048,260  $39,436,000  $36,453,000

**Total Capital Projects**: $225,868,852  $210,730,047  $247,192,952  $258,317,324  $165,877,560

**Total Expenditures**: $513,656,098  $508,392,530  $489,540,070  $516,811,425  $441,501,772

**Fund Balance**: $98,011,024  $41,149,642  $9,362,229  $5,376,836  $47,734,250
PHOENIX
T2050
This report provides information to the Citizens Transportation Commission (CTC) about the USDOT Advanced Transportation and Congestion Management Technology Deployment Initiative (ATCMTDI).

BACKGROUND

On June 6, 2018, the Phoenix City Council adopted Ordinance S-44734 authorizing the City to apply for Federal Highway Administration (FHWA) Advanced Transportation and Congestion Management Technology Deployment Initiative (ATCMTDI) discretionary grants and, if awarded, to enter into agreement with the FHWA or the USDOT for the purpose of accepting the grants.

On June 18, 2018 two grant applications were submitted to the USDOT. Before applying, staff confirmed with the USDOT that submitting two applications was not a detriment to the city or the evaluation process.

The Public Transit Department submitted a $6 million grant request for the Regional Fare Collection System Technology Improvement Project. This regional project will introduce new electronic fare payment and communication technology, including reduced fare identification cards, stored value smart cards, a mobile application with real-time transit data, and upgraded farebox equipment and infrastructure.

The Streets Transportation Department also submitted a $6 million grant request to develop next generation signal technology in the Baseline Road corridor that would support transit signal priority for a future Bus Rapid Transit line and deploy a comprehensive Intelligent Transportation System, which will manage transit, freight and private vehicle platoons through the corridor with specific opportunities to improve travel time and reliability, and enhance safety by creating calm and predictable traffic operations.
Both of these projects would include T2050 funding if approved. Announcements for this grant process are anticipated by the end of the calendar year. Staff will provide an update when grant awards are announced by the USDOT.
This report provides a financial update on Transportation 2050 (T2050), passed by voters on August 25, 2015. Included in this report is a summary of the sales tax revenue collections and the use of those revenues for projects within the plan.

**THE ISSUE**

T2050 is a 35-year multi-modal transportation plan that includes street improvements, bus and paratransit service enhancements, and light rail expansion. These broad categories are broken down into specific plan elements, and within these elements are specific projects planned to be implemented over the course of the 35-year plan.

**OTHER INFORMATION**

The sales tax revenues are being used in both the Public Transit and Street Transportation Departments’ budgets to implement projects in the T2050 plan. The T2050 sales tax became effective January 1, 2016, and with the one-month lag in sales tax reporting and collections, there have been thirty-one months of revenue collected by the City through August 2018. The following graph provides estimated and actual sales tax through August 30, 2018. Estimates are based on a consistent annual growth rate. Some months and years will see a higher or lower return, however, the differences are anticipated to balance over time.
The attached table (Attachment A) shows T2050 sales tax revenue collections and T2050 expenditures through August 31, 2018.

RECOMMENDATION

This report is for information and discussion only.
**T2050 SALES TAX REVENUES:**

Through FY 2017-18: 517,241,404

July 2018 - August 2018: 33,174,109

**TOTAL:** 550,415,513

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**EXPENDITURES:**

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(1) Other (non-T2050) sources include transit fares, federal, regional, AZ Lottery, and 302 building revenues.
TO: Mario Paniagua
Deputy City Manager

FROM: Maria Hyatt
Street Transportation Director
Ken Kessler
Acting Public Transit Director

SUBJECT: UPONING T2050 RELATED PUBLIC MEETINGS/EVENTS

This report provides the Citizens Transportation Commission (CTC) with a list of upcoming T2050 related public meetings by Public Transit Department, Streets Transportation and Valley Metro.

This item is for information only.

**Upcoming T2050 Related Public Meetings/Events**

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<tr>
<th>Meeting Date and Time</th>
<th>Location</th>
<th>Topic</th>
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<tr>
<td>City Council Special Meeting</td>
<td>City Council Chambers 200 W. Jefferson St. Phoenix, AZ</td>
<td>South Central Light Rail Extension Lane Configuration</td>
<td>Public Transit/Valley Metro</td>
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<td>Public Meeting: Project Update</td>
<td>Ability360 Conference Room 1 5025 E. Washington St. Phoenix, AZ</td>
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<td>Public Meeting: Project Update</td>
<td>College America 9801 N. Metro Pkwy. E Phoenix, AZ</td>
<td>Light Rail: Northwest Phase II Meeting to provide a project update and for the public to review and comment on EA</td>
<td>Public Transit/Valley Metro</td>
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<td>Oct. 4, 2018 6 PM – 7 PM</td>
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